Hochschule Aalen

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Study and Examination Regulations for Master's Degree Programs at Aalen University (SPO 31)

dated July 18, 2016

in the version dated November 03, 2022

Based on § 8 para. 5 in conjunction with § 32 of the Baden-Württemberg Higher Education Act (Landeshochschulgesetz LHG) in the version of January 1, 2005 (GBl. p.1), last amended by Article 1 of the Act of April 1, 2014 (GBl. p.99), in the version from April 9, 2004, the Senate of Aalen University - Engineering and Business adopted the following examination regulations on July 8, 2016. The Rector approved these study and examination regulations (SPO 31) on July 18, 2016.

On November 30, 2016, the Senate of Aalen University - Engineering and Business passed the 1st amendment to the study and examination regulations for Master's degree programs (SPO 31). By decree dated December 9, 2016, the Rector approved this amendment to the study and examination regulations.

On February 8, 2017, the Senate of Aalen University - Engineering and Business adopted the 2nd amendment to the Study and Examination Regulations for Master's Degree Programmes (SPO 31). By decree dated March 1, 2017, the Rector approved this amendment to the study and examination regulations.

On March 29, 2017, the Senate of Aalen University - Engineering and Business adopted the 3rd amendment to the Study and Examination Regulations for Master's Degree Programs (SPO 31). By decree dated April 7, 2017, the Rector approved this amendment to the study and examination regulations.

On May 31, 2017, the Senate of Aalen University - Engineering and Business adopted the 4th amendment to the Study and Examination Regulations for Master's Degree Programs (SPO 31). By decree dated June 9, 2017, the Rector approved this amendment to the study and examination regulations.

On July 12, 2017, the Senate of Aalen University - Engineering and Business adopted the 5th amendment to the Study and Examination Regulations for Master's Degree Programs (SPO 31). By decree dated September 5, 2017, the Rector approved this amendment to the study and examination regulations.

On November 8, 2017, the Senate of Aalen University - Engineering and Business adopted the 6th amendment to the Study and Examination Regulations for Master's Degree Programs (SPO 31). By decree dated December 22, 2017, the Rector approved this amendment to the study and examination regulations.

On April 25, 2018, the Senate of Aalen University - Engineering and Business approved the 7th amendment to the Study and Examination Regulations for Master's degree programs (SPO 31). By decree dated May 16, 2018, the Rector approved this amendment to the study and examination regulations.

On November 7, 2018, the Senate of Aalen University - Engineering and Business adopted the 8th amendment to the Study and Examination Regulations for Master's Degree Programs (SPO 31). By decree dated November 22, 2018, the Rector approved this amendment to the study and examination regulations.

On January 30, 2019, the Senate of Aalen University - Engineering and Business adopted the 9th amendment to the Study and Examination Regulations for Master's degree programs (SPO 31). By decree dated February 25, 2019, the Rector approved this amendment to the study and examination regulations.

On July 10, 2019, the Senate of Aalen University - Engineering and Business adopted the 10th amendment to the Study and Examination Regulations for Master's Degree Programs (SPO 31). By decree dated August 8, 2019, the Rector approved this amendment to the study and examination regulations.

On April 29, 2020, the Senate of Aalen University - Engineering and Business adopted the 11th amendment to the Study and Examination Regulations for Master's Degree Programs (SPO 31). By decree dated May 6, 2020, the Rector approved this amendment to the study and examination regulations.

On July 1, 2020, the Senate of Aalen University - Engineering and Business adopted the 12th amendment to the Study and Examination Regulations for Master's Degree Programs (SPO 31). By decree dated July 15, 2020, the Rector approved this amendment to the study and examination regulations.

On October 26, 2022, the Senate of Aalen University - Engineering and Business approved the 13th amendment to the Study and Examination Regulations (SPO 31). By decree dated November 03, 2022, the Rector approved this amendment to the Study and Examination Regulations.

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A. General part

§ 1a Scope of application

(1) These study and examination regulations apply to the Master's degree program:

1. International Marketing and Sales (MI)
2. Data Management in Product Development and Production (MDP)
3. Polymer Technology (PTC)
4. Lightweight Construction (LBM)
5. Leadership in Industrial Sales and Technology (IST)
6. Business Informatics (WIC)
7. Business Development (Product Management & Start-up Management (MBD))
8. Applied Photonics (APH)
9. Machine Learning & Data Analytics (MLD)
10. Analytical and Bioanalytical Chemistry (ABC)
11. Ophthalmic Optics and Psychophysics (AOP)
12. Financial Management (MF)
13. SME Management (MM)

(2) The office and function designations refer equally to women and men; otherwise, Section 11 (7) LHG applies accordingly.

§ Section 1b General admission requirements

(1) Admission to the Master's degree program can only be granted to those who

1. fulfill the requirements for admission in accordance with the statutes for the university's own selection procedure for the respective Master's degree course,
2. have completed any previous work experience defined in the relevant admission regulations,
3. submits a declaration stating whether a Master's examination has already been definitively failed in the same degree program or in a degree program determined by the university's statutes in accordance with Section 60 (2) No. 2 LHG at a university within the scope of the Basic Law.
4. provided there are no deviating regulations in the special section or in the corresponding module description.

(2) Further admission requirements for the Master's degree programs are regulated in the respective selection statutes of the Master's degree programs as well as the Higher Education Admission Act (HZG) and the HVVO (Hochschulvergabeverordnung).

(3) Module examinations or partial examinations can only be taken by students who are enrolled in the current semester. This also applies to the Master's thesis.

(4) Applicants with a university degree of at least 180 and less than 210 credit points will only be admitted on condition that they earn the difference between the credit points already earned and the 210 credit points required in para. 1 no. 1 during the Master's degree program. The form in which these additional credits are to be acquired is regulated in the special section. In this case, the degree program is

extended by one semester. If this is not regulated in the special section or in the associated admission regulations, the examination board of the degree program will decide on a case-by-case basis.

I. Section - General

§ Section 2 Standard period of study, course structure and number of hours

(1) The standard period of study for full-time consecutive degree courses in accordance with Section 1 (1) No. 1 - 13 is three semesters or a maximum of six semesters for part-time courses. An academic year consists of two consecutive semesters (winter semester and summer semester).

(2) The course of study in the Master's degree programs according to § 1 Para. 1 No. 1 - 13 is divided into the semesters and study sections specified in the special section. It comprises the theoretical semesters and the module examinations or partial module examinations including the Master's thesis.

(3) The compulsory area comprises the modules and module components that must be completed during the individual semesters of study. The compulsory elective area comprises the modules or module components that students must select from the courses offered in the prescribed manner in the individual semesters of study. The total scope of the modules or module components required for the successful completion of the degree course in the compulsory and compulsory elective area in semester hours per week is specified in the special section. In addition, the assigned credit points must be indicated.

(4) The degree program has a modular structure. A module refers to a study unit consisting of one or more partial achievements (courses) that either build on each other methodically or belong together in terms of content. Among other things, block courses can also be defined as part of a module within the framework of so-called international weeks, summer schools, etc.

(5) The content of a module is designed so that it can be taught within one semester or within two consecutive semesters. A module examination must be taken for each module in accordance with §§ 15, 16. Deviating regulations must be justified in the corresponding module descriptions.

(6) Proof of at least 300 credit points in total (Bachelor's degree course and Master's degree course) and 90 credit points in the Master's degree course is required for the successful completion of a Master's degree course. Deviations are listed separately.

(7) The order and type of modules or module examinations specified in the special section may be changed for compelling reasons in individual cases per semester by resolution of the faculty.

§ 3 Examination structure

(1) The Master's examination consists of the modules or partial module examinations listed in the special section and the Master's thesis. Modules consist of one or more partial module examinations in an examination subject or in an interdisciplinary examination area. The modules of the Master's examination and the individual module examinations are specified in the special section.

(2) Module examinations or partial module examinations are generally examined in conjunction with and with reference to the content of the courses (course-related examinations).

(3) A module concludes with a cross-course examination (module examination). If a module consists of several courses that are examined in individual module examinations, this must be defined and separately justified in the module description.

(4) In the special section, the coursework assigned to the individual modules / module examinations of the semesters that must be completed for admission to the Master's examination is specified for each compulsory and compulsory elective area.

§ 4 Deadlines

(1) The module examinations or partial module examinations for the Master's examination should be completed by the semester specified in the special section. The module examinations or partial module examinations may also be taken before the set deadlines, provided that any necessary requirements have been met. Students are responsible for meeting the deadlines; the university does not draw attention to impending missed deadlines.

(2) At the request of a student to the responsible examination board, the maternity protection periods as stipulated in the applicable law for the protection of working mothers (MuSchG) must be taken into account. The application must be accompanied by the necessary evidence. The maternity protection periods interrupt any deadline according to this SPO; the duration of maternity protection is not included in the deadline.

(3) Likewise, the deadlines for parental leave in accordance with the applicable law on the granting of parental allowance and parental leave (BEEG) must be taken into account upon application. The student must inform the responsible Examination Board in writing of the period or periods for which he/she wishes to take parental leave at least four weeks before the date from which he/she wishes to take parental leave, enclosing the necessary evidence. The student must be informed immediately of any new examination deadlines. The deadline for completing the Master's thesis cannot be interrupted by parental leave. The topic provided is deemed not to have been assigned. At the end of parental leave, the student will receive a new topic.

(4) An activity as an elected member of statutory committees, statutory bodies of the university or the student union for at least one year can be taken into account on request for up to one academic year when calculating the examination deadlines; the decision on this is made by the Chair of the Executive Board (§ 32 Para. 6 LHG).

§ Section 4 a Loss of entitlement to examinations

(1) The right to take examinations and admission to the degree program expires if the module examinations or specified partial examinations for the Master's examination have not been completed at the latest three semesters after the date specified in para. 1, unless the student is not responsible for exceeding the deadline. (§ 32 para. 5 LHG).

(2) Students will be informed in good time by the relevant degree program about the type and number of module examinations or partial examinations to be completed as well as the dates on which they are to be completed and also about the date of completion and submission of the Master's thesis and, if applicable, about the examination modalities of the oral Master's examination (colloquium).

(3) For students who are in the 6th or higher semester in the winter semester 2015 and who have lost their right to take examinations due to exceeding the time limit by more than three semesters, the right to admission to examinations for the Master's examination remains valid for a maximum of one year after the time of exceeding the time limit (para. 3), provided that they are not part of the course (e.g. Master's thesis) and provided that the examinations required in the current version of the study and examination regulations had already been completed at the time of exceeding the time limit. This regulation does not apply to students who are in their 5th semester or a lower semester in the winter semester 2015.

§ 5 Credit points and scope of learning

(1) Aalen University applies the "European Credit Transfer System (ECTS)". In accordance with the ECTS, credit points describe the average amount of time required to successfully complete a module. 1 credit point corresponds to a workload of 30 working hours.

(2) Credit points are allocated to the modules in the special section according to the workload of the students due to courses, preparatory and follow-up work, exam preparation and exams as well as practical work. Credit points are only awarded if all partial achievements of the respective module have been completed. Accordingly, credit points are awarded for the successful Master's thesis or for the successful oral Master's examination (colloquium) in accordance with the special section.

(3) The workload for one semester is usually 30 credit points. 90 credit points are required to pass the Master's examination. Exceptions are regulated in the special section.

(4) The workload of all modules and any module examinations is defined in module descriptions (in accordance with ECTS). The module descriptions are provided in German and/or, if applicable, in English and must be made available to students in an appropriate form.

§ 6 Teaching and examination languages

In the degree programs according to § 1, courses and examinations (module examinations, partial module examinations, Master's thesis, oral Master's examination (colloquium)) can generally be offered in German, alternately in German and English or exclusively in English. In the case of coursework and examinations with alternating languages, assignments are offered and solutions accepted in both languages. Further details are regulated in the special section.

II. Section - General examination bodies and responsibilities

§ Section 7a Faculty Council

The Faculty Council advises and decides on all matters of fundamental importance to the Faculty (Section 25 LHG).

Among other things, the following require the approval of the Faculty Council

a) Initial version of the special parts of the study and examination regulations of the faculty's degree programs; approval requires the agreement of the responsible study commission.

b) Other changes to the special parts of existing study and examination regulations that require the approval of the Senate. The Central Examination Office must be involved in an advisory capacity.

c) Initial version of the admission statutes of the Faculty's degree programs. The Central Admissions and Recognition Office must be involved in an advisory capacity.

d) Other changes to the Faculty's admission statutes or program-specific parts of Aalen University's own selection procedure that affect the Faculty. The Central Admissions and Recognition Office must be involved in an advisory capacity.

§ 7b Examination Board

(1) For the organization of Master's examinations and the tasks assigned by the study and examination regulations, an Examination Board shall be formed for each degree course; a joint Examination Board may be formed for related degree courses.

(2) The Examination Board is composed in accordance with para. 1, 1st half-sentence of

- the chairperson,
- the dean(s) of studies,
- and four professors,

The chairperson and the four other professors are appointed by the faculty council to which the degree program is assigned from among the professors of this faculty and the professors of other faculties who regularly teach courses in the degree program.

(3) If a joint examination board is formed in accordance with Section 7 b (1), 2nd half-sentence, the examination board shall consist of

a) the chairperson

b) the deans of studies of the degree programs or, in the case of study areas, the respective dean of studies and the associated degree program coordinators

c) and three further professors

The chairperson and the three other professors are appointed by the Faculty Council, to which the vast majority of the related degree programs are assigned, from among the professors of this faculty and the professors of other faculties who regularly teach courses in the degree programs.

(4) Other professors, lecturers, the head of the Central Examination Office (or the person appointed for this purpose in accordance with Section 7 b of these statutes) and teaching staff for special tasks may be consulted in an advisory capacity. The term of office of the members corresponds to that of the Faculty Board and is four years. The Examination Board appoints a deputy chairperson from among the appointed members.

(5) Each member of the Examination Board in accordance with Section 7 b (2) or (3) has only one vote, irrespective of any double function within the scope of their duties. Votes may not be delegated to other members of the Audit Committee.

(6) The Examination Board shall ensure that the provisions of the study and examination regulations are complied with. At the request of the faculty, the Examination Board reports on the development of examination and study times as well as the distribution of module and overall grades. The Examination Board makes suggestions for the reform of the curriculum and the study and examination regulations. The Examination Board may delegate certain of its tasks to the Chairperson.

The Examination Board has the following tasks in particular:

1. Initial examination and resolution of the module descriptions for new study and examination regulations in agreement with the module supervisors/teachers; in cases pursuant to Section 22a (4), the Examination Board may only pass resolutions with regard to the organization of teaching and the establishment of and compliance with study and examination regulations in accordance with Section 3 of the State Higher Education Act (LHG).
2. Implementation of the changes to the study and examination regulations decided by the Faculty Council and Senate of Aalen University in the respective module descriptions; the Chair of the Examination Board is responsible for the prompt implementation. He/she can delegate this task to the module coordinator or other responsible persons. The module descriptions must be made known to the students in good time and in a suitable form or made accessible to the students.
3. Consultation and decision-making on changes to the module descriptions. Resolutions on amendments to existing study and examination regulations and module descriptions are passed in accordance with Section 22 a;

4. Appointment of examiners and assessors;
5. Deciding on the recognition of periods of study, credits and modules and, if applicable, partial credits;
6. Deciding on the extension of the deadline for the Master's thesis in accordance with § 25 Para. 6, on failure and withdrawal in accordance with § 19, cheating in accordance with § 20 and the invalidity of the Master's certificate and the Master's certificate in accordance with § 28 of these regulations;
7. Support in objection procedures in study and examination matters; (The Prorector for Teaching is responsible for deciding on objections in study and examination matters);
8. Decision on a second repetition of module examinations and, if applicable, partial examinations in accordance with § 18 and on the expiry of the right to take examinations and admission to studies in accordance with § 32 para. 4 LHG.
9. Decision on the submission of a medical certificate,
10. Decision on the approval of withdrawal from examinations.

(7) The members of the Examination Board have the right to be present when examinations are being taken.

(8) The members of the examination board and their deputies are subject to official secrecy. If they are not in public service, they must be sworn to secrecy by the chairperson.

(9) In the event of an objection, the Examination Board issues a statement to the Rectorate.

§ Section 7c Admission / Recognition Office of the degree program

(1) An admissions/recognition office is appointed for each degree program for the recognition of achievements at the time of admission and during the course of study; a joint admissions/recognition office may be appointed for related degree programs.

(2) The admissions/recognition office for the degree program consists of a professor (head) and a deputy. They are appointed by the faculty council to which the degree program is assigned from among the professors of the respective degree program. The term of office of the Head of the Admissions / Recognition Office corresponds to that of the Faculty Board and is four years.

(3) The Head of the Admissions/Recognition Office ensures that the provisions and regulations relating to admissions and the recognition of achievements are complied with. At the request of the faculty, the Admissions / Recognition Office reports on developments in the area of admissions and the recognition of achievements. The Admissions/Recognition Office provides suggestions for reforming admission and recognition practices and the corresponding regulations.

(4) The tasks of the Admissions/Recognition Office are in particular

a) Deciding on the number of admissions, the final target number and the number of applicants to be admitted in consultation with the Dean of Studies of the degree program and the Rectorate.

b) Contact person for admission and enrollment procedures at Aalen University.

c) Examination and decision on applications for admission to a higher semester and the respective recognition of achievements within the scope of these applications.

d) Examination and decision on applications for recognition of achievements during the course of study.

e) System-based recording of recognition cases.

(5) The head of the Admissions/Recognition Office and his/her deputy are bound by official secrecy.

(6) In appeal proceedings, the Admissions / Recognition Office of the degree program submits a statement to the Rectorate.

(7) The tasks of the Admissions and Recognition Office can be transferred in whole or in part to the Dean of Studies, program coordinator, examination board or an academic staff member of the faculty by resolution of the Faculty Council.

§ 8 Examiners and assessors

(1) In addition to professors, lecturers and teaching staff for special tasks as well as persons experienced in professional practice and training who themselves have at least the qualification to be determined by the examination or an equivalent qualification may be appointed as examiners. As a rule, the examiner of a module examination or partial module examination is the person who was primarily responsible for the course on which this module examination or partial module examination is based in the semester in question. The examiners of the Master's thesis are to be appointed in accordance with § 25 Para. 2, the examiners of the oral Master's examination (colloquium) are to be appointed in accordance with § 26 a Para. 3.

(2) The person to be examined may propose the examiner or a group of examiners for the Master's thesis and the oral module examinations and, if applicable, partial module examinations. The proposal does not constitute a claim.

(3) The names of the examiners should be announced in good time.

(4) Only those who possess at least the qualification to be determined by the examination or an equivalent qualification shall be appointed as assessors.

(5) The examiners and assessors are subject to official secrecy. If they are not in public service, they must be sworn to secrecy by the Chair of the Examination Board.

§ 9 Central Examination Board

(1) A Central Examination Board has been established at Aalen University - Engineering and Business. The Central Examination Board is composed of

1. the Rector as Chairman,
2. Vice-Rector for Teaching,
3. the chairpersons of all examination boards
4. the head of the Central Examination Office (advisory function),
5. the person responsible for creating and amending the study and examination regulations of Aalen University (advisory function).

(2) The Central Examination Board has the following tasks

1. Dealing with legal issues relating to the study and examination regulations,
2. Coordinating the uniform application of the study and examination regulations at the university,
3. Dealing with cross-course examination matters.

§ 9a Central Admissions / Recognition Committee

(1) A central admissions/recognition committee has been set up at Aalen University - Engineering and Business. The Central Admissions/Recognition Committee is composed of

1. the Rector as chairperson,

2. Vice Rector(s) for Teaching,

3. the heads of all admissions/recognition offices of the study programs or the person responsible for the study program or study program named in § 10 a named responsible for the degree program or study area. ,

4. the head of the Central Admissions/Recognition Office (advisory function)

5. the person responsible for drawing up and amending the study and examination regulations and admission regulations and matriculation regulations of Aalen University (advisory function). function).

(2) The Central Admissions/Recognition Committee has the following tasks:

1. Coordination of the uniform handling of legal requirements in the area of admission and recognition

2. Dealing with cross-course matters and legal issues in the area of admission and recognition.

§ 10 Central Examination Office

(1) A Central Examination Office has been established at Aalen University - Engineering and Business. It reports to the Rectorate.

(2) The tasks of the Central Examination Office are in particular

1. Administrative processing and support of examination registration,

2. administrative support in the administration of the results of module examinations and, where applicable, partial examinations,

3. administrative support for hardship and exclusion decisions,

4. Administrative handling of objection procedures,

5. Advice on study matters and legal issues relating to study and examination regulations.

§ 10a Central Admissions and Recognition Office

(1) A central admissions/recognition office has been set up at Aalen University - Engineering and Business. It reports to the Rectorate.

(2) The tasks of the Central Admissions/Recognition Office are in particular

1. Handling admissions in cooperation with the degree programs,

2. Administrative support in the preparation of admission notifications and Recognition and rejection notices in the area of recognition.

3. Administrative handling of objection procedures,

4. Advice on legal issues relating to admission and recognition

Section III - Courses, module examinations and partial achievements

§ Section 11 Courses

(1) Lectures, seminars, tutorials and other suitable courses are generally held on site, i.e. with the simultaneous presence of lecturers and students at the university (classroom teaching).

(2) In justified individual cases, face-to-face courses can also be broadcast online at the same time. The decision on the additional online transmission is at the discretion of the lecturer. Students are not entitled to an online transmission.

(3) In consultation with the relevant dean of studies, the rectorate may give its approval for a course to be offered online without the presence of students at the university for all or most of the semester in deviation from paragraph 1. If a course is taught by non-full-time teaching staff, the responsible dean of studies shall grant approval in accordance with sentence 1 instead of the rectorate.

(4) Access to courses transmitted online must be restricted to students who are entitled to participate. Compliance with data protection regulations must be ensured in advance.

§ Section 11a Registration and admission to module examinations

(1) Examinations are generally taken during the examination period set by the University Senate, outside the lecture period of the respective semester.

(2) Students shall register for the individual module examinations or partial module examinations scheduled for the respective semester via the online procedures available to Aalen University or, if applicable, in written form by the end of the 8th week of lectures of the semester at the latest, or in the period specified by the university in the form specified by the university. Deviating regulations are regulated in the special section. As an exception, late examination registrations are possible within the scope of available capacities until the examination registration deadline (para. 8 and 9), two weeks before the examination period set by the Senate of Aalen University, after which registration is excluded. In the case of late registration as defined in sentence 2, participation in the examination cannot be guaranteed, especially if capacities are exhausted. For late examination registration as defined in sentence 2, a fee will be charged in accordance with Aalen University's current fee regulations.

(3) Portfolio examinations must generally be registered with the respective module coordinator/examiner 1 week before the first examination element is completed. Deviating regulations will be announced at the beginning of the courses of the respective module.

(4) Participation in module or partial module examinations (paras. 2 and 3) is not permitted without prior registration, unless the student is not responsible for the failure to register.

(5) As a prerequisite for admission to a module examination or partial module examination, it may be required that other module examinations or partial module examinations have previously been passed. Further regulations are set out in the special section.

(6) Admission to a module examination of the Master's examination can only be granted to those who

1. is admitted to and enrolled in their Master's degree program at Aalen University - Engineering and Business,
2. have not lost their right to take examinations in this degree program,
3. have passed the module examination or partial module examinations required in accordance with Para. 5.

(7) Admission to a module examination may only be refused if

1. the requirements specified in paragraph 5 are not fulfilled in whole or in part or
2. in the same course of study or in a course of study with essentially the same content determined by the statutes of the university in accordance with § 60 para. 2 no. 2 LHG, a course-related examination required by the study and examination regulations, the Bachelor's examination has been definitively failed or the person is in an examination procedure or
3. the examination entitlement has expired in accordance with § 32 Para. 4 LHG.

(8) Examination withdrawals are possible up to two weeks before the examination period set by the Senate of Aalen University via the online procedure available to Aalen University or, if applicable, in written form. Deviating regulations are regulated in the Special Section.

(9) Cancellations of examinations that take place before the examination period set by the Senate of Aalen University can be made in writing to the relevant degree program office up to one week before the examination date.

§ 12 Examinations

(1) Examinations take place on site, i.e. with the simultaneous presence of examiners and students on university premises (attendance examination). In suitable cases, the examiner may conduct a face-to-face examination using electronic information and communication systems (online face-to-face examination). Video supervision (e.g. proctoring) is not permitted for online face-to-face examinations; otherwise, Section 32a (2) of the current version of the State Higher Education Act applies to online face-to-face examinations. Students have no legal entitlement to an online presence examination. The implementation of an online presence examination is subject to the technical possibilities of the university. Sentences 1 to 5 do not apply to examinations which, due to their nature, cannot be conducted on the university premises (e.g. learning diary or internship).

(2) In justified exceptional cases, the rectorate may, in agreement with the chairperson of the relevant examination board, grant permission for an examination to be conducted outside the university using electronic information and communication systems and video supervision (online remote examination). Section 32a and Section 32b of the current version of the State Higher Education Act also apply to online remote examinations; in particular, it must be ensured that the online remote examination is voluntary for students. The Rectorate may transfer the responsibility for approving oral online distance examinations in general or in individual cases to the chairperson of the relevant examination board. Students are not entitled to an online distance-learning examination.

(3) Examinations must be recorded in minutes, which must include at least the name of the person taking the minutes, the start and end of the examination and any special incidents In the case of oral examinations, the main subjects, results and the course of the examination must also be recorded.

§ Section 12a Types of examination

(1) The type of examination required as proof of a module examination is specified in the module descriptions for the respective degree programs. Module examinations can be

abbreviation	Name	Definition
PLS	Term paper / research report	Written elaboration, which does not necessarily overlap directly with the course content (e.g. seminar papers)
PLM	Oral examination	Oral examination discussion. The questions and tasks are based on the course content.
PLK	Written examination papers	A paper in text form - open questions are set within the examination or an individual question or a "case" is presented. All variants are based on the course content
PLR	Presentation	The presentation is a discussion of a problem from the working context of the course with the inclusion and evaluation of relevant literature. The presentation

		consists of a written and / or an oral presentation.
PLL	Laboratory work	Practical activity within a laboratory. The results of this activity are usually recorded in the form of written papers, measurement protocols or a laboratory report. The content of the laboratory work is based on the actual course content and can include basic and in-depth knowledge dimensions.
PLE	Draft	The draft usually contains a written description of a given problem. Results for solving the problem are recorded in the form of written elaborations, sketches or drafts.
PLA	Practical work	Practical work primarily involves the application of technical skills in laboratories or similar.

Abbreviation	Name	Definition
PLT	Learning diary	Record perceptions, sensations, reflections and encounters on a daily basis and accompany the individual experience process in writing
PLF	Portfolio	Collection of coordinated achievements on a defined topic, usually in the form of a workbook. (e.g. work results, presentations, working papers, etc.)
PLP	Project	Project work essentially combines the characteristics of a written paper (or presentation) and an oral paper. Tasks/topics are assigned as project work. The content of the project work can build on the course content as well as deepen it.
PPR	Internship	e.g. practical semester
PMC	Multiple Choice	Examination in which the pass mark can only be achieved by marking the correct or incorrect answers

can be achieved. Written module examinations using the multiple choice method are generally excluded.

(2) The workload for students must be aligned with the qualification objectives and competencies of the modules so that studyability is guaranteed in the individual semesters.

(3) In justified exceptional cases, a module may consist of several partial module examinations in accordance with para. 1.

(4) The module examinations are generally taken during the examination period outside the lecture period of the semester.

(5) If, when registering for the examination, a student can credibly demonstrate that it is not possible to take all or part of the module examinations or partial module examinations in the intended form due to a prolonged or permanent physical disability, the chairperson of the responsible examination board will allow the student to take the module examinations within an extended processing time or to take an equivalent module examination in a different form. A medical certificate may be required for this purpose.

(6) The module descriptions must be announced in good time before the start of the semester and made available to students in a suitable form.

§ Section 12 a Preliminary work (formative learning process)

In addition to § 12, in justified cases, work can also be completed as part of an ungraded preliminary performance (e.g. laboratory exercises, participation in a practical course, test, etc.). These achievements may also be required as a prerequisite for module examinations or partial module examinations.

§ 13 Oral examinations

(1) In oral examinations, students should demonstrate that they recognize the interrelationships of the examination area and are able to classify specific questions in these contexts. Furthermore, it should be determined whether they have a broad basic knowledge.

(2) An oral examination (PLM) is an examination interview with an integrated academic discussion.

a) Oral examinations are to be taken in front of at least two examiners (peer examination) or in front of one examiner in the presence of an observer as a group examination or as an individual examination. Exceptions must be approved by the respective examination board.

b) The duration of the oral examination is a minimum of 15 minutes and a maximum of 30 minutes for each person to be examined and each subject. Further details may be specified in the special section or in the module description.

(3) Other oral examinations (e.g. papers, presentations, projects, etc.) are oral examinations in which written or other evidence is used to assess performance.

a) The written or other evidence used to assess performance must be submitted to the examiner shortly before or at the other oral examination.

b) Other oral examinations must be taken in front of at least one examiner as a group examination or as an individual examination. Exceptions must be approved by the respective examination board.

c) The duration of the other oral examination is a minimum of 15 and a maximum of 30 minutes for each person to be examined and each subject, with a maximum of 45 minutes including discussion.

d) Further details may be specified in the special section or in the module description.

(4) Students who wish to take the same examination in a later examination period should be admitted as listeners, subject to room conditions, unless the person being examined objects. However, admission does not extend to the consultation and announcement of the examination results. In the case of an oral online remote examination, participation as a listener can be guaranteed by connecting; sentences 1 and 2 apply accordingly.

§ Section 14 Written examinations and other written work

(1) In the written examinations and other written assignments, students should demonstrate that they are able to solve problems and work on topics using the usual methods of their subject within a limited period of time and with any aids provided. The written examination should also determine whether they have the necessary basic knowledge. A choice of topics may be provided.

(2) A written examination or other written work is a performance that must be completed under supervision and within a set time limit.

(3) The duration of written examinations and other written assignments is specified in the module description.

(4) The duration of a written examination worth 5 credit points is generally a maximum of 240 minutes. For larger modules, the duration of the examination can be adjusted in relation to the credit points.

§ 14 a Multiple choice examinations

(1) Written examinations or other written work may be carried out in whole or in part using the multiple choice method.

(2) The multiple-choice examination tasks must be based on the knowledge required for the module and enable reliable examination results. The examination questions shall be prepared jointly by two

examiners who themselves possess at least the qualification to be determined by the examination or an equivalent qualification. When setting the examination questions, it must be determined which and how many answers are recognized as correct. The number of answers to be marked in each case must be indicated on the task sheet. If only one of several possible answers is correct, the task is considered solved if only the correct answer is marked. If the marking is missing or incorrect, or if several answers are marked, the task is awarded zero points. If more than one of the possible answers is correct, the task is scored according to the proportion of correct answers. If no answers or too many answers are marked, the task is awarded zero points.

(3) The examination tasks must be checked to see whether they are incorrect in relation to the requirements of the module before the examination result is determined. Incorrect examination tasks are not to be taken into account when determining the examination result. The assessment shall be based on the reduced number of examination tasks. The reduction in the number of examination tasks must not be to the detriment of the candidate. In the course of the assessment of the examination performance, none of the tasks may be assessed with a negative score.

(4) An examination in the multiple-choice procedure is passed if at least 50% (minimum pass mark/minimum number of points) of the intended maximum number of points has been achieved or the number of points achieved is not more than 22% lower than the average examination performance of all candidates taking part in the examination.

(5) The performance in the multiple-choice procedure is to be assessed as follows:

1,0	very good	if 95 - 100 %	of the possible points have been achieved.
1,3	very good	if 90 - <94.9 %	
1,7	good	if 85 - <89.9 %	
2,0	good	if 80 - <84.9 %	
2,3	good	if 75 - <79.9 %	
2,7	satisfactory	if 70 - <74.9 %	
3,0	satisfactory	if 65 - <69.9 %	
3,3	satisfactory	if 60 - <64.9 %	
3,7	sufficient	if 55 - <59.9 %	
4,0	sufficient	if 50 - <54.9 %	
5,0	Not passed	if 0 - 49.9 %	

If the candidate has not achieved the minimum number of points required to pass the examination, the grade is "fail" (5.0).

(6) If the examination consists of both multiple-choice tasks and other tasks, the multiple-choice part shall be assessed in accordance with paragraphs 2 - 5. The other tasks are assessed according to the usual procedure. The overall assessment is calculated from the weighted results of both parts of the examination, whereby the weighting is based on the proportion of the examination accounted for by each type of task. A failed task part is included in the weighted overall assessment with the grade

"insufficient" (5.0). The above regulations on the multiple-choice procedure do not apply if a written examination only contains a small number of multiple-choice items. This is the case if multiple-choice components do not account for more than 15% of the overall examination performance.

§ 14b (unoccupied)

§ 14 c Group examination / group work

(1) If an examination is completed jointly by two or more students in the form of group work, the contribution of the individual students to be assessed as examination work must be marked accordingly on the basis of sections, page numbers or other objective criteria, so that a clear distinction can be made that is clearly distinguishable and assessable

(2) An individual grade must be awarded for each student to be examined.

(3) The absence of one or more examination group participants due to illness does not affect the individual grades awarded to the remaining examination group participants.

§ 14 d Portfolio examination

(1) The portfolio examination is a standardized form of examination in which students can perform certain tasks in a formative, process-oriented, continuous manner and in various ways within the framework of courses of a module. In this way, the portfolio examination enables an adequate and competence-oriented adaptation of the examination form to the teaching and learning material on the one hand and, on the other hand, an outstanding way of determining that the respective competence objectives have been achieved.

(2) A portfolio examination is made up of different types of examination elements accompanying the lecture. Up to three examination elements may be required as part of the portfolio examination. By way of derogation from sentence 2, exceptions are possible in particularly justified cases.

(3) Examination components that correspond to or exceed the scope of an oral examination (Section 13) or a written examination (Section 14) in terms of content and/or time are not permitted as part of a portfolio examination. The maximum duration of all examination elements may not exceed the duration of an equivalent individual examination (PLM, PLK).

(4) The type, scope and weighting of the individual examination elements are part of the module descriptions.

(5) The preparation of the module grade, which is awarded as part of a portfolio examination, is regulated in § 14 d Para. 4.

(6) Regulations on exam registration are set out in Section 11 (2) and (3) and regulations on exam deregistration are set out in Section 11 (9) in conjunction with Section 19 (2) and (3). § Section 19 (2) and (3).

(7) If one or more examination elements of a portfolio examination cannot be taken due to illness, the entire examination is deemed to have been failed.

§ 14 e Compulsory attendance

(1) Students are expected to attend courses and study on their own.

(2) However, compulsory attendance - regular participation in a course or a defined part of a course - may be stipulated in justified individual cases in the special section and the respective module description or only in the respective module description. The corresponding justification must be listed in the special section or the module description.

(3) The requirement of regular attendance is fulfilled if students were generally present for at least 75% of the attendance time of the course or a defined part of a course. Deviating regulations can be specified in the relevant module description. Students who care for children or relatives in need of care, or disabled or chronically ill students can also fulfill the attendance requirement with less attendance upon request. The respective examination board will decide on such an application.

(4) Checking regular attendance at courses or defined parts of a course is only permitted in compliance with data protection regulations

a) as a prerequisite for the award of ECTS points

b) as proof of the active individual or collective participation of students in an examination,

c) in the case of preliminary courses / preliminary work, which serve as proof of the acquisition of required competencies and for admission to examinations.

The student's attendance list is sufficient proof of active and regular participation in lectures or comparable courses.

§ 15 Examination dates and examination material

(1) The module examinations or partial module examinations, which are to be completed as written or oral examinations, are completed during the examination period determined by the Senate of Aalen University following the lecture period of the respective semester. If, in justified cases, examinations are scheduled outside of the time specified in sentence 1, the corresponding dates must generally be announced at the beginning of the semester, but no later than 2 weeks before the respective examination date. Exceptions to the examination date are also possible for block courses. The announcement of the respective examination period for block courses is usually made at the beginning of the respective semester or at the latest 2 weeks before the examination date of the respective block course. The exact examination dates of the individual module examinations are announced to the persons to be examined in good time by means of suitable measures.

(2) The examination period decided by the Senate of Aalen University is usually three weeks. The examination period takes place at the end of the respective semester during the lecture-free period. Deviating regulations are decided by the Senate of Aalen University and announced publicly.

(3) The subject of the module examinations or partial module examinations are the subject areas of the courses assigned in accordance with the Special Section or the practical training.

§ 16 Assessment of module examinations / partial module examinations

(1) The grades for the individual graded module examinations are determined by the respective examiners.

(2) not occupied

(3) Module examinations or partial module examinations or tutorials can be assessed as "passed" or "failed". A corresponding definition must be specified in the module description

(4) The following grades are to be used for the assessment of module examinations or partial module examinations:

– 1 = very good = an outstanding performance;

- 2 = good = a performance that is significantly above the average requirements;
- 3 = satisfactory = a performance that meets average requirements meets average requirements;
- 4 = sufficient = a performance which, despite its shortcomings, still meets the requirements;
- 5 = failed = a performance that no longer meets the requirements no longer meets the requirements.

For differentiated assessment of the modules, individual grades can be increased or decreased by 0.3 to intermediate values; the grades 0.7; 4.3; 4.7 and 5.3 are excluded.

(5) For module examinations that are taken in the form of portfolio examinations, the module grade is based on a points system. Points are to be determined for the individual examination elements according to the degree of fulfillment and, in addition, a table which issues a corresponding grade for the total number of points. The respective details are specified in the module description.

(6) Modules must consist of at least one graded module examination or partial module examination (module grade). If a module consists of several partial module examinations of which only one is graded, the grade of the graded partial module examination corresponds to the final grade of the module. If a module consists of several graded partial module examinations, the module grade is calculated from the average of the grades of the individual partial module examinations. The grades of individual partial module examinations are weighted according to the credit points in the special section. Deviating regulations are specified in the special section.

The module grade is as follows:

Grade from - to	Designation	Definition
1,0 - 1,5	very good	very good
1,6 - 2,5	good	good
2,6 - 3,5	Satisfactory	Satisfactory
3,6 - 4,0	Sufficient	Sufficient
4,1 - 5,0	Failed	Fail

(7) In order to provide transparent and coherent information about the performance level of an individual student, Aalen University issues a table with the statistical distribution of the final examination passed. This includes the grade, the corresponding number of grades, the corresponding percentage and the classification according to ECTS grades. The calculation is based on the cohorts of the last five semesters before the respective module examination and Master's examination passed. Relative ECTS grades are only shown if at least 30 graduates have successfully passed the corresponding module examinations or Master's examinations during this period.

(8) Section 16 applies accordingly to the calculation of the overall grade.

(9) When calculating the average, only the first decimal place after the decimal point is taken into account; all other places are deleted without rounding.

§ 17 Passing and failing a module examination / or partial module examination

(1) A module examination or partial module examination is passed (or completed) if it has been graded at least "sufficient" (4.0).

(2) A module is passed if the associated module examination or all associated partial module examinations have been completed. If a weighting of examinations has been defined in the corresponding module description with regard to the composition of the final grade of the module /

partial module examination, this is passed after calculation of the module grade or partial module examination if it has been graded at least "sufficient" (4.0).

(3) If a module examination or partial module examination has not been passed, the examinee will be informed of this. They must also be informed whether and, if so, to what extent and within what period the module examinations or partial module examinations can be repeated. In justified cases, the Examination Board may schedule a new examination date

§ 18 Repetition of module examinations / or partial module examinations

(1) It is not permitted to repeat a module examination/module component examination that has been passed.

(2) Failed module examinations/module components may be repeated once, provided that the deadlines specified in § 4 are met. Failed attempts at other universities of applied sciences or universities in the Federal Republic of Germany may be credited, provided that they are largely equivalent.

(3) A module examination or partial module examination is deemed to have been assessed with 5.0 and is therefore deemed to have been failed if

1. an examination date is missed without a written declaration of withdrawal,
2. the examination is scheduled and the person being examined withdraws without a valid reason,
3. a written or practical module examination or partial module examination is not completed within the specified processing time.

(4) In the cases of § 22, the module examination/module component examination that has not been graded "sufficient" (4.0) or "failed" must be repeated.

(5) The repeat examination can be taken during the examination dates of the following semester.

(6) Repeat examinations are held every semester, provided there are registrations.

(7) At the student's request, the Examination Board may, in justified cases, schedule a new examination date for the repeat examination, irrespective of the examination period at Aalen University.

(8) At the written request of the student, the Examination Board may allow a second retake of failed module examinations or partial module examinations - within the deadlines specified in § 4 - if the previous academic achievements as a whole justify the expectation that the degree program can be successfully completed. Those responsible for the degree program should conduct a study consultation with the students concerned.

(9) The third repetition of a module or partial module examination is excluded.

(10) Failed ungraded partial module examinations (e.g. tutorials) must be repeated in accordance with the deadlines specified in § 4. In justified cases, the Examination Board may schedule a new examination date.

(11) Students who have applied for a semester of leave due to a semester abroad are entitled to take examinations.

§ 19 Withdrawal and tardiness

(1) Participation in procedures for the completion of scheduled module examinations or partial module examinations that have been registered by students in accordance with § 11 is mandatory.

(2) It is possible to withdraw from scheduled module examinations or partial module examinations up to two weeks before the examination period set by the Senate of Aalen University without giving reasons (§ 11). After this deadline, withdrawal is only possible upon request in exceptional circumstances. Approval is granted by the chairperson of the responsible examination office. Withdrawal from a repeat examination is only possible in exceptional circumstances or in the event of illness (§ 11).

(3) In the case of module examinations or partial module examinations scheduled outside the examination period, students may withdraw from an examination up to one week before the examination date without giving reasons.

(4) It is possible to deregister from a portfolio examination (entire examination with all examination elements) up to the end of the registration period in accordance with § 11. Cancellation of individual examination elements is not permitted.

(5) If an examination is missed without prior deregistration, the reason for the absence must be reported immediately in writing and substantiated (within three days of the examination date).

(6) The inability to take the examination due to illness must be proven by a medical certificate based on an examination that was generally carried out on the day of the missed examination. The medical certificate must be submitted to the relevant examination board. This medical certificate must state both the inability to take the examination and the duration of the inability to take the examination. If several examinations are missed during an examination period, the reasons for each individual absence must be reported immediately after the respective examination. However, if it is known at the time the certificate is issued that several examinations will be missed during the period of incapacity for examination, the excuse for all examinations concerned must be submitted together in advance. In cases of doubt, a certificate from a doctor appointed by the university may be requested. The examination board can arrange a new examination date at short notice.

(7) Withdrawal from one or more examination elements of a portfolio examination due to illness leads to withdrawal from the entire portfolio examination. Results already obtained for individual examination elements of a portfolio examination must be provided again when the examination is retaken.

(8) Withdrawal during an examination is generally excluded. In the event of unforeseen illness that prevents the student from participating in the further examination procedure, the examination may be canceled. The reason for withdrawal must be reported to the examination board immediately in writing and substantiated by a medical certificate from the day of the relevant examination. A decision on the application is the responsibility of the examination board. If the withdrawal is recognized, the examination attempt will be counted as a withdrawal. If the withdrawal is not recognized, the attempt is counted and the examination is assessed as "failed" .

(9) Insofar as compliance with deadlines for the initial registration for module examinations or partial module examinations, the repetition of module examinations or partial module examinations and the reasons for missing module examinations or partial module examinations, as well as the deregistration from module examinations or partial module examinations is affected, the illness of the student is equivalent to the illness of a child to be cared for by the student. Para. 4 remains unaffected by this.

§ Section 20 Cheating and breach of regulations

(1) If the person being examined attempts to influence the result of their module examination or partial module examination by cheating or using unauthorized aids, the examination in question will be assessed as "failed" (5.0). Anyone who disrupts the orderly progress of the examination can be excluded from continuing the examination by the respective examiner or invigilator; in this case, the module examination or module part examination will be assessed as "failed" (5.0).

(2) If examinations are based in whole or in part on other work or publications without the use of verbatim quotations or quotations that are necessary in this respect, stating the source, this is to be regarded as a violation of good academic work (plagiarism) within the meaning of Section 3 (5) LHG.

a) In the case of a slightly negligent violation (simple violation) of the rules of good academic work, in particular in the case of a first-time incorrect or insufficient citation, a discussion will take place between the examiner(s) and the person being examined, in which attention is drawn to the observance of academic honesty. The Chair of the Examination Board must be informed of the discussion. The module examination or partial module examination is assessed as "failed" (5.0).

b) In the event of a grossly negligent or intentional violation of the rules of good academic work, in particular in the repeated case of incorrect or inadequate citation (serious violation) in a module examination or module component examination, this will be assessed as "definitively failed". This leads to ex officio de-registration from the degree program in question.

(3) The person affected by the decision may request within a period of four weeks that the decisions according to paragraph 1 sentences 1 and 2 be reviewed by the Examination Board.

§ Section 21 Crediting towards studies and examinations

(1) Periods of study, coursework and examinations are recognized as periods of study and module examinations without an equivalence assessment if they were completed at a university/university of applied sciences in the Federal Republic of Germany in a comparable degree program. Recognition with conditions may be possible.

(2) When transferring from another university, equivalent institutions or in justified cases, study and examination achievements as well as periods of study according to the Lisbon Convention that do not fall under paragraph 1 are generally recognized, provided that there are no significant differences between the knowledge and skills acquired and those to be acquired at Aalen University. Non-recognition of study and examination achievements gained at other universities must be justified by Aalen University. Students can only apply for credit transfer if they have not yet taken part in the relevant course or examination at Aalen University for which credit is to be transferred.

(3) Achievements (knowledge and skills) gained outside of the university system that are equivalent to those required for the successful completion of a degree program at Aalen University can be credited up to half of the study and examination achievements of the respective degree program.

(4) Paragraphs 1 and 2 apply accordingly to periods of study, study achievements and examination achievements in state-recognized distance learning courses and at dual universities (vocational academies); paragraph 2 also applies to periods of study, study achievements and examination achievements at technical and engineering colleges and officers' colleges of the former GDR.

(5) If coursework and examinations are credited as periods of study and module examinations, the grades - insofar as the grading systems are comparable - are to be adopted and included in the calculation of the overall grade. In the case of non-comparable grading systems, the note "passed" is included. It is permissible to mark the crediting in the certificate. Credit points are to be awarded for the credited module examinations in accordance with § 5 and in accordance with the special section.

(6) If coursework, examinations and external work are credited as periods of study and module examinations, the grades - insofar as the grading systems are comparable - are to be adopted and included in the calculation of the overall grade. In the case of non-comparable grading systems or if no grade is available, the note "passed" is included. If no application for recognition is made for the above-mentioned coursework, examination achievements or external achievements, but the student registers for the corresponding examination, subsequent recognition is no longer possible. It is permissible to mark the recognition in the transcript. Credit points are to be awarded for the recognized module examinations in accordance with § 21 and in accordance with the Special Section.

(7) Failed coursework and examinations in a degree program at Aalen University can be officially counted as a failed attempt towards the permitted number of repeat examinations when changing within the major fields of study of a degree program. In the event of a discontinuation and resumption of studies in the same degree program, failed coursework and examinations at Aalen University are to be

counted ex officio as failed attempts towards the permitted number of repeat examinations. The Examination Board can also determine this for associated study specializations.

(8) The head of the Admissions and Recognition Office of the degree program decides on the crediting of periods of study, study and examination achievements during the degree program. The international representative of the degree program or the relevant partnership representative may be consulted for advice on the recognition of periods of study, coursework and examinations completed abroad.

(9) If the requirements of paragraphs 1-6 are met, there is a legal entitlement to credit transfer. Recognition is granted upon application. It is the responsibility of the applicant to provide the necessary information on the periods of study and examinations to be recognized.

§ Section 21a Application procedure and deadlines

(1) The recognition of periods of study and examinations shall only be granted upon application. The application must be submitted within a period of 6 weeks after the start of lectures of the respective semester in which admission to Aalen University took place or after resuming studies at Aalen University following a semester abroad/studies abroad.

(2) The applicant must be informed of this when applying for admission and the student when applying for a semester abroad/study abroad.

(3) The application must be submitted to the Admissions and Recognition Office assigned to the degree program or to the committee, Dean of Studies, program coordinator or responsible academic staff member of the faculty appointed by the Faculty Council.

(4) In particularly justified cases, a deviating regulation from paragraph 1 may be made by the Admissions and Recognition Office of the degree program or by the committee, dean of studies, program coordinator or responsible academic staff member of the faculty appointed for this purpose by the Faculty Council.

(5) In the case of other work completed during the course of study (e.g. summer school), the application for recognition must be submitted within 6 weeks of the start of lectures in the following semester in which the work was completed.

(6) Notwithstanding paragraph 1, in the case of recognition of credits for a major field of study in the main course of study, the application for recognition must be submitted within 6 weeks of the start of lectures in the semester in which the major field of study is to be chosen.

§ Section 22 Partial module examinations

(1) A module may consist of several partial module examinations.

(2) Partial module examinations or tutorials may be graded or ungraded. A graded partial module examination is passed (or completed) if it has been graded at least "sufficient" (4.0), an ungraded partial module examination is completed if it has been graded "passed". A corresponding definition must be specified in the module description.

(3) If a module is not passed, only the module part examination that was not graded "sufficient" (4.0) or "failed" is to be repeated.

(4) Failed partial module examinations must be repeated in accordance with the deadlines specified in § 4. In justified cases, the Examination Board may schedule a new examination date.

§ 22a Module descriptions

(1) A full-time professor of the degree program must be appointed as the module supervisor for each module. In cases of doubt, the Examination Board shall appoint the module coordinator.

(2) All information and examination modalities required for the respective modules or module components are set out in the module descriptions. They should be made available to students in a suitable form in good time before the start of the semester.

(3) The module descriptions can be revised or amended by resolution of the respective examination board in agreement with the respective module supervisor / lecturer; exceptions to this are para. 4 and § 7b para. 6 no. 1. The member of the Rectorate responsible for teaching can intervene to regulate if necessary.

(4) An update of the module description by the module coordinator is possible in agreement with the lecturer(s) in accordance with Section 3 LHG without a decision by the Examination Board in the following points:

a) Use in degree programs
b) Form of knowledge transfer
c) Permitted aids
d) Teaching content
e) Literature
f) Remarks / Other

IV. Section - Master's examination

§ Section 23 Purpose and implementation

(1) The Master's examination is a research-oriented, academic thesis which should be completed with a high degree of independence. The Master's examination forms the professionally qualifying degree of the Master's degree program. The Master's examination determines whether the student has understood the context of the subject, whether he/she is able to apply his/her knowledge and methodological skills to a scientific problem and whether he/she has acquired the in-depth specialist knowledge required for the transition to professional practice.

(2) The module or partial module examinations of the Master's examination are generally carried out during the course of study following the respective courses of the degree program.

§ Section 24 Subject-specific requirements and type and scope

(1) The special section specifies the type and number of module examinations or partial module examinations in the compulsory and compulsory elective areas that must be completed as a prerequisite for admission to the Master's examination.

(2) Proof of successful completion of the Studium Generale must be provided as a prerequisite for registering for the Master's thesis. Exceptions are defined in the special section of these statutes.

(3) The subject of the module examinations or partial module examinations are the subject areas of the courses assigned to the examination subjects in accordance with the special section.

(4) Notwithstanding paragraph 2, admission to the Master's thesis may also be granted without submission of the Studium Generale after approval by the relevant Examination Board if proof is provided when registering for the Master's thesis that the Studium Generale will be taken as part of a semester abroad after the Master's thesis has been completed. Corresponding proof or agreements

regarding the semester abroad must be submitted to the responsible committee when applying for the Master's thesis.

§ 25 Master's thesis

(1) The Master's thesis is an examination paper. In the Master's thesis, the student should demonstrate that a problem from the subject can be worked on independently using scientific methods within a specified period of time. The topic of the Master's thesis must be submitted at the earliest one semester before the end of the regular semester and at the latest three months after successful completion of all modules.

(2) The Master's thesis is supervised by two examiners, whereby the first examiner must always be a professor at Aalen University. After consultation with the respective supervisor, the Master's thesis can also be completed at an institution outside the university . The examiners are appointed by the relevant examination board.

(3) If professors are not available as second examiners, this can be supervised by lecturers or persons experienced in professional practice and training who themselves have at least the qualification to be determined by the Master's examination in the respective degree program or an equivalent qualification. If the Master's thesis is to be carried out at an institution outside the university, the approval of the chairperson of the relevant examination board is required. In cases of doubt, the member of the Rectorate responsible for teaching shall decide.

(4) The topic, task and scope of the Master's thesis must be limited by the examiner in such a way that the deadline for completing the Master's thesis can be met.

(5) The Master's thesis may also be completed in the form of a group thesis if the individual contribution to be assessed as examination work is clearly distinguishable and assessable on the basis of the specification of sections, page numbers or other objective criteria that enable clear differentiation and fulfills the requirements according to paragraph 1.

(6) The workload for the Master's thesis is generally 29 or 30 CP including colloquium. It must be completed within a maximum of six months. If this is necessary to ensure equal examination conditions or for reasons for which the person being examined is not responsible, the completion time may be extended to a maximum of eight months; the decision on this is made by the Examination Board on the basis of a statement by the supervisor. The topic, task and scope of the Master's thesis must be limited by the supervisor in such a way that the deadline for completing the Master's thesis can be met.

§ 25 a Master's thesis - registration, issue and completion time

(1) The Master's thesis must be registered by the student at the degree program office in due time using the appropriate registration form.

a) The registration form contains the names of the first and second examiners, the topic of the Master's thesis, the supervising examiner's approval of the topic and the student's personal details. The registration form is completed by the degree program with the registration and submission date. Students can express topic requests. There is no entitlement to the consideration of topic requests.

b) Based on the registration form, the Examination Board decides on the registration for the Master's thesis and determines the start and submission date of the Master's thesis.

c) The student will be informed of the decision. The Master's thesis is deemed to have been registered when the Examination Board announces its positive decision.

(2) The topic of the Master's thesis may only be issued if the person to be examined

a) has been enrolled at Aalen University for at least one semester,

b) has provided evidence of the subject-specific requirements in accordance with § 24.

(3) The topic of the Master's thesis must be issued at the earliest one semester before the end of the regular semester and at the latest three months after successful completion of all modules. If the topic is not issued within a period of three months, the relevant examination board shall determine a topic for the Master's thesis and inform the student accordingly.

(4) The Master's thesis must be completed within a maximum of six months. If this is necessary to ensure equal examination conditions or for reasons for which the person being examined is not responsible, the completion time may be extended to a maximum of eight months; the decision on this shall be made by the relevant examination board on the basis of a statement from the supervisor.

§ 26 Submission and assessment

(1) The Master's thesis must be submitted on time to the examination office/secretariat of the degree program or to the respective supervisor; the time of submission must be recorded. In addition to the written copies, the degree program may require the Master's thesis to be submitted in digital form.

(2) Upon submission, a written declaration must be made that the thesis - in the case of a group thesis, the part of the thesis marked accordingly - was written independently and that no sources or aids other than those specified were used.

(3) If the Master's thesis is not completed within the specified processing time, it is graded as "insufficient" (5.0).

(4) The Master's thesis must be assessed by two examiners. One of the examiners must be the supervisor of the Master's thesis. The assessment procedure should not exceed four weeks.

(5) The Master's thesis must be defended before a colloquium. The members of the colloquium are the assessors of the thesis and the other professors of the respective Master's degree program. Members of the university may attend as guests. Following the colloquium, the reviewers determine the grade for the final oral presentation.

(6) The grade is calculated from the arithmetic mean of the grades awarded by the examiners.

(7) The overall grade for the Master's thesis is made up of

80% the grade for the written thesis (including associated practical activities),
20% the grade of the colloquium,

both parts must be passed individually. A failed colloquium can be repeated once if the written thesis is passed.

(8) The Master's thesis can be repeated once if the grade is worse than "sufficient" (4.0); a second repetition is excluded. The issue of a new topic must be applied for in writing to the Chair of the Examination Board within two months of the announcement of the failure. If the application deadline is missed, the right to take the examination expires, unless the person being examined is not responsible for the failure.

§ Section 26 a Oral Master's examination (colloquium)

(1) If provided for in the special part of the respective degree program, the student must take an oral Master's thesis (colloquium) in addition to the Master's thesis. Section 11 (2, 3 and 5) (Registration for admission to module examinations) applies accordingly to admission to the oral Master's examination.

(2) The colloquium must be conducted by two examiners. Notwithstanding sentence one, in justified cases the examination may be conducted by one examiner and one assessor.

(3) The persons to be examined are examined individually. The duration of the oral Master's examination is at least 20 minutes and a maximum of 60 minutes.

(4) Section 12 and Section 13 (4) sentence 2 apply to the conduct of the oral Master's examination using electronic information and communication systems.

§ Section 27 Additional subjects

(1) Students may take further examinations in addition to the modules/module components listed in the special section (additional subjects). The results of the examinations in these subjects are not taken into account when determining the overall grade. Likewise, no credit points are awarded for these subjects. They can be listed on the certificate at the student's request.

(2) In each semester, additional subjects worth a total of 10 ECTS credits may be taken outside the degree program in which the student is enrolled. In justified cases, the examination board of the degree program in which the student is enrolled may approve further additional subjects at the student's request.

(3) Achievements that have been completed outside Aalen University and are not recognized will not be listed as additional subjects on the certificate.

§ 28 Overall result and certificate

(1) The Master's examination is passed if all modules of the Master's examination and any oral Master's examination have been passed and the Master's thesis has been assessed as "sufficient" (4.0).

(2) The overall grade is calculated in accordance with § 16 from the module grades of the Master's examination including the Master's thesis. The weighting is based on the credit points shown in the special section.

(3) In the case of outstanding performance (overall grade of at least 1.3), the overall grade "passed with distinction" is awarded.

(4) As a rule, a certificate of successful completion of the Master's examination is issued within eight weeks of the final examination. All module grades, the topic of the Master's thesis and its grade as well as the overall grade are to be included in the certificate; the grades are to be provided with the decimal value determined in accordance with § 16 as an addition in brackets. If applicable, the field of study and the specializations as well as - upon request - the result of the examinations in the additional subjects (§ 27) and the duration of study required to complete the Master's examination must also be included in the certificate.

(5) The certificate shall bear the date on which the last examination (partial module examination, module examination, Master's thesis, oral Master's thesis) was completed. If the Master's thesis is the last examination completed, the date of submission must be entered. It shall be signed by the Rector and the Dean of the Faculty.

§ 29 Academic degree and Master's certificate

(1) After passing the Master's examination, Aalen University of Applied Sciences - Engineering and Business - awards the following degree, stating the specialization

- in the degree program "International Marketing and Sales" the Master's degree "Master of Arts", short form "M.A."

- in the degree course "Data Management in Product Development and Production" the Master's degree "Master of Science", short form "M.Sc."

- in the degree program "Polymer Technology" the Master's degree "Master of Science", short form "M.Sc."

- in the degree program "Lightweight Construction" the Master's degree "Master of Science", short form "M.Sc."

- in the degree program "Leadership in Industrial Sales and Technology" the Master's degree "Master of Engineering", short form "M.Eng."

- in the degree program "Business Informatics" the Master's degree "Master of Science", short form "M.Sc."

- in the degree program "Business Development (Product Management & Start-up Management" the Master's degree "Master of Arts", short form "M.A."

- in the degree program "Applied Photonics" the Master's degree "Master of Science", short form "M.Sc."

- in the degree program "Machine Learning & Data Analytics " the Master's degree "Master of Science", short form "M.Sc."

- in the degree program "Analytical and Bioanalytical Chemistry" the Master's degree "Master of Science", short form "M.Sc.

- in the degree program "Ophthalmic Optics and Psychophysics" the Master's degree "Master of Science", short form "M.Sc."

- in the degree program "Financial Management" the Master's degree "Master of Arts", short form "M.A."

- in the degree program "Mittelstandsmanagement" the Master's degree "Master of Arts", short form "M.A."

(2) After submission of a certificate of discharge by the university, the Master's certificate with the date of the certificate will be issued at the same time as the transcript. This certifies the award of the Master's degree. The Master's certificate is signed by the Rector and bears the seal of Aalen University - Engineering and Business.

§ 30 Diploma Supplement, Transcript of Records

(1) In addition, the graduate will receive a "Diploma Supplement" in German and English in accordance with the "Diploma Supplement Model" of the European Union/Europarat/Unesco as well as a "Transcript of Records", which contains the essential information about the course content, the course of study and the academic and professional qualifications acquired with the degree as well as the profile of the degree program.

(2) The Diploma Supplement and the Transcript of Records bear the date of the certificate and are signed by the Dean of the Faculty or the Chair of the Examination Board of the degree program.

§ 31 Final failure

(1) The Master's examination is definitively failed if

a) a module examination or a partial module examination of a compulsory or compulsory elective module has not been passed or is deemed not to have been passed in the first repetition and a second repetition in accordance with § 18 has not been applied for within the set deadline or has not been permitted,

b) a module examination or partial module examination of a compulsory or compulsory elective module is not passed or is deemed not to have been passed in a second repetition granted in accordance with § 18,

c) the required ECTS points have not been achieved in the relevant semesters in accordance with the CP limits (minimum number of CP) specified in the special section of the respective degree program,

d) the Master's thesis has not been passed at the second attempt or is deemed to have been failed,

e) if provided for in the Special Section, the oral Master's examination has not been passed at the second attempt or is deemed to have been failed.

(2) If the Master's examination has been definitively failed, a certificate will be issued on request and on presentation of the relevant evidence and the certificate of exmatriculation, which contains the examinations passed (partial module examination, module examinations, Master's thesis, oral Master's examination) and their grades as well as the examinations not yet passed and indicates that the Master's examination has been definitively failed.

§ 32 Invalidity of the Master's examination

(1) If the person being examined has cheated in a module examination or partial module examination and this fact only becomes known after the certificate has been issued, the grade of the module examination or partial module examination can be corrected in accordance with § 20. If necessary, the module examination or partial module examination can be declared as "failed" (5.0) and the Master's examination can be declared as failed. The same applies to the Master's thesis and, if applicable, the oral Master's examination.

(2) If the requirements for taking a module examination or partial module examination were not fulfilled without the person being examined intending to deceive about this, and this fact only becomes known after the certificate has been issued, this deficiency is remedied by passing the module examination or partial module examination. If a module examination was deliberately and wrongfully obtained so that it could be taken, the module examination or partial module examination can be assessed as "failed" (5.0) and the Master's examination can be declared failed. The same applies to the Master's thesis and, if applicable, the oral Master's examination.

(3) The student must be given the opportunity to comment before a decision is made.

(4) The incorrect certificate must be withdrawn and a new one issued if necessary. The "Master's certificate", the "Diploma Supplement" (English and German versions) and the Transcript of Records must also be confiscated together with the incorrect certificate if the Master's examination was declared failed due to cheating. A decision in accordance with paragraph 1 and paragraph 2 sentence 2 is excluded after a period of ten years from the date of issue of the certificate.

V. Section - Miscellaneous

§ Section 33 Inspection of the examination files

(1) Upon request, the examined person shall be granted access to their written examinations, the related expert reports and the examination records; Section 29 of the State Administrative Procedure Act shall remain unaffected.

(2) The date of the inspection is to be agreed between the examiner and the examinee. If several applications for examination inspection have been submitted for an examination, a joint date for examination inspection can be agreed between the examiner and the person concerned.

(3) Examination documents, reports and examination protocols may not be reproduced without the consent of the examiner or examiners.

(4) Inspection is only possible under supervision.

§ Section 34 Retention periods

Examination papers in text form, final theses and the minutes of oral examination procedures are kept for one year. This applies accordingly to examinations that are conducted using electronic information and communication systems.

§ Section 35 General studies

(1) In order to take civic engagement into account, students must choose subjects from Aalen University's "Studium Generale" program within the framework of the curriculum to the extent of one CP (30 hours workload). Courses or activities already completed can be recognized in accordance with the "Guidelines of the Studium Generale" passed by the Senate of Aalen University.

(2) The courses of the Studium Generale are divided into several areas, the contents of which vary from semester to semester.

(3) Student attendance must be verified for each course selected.

(4) Students are required to prepare a comprehensive report on all courses, lectures, seminars, activities and other work completed. The respective internship office decides whether the report has been passed.

(5) Proof of successful completion of the Studium Generale must be provided by the time of registration for the Master's thesis.

(6) Notwithstanding paragraph 5, students may register for the Master's thesis without submitting the Studium Generale if proof is provided when registering for the Master's thesis that the Studium Generale will be taken as part of a semester abroad after the Master's thesis has been completed. Corresponding proof or agreements regarding the semester abroad must be submitted to the Examination Board when applying for the Master's thesis.

(7) Exceptions are defined in the special section.

§ 36 Leave of absence

(1) Upon application, students can be granted leave of absence if they

1. wish to study at a foreign university or language school,
2. are unable to attend a course due to illness and whose illness prevents them from completing the expected coursework,
3. are doing voluntary military service or federal voluntary service,

4. are caring for or looking after their spouse or a relative in a direct line or first-degree relative by marriage who is in need of assistance within the meaning of the Federal Social Assistance Act,
5. are unable to attend a course due to their impending childbirth and the subsequent care of the child,
6. are serving a prison sentence,
7. are taking up a practical activity that serves the purpose of their studies,
8. have other reasons for a leave of absence.

As a rule, the period of leave of absence should not exceed two semesters.

(2) The application for the coming semester must be submitted before the start of the lecture period; in other cases, the leave of absence must be applied for immediately after the reason for the leave of absence has occurred.

(3) A leave of absence in the first semester of a degree program is not permitted unless the student is not responsible for the reason for the leave of absence.

(4) Students on leave of absence do not participate in the self-administration of the university. They are not entitled to attend courses or use university facilities, with the exception of library facilities.

(5) Students on leave of absence are not entitled to take module or partial module examinations.

(6) Students may take leave of absence in accordance with § 3 para. 1 and § 6 para. 1 of the Act for the Protection of Working Mothers (MuSchG) in the version published on June 20, 2002 (BGBl. IS. 2318) in the respective valid version and parental leave in accordance with § 15 para. 1 to 3 of the Federal Parental Allowance and Parental Leave Act of December 5, 2006 (BGBl.IS. 2748) in the respective valid version; they must be granted leave of absence for this purpose upon application. Students on leave of absence in accordance with sentence 1 are entitled to attend courses, complete coursework and examinations and use university facilities. Periods according to sentence 1 are not counted towards the leave of absence according to paragraph 1 sentence 2.

§ Section 37 Electronic communication with students

(1) Results of examinations and coursework are generally announced electronically. The results are deemed to have been announced on the third day after the results are available to the addressee in Aalen University's online student portal.

(2) Other notifications, information and inquiries from the university to students can also be made electronically. These are sent to the students using the e-mail address assigned by the university. The corresponding upload of certificates and notifications is possible in the upload portal students after notification. On the third day after the electronic message was available to the student, access is deemed to have been granted.

B.Special section

§ Section 38 Explanations and abbreviations:

(1) The following data must be listed in the study and examination regulations for all degree programs:

- the allocation of module examinations / module part examinations in the compulsory area to the individual semesters of study,
- the allocation of module examinations / module part examinations in the compulsory elective area to the individual semesters of study,

(2) If the standard curriculum provides for compulsory electives or elective subjects, the student must select enough of the specified subjects to achieve the number of credit points required in the regulations for the degree programs.

(3) The following abbreviations are used in the tables in the special section:

Module, partial performance no.	Number of the module and partial module examination	
Type of course	V = Lecture	In the lectures, the subject matter is presented by the lecturers in the form of regular presentations and, where possible, supported by appropriate teaching materials and the use of multimedia aids. They serve to convey facts and methods.
	E = Excursion	Excursions are illustrative lessons outside the university. They primarily serve to supplement the theoretical knowledge taught and provide an insight into future areas of activity.
	L = Laboratory	Course in which practical, experimental and/or constructive work is carried out to deepen and/or extend the material taught in the associated lectures. skills within the framework of scientific or scientific vocational training are taught
	P = Project	Projects include interdisciplinary or individual subject-related planning and/or realization processes, which are worked on in cooperative forms under the guidance of the lecturer and presented in a paper or presentation followed by a scientific discussion. Characteristic is the largely independent and self-organizing work of the students.
	S = Seminar	Seminars are characterized by the active contribution of the students to the course. The seminar is characterized by intensive interaction between lecturers and students and the development of predominantly new problems using scientific methods alternating between lecture and discussion. The students work independently on longer contributions, present solutions and report on their own or other students' work.

Module, partial performance no.	Module number and partial module examination	
	Ü = Exercise	Exercises serve to supplement and deepen the material taught in

		the lectures using suitable examples. At the same time, students should learn how to apply the knowledge and methods taught in the lectures by working on tasks in an exemplary manner. Short interactions between lecturers and students are common.
	PR = practical course / internships	Practicals are experimental exercises in which students can apply the theoretical knowledge acquired in other courses to specific practical examples and gain knowledge through independent work. They are characterized by the largely independent work of the students, acquisition and deepening of knowledge by working on scientific practical or experimental tasks. Teachers guide the students. Students carry out observations, work and experiments, apply their knowledge and draw scientific conclusions.
	K = Colloquium	The content of a colloquium is a scientific discussion on a specific problem. It serves to supplement the teaching activities through an exchange of experiences with representatives from different areas of society. It also serves to present the results of students' academic work for academic discussion with other students and lecturers.
	EX = Experiment	Students learn to apply their knowledge of literature research, experimental design, data collection and evaluation from the courses Fundamentals, Advanced Statistics and Scientific Work. They are able to review the current state of research on a topic and carry out experimental studies. Results are presented in report form.
	EL = e-learning	E-learning refers to forms of teaching in which the teaching and learning material is offered and used exclusively via electronic media. Interaction between teachers and students can also take place electronically. E-learning courses are generally used to impart factual and methodological knowledge. They can be combined with conventional forms of teaching (blended learning).
	X = not fixed	This type of course depends on the course selected (this only applies to compulsory elective modules, Studium Generale, etc.).
1, 2, 3, 4, 5, 6, 7	Number of semester hours per week (SWS) in the respective semester	
CP	Credit points (ECTS)	

§ 39 International Marketing and Sales degree program (Master of Arts)

I. Preamble - Qualification goals

The Master's degree course in International Marketing and Sales is a **consecutive attendance** course and is designed as a more application-oriented course. It is designed as a full-time, half-time course of study starting in the winter semester. With a standard period of study of three semesters, the last semester is used to complete the Master's thesis. The courses and associated examinations are generally held in English. The language is specified in the module description.

On completion of their studies, graduates are awarded the **degree of Master of Arts in International Marketing and Sales.** This degree is geared towards the needs of manufacturing companies and provides graduates with the core competencies for tasks at the first to third management level. Internationalization and application orientation are at the forefront of the course. Graduates are optimally prepared for their work in sales/purchasing, firstly through the creation of a sound knowledge base and secondly through the language of instruction, English, for which very good knowledge is already a prerequisite for admission.

- Graduates have acquired in-depth knowledge of marketing and sales in the industry. They are able to evaluate and design the core processes from product development to series production.
- Graduates are able to present and defend their research results and complex issues precisely in English, both orally and in writing. They have the ability to persuade and negotiate in an international context, as project work dominates the course.
- Graduates' qualifications are based on the stages of the "product of life cycle". They are able to plan and design the core processes along the value chain. Upon successful completion of the Master's thesis, graduates are able to work markets extremely successfully and independently as marketing and sales professionals. They can independently improve and design processes in the areas of marketing and sales and increase their efficiency.
- Graduates of the program are capable of scientific work due to the high-level projects and case studies carried out as part of the program and a corresponding Master's thesis.
- They are proficient in team building and organizational management in an intercultural environment and are able to act independently and critically because project work in teams is required in courses; often in cooperation with external, international partners from business and science.

II Course structure and scope

(1) General information

a) The Master of Arts in International Marketing and Sales is a full-time course with a standard period of study of three semesters. The last semester is used to complete the Master's thesis.

b) The courses and associated examinations are generally offered in English. The language of the course is specified in the respective module description.

(2) Admission

Admission to the degree program is regulated in separate admission regulations.

The selection committee decides on the additional work to be completed by applicants with a degree of less than 210 credit points in accordance with the admission regulations.

(3) Structure and content

a) The degree program is divided into three parts:
- Compulsory study program comprising 10 modules (5 modules in the 1st semester, 5 modules in the 2nd semester) with 5 CP each,
- Free compulsory elective program, in which in the first and second semesters one module of 5 CP each can be selected from the compulsory elective offer of the degree program or, with the approval of the Examination Board, from the Master's offer of Aalen University. Only modules and courses in English can be selected outside the range of courses offered by the degree program.
- Master's thesis with 30 CP.

b) The modules and courses offered in the compulsory elective program are subject to change. There is no entitlement to attend a specific module or course.

c) The degree program may issue guidelines on the choice of compulsory elective modules by resolution of the Examination Board by means of a notice or announcement in the usual form.

d) The structure of the degree program, the modules, the courses with the number of hours per week per semester and the number of credit points (CP) can be found in the following tables and in the module descriptions of the degree program.

(4) No separate workload has been defined in the curriculum for the Studium Generale, as the corresponding workload is already integrated into the standard course of study.

(5) Master's thesis

The Master's thesis can only be started if at least 255 credit points have been achieved in the previous course of study (Bachelor's and Master's degree program) (85% of the total 300 CP to be achieved).

The degree programme can issue additional guidelines by resolution of the Examination Board by means of a notice or announcement in the usual form, which regulate the content and formal requirements for the Master's thesis as well as questions of procedural organization and assessment.

(6) Exclusion from the degree program

a) The right to take examinations and admission to the degree program expires if the student has not completed all the examinations required for the final examination by the end of the sixth semester after commencement of studies at the latest.

b) The right to take examinations and admission to the degree program shall not expire if the student is not responsible for the failure to meet this deadline. The Examination Board will decide on this at the student's request.

"International Marketing and Sales" - compulsory program						
No.	**Module/** Course	**Type**	**Semester** SWS			**CP**
			1	2	3	
34001	**Research in Business**		**4**			**5**
34101	Research Methods	V, Ü, S, P	4			5
34002	**New Channels and Customers**		**4**			**5**
34102	New Channels and Customers	V, Ü, S, P	4			5
34003	**Quantitative Marketing**		**4**			**5**
34103	Quantitative Marketing	V, Ü, S, P	4			5
34004	**Managerial Economics & Pricing**		**4**			**5**
34104	Managerial Economics & Pricing	V, Ü, S, P	4			5
34005	**Servitization & Digitization**		**4**			**5**
34105	Servitization & Digitization	V, Ü, S, P	4			5
34006	**Qualitative Research in Business**			**4**		**5**
34201	Qualitative Research in Business	V, Ü, S, P		4		5
34007	**Marketing & Sales in New Manufacturing**			**4**		**5**
34202	Marketing & Sales in New Manufacturing	V, Ü, S, P		4		5
34008	**Distribution Law**			**4**		**5**
34203	Distribution Law	V, Ü, S, P		4		5
34009	**Practical Business Software**			**4**		**5**
34204	Practical Business Software	V, Ü, S, P		4		5
34010	**Total Customer Management**			**4**		**5**
34205	Total Customer Management	V, Ü, S, P		4		5
	Number of SWS		**20**	**20**		
	Number of CP		**25**	**25**		**50**
	Number of exams		**5**	**5**		

"International Marketing and Sales" Compulsory elective area - offer of the degree program						
No.	**Module/** Course	**Type**	**Semester** SWS			**CP**
			1	2	3	
34011	**Persuasion & Negotiation**		**4**			**5**
34106	Persuasion & Negotiation	V, Ü, S, P	4			5
34012	**International Economics & Markets**			**4**		**5**
34206	International Economics & Markets	V, Ü, S, P		4		5
	Number of SWS		**4**	**4**		
	Number of CP		**5**	**5**		**10**
	Number of exams		**1**	**1**		

"International Marketing and Sales" - Additional elective area						
No.	**Module/** Course	**Type**	**Semester** SWS			**CP**
			1	2	3	
34013	**Elective module 1**					**5**
34107	Elective module 1 (Subjects from the compulsory elective area of the degree program or from the Master's program at Aalen University after approval by the PA)	V, Ü, S, P	X			5
34014	**Elective module 2**					**5**
34207	Elective module 2 (Subjects from the compulsory elective area of the degree program or from the Master's program at Aalen University after approval by the PA)	V, Ü, S, P		X		5
	Number of SWS					
	Number of CP		**5**	**5**		**10**
	Number of examinations		**1 (WB)**	**1 (WB)**		

Master's thesis						
No.	**Module/** Course	**Type**	**Semester** SWS			**CP**
			1	2	3	
9999	**Master thesis**				**X**	**30**
9999	Written Master's thesis				X	30
9998	Master's thesis colloquium				X	
	Total number of SWS		**20 + WB***	**20 + WB**		
	Total number of CP		**30**	**30**	**30**	**90**
	Total number of examinations		**5+ 1 (WB)**	**5+ 1 (WB)**	**MA**	**14**

*WB = elective area/compulsory elective area, MA = Master's thesis

§ 40 Master's degree program Data Management in Product Development and Production (MDP)

I - Preamble - Qualification goals

After successfully completing the course, graduates will be able to evaluate and analyze the relationships between digital data from product development and machine data from manufacturing and production technology, taking into account quality-relevant specifications and sensor-based measurements, in order to develop an understanding of the virtual production model. This competence enables him/her to design and optimize a suitable virtual production model on the basis of existing requirements.

The graduate is proficient in the interpretation of raw data, which is primarily sensor-based, with the aim of generating the basis for decision-making, which is used for predictive processes such as plant maintenance. To this end, the graduate possesses methodological knowledge for mastering complex interrelationships and the ability to apply the knowledge acquired in this Master's degree program.

They will be able to derive prediction models from the available data by recording the data generated during product development, production and assembly, mapping it in a data model, classifying it and linking it with each other in a meaningful way using mathematical methods. The prediction model is suitable for determining key figures for tool wear, for machine availability and thus for productivity analysis.

The graduate acquires the knowledge to transfer the information depicted in the virtual production model into real structures by analysing and categorizing mutual dependencies. In this way, they create the transfer between the virtual environment and the real structure with the aim of being able to predict the system behavior both on a virtual level and on a real level.

He is able to assess which measures are necessary to ensure data security (cyber security) by comparing and evaluating different IT infrastructures with the aim of deciding which security level is required for which applications.

With regard to data management, the graduate has the competence to evaluate structured systems for data storage, analysis and processing in order to assess their structure for the application-specific benefit. This knowledge enables them to develop and evaluate digital system architectures on the basis of analytical methods with the aim of mapping and interpreting logical relationships.

Graduates are able to select and efficiently apply the approaches learned during their studies in a task-specific and goal-oriented manner. In doing so, he/she proceeds in a team-oriented manner in finding solutions to tasks by differentiating task contents from one another and defining, pursuing and coordinating their goal-oriented processing transparently for others in regular coordination meetings.

The objectives associated with the Studium Generale, such as promoting the holistic education of students and creating a solid theoretical foundation for a successful professional career, are achieved in particular through project work and the content and methods of project management. The partly seminar-based and project-based work in the other modules also contributes to personal development.

Students acquire fundamental knowledge in the areas of data analysis and data management against the background of product development and production. This qualifies them for a wide

range of employment opportunities in business and science and provides them with a useful foundation throughout their careers. In addition, the diverse project activities during their studies ensure that they put the basic qualifications for an application field into practice and are thus optimally prepared for a career in this application domain. Students are able to analyze large amounts of data and, depending on their focus, work in decision-support activities in business or science.

Examples of such activities are

- Optimization of business functions (e.g. product development, production planning, networking of production facilities, production control, logistics planning, market research, etc.),
- answering social and political questions (e.g. energy planning, transport planning, water management) and in the scientific field (evaluation of experiments, carrying out simulations).

II - Program structure and requirements for admission to the program

(1) The Master's degree course in Product Development and Production has a standard duration of 3 semesters with a total of 48 semester hours per week. In the first two semesters, lectures, projects, presentations and self-study lay the technical foundations for the Master's thesis, which is scheduled for the third semester.

(2) The duration and structure of the course, the courses with weekly semester hours, modules with examinations, as well as their weighting for grading and corresponding credit points are shown in the table below.

(3) No separate workload has been defined in the curriculum for the Studium Generale, as the corresponding workload is already integrated in the standard course of study in modules 38006 Project I and 38012 Project II.

(4) Exclusion from studies:

a) The right to take examinations and admission to the degree program expires

1. if the student has not completed all the examinations required for the final examination by the end of the sixth semester after the start of the course at the latest,
2. if the student has not earned at least 15 credit points by the end of the first semester.

b) The right to take examinations and admission to the degree program does not expire if the student is not responsible for not reaching this deadline or not reaching the CP limit. The examination board of the degree program will decide on this at the student's request.

Curriculum Master MDP

No.	**Module /** Courses	Type	Semester hours per week / semester			CP
			1.	2.	3.	

38001	**Digital product development**					**5**
38101	Processes and data of digital product development	V	2			5
38102	Product data management laboratory	L	2			
38002	**Data models production engineering**					**5**
38103	Data models in production engineering	V,P	4			5
38003	**Data models sensor/measurement technology**					**5**
38104	Data models sensor technology	V,Ü		2		5
38105	Data models measurement technology	V,Ü		2		
38004	**Big Data & Predictive Analytics**					**5**
38106	Big Data & Predictive Analytics	V,L	4			5
38005	**Networking of production systems**					**5**
38107	Networking of production systems	V,Ü	4			5
38006	**Project I**					**5**
38108	Project I	P	4			5
38007	**Machine Learning**					**5**
38201	Machine Learning	V,Ü		4		5
38008	**Digital Twin/CP-Factory**					**5**
38202	Digital Twin	L,P		2		5
38203	CP-Factory	L,P		2		
38009	**Data security/cyber security**					**5**
38204	Data security/cyber security	V,Ü		4		5
38010	**Databases/Data Transformation/CAx**					**5**
38205	Databases/Data Transformation/CAx	V,Ü	4			5

No.	**Module /** Courses	Type	Semester hours per week / semester			CP
			1.	2.	3.	

38011	**Digital transformation and Industry 4.0**					**5**
38206	Digital transformation and Industry 4.0	V,Ü		4		5
38012	**Project II**					**5**
38208	Project II	P		4		5
9999	**Master thesis**				X	**30**
	SWS Total		24	24		
	CP Total		30	30	30	
	Exams Total		6	6	MA*	

*MA=Master's thesis

§ 41 Master Polymer Technology (PTC)

I - Preamble - Qualification goals

The Master's degree program in Polymer Technology deals scientifically with the field of polymer technology.

The content of the Master's degree course is characterized by the in-depth engineering approach within the modules. In terms of content, complex physical relationships, e.g. in polymer physics, rheology, process technology or polymer analytics, which are based on an in-depth mathematical description (e.g. differential equations of state, tensor calculus) are demonstrated. This requires knowledge of experimental physics, mathematics, thermodynamics and fluid mechanics. This allows a broad target group of applicants to be addressed.

The scientific specialization distinguishes the Master's degree course in Polymer Technology from the Bachelor's degree course in Polymer Technology.

Building on the level of a technical Bachelor's degree course (in particular the Bachelor's degree course in Polymer Technology), students on the Master's degree course in Polymer Technology also acquire the following skills:

- Students develop a high level of abstraction skills.
- They are able to optimize existing processes and procedures based on the process and testing technology lectures and to develop new ones. The scientific tools acquired in the Bachelor's program are thus further deepened.
- Students from related Bachelor's degree courses must work on individual knowledge deficits in self-study.
- A high degree of independence is required through laboratories and simulation exercises.
- Students are able to plan, carry out and evaluate experiments largely independently. This approach is clearly different from the Bachelor's level.
- Scientific terminology is professionalized in the discussion of experimental results, i.e. students must, among other things, propose, present, argue and defend independent experimental evaluation strategies.

The Master's degree course therefore teaches knowledge and skills that enable graduates to analyze and present technical plastics issues independently and as part of a team, draw conclusions and develop new solutions.

Graduates are thus able to investigate and evaluate complicated engineering issues and problems in projects, both independently and as a member of an international team, using modern simulation techniques, among other things, and to contribute to improvements and innovations through possible solutions.

Graduates of the scientific Master's degree program in Polymer Technology have acquired in-depth specialist knowledge in the entire field of plastics technology in both English and German. Students are able to systematically analyze complex plastics technology issues, develop problem-solving strategies and thus work out possible solutions. They are able to scientifically justify and represent these to team members, superiors and experts. You will be able to carry out projects independently and on your own responsibility.

Successful completion of the Master's degree program qualifies students for an engineering career, particularly in the field of plastics technology, which is an engineering discipline in its own right and an integral part of mechanical engineering, automotive and aerospace engineering, medical and environmental technology as well as the consumer goods and sports industries.

Graduates typically work in plastics engineering in the fields of materials development, product development and simulation, processing technology, testing technology, testing, quality assurance, damage analysis, process development, production and recycling in all areas of industry and science with plastics engineering requirements.

The ability to engage in civil society is anchored in the "Intercultural Communication" module. Here, students acquire intercultural skills, soft skills and interdisciplinary skills. Among other things, graduates are able to discuss socio-cultural issues and develop intercultural sensitivity.

II - Program structure and scope

(1) The Faculty of Mechanical Engineering/Materials Technology offers a Master of Science Polymer Technology for students with a Bachelor's/Diploma degree. The Master's program comprises a total of 3 semesters with a total of 46-52 semester hours per week.

(2) Participation in at least 2 excursions is compulsory.

(3) The duration and structure of the course, the courses with semester hours per week, modules with examinations, as well as their weighting for grading and corresponding credit points (CP) are shown in the table below.

(4) Students can take examinations in both German and English. Exceptions to this are the written examinations in the "Intercultural Communication" module, which must be taken in the chosen language.

(5) No separate workload has been defined in the curriculum for the Studium Generale, as the corresponding workload is already integrated in the standard course of study in module 14007 "Intercultural Communication" with the treatment of socio-political and socio-cultural topics.

(6) Master's thesis

The regulations of §§ 23 ff of these statutes apply.

The Master's thesis must be assessed by two examiners. One of the examiners must be the supervisor of the Master's thesis. External supervisors may not be appointed as first assessors.

(7) The Master's certificate and the Master's diploma are issued in German. In addition, the Diploma Supplement and the Transcript of Records are issued in German and English.

(8) The duration of the entire course of study, including the Master's thesis, is a maximum of 6 semesters. If the maximum duration is exceeded, admission to the program will be revoked. Furthermore, admission and the right to participate in examinations expires if the student has achieved less than 15 ECTS credits after the first semester of study and less than 40 ECTS credits after the second semester of study, unless the student is not responsible for not achieving the minimum value

Curriculum: Master of Science in Polymer Technology

No.	Module/ Course	Type	Semester SWS			CP
			WS	SS	WS/SS	
14001	**Polymer Materials**				Master Thesis	**5**
14101	Polymer Materials	V	4			5
14002	**Polymer Testing**					**5**
14102	Polymer Testing	V, Ü	2			5
14103	Polymer Testing Lab	L	2			
14003	**Advanced Polymer Processing - Extrusion**					**5**
14104	Extrusion Technology	V, Ü	2			5
14105	Extrusion Lab	L	2			
14004	**Polymer Physics and Rheology**					**5**
14106	Polymer Physics	V, Ü	2			5
14107	Advanced Rheology	V, Ü	2			
14005	**Advanced Polymer Processing - Injection Molding**					**5**
14108	Injection Molding Advanced Technologies	V, Ü	2			5
14109	Injection Moulding Lab	L	2			
14006	**Polymer Design and Mould Design**					**5**
14110	Polymer Design	V, Ü	2			5
14111	Mould Design	V, EXERCISE	2			
14007	**Intercultural Communication***					**5**
14201	Intercultural Communication - English	V, Ü		4		5
14202	Intercultural Communication - German	V, EXERCISE		8		5
14008	**Multi Materials Manufacturing**					**5**
14203	Multilayer Technology	V, Ü, L		2		5
14204	Design of Experiments DOE	V, Ü, L		2		
14009	**Polymer Thermal Analysis**					**5**
14205	Thermal Analysis Methods	V, Ü		2		5
14206	Thermal Analysis Lab	L		2		
14010	**Advanced Process Simulation**					**5**
14207	Process Simulation	V, Ü		2		5
14208	Process Simulation Lab	L		2		

* Students whose native language is German must choose subject 14201.

* Students whose native language is not German must choose subject 14202.

No.	Module/ Course	Type	Semester SWS			CP
			WS	SS	WS/SS	
	Two Obligatory Modules (two of ten)					
14801	**Advanced Mould Design**				Master Thesis	**5**
14301	Advanced Mould Design	V, Ü		2		5
14302	CAD Mould Design	L		2		
14802	**Modeling and Control**					**5**
14303	Material Modeling	V, Ü		2		5
14304	Control Engineering	V, Ü		2		
14803	**Scientific Project**					**5**
14305	Scientific Project	L		2		5
14804	**Polymers in Application**					**5**
14306	Polymers in Application	V, Ü		4		5
14805	**Lightweight construction**					**5**
14307	Composites	V,Ü		4		5
14807	**Structural Mechanics**					
14309	Structural Mechanics	V, Ü		4		5
14808	**Robotics**					
14310	Robotics	V		4		5
14809	**Product development**					
14311	Digital product development and production	V		2		5
14312	Digital product creation and manufacturing - Lab	L, P		2		
14810	**Physical modeling**					
14313	Physical modeling	V		4		5
14811	**Structure calculation**					
14314	FEM - Topology Optimization	V, Ü, P		4		5
14999	**Master thesis**				X	**30**
9999	Master thesis	P			X	30
	Total SWS		**24**	**22-28**		
	Total CP		**30**	**30**	**30**	**90**
	Total examinations		**6**	**4 + 2 WP**	**MA**	

* WP = compulsory elective area, MA = Master's thesis,

§ 42 Lightweight Construction (LBM) degree program

I - Preamble - Qualification goals

The Master's degree program in Lightweight Construction deals scientifically with the field of technical lightweight construction, which includes the areas of design, development, layout and production of lightweight, monolithic and hybrid structures.

Building on the level of a technical Bachelor's degree course, students on the Master's degree course in Lightweight Construction acquire additional, in-depth specialist skills which expand the student's own engineering expertise and promote their scientific knowledge.

Graduates of the Master's degree program in Lightweight Construction have acquired the following skills:

- Based on their acquired theoretical and technical mathematical and structural-mechanical expertise and with the help of simulation techniques, they are able to investigate and evaluate complicated technical issues and problems and thereby develop targeted lightweight construction solutions in order to develop innovative, lightweight products.
- Graduates are able to make professional decisions based on the knowledge they have acquired and develop efficient solutions through targeted construction methods, material selection and weight reduction, and can also justify and represent these scientifically to team members, superiors and experts. They can apply special engineering knowledge and skills related to lightweight construction, including with regard to sustainability, and have a high level of abstraction skills.
- They are able to differentiate, evaluate and further develop manufacturing processes in the field of lightweight construction with regard to their advantages and disadvantages. They can therefore make well-founded decisions within the design process.
- Thanks to their knowledge of lightweight construction materials and composites, structural mechanics and simulation skills, graduates are able to analyze key interactions in relation to lightweight construction and thus develop problem-solving strategies for structural lightweight construction.
- A high degree of independence is demanded through integrated laboratories, e.g. in the field of additive manufacturing, as well as through simulation exercises.
- Graduates are able to plan and evaluate tasks and experiments largely independently. This approach is clearly different from the Bachelor's level.
- By discussing results, graduates professionalize their scientific terminology. They are also able to propose and discuss independent evaluation strategies.
- They are able to analyze lightweight construction issues independently and as part of a team, draw conclusions, develop new solutions and discuss them controversially.

Thanks to their scientific training, they can take on professional engineering activities in connection with lightweight construction issues in the areas of development, design, production and testing, for example in the automotive and aviation industries and in mechanical engineering.

The ability to engage in civil society is anchored in the module "Intercultural Communication". Here, students acquire intercultural skills, soft skills and interdisciplinary skills. Among other things, graduates are able to discuss socio-cultural issues and develop intercultural sensitivity.

II - Program structure and scope

(1) The Faculty of Mechanical Engineering/Materials Engineering offers a Master of Science in Lightweight Construction for students with a Bachelor's/Diploma degree. The number of places is limited.

(2) Some lectures are offered in English.

(3) Admission to the Lightweight Construction degree program requires a Bachelor's/Diploma degree in a degree program with a mechanical engineering or production engineering focus, usually with 210 ECTS credits, and is regulated by its own admission regulations.

(4) The standard duration of study for the Master's degree course in Lightweight Construction is 3 semesters.

(5) The total number of courses required for successful completion of the degree program is 90 ECTS credits.

(6) The duration and structure of the course, modules, courses with the number of semester hours per week and the number of ECTS credits (CP) can be found in the following table and in the course module handbook. The elective subject is selected from the Master's degree program of Aalen University and requires the approval of the head of the examination office.

(7) No separate workload has been defined in the curriculum for the Studium Generale, as the corresponding workload is already integrated in the standard course of study in module 27006 "Intercultural Communication" with the treatment of socio-political and socio-cultural topics.

(8) The criteria for passing the examination can be found in the module/course descriptions.

(9) The duration of the entire degree program, including the Master's thesis, is a maximum of 6 semesters. If the maximum duration is exceeded, admission to the degree program expires. Furthermore, admission and the right to participate in examinations expires if the student has achieved less than 15 ECTS credits after the first semester of study and less than 40 ECTS credits after the second semester of study, unless the student is not responsible for not achieving the minimum value.

Curriculum of the Master of Science in Lightweight Engineering degree program

No.	**Module /** Course	Type	Semester (SWS)			CP (ECTS points)
			WS (winter semester)	**summer semester** (summer semester)	**3.** semester	
	Courses in the winter semester					
27001	**Finite elements**					**5**
27101	FEM	V,Ü	4			5
27002	**Engineering Materials**					**5**
27102	Engineering Materials	V	4			5
27003	**Polymeric Materials**					**5**
27103	Polymer Materials	V	4			5
27005	**Production of multi-material composites**					**5**
27105	Injection Molding Advanced Technologies	V, Ü	2			5
27106	Injection Moulding Lab	V, L	2			
27006	**Intercultural Communication**					**5**
27107	Intercultural Communication - English	V, Ü	4			5
27010	**Designing technical structures**					**5**
27112	Industrial Design Engineering	V, Ü	4			5
	Courses in the summer semester					
27004	**Cast materials and lightweight construction with simulation**					**5**
27104	Cast materials and lightweight construction with simulation	V, Ü, L		4		5
27007	**Structural mechanics**					**5**
27108	Structural Mechanics	V, Ü		4		5
27009	**Generative manufacturing**					**5**
27111	Additive manufacturing processes	V		2		5

27120	Additive manufacturing laboratory	L,P		2		

No.	**Module /** Course	Type	Semester (SWS)			CP (ECTS points)
			WS (winter semester)	summer semester (summer semester)	3. semester	
27011	**Engineering with lightweight materials**					**5**
27113	Polymers in Application	V, Ü		4		5
27012	**Lightweight construction and construction methods**					**5**
27114	Composites	V, Ü		4		5
	Total SWS		24	20		
	Total CP		30	25		
	Total exams		6	5		

No.	**Module /** Course	Type	Semester (SWS)			CP (ECTS points)
			WS (winter semester)	summer semester (summer semester)	3. semester	
	Compulsory elective area					
27008	**Elective module (1 module out of 5)**					**5**
27013	**Connection technology**					**5**
27109	Joining technology	V		3		5
27110	Bonding technology	V		2		
27014	**Structural calculation**					**5**
27115	FEM - Topology Optimization	V,Ü		4		5

27015	**Physical Modeling**					**5**
27116	Physical modeling	V,P		4		5

No.	**Module /** Course	Type	Semester of study (SWS)			CP (ECTS points)
			WS (winter semester)	summer semester (summer semester)	3. semester	
27016	**Lightweight construction study project**					**5**
27118	Scientific-technical project	L		2		5
27017	**Elective subject (after approval)**					**5**
27119	Lecture from the Master's program of the HS Aalen	V		4		5
9999	**Master's thesis**					
9999	Master thesis				x	30
	Total SWS		24	20 + WP*		
	Total CP		30	25 + 5 WP	30	90
	Total exams		6	5 + 1 WP	MA	

*WP = compulsory elective area, MA = Master's thesis

§ 43 Master Leadership in Industrial Sales and Technology

I - Preamble - Qualification goals

Graduates of the Master's degree program "Leadership Industrial Sales and Technology" (IST) are prepared to perform sales and consulting-related management tasks in connection with complex services requiring explanation, particularly in international technical sales, marketing and service and beyond.

The degree program is interdisciplinary and integrates business and technical areas of expertise in particular. In addition to broadening/deepening technical knowledge, students are trained in the understanding and application of management tasks. With this interdisciplinary degree program, graduates have expanded their management know-how and essential soft skills. The teaching of leadership and management skills prepares students for a successful management position in an international environment.

Typical areas of activity for graduates are accordingly:

Managing Director Sales, Head of Sales, Sales Manager, Regional / Area Manager, Key Account Manager, Manager Business Development, Marketing Manager, Product Manager, Channel Manager, Service Manager, Sales Engineer, Sales Engineer etc. in field or office sales, Project Manager, Project Manager, Consultant etc. in technology or service-oriented organizational units.

The following qualifications are particularly taught in the Leadership in Industrial Sales and Technology degree program:

Interdisciplinary and analytical, forward-looking thinking, planning and action:
Graduates are able to independently apply and further develop subject-specific methods and instruments for leadership, guidance, organization and motivation.
They are able to independently prepare, help shape and represent decisions and thus successfully manage business relationships with stakeholders on a long-term basis, particularly in an interface-oriented manner.

Negotiate, market and sell complex services in an advisory capacity:
Graduates are able to develop and discuss strategies and tactics for the sales and marketing of technically sophisticated products and services. They know and understand essential methods, instruments and tools from sales management and marketing and are able to apply these accordingly in their professional life.

Technical and engineering knowledge:
Students are able to think and act in systems beyond areas of technology. Graduates understand processes of performance and value development. They are able to identify and develop products and services in a life cycle-specific manner. They use information technology support options and order and project management.

Ability to work scientifically and communicate effectively:
Graduates have acquired the ability to work independently, autonomously, purposefully and problem-oriented by means of case studies, projects and Master's theses.
They are able to work independently on technical and economic problems, draw conclusions and present

results. They also have strong communication skills: Preparing information and communicating it in a media-supported manner for specific target groups - using linguistically adapted vocabulary.

Ability to engage in civil society:
The ability to engage in civil society is anchored in the Studium Generale. Aalen University implements the requirements of the Bologna Process by integrating the Studium Generale into the course of study. By participating in the Studium Generale, students acquire additional soft skills and interdisciplinary competencies that are essential for their future careers. There are many different types of Studium Generale events, including public lectures, seminars, activities in social institutions and voluntary work on committees, which enable graduates to discuss current and historical topics and develop an understanding of different perspectives.

II - Program structure and scope

(1) The Faculty of Mechanical/Materials Engineering offers a Master of Engineering in Leadership in Industrial Sales and Technology for Bachelor students who have achieved an above-average degree. The number of study places is limited and access is regulated by admission regulations.

(2) Eligibility for admission

Admission is governed by the regulations of the relevant selection statutes.

(3) The Master's degree course in Leadership in Industrial Sales and Technology comprises three semesters. The duration of the entire course, including the Master's thesis, is a maximum of six semesters. If the maximum duration is exceeded, admission to the program is terminated by exclusion, unless the student is not responsible for exceeding the deadline. With regard to the regulations for students with a Bachelor's degree of less than 210 CP, please refer to the admission regulations.

(4) Compulsory elective area:

a) A technical compulsory elective area of at least 15 CP and a supplementary compulsory elective area (technical / economic) of at least 15 CP must be taken. The total number of courses from all compulsory elective modules required for successful completion of the degree program is at least 30 ECTS credits.

b) In the compulsory technical elective area, at least one elective module (at least 5 CP) must be taken in English.

c) In addition, at least one elective module (at least 5 CP) from the compulsory elective areas "compulsory technical electives" or "profiling electives" must be taken in English.

d) The three technical and three profiling elective modules must be selected by the student from the modules offered in the current semester. In the event of a low selection, the degree program reserves the right not to offer compulsory elective modules. Over a period of one year, at least three technical elective modules are offered by the faculty and three elective modules by the degree program.

e) Students choose modules with at least 5 CP from the compulsory elective modules offered by the degree program. In addition, modules from other Master's degree programs at the university as well as other universities can be selected upon application and approval by the head of the examination office.

f) At the beginning of each semester, the degree program publishes a list of possible compulsory elective modules and publishes it in the relevant media. The examinations in the compulsory elective modules of the degree program as well as courses from the Master's courses offered by Aalen University or other universities must be approved by the head of

the examination office of the degree program at and registered by the student via manual registration within the examination registration period. An examination that is not taken will not be assessed as a whole.

g) If more elective modules are passed than required, the best option will be taken into account when calculating the final grade. A different calculation may be made at the student's request.

(5) The duration and structure of the degree program, courses with semester hours per week, module examinations, their weighting for the grade calculation and the number of credit points can be found in the table below or in the module handbook for the degree program.

(6) At least 40 ECTS credits from this Master's degree program are required to register for the Master's thesis.

(7) Admission and the right to participate in examinations expires if the student has achieved a total of less than 45 from this Master's degree program after the 2nd semester.

(8) Subjects that the student has not registered as compulsory electives can be registered as additional subjects. They can be noted on the certificate as additional subjects at the student's request. They cannot be used to determine CP and cannot be counted towards the above-mentioned CP minima.

(9) The courses are offered in German and/or English. The selection of at least one compulsory technical elective module in English ensures that at least 30 CP (at least half of the modules) must be taken in English.

Curriculum Leadership in Industrial Sales and Technology

Compulsory modules						
No.	**Module/** Course	**Type**	**Semester** SWS			**CP**
			1	2	3	
Leadership and Management						
23010	**Structuring and Leading International Sales Teams (Organizing and Leading International Sales Teams)**					**5**
23101	Leading International Sales Teams	V	2			5
23102	Structuring International Sales Teams	V	2			
23011	**Business Strategy (corporate strategy)**					**5**
23111	Business Strategy	V	4			5
23012	**International Finance (International Finance)**					**5**
23121	International Finance	V		4		5
Sales and Marketing Management						
23020	**Advanced Principles of Marketing Strategy (Marketing Strategy for Advanced Students)**					**5**
23201	Advanced Principles of Marketing Strategy	V		4		5
23021	**Strategic Sales Management in Technology Companies (Strategic Sales Management in Technology Companies)**					**5**
23211	Strategic Sales Management	V Ü S	4			5
23022	**Sales Management Practices (Sales Management and Controlling)**					**5**
23221	Executing Sales Management Practices	V		4		5
	Total SWS		12	12	0	
	Total CP		15	15	0	
	Total exams		3	3	0	

Compulsory elective area						
No.	**Module/** Course	**Type**	**Semester** SWS			**CP**
			1	2	3	
Compulsory technical elective area						
23031	**Technical elective I**			**X**		**5**
23032	**Technical elective II**			**X**		**5**
23033	**Technical elective III**		**X**			**5**
Compulsory technical electives can be taken from the courses offered in the degree program or other Master's courses at Aalen University or other universities. A total of 10 of the 15 CP must be chosen from the courses offered by Aalen University. The selected compulsory elective modules must be approved by the Chair of the Examination Board.						
No.	**Module/** Course	**Type**	**Semester** SWS			**CP**
			1	2	3	
Electives						
23096	**Elective IV**		**X**			**5**
23097	**Elective V**		**X**			**5**
23098	**Elective VII**			**X**		**5**
Compulsory electives can be taken from the courses offered in the degree program or other Master's courses at Aalen University or other universities. A total of 10 of the 15 CP must be chosen from the courses offered by Aalen University. The selected compulsory elective modules must be approved by the Chair of the Examination Board.						
23999	**General Studies**				X	1
9999	**Master's thesis**				x	29
	Master's thesis					
	Colloquium					
	Total SWS		16 + WB *	20 + WB	0	
	Total CP		20 + 10 WB	25 + 5 WB	30	
	Total exams		4 + WB	5 + WB	MA+ SG*	

*WB = elective area, MA=Master's thesis, SG=Studium Generale

§ 44 Master of Information Systems (WIC)

I - Preamble - Qualification goals

The consecutive Master's degree program in Information Systems combines knowledge of business administration, computer science and other disciplines such as quantitative methods and statistics in order to use this interdisciplinary understanding to provide answers to questions about competitive business models and the underlying technologies.

This interdisciplinary knowledge enables graduates to analyse, develop and evaluate information systems, associated data and underlying processes in and between organizations. This enables them to better understand the strategies, structures, functions and processes of companies and corporate networks and to organize them for the future.
The synergetic interaction of research, teaching and practice is a central component of the interdisciplinary degree program in Business Information Systems, which thus addresses all relevant requirements of a still highly attractive job market in the field of Business Information Systems. Graduates can therefore be employed in a variety of business areas and sectors. They take on a kind of "translation function" between the business world of thought and language on the one hand, and a technically anchored system world on the other.

The consecutive Master's degree course in Business Information Systems focuses on the interlinking of business-relevant aspects and aspects of information technology and processing. The focus is on "Big Data", i.e. the analysis and interpretation of large amounts of data, which represents a challenge in every medium-sized and larger company.

However, "big data" is no longer an issue that only affects information technology. For more and more companies and organizations, the ability to process and analyse constantly growing volumes of data has become a high priority. The reason for this is the increasing importance of this data and its impact on business processes in a global economy and its participants.
Big data can also provide insights into the redesign of existing processes, existing organizations, entire industries and even social issues. This is why the interlinking of business aspects with aspects of computer science is a decisive factor for the Master's degree in Information Systems. Graduates can act as interdisciplinary "interpreters" who are able to mediate between highly specialized programmers, commercial requirements and the needs of company management in a solution-oriented manner.

Graduates are able to raise and answer questions from business administration, computer science and business informatics in the narrower sense and to defend these in an argumentative manner.
Graduates can analyze business requirements and assess the benefits of certain methods and IT tools, as well as argue appropriately and convincingly for strategies to be adopted to solve the challenges in business practice.
Graduates are also able to develop their own areas of interest and work focus against the background of professional projects and to further develop their own skills independently. They are able to reflect on current professional challenges against the background of the course content covered in exchange with their fellow students and conduct interdisciplinary and cross-disciplinary discussions. In groups, they can assume responsibility for complex tasks and represent the group results achieved in a technically competent and argumentative manner.

The Master's degree program in Information Systems (consecutive) also lays the foundation for graduates to have the opportunity to go into science and research and contribute to innovations and further developments in information systems - especially in the area of "Big Data" - for example as part of a doctoral thesis. Graduates are qualified to work scientifically on the basis of the projects, presentations and case studies carried out, as well as a corresponding Master's thesis.

II - Course structure and scope

(1) The regulations of the general part of the study and examination regulations apply to the Master's degree program, insofar as they are not regulated differently by § 44.

(2) Admission to the Master's degree course in Business Information Systems requires a Bachelor's degree with, as a rule, 210 CP and is regulated by its own admission regulations.

(3) The standard course of study for students on the Master's in Information Systems comprises three semesters. Please refer to the admission regulations for special regulations for students with a Bachelor's degree of less than 210 CP.

(4) The total number of courses required to successfully complete the degree program is 90 ECTS credits. With regard to the regulations for students with a Bachelor's degree of less than 210 CP, please refer to the admission regulations.

(5) All examinations of the compulsory modules and the Master's thesis must be passed in accordance with the table below. Failure to take an examination is equivalent to an unexcused deregistration and will be assessed with 5.0. The criteria for passing the examination can be found in the module/course descriptions valid for the respective semester.

(6) The duration and structure of the degree program, courses with semester hours per week, module examinations, their weighting for grading and the number of credit points can be found in the table below or in the module handbook for the degree program.

(7) The prerequisite for registering for the Master's thesis is at least 45 ECTS credits as part of the Master's degree program.

(8) Additional exclusion from the degree program: Admission and the right to participate in examinations expires if

a) the student has achieved less than 15 CP from this Master's degree program after the 1st semester, or if

b) the student has achieved a total of less than 40 from this Master's program after the 2nd semester.

Curriculum

No.	Compulsory area Modules / Courses	Type	Semester of study SWS			CP
			1	2	3	

35001	**Business Analytics: System Development**					**5**
35101	Business Analytics: System Development	V,Ü,S,P	4			5
35002	**IT compliance & governance**					**5**
35102	IT Compliance & Governance	V,Ü,S,P	4			5
35003	**Database Technologies**					**5**
35103	Database Technologies	V,Ü,S,P, L	4			5
35004	**Data Mining**					**5**
35104	Text Mining & Time Series Analysis	V,Ü,S,P	4			**5**
35005	**Quantitative methods**					**5**
35105	Quantitative Methods	V,Ü,S,P	4			5
35006	**International Project Management**					**5**
35106	International Project Project Management	V,Ü,S,P	4			5
35007	**Business analytics (methods)**					**5**
35201	Business Analytics (Methods)	V,Ü,S,P		4		5
35008	**Visual Analytics**					**5**
35202	Visual Analytics	V,Ü,S,P		4		5
35009	**Applied Analytics**					**5**
35203	Applied Analytics	V,Ü,S,P		4		5
35010	**Predictive analytics**					**5**
35204	Machine Learning & Predictive Modeling	V,Ü,S,P		4		5
35011	**Entrepreneurship**					**5**
35205	Entrepreneurship	V,Ü,S,P		4		5
35012	**Corporate strategy**					**5**
35206	Corporate Strategy	V,Ü,S,P		4		5

No.	**Compulsory area Modules / Courses**	**Type**	**Semester SWS**			CP
			1	**2**	**3**	
9999	**Master thesis**				**X**	**29**

35999	**General studies**				**X**	**1**
	Total SWS		**24**	**24**		
	Total CP		**30**	**30**	**30**	**90**
	Total exams		**6**	**6**	**MA + SG***	

*MA=Master's thesis, SG=Studium Generale

§ 45 Business Development (Product Management & Start-up Management)

I - Preamble - Qualification goals

The **consecutive Master's in Business Development** is a full-time course with a standard period of study of three semesters and offers above-average qualified graduates of technical and economic bachelor's courses a specialization in the field of business development. The two specializations Product Management and Start-up Management are offered for this purpose. It is designed as a particularly strong application-oriented degree course with the two specializations "Product Management" and "Start-up Management" starting in the winter semester. The last semester is used to write the Master's thesis (§ 45 SPO 29). The courses and associated examinations are held in German or English. The language is specified in the module description (§ 45 SPO 29). Upon completion of the program, graduates are awarded the degree **of Master of Arts in Business Development**. In the Master's degree program in Business Development, graduates learn to solve tasks in start-up management and business development and to systematically develop business areas while leading interdisciplinary teams. In the Start-up Management specialization, the focus is on qualifying students to assess and independently implement business ideas. In the Product Management specialization, the focus is on qualifying students to responsibly manage new products and services within existing companies, from idea generation to implementation in innovation and production through to marketing. Students can select in-depth specialist knowledge in the areas of state-of-the-art, practice-oriented management methods and interdisciplinary skills, which they apply in the course of diverse regional and international collaborations, case studies and practical projects. The curriculum of the Master's program in Business Development is characterized in particular by a great deal of freedom of choice for students.

Graduates of the Master's program in Business Development have acquired the following skills:

- Graduates have acquired in-depth knowledge in the field of management and can apply this within management tasks in start-up companies and in product management in existing companies.
- Graduates are able to solve problems independently thanks to the social skills acquired in projects and case studies carried out on their own responsibility.
- They also have the ability to conduct negotiations in order to convince investors and decision-makers in the private sector.
- Graduates are proficient in analytical methods to understand complex procedures and processes and are able to describe, analyze, explain and evaluate interrelationships.

By completing the Master's thesis, graduates are able to work scientifically and think critically.

They have the ability to defend their research findings and present complex issues convincingly in writing and orally.

The ability to engage in civil society can be promoted through participation in the Studium Generale. Here (e.g. in seminars or through activities in social institutions), students acquire further soft skills and interdisciplinary competencies that are essential for their later professional life. As a result, graduates are able to discuss current and historical topics and develop an understanding of different points of view.

II - Program structure and scope

(1) General information
   a) The Business Development (Master of Arts) course is a full-time course with a standard period of study of three semesters. The last semester is used to complete the Master's thesis.

b) The courses and associated examinations are held in German or English. The language is specified in the module description.

(2) Admission

Admission to the course is regulated in a separate set of admission regulations.

The selection committee decides on the additional work to be completed by applicants with a degree of less than 210 credit points in accordance with the admission regulations.

(3) Structure and content

a) The degree program is divided into five parts:

- Compulsory core program comprising nine modules with 5 CP each (4 modules in the first semester, 5 modules in the second semester),
- Compulsory elective program, in which in the first and second semesters a total of 3 modules, each worth 5 CP, must be selected from the Master's program or technical Master's program offered by Aalen University with the approval of the Examination Board. Two modules must be selected in the first semester and one module in the second semester.
- Master's thesis with 30 CP.

b) The structure of the degree program, the modules / partial achievements, the courses with the number of hours per week per semester and the number of credit points (CP) can be found in the following tables and in the module descriptions in the module handbook of the degree program.

(4) Master's thesis

The Master's thesis can only be started if at least 255 credit points have been achieved in the previous course of study (Bachelor's and Master's degree program) (85% of the total 300 CP to be achieved).

By resolution of the Examination Board, the degree programme may issue additional guidelines by notice or announcement in the usual form, which regulate the content and formal requirements for the Master's thesis as well as questions of procedural organization and assessment.

(5) No separate workload has been defined in the curriculum for the Studium Generale, as the corresponding workload is already integrated in the standard course of study in the module Business Project (79004/79005).

(6) Exclusion from the degree program

a) Admission to the degree program expires if the student has achieved fewer than 15 credit points after the first semester or fewer than 40 credit points after the second semester.

b) the right to take examinations and admission to the degree program expires if the student has not completed all the examinations required for the final examination by the end of the sixth semester after commencement of studies at the latest.

c) The right to take examinations and admission to the degree program shall not expire if the student is not responsible for the failure to comply with the regulations in letters a and b above. The Examination Board will decide on this at the student's request.

"Business Development Compulsory program						
No.	**Module/** Course	**Type**	**Semester** SWS			**CP**
			1	2	3	
79001	**Start-up management**		**4**			**5**
79101	Start-up Management	V, Ü	4			5
79002	**Product Management**		**4**			**5**
79102	Product Management	V	2			5
79103	Exercises in product management	Ü	2			
79003	**Project Management / Quality Management**		**4**			**5**
79104	Project Management	V, Ü,	2			5
79105	Quality management	V, EXERCISE	2			
79004	**Company project / student research project part I**		**4***	**4***		**5**
79106	Company project / student research project Product Management and Start-up Management Part 1	P	4	4		5
79005	**Company project / student research project part II**		**4***	**4***		**5**
79201	Company project / student research project Product Management and Start-up Management Part 2	P	4	4		5
79006	**Business models and business plan**			**4**		**5**
79202	Business models and business plan	V, Ü		4		5
79007	**Leadership**			**4**		**5**
79203	Leadership/Sustainable Corporate Management	V, Ü		4		5
79008	**Project and start-up financing**			**4**		**5**
79204	Project and start-up financing	V, Ü		4		5
79013	**Start-up innovation**			**4**		**5**
79207	Start-up innovation	V		4		5
	Number of SWS		**16**	**20**		
	Number of CP		**20**	**25**		**45**
	Number of exams		**4**	**5**		

*Modules 79004 and 79005 are to be chosen in opposite directions depending on whether the student starts in the summer semester or winter semester.

"Business Development" Compulsory elective area						
No.	**Module/** Course	**Type**	**Semester** SWS			**CP**
			1	2	3	
79009	**Elective module 1**		**X**			**5**
79820	Elective module 1 (Subjects from the Master's program of Aalen University after approval)	V, Ü, S, P	X			5
79010	**Elective module 2**		**X**			**5**
79817	Elective module 2 (Subjects from the Master's program at Aalen University after approval)	V, Ü, S, P	X			5
79011	**Elective module 3**			**X**		**5**
79818	Elective module 3 (Subjects from the Master's program at Aalen University after approval)	V, Ü, S, P		X		5
	Number of SWS					
	Number of CP		**10**	**5**		**15**
	Number of exams		**WP[2)]**	**WP[2)]**		

[2)]Number of examinations depending on choice

Master's thesis						
No.	**Module/** Course	**Type**	**Semester** SWS			**CP**
			1	2	3	
9999	**Master thesis**				**X**	**30**
9999	Written Master's thesis				X	30
9998	Master's thesis colloquium				X	
	Total number of SWS		**16 + WP[3)]**	**20 + WP[3)]**		
	Total number of CP		**20 + 10 WP**	**25+ + 5 WP**	**30**	**90**

	Total number of exams		**4 + 2 WP**	**4 + 1 WP[3)]**	**2**	**14**

[3)]WP=compulsory elective area, MA=Master's thesis

§ 46 Master's degree program Applied Photonics

I - Preamble - Qualification objectives

Generic objective of Master of Photonics program is to qualify the students for an employment in the area of applied research and development. This Master of program is a three semester consecutive program. Mandatory and optional courses exist in parallel.

Language of instruction is English. Thus, the program is accessible for international students. In addition, this allows an international career. The mixture of national and international students improves the open-minded, social and intercultural competence.
Strictly, the term "Photonics" stands for the science of photon. Today the term incorporates many novel disciplines. In the essence, graduates of the Photonics Master course preferably work in one of the following occupational areas:

- optical information and communication
- industrial manufacturing
- lighting
- life science.

Graduates are particularly well educated for a leading position in research and development, where advanced theoretical knowledge of physics and optics are combined with practical experience. Examples are

- development and application of lasers and laser systems,
- development of fiber-optic components and systems,
- design and development of optical instruments,
- novel techniques for lighting and displays,
- design and application of medical systems for diagnosis and therapy.

The students will learn

Specifically "Photonics" not only denotes the particle properties of light, the term incorporates all practical applications of optics, and the potential to create, transport and process optical signals. Photonic techniques are used in various fields. The combination of medical problems and photonic technologies proved to exhibit a high economical potential.

Consequently, this Master course provides a profound knowledge of innovative technologies in Photonics. The student achieves the qualification for a leading position in industry or research. Attending courses, the students expand their scientific knowledge in quantum optics, photonic detectors and devices, optical communication networks, lasers and non-linear optics, optical metrology systems, and physical optics. In optional courses, students identify special photonic subjects in addition.

Projects provide social and analytical skills: By means of laboratory work, students find either self-reliant or in a team the solution path for a complex problem. Students present their intermediate results to fellow students.

This Master diploma of Photonics by Aalen Applied University achieves the degree Master of Science for subsequent doctoral thesis.

II - Program structure and scope

(1) The regulations of the general part of the study and examination regulations apply to the Master's degree program, insofar as they are not regulated differently by § 47.

(2) Admission to the Applied Photonics degree program is governed by its own admission regulations.

(3) The standard course of study for the Master's degree course in Applied Photonics comprises three semesters. The duration of the entire course, including the Master's thesis, is a maximum of 6 semesters. If the maximum duration is exceeded, admission to the course expires due to exclusion, unless the student is not responsible for exceeding the deadline.

(4) The total number of compulsory and compulsory elective courses required to successfully complete the degree program is 90 ECTS credits. Of these, 70 ECTS credits must be earned in the compulsory area and 20 ECTS credits in the compulsory elective area. In the 1st + 2nd semester, 2 electives each should be completed from the range of courses offered by the degree program.

(5) All examinations from the mandatory units, including any preliminary examinations, must be passed in accordance with the table below.

(6) The student must register in writing for the examinations from the elective area within the period announced on the notice board. It is also possible to deregister from examinations that have already been registered during the same period.

(7) Notwithstanding Section 18 (2) sentence 1 of these statutes, any failed examination may be repeated a maximum of two times. A failed 3rd attempt leads to exclusion from this degree program.

(8) The courses of the degree program with semester hours per week, subject examinations with examinations and the number of ECTS credits are listed in the following tables. Further information can be found in the module handbook for the degree program.

(9) Contrary to § 35 Studium Generale, no separate workload has been defined in the curriculum, as this is already integrated in the standard course of study in module 33001 "Project / Soft Skills".

(10) The Master's thesis includes an oral colloquium presentation (graded at 20% of the thesis) and a written report on the Master's thesis (graded at 80% of the thesis). A minimum of 40 ECTS credits and passing the Project module examination are required to register for the Master's thesis. The examination requirements for the Master's thesis are set out in the module handbook.

(11) Exclusion from studies:

a) Admission and the right to participate in examinations expires if

1. the student has achieved fewer than 15 ECTS credits after the 1st semester of study,
2. the student has achieved a total of less than 30 ECTS credits after the 2nd semester,
3. the student has not achieved at least 40 ECTS credits after the 3rd semester.

unless the student is not responsible for this.

b) If the student is studying at a different pace (para. 12), different deadlines in para. 11 letter a) no. 1-3 are permitted by individual agreement.

(12) Deviating speed

Upon application by the student and approval by the Dean of Studies, the degree program may be studied at a different pace to the standard duration of study. In addition to the distribution of the modules over individual semesters, a specification regarding the distribution of the Master's thesis over 2 semesters can be defined. The respective study concept must be coordinated accordingly with the Dean of Studies. Parallel professional activity is permitted after approval.

(13) For each approved and completed work-integrated semester, the requirement for registering for the Master's thesis is reduced by 5 ECTS credits. The "Project" module must always be passed before registering for the thesis.

Master's Examination (20040)

Mandatory Courses:

No.	**Subject examination/ Lecture**	Type	Sem.1 h/week	Sem. 2 h/week	Sem. 3 h/week	ECTS
33001	**Project / Soft Skills**					**5**
33101	Project / Soft Skills	L	4			5
33002	**Interferometry**					**5**
33102	Interferometry	V	4			5
33003	**Quantum Optics**					**5**
33103	Quantum Optics	V,L	4			5
33004	**Photonics Detectors and Devices**					**5**
33104	Photonics Detectors and Devices	V	4			5
33005	**Non-linear Optics**					**5**
33201	Non-linear Optics	V		4		5
33006	**Advanced Optical Communications Technology**					**5**
33202	Advanced Optical Communications Technology	V		4		5
33007	**Optical Systems**					**5**
33203	Optical Systems	V, L		4		5
33008	**Physical Optics**					**5**
33204	Physical Optics	V		4		5
9999	**Master Thesis**					**30**
9999	Master Thesis				X	30
	Sum of h/week (Mandatory Courses)		**16**	**16**		
	Sum of required ECTS-scores		**20**	**20**	**30**	**70**
	Total number of examinations in optional and mandatory section		**4**	**4**	**1**	

Optional Courses (2 Optional Courses with 10 ECTS-scores in each semester):

No.	**Subject examination/ Lecture**	Type	Sem.1 h/week	Sem. 2 h/week	Sem. 3 h/week	ECTS
33030	**Photonics Communications Engineering**					**5**
33130	Photonics Communications Engineering	V, E	6			5
33031	**Applications of Photonics Detectors**					**5**
33131	Applications of Photonics Detectors	V,L	4			5
33032	**Advanced Image Processing**					**5**
33132	Advanced Image Processing	V,L	4			5
33033	**Laser Application Technology**					**5**
33133	Laser Application Technology	V, L	4			5
33034	**Simulation of Sensor Systems**					**5**
33134	Simulation of Sensor Systems	V, L	4			5
33035	**Fundamental Optics**					**5**
33135	Fundamental Optics	V, L	2			5
33036	**Optical Design Strategies**					**5**
33236	Optical Design Strategies	V, L		4		5
33037	**Optics Technology**					**5**
33237	Optics Technology	V, L		4		5
33038	**Biophotonics**					**5**
33238	Biophotonics	V,L		4		5
33039	**Advanced Optical Design**					**5**
33239	Advanced Optical Design	V,L		4		5
33040	**Laser Photonics**					**5**
33240	Laser Photonics	V,L		4		5
33041	**Illumination**					**5**
33241	Illumination	V		4		5
33043	**International Photonics (courses offered in Halmstad or Barcelona)**					**15**
33243	International Photonics (courses offered in Halmstad or Barcelona)	V, L		X		15
	Sum of h/week (Mandatory Courses)		**16 + WP**	**16 + 8 WP**		
	Sum of required ECTS-scores		**30**	**30**	**30**	**90**
	Total number of examinations in optional and mandatory section		**4 + 2 WP**	**4 + 2 WP***	**1**	

*=Compulsory elective section

§ 47 Master's degree program in Machine Learning & Data Analytics

I - Preamble - Qualification goals

Graduates of the Master's degree program in Machine Learning & Data Analytics have dealt extensively with the areas of machine learning and intelligent computer systems. On the basis of increasingly powerful computers, it is now possible to simulate human learning and decision-making behavior using intelligent systems. This makes it possible to solve tasks efficiently. After successfully completing the course, you will be qualified to work with intelligent systems and to improve and further develop them.

This knowledge enables graduates to take on challenging tasks and activities in the following areas:

- Development and research departments (e.g. in the automotive industry, security technology)
- Companies in the IT sector - in the areas of business intelligence and data processing
- Research institutes for technologies

Graduates have acquired the following competencies and skills through their studies:

- Graduates of the degree program are able to independently solve and develop questions for scientific problems in the field of machine learning and data analysis using suitable research methods and implement them in practice.

- They can plan and develop intelligent systems. They are also able to apply methods of machine learning and data analysis and critically reflect on the possible consequences of their decisions.

- Graduates of the Master's degree program are able to interpret research results and complex issues, present and defend them precisely in writing and orally, and discuss them constructively with both laypeople and experts.

- They are prepared - both in team and management positions - to develop questions and their solutions independently and to promote their development through innovative contributions.

- Graduates have in-depth knowledge of the structure and operation of intelligent systems and can use these independently to solve new types of problems and are therefore able to work in a scientifically innovative way. In particular, they are able to use them within their area of application or competence.

- They can measure and critically assess the quality of the systems they have designed. This includes, in particular, the quality of the analyses and the decisions made by the systems.

- They are able to take ethical and social aspects into account in their work. They reflect on their professional actions and thus develop a professional self-image.

- They are able to reflect on and discuss humanistic and socio-economic aspects of the topic of "machine learning and data analytics" in the context of current social, societal and political discussions.

The ability to engage in civil society is anchored in the "Seminar" and "Project" modules. Here, students acquire intercultural skills, soft skills and interdisciplinary skills. Among other things, graduates are able to discuss socio-cultural issues and develop intercultural sensitivity.

II - Program structure and scope

1) The Faculty of Electronics and Computer Science offers a Master of Science in "Machine Learning & Data Analytics" for Bachelor students who have achieved an above-average degree. The number of study places is limited and access is regulated by admission regulations. Some

subjects are offered in English. English language skills are therefore essential.
The regulations of the general part of the study and examination regulations of Aalen University apply to the Master's degree program, unless they are regulated differently by this special part.

2) In the Master's degree program Machine Learning & Data Analytics, the standard course of study comprises three semesters. The duration of the entire course, including the Master's thesis, is a maximum of six semesters. If the maximum duration is exceeded, admission to the course expires due to exclusion, unless the student is not responsible for exceeding the deadline. With regard to the regulations for students with a Bachelor's degree of less than 210 CP, please refer to the admission regulations.

3) Admission requirements
The admission requirements are regulated in separate admission regulations.

4) Course structure
   a) The Master's course consists of two semesters, each with 30 CP, and a further semester in which the Master's thesis is completed, which is assessed with 30 CP.
   b) The compulsory modules of the degree program do not build on each other. Lectures can therefore be held annually, and students can begin their studies in the winter and summer semesters.

5) Area of competence
   a) The degree program includes a competence area comprising 4 modules of 5 CP or 10 CP each, for a total of 25 CP.
   b) The courses Seminar (56007) and Project (56008) as well as the competence subjects 1 and 2 (56009, 56010), each worth 5 CP (10 CP in total), must be completed as part of the competence area.
   c) Competence subjects 1 and 2 must be chosen by the students after approval by the Examination Board in accordance with the subject area of the first professionally qualifying degree.

6) At the beginning of each semester, the degree program publicly announces a list of possible elective courses and publishes it in the relevant media. Students must register for these elective courses manually during the examination registration period.

7) In the first semester, students select a module worth 5 CP from the list of elective courses in accordance with para. 5. Deviating from this, modules from the Master's program of Aalen University can also be completed after approval by the Examination Board.

8) If more elective modules are passed than required, the best option will be taken into account when calculating the final grade. A different calculation can be made at the student's request.

9) The duration and structure of the degree program, courses with semester hours per week, module examinations, their weighting for the grade calculation and the number of credit points can be found in the table below or in the module handbook of the degree program.

10) To successfully complete the degree program, an independent academic thesis (Master's thesis) must be completed. This can be registered in the third semester at the earliest if at least 50 CP have been achieved by then. The Master's thesis must be presented in a colloquium after completion.

11) Exclusion from the degree program
   a) The right to take examinations for the degree program expires if the student has not completed all the examinations required for the final examination by the end of the sixth semester after the start of the degree program at the latest.

   b) The right to take examinations for the degree program does not expire if the student is not

responsible for failing to meet the regulations in letter a). The Examination Board shall decide on this at the student's request.

12) Exclusion from the degree program
   a) The right to take examinations for the degree program expires if the student has not completed all the examinations required for the final examination by the end of the sixth semester after the start of the degree program at the latest.

   b) The right to take examinations for the degree program does not expire if the student is not responsible for failing to meet the regulations in letter a). The Examination Board will decide on this at the student's request.

13) No separate workload has been defined in the curriculum for the Studium Generale, as the corresponding workload is already integrated in the standard course of study in the modules "Seminar" (56007) and "Project" (56008).

Curriculum

No.	Compulsory areas Modules / Courses	Type	Semester SWS			CP
			SS	WS	SS/WS	
	Machine Learning & Data Analytics (compulsory area)*					
56001	**Artificial Intelligence**					**5**
56101	Artificial Intelligence	V,Ü	4			5
56002	**Machine Learning & Deep Learning**					**5**
56102	Machine Learning & Deep Learning	V,Ü	4			5
56003	**Natural Language Processing**					**5**
56103	Natural Language Processing	V,Ü	4			5
56004	**Data Analytics**					**5**
56201	Data Analytics	V,Ü		4		5
56005	**Predictive analytics**					**5**
56202	Predictive Analytics	V,Ü		4		5
56006	**Big Data & Data Mining**					**5**
56203	Big Data & Data Mining	V,Ü		4		**5**
	Total SWS		**12**	**12**		
	Total CP		**15**	**15**		
	Total exams		**3**	**3**		

*The courses in the compulsory area of Machine Learning & Data Analytics are always offered on an annual basis. The corresponding coursework must be completed depending on when the course begins.

No.	Compulsory elective area Modules / Courses	Type	Semester SWS			CP
			1	2	3	
56007	**Seminar (1st semester)**					**5**
56104	Seminar in the competence area	S	2			5
56008	**Project (2nd semester)**					**10**
56204	Project in the competence area	P		2		10
Compulsory elective subjects (incl. competence area)						
56009	**Competence area** 1 (Master's elective subject from the student's competence area n.G. by PA)					**5**
56105	Lecture from the Master competence area 1	V,Ü	4			5
56010	**Competence area 2** 1 (Master's elective subject from the student's competence area n.G. by PA)					**5**
56205	Lecture from the Master competence area 2	V,Ü		4		5
56011	**Compulsory elective subject** (from the elective offer of the degree program or the Master's offer of Aalen University n.G. by the PA)					**5**
56106	Compulsory elective subject		X			5
9999	**Master thesis**				**X**	**30**
	Total SWS		**18 + WP***	**18**	**MA**	
	Total CP		**30**	**30**	**30**	
	Total examinations		**6**	**5**	**1**	

*WP = compulsory elective subject, MA = Master's thesis

§ 48 Master Analytical and Bioanalytical Chemistry

I Preamble - Qualification goals

Graduates of the Master's degree program in Analytical and Bioanalytical Chemistry are prepared to work on challenging chemical-analytical issues comprehensively and independently, in particular to evaluate and practically apply appropriate measurement techniques. The overriding aim is to qualify graduates for a research-related career in chemical, biochemical, pharmaceutical and related applications.

Specifically, graduates have the following qualifications:

- Have in-depth knowledge of modern chemical analytical, spectroscopic and bioanalytical techniques and their applications, as well as the evaluation and assessment of appropriate analytical results.
- Comprehensive chemical and biochemical knowledge with regard to the application to analytical questions is available.
- Graduates have gained practical experience in working with important analytical techniques, including the ability to independently develop appropriate measurement methods.
- Seminars, practical project work and electives support project-oriented work, independent planning and execution of (bio)analytical/chemical experiments as well as interdisciplinary thinking.
- Graduates are able to work independently on scientific issues and to argue well in technical discussions. They can take up doctoral studies as the next step in their academic career if they are qualified.
- They will be able to reflect on their professional activities and continue their education independently.
- They are able to take ethical and social aspects into account in their work. They reflect on their professional actions and thus develop a professional self-image.

Graduates of the Master's degree program are able to present research results and complex issues orally and in writing in German and English. They are able to familiarize themselves independently with new topics in (bio)analytical chemistry, as well as to evaluate information accordingly and draw practical conclusions from it.

The ability to engage in civil society can be promoted, among other things, through participation in the Studium Generale. Here (e.g. in seminars or through activities in social institutions), students acquire additional soft skills and interdisciplinary competencies that are essential for their later professional life. As a result, graduates are able to discuss current and historical topics and develop an understanding of different points of view.

II Course structure and scope

(1) The Master's degree course in Chemistry comprises three semesters.

(2) The total number of compulsory and compulsory elective courses required for successful completion of the course is 57 semester hours per week. The number of credit points is 90.

(3) Admission is in accordance with the admission regulations.

(4) For the Master's thesis, the requirements according to §§ 23 - 26 of the general part apply.

(5) The Master's thesis is credited with 29 credit points.

(6) The duration and structure of the degree program, courses with semester hours per week, credit points, modules with examinations can be found in the following tables.

(7) In modules 31801 and 31802, modules worth 5 CP each must be selected. One module should be chosen in the first semester and one module in the second semester. After approval by the Dean of Studies, modules from the Master's program at Aalen University can be selected accordingly.

Curriculum

No.	Module / Course	Type	Semester			CP
			SS	WS	3	
Compulsory modules						
31001	**Methods of structure determination**					**5**
31102	Mass spectrometry	V	2			5
31103	NMR spectroscopy	V	2			
31002	**Instrumental Analytical Chemistry**					**10**
31104	Instrumental Organic Analytical Chemistry	V	2			10
31105	Environmental Analysis	V	1			
31106	Seminar Analytics	S	2			
31107	Biopharmaceutical Analytics	V	1			
31108	Chemometrics	V	2			
31003	**Spectroscopic methods**					**5**
31110	Spectroscopy	V		3		5
31111	Element and surface analysis	V		1		
31004	**Bioorganic chemistry and nanomaterials**					**5**
31112	Synthesis strategies in biochemistry and organic chemistry	V		3		5
31113	Nanomaterials and Catalysis	V		1		
31005	**Nucleic acid analysis**					**5**
31114	Nucleic acid analysis	V	4			5
31115	Practical course in nucleic acid analysis	V	1			
31006	**Protein analysis**					**10**
31116	Protein analysis	V		4		10
31118	Analysis of Posttranslational Modifications	V		3		
31119	Seminar Bioanalytics	S		1		
31007	**Research laboratory 1[1)]**					**5**
31120	Project work 1	P	7			5
31008	**Research laboratory 2[1)]**					**5**
31121	Project work 2	P	7			5
	Total SWS		**24**	**23**		
	Total CP		**25**	**25**		
	Total exams		**4**	**4**		

[1)]Module 31007 and 31008 are offered in SS and WS, the duration of the modules is 1 semester. One module is to be chosen in SS, one module in WS.

No.	Module / Course	Type	Semester of study			CP
			SS	WS	3	
Elective modules						
31801	**Chemical/analytical elective module 1 (choice 1 out of 5 from courses 31810 - 31813)**		**X**			**5**
31802	**Chemical/analytical elective module 2 (choice of 1 out of 5 from courses 31810 -31814)**			**X**		**5**
	Elective area for modules 31801 and 31802					
31810	Advanced protein analysis and structural analysis of natural products	V		4		5
31811	Modern methods of organic chemistry and structural analysis of natural products	V		4		5
31812	Chemistry of peptides and peptidomimetics, chemometrics, molecular modeling and bioinformatics	V	4			5
31813	Medicinal chemistry, chemometrics, molecular modeling and bioinformatics	V	4			5
31814	Elective subject from the Master's courses offered by Aalen University after approval by the degree program[2)]			X		5

(2) ())In module 31802, a subject from the Master's program offered by Aalen University can be chosen instead of the electives offered.

No.	Module / Course	Type	Semester of study			CP
			SS	WS	3	
Compulsory modules						
9999	**Master Thesis**				**X**	**29**
9999	Master thesis				X	29
31999	**General studies**				**X**	**1**
	Total SWS		24 + WP(3) ())	23 + WP(3) ())	0	
	Total CP		25 + 5 WP(3) ())	25 + 5 WP(3) ())	30	
	Total exams		4 + WP(3) ())	4 + WP(3) ())	MA(3) ())+ SG(3) ())	

(3) ())WP=elective module, MA=Master's thesis, SG=Studium Generale

§ 49 Master's degree program (consecutive) M.Sc. in Ophthalmic Optics and Psychophysics

I - Preamble - Qualification goals

The overriding objective of the Master's degree program in Ophthalmic Optics and Psychophysics is to qualify graduates for a research or development-related professional activity at the interface between natural science disciplines such as physics and optics on the one hand and medicine on the other. Graduates have a sound and broad knowledge in the fields of ophthalmic optics, optometry, psychophysics, binocular vision, spectacle lens design, contact lenses and scientific methodology. However, the Master's degree course in Ophthalmic Optics and Psychophysics is broader in content and more scientifically based than a purely subject-related degree course and thus provides graduates with a wider and more sustainable range of career opportunities. Graduates of the course are qualified to work scientifically due to the challenging projects and case studies carried out as part of the course and a corresponding Master's thesis.

Graduates of the Master's degree program in Ophthalmic Optics and Psychophysics

- are able to examine and assess the performance of the visual system according to clinical standards;
- are able to use subject-specific screening procedures appropriately and interpret their results competently;
- have practical research skills and knowledge in the fields of spectacles, contact lenses, vision research, hearing and vision;
- can apply the methods of statistics, test planning and quality control to clinical and research-related issues as well as to industrial developments and describe, analyze, explain and evaluate correlations;
- can define the optical design of spectacle lenses on the basis of systematic measurements of the visual requirements of spectacle wearers and analyze and evaluate them using suitable subjective and objective methods;
- know all relevant subject-specific parameters of contact lens fitting and their determination and are able to independently carry out and verify target-oriented and optimized contact lens fittings, especially in difficult cases;
- know the possibilities and limitations of the various refraction methods and can select the appropriate methods and use them, especially in difficult cases;
- are familiar with all potential factors that can lead to limitations in binocular vision and can draw the correct conclusions for the provision of visual aids to customers and patients;
- are familiar with other sensory-physiological examination procedures relevant to their specialty, such as static and kinetic perimetry and the examination of contrast vision, twilight vision, glare sensitivity and color vision;
- have basic knowledge of electrophysiological examination procedures;
- have a basic understanding of interdisciplinary and interdisciplinary relationships in the field of pharmacology and can assess the potential use of medication in eye diseases.

In addition to specialist and scientific skills, the personal development and motivation of students is promoted through method-related training ("skills labs") and social interaction - e.g. through direct contact with test subjects, visually impaired people and patients.

Graduates of the Master's degree program in Ophthalmic Optics and Psychophysics

- are able to communicate appropriately and have an empathetic understanding of their customers and patients;
- are able to reflect on their professional actions and develop a professional self-image.

- have basic competence in the area of "good clinical practice (GCP)";
- are able to independently develop questions for scientific problems, draw further conclusions and defend these in an argumentative manner to both experts and laypersons;
- are able to structure and independently carry out small research projects. To this end, they apply their knowledge of time and project management;
- can independently develop new subject areas, evaluate information and draw practical conclusions, taking into account both ophthalmic / technical-optical and medical aspects;
- are able to combine the subject-specific methods of ophthalmic optics and psychophysics with the methods of the disciplines of optics and medicine in order to develop new solutions to problems in complex contexts.

Successful completion of the Master's degree program enables students to work in professional fields such as sensory function testing or industrial research and development in addition to the traditional professional fields in ophthalmic optics and optometry. The associated fields of activity include, among others:

- Optometric competence centers,
- contact lens centers,
- ophthalmology clinics or practice associations,
- Eye laser centers,
- research institutes,
- Research and development departments in the field of ophthalmic lens development and the development of ophthalmic measuring devices,
- Institutions and authorities acting as experts (e.g. in the field of traffic engineering, quality control, process monitoring, ergonomics and workplace safety),
- Institutions that deal with practical life skills, the improvement of sensory functions and rehabilitation.

The Master's degree program in Ophthalmic Optics and Psychophysics also qualifies graduates for access to the higher civil service, as is necessary, for example, for a position as a teacher at technical and vocational schools.
After successfully completing the Master's degree program in Ophthalmic Optics and Psychophysics, graduates can pursue a doctorate at a German or international university (e.g. Dr. sc. hum.).

The ability to engage in civil society is anchored in the Studium Generale. Here (e.g. in seminars or through activities in social institutions), students acquire further soft skills and interdisciplinary competencies that are essential for their later professional life. As a result, graduates are able to discuss current and historical topics and develop an understanding of different points of view.

II - Program structure and scope

1. The consecutive Master of Science (M.Sc.) degree program in Ophthalmic Optics and Psychophysics comprises a standard period of study of 3 semesters.

2. The total amount of coursework required for successful completion of the degree program, including a previous Bachelor's degree, is at least 300 credit points.

3. Admission to the Master of Science (M.Sc.) in Ophthalmic Optics and Psychophysics is regulated by its own admission regulations.

4. The duration and structure of the course, modules with credit points and semester hours per week are shown in the table below.

5. The weighting of the grades for the modules in the Master's certificate depends on the credit points of the modules.

6. The modules of semesters 1 and 2 do not build on each other, so that the order of semesters 1 and 2 can be swapped.

7. Compulsory elective area:

    a. In the 1st and 2nd semesters of study, 2 compulsory elective modules from the compulsory elective area of the degree program must be completed in each semester.

    b. Compulsory elective modules totaling 20 CP must be completed.

    c. In addition to the modules listed in the compulsory elective area, suitable modules from other degree programmes can also be recognized as compulsory electives by the Examination Board upon application.

Master's degree program M.*Sc. Ophthalmic Optics and Psychophysics* - Compulsory area

No.	Modules / Courses	Type	Semester SWS			CP
			1	2	3	
76001	**Eye diseases**					**5**
76101	Eye diseases A	V	2			5
76102	Eye diseases B	V	2			
76002	**Innovation management and design** **Ophthalmic optics**					**5**
76103	Innovation and quality management	V,Ü	2			5
76104	Design	V,Ü	1			
76105	Case studies/scenarios	V,S	1			
76004	**Scientific methodology**					**5**
76108	Interdisciplinary project work	P	2			5
76109	Experimental Design/Statistics	V,Ü	2			
76005	**Practical ophthalmic optics - specialization A**					**5**
76110	Refraction and Screening - Advanced A	L,S	4			5
76011	**Practical ophthalmic optics - specialization B**					**5**
76201	Contact lenses - specialization B	L,S		4		5
76006	**Spectacle lens design**					**5**
76202	Lens design	V,Ü		4		5
76203	Practical course in ophthalmic lens development	L		2		
76007	**Binocular vision**					**5**
76204	Binocular vision	V		2		5
76205	Binocular vision practical course	L		2		
76009	**Contact lenses 4**					**5**
76208	Contact lenses 4	V,L		2		5
76209	Practical course contact lenses 4	V,L,P		2		

	Total SWS		**16**	**18**		
	Total CP		**20**	**20**		
	Total exams		**4**	**4**		
No.	**Modules / Courses**	**Type**	**Semester SWS**			CP
			1	**2**	**3**	
76010	**Master thesis**					**29**
9999	Master thesis	P				29
76999	**General studies**					**1**
76999	General Studies	P				1
	Total SWS (compulsory area)		**16**	**18**		
	Total CP (compulsory area)		**20 + 10 WP***	**20 + 10 WP***	**30**	**90**
	Total examinations		**4 + 2 WP**	**4 + 2 WP**	**MA + SG***	

**WP=compulsory elective area, MA=Master's thesis, SG=Studium Generale*

Master's degree program *M.Sc. Ophthalmic Optics and Psychophysics* - Compulsory elective area

Two compulsory elective modules must be completed in each of the first and second semesters.

In total, compulsory elective modules worth at least 20 credit points must be selected in the Master's degree program in Ophthalmic Optics and Psychophysics.

In addition to the modules in the list, suitable modules from other degree programmes can also be recognized as compulsory electives by the Examination Board upon application.

No.	Modules / Courses	Type	Semester of study SWS	CP
76901	**Biophotonics**			**5**
76801	Biophotonics	V	3	5
76802	Biophotonics Laboratory	L	1	
76902	**Interferometry**			**5**
76803	Interferometry	V	4	5
76903	**Optics Technology**			**5**
76804	Optics Technology	V	3	5
76805	Optics Technology Laboratory	L	1	
76904	**Technical Optics - Experimental Project**			**5**
76806	Technical optics - experimental project	P	4	5
76905	**Hearing and seeing project**			**5**
76808	Special aspects of hearing and seeing	V	1	5
76809	Hearing and vision project	P	3	
76906	**Visual system project**			**5**
76810	Project work in the Vision Research Competence Center	P	4	5
76907	**Lens project**			**5**
76811	Project work in the ophthalmic lens competence center	P	4	5
76908	**Audiology project**			**5**
76812	Project work in the Audiology Competence Center	P	4	5

No.	Modules / Courses	Type	Semester SWS	CP
76910	**Biochemistry and Biotechnology**			**5**
76813	Biochemistry	V	2	5
76814	Biotechnology	V	2	
76911	**Introduction into Matlab / Simulink**			**5**
76815	Introduction into Matlab / Simulink	V	4	5
76912	**Special eye diseases**			**5**
76816	Neuroophthalmology	V	2	5
76817	Special physiology of the retina	V	1	

§ 50 Master's degree program "Financial Management (Master of Arts)

I - Preamble - Qualification goals

The Master's degree course in Financial Management is a consecutive attendance course and is designed as a strongly application-oriented course. It is designed as a full-time, half-time course of study beginning in the winter semester. The courses and associated examinations are generally held in German or English. The language is specified in the module description.

On completion of their studies, graduates are awarded the degree of Master of Arts in Financial Management. This degree is geared towards the needs of manufacturing and service-based companies and provides graduates with the core competencies for tasks at the first to third management level in finance departments. Graduates are optimally prepared for their work in the areas of auditing, accounting and bookkeeping, financial management and risk management and understand how these are affected at group level. This is achieved on the one hand by creating a sound knowledge base and on the other hand by dealing with specific industry-related topics.

Graduates have acquired in-depth knowledge of internal and external auditing, risk management, accounting and corporate management in industry. Upon successful completion of the Master's thesis, graduates are able to work extremely successfully and independently as risk managers, controllers or auditors. Thanks to the projects and case studies carried out as part of the degree program, through which students acquire the competence to acquire industry-, business cycle- and company-specific knowledge, and a corresponding Master's thesis, graduates are capable of scientific work.

The basic structure of the program is divided into three main components, which aim to impart specific skills. In the first part, "Deepening Expertise", subject-specific scientific knowledge is taught. In the second part, "Designing Innovation", students are enabled to design their own qualified solutions. In the practical part "Making it Work", students put the knowledge they have acquired into practice in practical projects on their own responsibility.

Graduates have the following skills:

- Graduates are able to understand, assess and analyse the key changes of digitalization, globalization and process restructuring and their influence on all of the aforementioned areas of work (financial management, risk management, accounting and corporate governance) - in particular corporate finance.
- Graduates are able to accompany, assess and develop the processes of internal and external auditing and to contribute to the successful completion of an audit. Graduates are able to analyse complex scientific problem areas and cases in the field of (group) tax law and transfer pricing, present recommendations for action for tax optimization and research their further development. They can apply the International Financial Reporting Standards (IFRS) and check their application for correctness.
- Graduates are able to coordinate the innovative methods and concepts of capital market-oriented corporate management, financing theory and company valuation and apply these to practical cases of globally active companies. In addition to deepening their specialist knowledge, graduates are also able to evaluate entrepreneurial processes, develop them further through innovation and present, explain and critically interpret research results.
- They are able to organize, independently review and sustainably optimize processes in the areas of operational and strategic corporate management and control as well as risk identification, assessment and control.

- Graduates are able to apply the concepts of corporate management and control as well as risk management in an organization-specific manner and to assess existing management systems from a risk perspective.
- Graduates are able to present and defend their analysis and complex issues precisely in writing and orally in English. They have the ability to persuade and negotiate in an international context and critically reflect on the possible consequences of their decisions.
- Through strategic knowledge and self-awareness, they are able to act effectively, independently, critically and responsibly and create content - often in cooperation with external, international partners from business and science. Through a process of personal growth, graduates are able to contextualize and solve cognitive tasks. They master team building and organizational management in complex business situations. They are able to take ethical and social aspects into account in their work. They reflect on their professional actions and thus develop a professional self-image.

II - Program structure and scope

(1) General information

a) The Master of Financial Management degree program is a full-time degree program with a standard period of study of three semesters. The last semester is used to complete the Master's thesis.

b) The courses and associated examinations are generally offered in English and German. The language of the course is specified in the respective module description.

(2) Admission

Admission to the degree program is regulated in separate admission regulations.

The selection committee decides on the additional requirements for applicants with a degree of less than 210 credit points in accordance with the admission regulations.

(3) Structure and content

a) The degree program is divided into three parts:
   1. Compulsory study program comprising 10 modules (5 modules in the 1st semester, 5 modules in the 2nd semester) with 5 CP each,
   2. Free compulsory elective program, in which in the first and second semesters one module of 5 CP each can be selected from the compulsory elective offer of the degree program or, with the approval of the Examination Board, from the Master's offer of Aalen University. Only modules and courses in English can be selected outside the range of courses offered by the degree program.
   3. Master's thesis with 30 CP.

b) The modules and courses offered in the compulsory elective program are subject to change. There is no entitlement to attend a specific module or course.

c) The degree program may issue guidelines on the choice of compulsory elective modules by resolution of the Examination Board by means of a notice or announcement in the usual form.

d) The structure of the degree program, the modules, the courses with the number of hours per week per semester and the number of credit points (CP) can be found in the following tables and in the module descriptions of the degree program.

(4) No separate workload was defined in the curriculum for the Studium Generale, as the corresponding workload is already integrated in the Designing Strategy & Value (40009) and Corporate Systems Management (40004) modules in the standard course of study.

(5) International semester ("International Financial Management")

a) Upon application, students have the opportunity to complete credits from the 2nd semester abroad (module name: "International Financial Management"). The application must be submitted to the Examination Board. The application must be granted if the student can provide suitable evidence (e.g. through a learning agreement or contract with a research institute) that the stay abroad is organized in a way that is conducive to study; the competence objectives of the 2nd semester will be taken into account appropriately. The modules "International Financial Management" replace the modules of the 2nd semester.

b) If not all of the agreed coursework is passed in the "International Financial Management" modules, the successfully completed coursework will nevertheless be credited to the corresponding modules of the 2nd semester in accordance with the Learning Agreement or contract. The Examination Board decides on the corresponding recognition on the basis of suitable evidence.

c) If one or more modules "International Financial Management" are not successfully completed during the international semester, the missing CP must be earned by completing other modules of the 2nd semester of the degree program after approval by the Examination Board. The modules still to be completed should complement the modules already completed abroad in a meaningful way.

(6) Master's thesis

The Master's thesis can only be started if at least 255 credit points have been achieved in the previous course of study (Bachelor's and Master's degree program) (85% of the total 300 CP to be achieved).

The degree programme can issue additional guidelines by resolution of the Examination Board by means of a notice or announcement in the usual form, which regulate the content and formal requirements for the Master's thesis as well as questions of procedural organization and assessment.

(7) Exclusion from the degree program

a) The right to take examinations and admission to the degree program expires if the student has not completed all the examinations required for the final examination by the end of the sixth semester after commencement of studies at the latest.

b) The right to take examinations and admission to the degree program shall not expire if the student is not responsible for the failure to meet this deadline. The Examination Board will decide on this at the student's request.

Curriculum

"Financial Management" - compulsory program						
No.	**Module/** Course	**Type**	**Semester** SWS			**CP**
			1	2	3	
40001	**Group Accounting**		**4**			**5**
40101	Group Accounting	V, Ü, S, P	4			5
40002	**Risk Management & Controlling**		**4**			**5**
40102	Risk Management & Controlling	V, Ü, S, P	4			5
40003	**Valuation**		**4**			**5**
40103	Valuation	V, Ü, S, P	4			5
40004	**Corporate Systems Management**		**4**			**5**
40104	Corporate Systems Management	V, Ü, S, P	4			5
40005	**Quant Data Research Methods**		**4**			**5**
40105	Quant Data Research Methods	V, Ü, S, P	4			5
40006	**Group Taxation**			**4**		**5**
40201	Group Taxation	V, Ü, S, P		4		5
40007	**Analytics in Management Control**			**4**		**5**
40202	Analytics in Management Control	V, Ü, S, P		4		5
40008	**Digital Finance**			**4**		**5**
40203	Digital Finance	V, Ü, S, P		4		5
40009	**Design Strategy & Value**			**4**		**5**
40204	Design Strategy & Value	V, Ü, S, P		4		5
40010	**Modern ERP**			**4**		**5**
40205	Modern ERP	V, Ü, S, P		4		5
	Number of SWS		**20**	**20**		
	Number of CP		**25**	**25**		
	Number of exams		**5**	**5**		

"Financial Management" **Compulsory elective area - select an elective module from the elective area or additional elective area in the 1st and 2nd semester in accordance with para. 3 letter a no. 1**						
No.	**Module/** Course	**Type**	**Semester** SWS			**CP**
			1	2	3	
40020	**Elective I**		**X**			**5**
40021	**Elective II**			**X**		**5**
Electives - offered by the degree program						
40011	**At Practice I**		**4**			**5**
40106	At Practice I	V, Ü, S, P	4			5
40012	**At Practice II**			**4**		**5**
40206	At Practice II	V, Ü, S, P		4		5
Electives - additional elective area (subject to approval by the Examination Board - if modules are chosen outside the range offered by the degree program, only modules and courses in English can be approved)						
40013	**Elective module 1**					**5**
40107	Elective module 1 (Subjects from the compulsory elective area of the degree program or from the Master's program at Aalen University after approval)	V, Ü, S, P	X			5
40014	**Elective module 2**					**5**
40207	Elective module 2 (Subjects from the compulsory elective area of the degree program or from the Master's program at Aalen University after approval)	V, Ü, S, P		X		5
	Number of SWS of the elective area		**X**	**X**		
	Number of CP of the elective area		**5**	**5**		**10**
	Number of examinations in the elective area		**1 (WB)**	**1 (WB)**		

Optional international semester "International Financial Management" (achievements of the 2nd semester can be recognized according to the learning agreement or contract abroad after approval by the examination board).

No.	**Module /** Courses	Type	Semester hours per week / semester			CP
			1.	2.	3.	
International module "International Management"						
40401	**International Management 1**					**5**
40208	International Management 1	V,Ü,P,S		X		5
40402	**International Management 2**					**5**
40209	International Management 2	V,Ü,P,S		X		5
40403	**International Management 3**					**5**
40210	International Management 3	V,Ü,P,S		X		5
40404	**International Management 4**					**5**
40211	International Management 4	V,Ü,P,S		X		5
40405	**International Management 5**					**5**
40212	International Management 5	V,Ü,P,S		X		5
40406	**International Management 6**					**5**
40213	International Management 6	P,S				5

Master's thesis						
No.	**Module/** Course	**Type**	**Semester** SWS			**CP**
			1	2	3	
9999	**Master thesis**				**X**	**30**
9999	Written Master's thesis				X	30
9998	Master's thesis colloquium				X	
	Total number of SWS		**20 + WB***	**20 + WB**		
	Total number of CP		**30**	**30**	**30**	
	Total number of exams		**5+1 (WB)**	**5+1 (WB)**	**MA**	

*WB = elective area/compulsory elective area, MA=Master's thesis

§ 51 Master's degree program "Mittelstandsmanagement (Master of Arts)

I - Preamble - Qualification goals

The **consecutive Master's in SME Management** is a full-time course with a standard period of study of three semesters and offers graduates with above-average qualifications from Bachelor's courses in economics a specialization in the field of SME management. It is designed as a more application-oriented course of study starting in the winter semester. The last semester is used to write the Master's thesis (§ 45 SPO 29). The courses and associated examinations are held in German or English. The language is specified in the module description (§ 45 SPO 29). Upon completion of the program, graduates are awarded the degree **of Master of Arts**.

In the Master's degree program in SME Management, graduates learn to solve management and leadership tasks in medium-sized companies. Special emphasis is also placed on qualifying students to assess and independently implement business ideas. Students can select in-depth specialist knowledge in the areas of state-of-the-art practice-oriented management methods and cross-sectional skills, which they apply in the course of diverse regional and international collaborations, case studies and practical projects. The curriculum of the Master's program in SME Management is characterized in particular by a great deal of freedom of choice for students. This includes the opportunity to take a closer look at topics such as innovation and technology management in order to develop their own problem-solving strategies. Furthermore, graduates have the following skills:

- Graduates will be able to apply their knowledge in the field of management and use it within management tasks in medium-sized companies.
- Graduates are able to solve problems independently thanks to the social skills they have acquired through projects and case studies.
- They also have the ability to argue with negotiating skills and can therefore be convincing in the private sector.
- Graduates are able to use analytical methods to understand complex procedures and processes and can describe, analyze, explain and evaluate relationships.
- By completing the Master's thesis, graduates are able to work scientifically and think critically.
- They are able to defend their research results and present complex issues convincingly in writing and orally.
- Graduates are able to take ethical and social aspects into account in their work. They reflect on their professional actions and thus develop a professional self-image.
- The Master's program in SME Management is characterized in particular by a high degree of freedom of choice for students. The qualification objectives of the 3 specializations are

Focus A: Digital Transformation & Business Models

The Digital Transformation and Business Models specialization combines knowledge of business administration and digitalization topics in order to provide answers to questions about competitive business models and the underlying digital technologies with this interdisciplinary understanding.

This interdisciplinary knowledge enables graduates to analyse, develop and evaluate information systems, associated data and underlying processes in and between organizations. This enables them to better understand the strategies, structures, functions and digitally supported processes of companies and corporate networks and to organize them in a future-oriented manner.

The synergetic interaction of research, teaching and practice is a central component of the interdisciplinary degree program in SME Management, which thus addresses all relevant requirements of a still highly attractive job market.

Graduates are able to raise and answer questions from the field of business administration in the narrower sense and to defend them with arguments. Graduates are able to analyze business requirements and assess the benefits of certain methods and IT tools as well as argue appropriately and convincingly for digital transformation strategies to be adopted in order to solve the challenges faced by small and medium-sized enterprises. Graduates are therefore well equipped to meet the challenges posed by the increasing importance of digitalization in SMEs.

The curriculum for specialization A includes focused elective options for students.

Major B: Innovation & New Business

In the Innovation and New Business specialization, graduates can solve tasks in innovation management and business development and systematically develop business areas while leading interdisciplinary teams.

The focus is on qualifying students to assess and independently implement business ideas, as well as on qualifying students to take responsibility for new products and services within existing companies, from idea generation to implementation in innovation and production to marketing. Creativity-oriented techniques from the field of agile management methods are also an essential component.

Students are able to initiate systematic innovation processes and apply the diverse skills they have acquired in a sustainable manner, especially in medium-sized companies. To this end, students can select in-depth specialist knowledge in the areas of state-of-the-art, practice-oriented innovation methods and cross-sectional skills, which they apply in the course of diverse regional and international collaborations, case studies and practical projects. Graduates are therefore well equipped to meet the challenges posed by the increasing importance of agile methods in medium-sized companies.

The curriculum of the specialization "Innovation & New Business" includes focused elective options for students.

Major C: Management 4.0

Graduates are able to apply analytical and innovative methods to interpret complex processes and interrelationships of new global framework conditions with regard to economic and digital opportunities and risks and to project the results obtained from this onto new management concepts for medium-sized companies.

Graduates are able to establish and evaluate current organizational and operational schemes as well as operational and effective business planning in terms of projects and corporate strategy and develop and implement competitive and future-oriented sales strategies. They are able to initiate systematic management processes and apply the wide range of skills they have acquired both in primary value creation (production and logistics) and in the supporting areas of the company (human resources management, etc.), particularly with regard to technological, economic and international dimensions.

Graduates are able to solve marketing issues for medium-sized companies, in particular new marketing concepts (neuromarketing etc.), taking into account IT systems and international aspects.

Graduates are able to present research and development results as well as complex issues in writing and orally using the latest working and presentation techniques depending on the situation. They can also be deployed in multinational work areas using the English language.

Graduates are therefore well equipped to meet the requirements of the increasing importance of digital technologies and global management approaches for medium-sized companies.

The curriculum of major C includes focused elective options for students.

At Aalen University, the ability to engage in civil society is anchored in the curriculum of every degree program. Aalen University implements the requirements of the Bologna Process by integrating the Studium Generale into the course of studies. The guidelines drawn up for the Studium Generale regulate the implementation and consideration of the respective activities. In order to prepare students for professional life, it is essential to integrate soft skills into their studies. A comprehensive range of courses is created for each semester. There are many different types of Studium Generale events, including public lectures, seminars, activities in social institutions and voluntary work on committees.

II - Program structure and scope

(1) General information

a) The "Mittelstandsmanagement (Master of Arts)" course is a full-time course with a standard duration of three semesters. The last semester is used to complete the Master's thesis.

b) The courses and associated examinations are held in German or English. The language is specified in the module description.

(2) Admission

Admission to the course is regulated in a separate set of admission regulations.

The selection committee decides on the additional work to be completed by applicants with a degree of less than 210 credit points in accordance with the admission regulations.

(3) Structure and content

a) The degree course offers three specializations:
   1. Major A: Digital Transformation & Business Models
   2. Major B: Innovation & New Business
   3. Focus C: Management 4.0

b) The degree program is divided into four parts:
   1. Compulsory program comprising three modules with 5 CP each (two modules are to be completed in the first semester, one module in the second semester),
   2. In the first and second semesters, students must choose modules totaling 15 CP (5 CP per module) from the chosen major (compulsory elective area). Two modules must be completed in the first semester and one module in the second semester).
   3. Free elective area, in which two modules are to be selected in the first semester and four modules each worth 5 CP in the second semester. In the first and second semesters, at least one module must be selected from the modules offered in the Master's degree program in SME Management. One module in the first semester and three modules in the second semester can be chosen from the entire range of Master's courses offered by Aalen University after approval by the Examination Board.
   4. Master's thesis amounting to 30 CP.

c) At the beginning of the degree program, the student must choose one of the specializations offered. A change of specialization is only permitted upon application and only in particularly justified cases. The Examination Board will decide on the student's application.

d) A specialization is only offered if at least 5 students choose a specialization.

e) The modules and courses offered in the compulsory elective major program may be subject to change. They are published at the beginning of the program in a module overview (list). There is no entitlement to attend a particular module or course.

f) The degree program may issue guidelines for the selection of compulsory elective modules by resolution of the Examination Board by means of a notice or announcement in the usual form.

g) The structure of the degree program, the modules / sub-modules, the courses with the number of hours per week per semester and the number of credit points (CP) can be found in the following tables, in the module overview (list) and in the module descriptions in the module handbook of the degree program.

(4) Master's thesis

The Master's thesis can only be started if at least 255 credit points have been achieved in the previous course of study (Bachelor's and Master's degree program) (85% of the total 300 CP to be achieved).

By resolution of the Examination Board, the degree programme may issue additional guidelines by notice or announcement in the usual form, which regulate the content and formal requirements for the Master's thesis as well as questions of procedural organization and assessment.

(5) No separate workload has been defined in the curriculum for the Studium Generale, as the corresponding workload is already integrated in the standard course of study in module "36001 Scientific Methodology".

(6) Exclusion from studies

a) The right to take examinations and admission to the degree program expires if the student has not completed all the examinations required for the final examination by the end of the sixth semester after the start of the degree program at the latest.

b) The right to take examinations and admission to the degree program shall not expire if the student is not responsible for the failure to meet this deadline. The Examination Board will decide on this at the student's request.

(7) International semester ("International Management")

a) Upon application, students have the opportunity to complete credits from the 2nd semester abroad (module name: "International Management"). The application must be submitted to the Examination Board. The application must be granted if the student can provide suitable evidence (e.g. through a learning agreement or contract with a research institute) that the stay abroad is organized in a way that is conducive to study; the competence objectives of the 2nd semester will be taken into account appropriately. The modules "International Management" replace the compulsory elective modules of the chosen major and the elective area in the 2nd semester in accordance with the defined regulations of the elective area.

b) If not all of the agreed achievements in the "International Management" modules are passed, the successfully completed achievements will nevertheless be credited to the corresponding modules of the 2nd semester in accordance with the Learning Agreement or contract. The Examination Board decides on the corresponding recognition on the basis of suitable evidence.

c) If one or more "International Management" modules are not successfully completed during the International Semester, the missing CP must be earned by completing other modules of the degree program in accordance with the chosen major and the regulations of the elective area. The modules still to be completed should complement the modules already completed abroad in a meaningful way.

Curriculum

"SME Management" - compulsory program						
No.	**Module/** Course	**Type**	**Semester** SWS			**CP**
			1	2	3	
36001	**Scientific Methodology**					**5**
36101	Scientific Methodology	V, Ü,	4			5
36002	**Financial Management**					**5**
36102	Financial Management	V, Ü	4			5
36003	**Law in medium-sized businesses**					**5**
36201	Law in the SME sector	V, Ü		4		5
	Number of SWS		**8**	**4**		
	Number of CP		**10**	**5**		
	Number of exams		**2**	**1**		

"SME Management" - compulsory elective area (at least 3 modules)						
No.	**Module/** Course	**Type**	**Semester** SWS			**CP**
			1	2	3	
Specialization A: Digital Transformation & Business Models (**Selection of at least 3 modules from the corresponding specialization - one module must be selected in the 1st semester and 2 modules in the 2nd semester - the modules are listed as examples and are subject to change. Each semester, the degree program publishes a current list of electives in the respective field of study with the possible elective modules - see para. 3)**						
36004	**Specialization module DTBM - 1**		**X**			**5**
36005	**Specialization module DTBM - 2**		**X**			**5**
36006	**Specialization module DTBM - 3**			**X**		**5**
Elective area Digital Transformation & Business Models						
36007	**Financial asset management in a digital world**					**5**
36103	Financial asset management in a digital world	V, EXERCISE, P	4			
36008	**Digital business models**					**5**
36202	Digital Business Models	V, Ü,P		4		5

No.	Module/ Course	Type	Semester SWS			CP
			1	2	3	
36009	**SCM 4.0**					**5**
36203	SCM 4.0	V, EXERCISE, P		4		5
36010	**Business analytics**					**5**
36204	Business Analytics	V, EXERCISE, P		4		5
36011	**Business Model Development**					**5**
36104	Business Model Development	V, EXERCISE, P	4			5
36012	**Strategic Management & Transformation**					**5**
36105	Strategic Management & Transformation	V, Ü,P	4			5
	Number of SWS		**16**	**8**		
	Number of CP		**20**	**10**		
	Number of exams		**4**	**2**		

Major B: Innovation & New Business

((Selection of at least 3 modules from the corresponding major field of study - one module must be selected in the 1st semester and 2 modules in the 2nd semester - the modules are listed as examples and are subject to change. Each semester, the degree program publishes a current list of electives in the respective field of study with the possible elective modules - see para. 3)

No.	Module/ Course	Type	Semester SWS			CP
			1	2	3	
36013	**Specialization module INB - 1**		**X**			**5**
36014	**Specialization module INB - 2**		**X**			**5**
36015	**Specialization module INB - 3**			**X**		**5**

Elective area Innovation & New Business						
36016	**HR Management 4.0**					**5**
36205	HR Management 4.0	V, EXERCISE, P		4		5

No.	Module/ Course	Type	Semester SWS			CP
			1	2	3	
36017	**Design Thinking**					**5**
36106	Design Thinking	V, Ü,P	4			5
36008	**Digital Business Models**					**5**
36202	Digital Business Models	V, Ü,P		4		5
36011	**Business Model Development**					**5**
36104	Business Model Development	V, EXERCISE, P	1			5
36018	**Technology Management**					**5**
36107	Technology Management	V, Ü,P	4			5
	Number of SWS		**16**	**8**		
	Number of CP		**20**	**10**		
	Number of exams		**4**	**2**		

Major C: Management 4.0

(Selection of at least 3 modules from the corresponding major field of study - one module must be selected in the 1st semester and 2 modules in the 2nd semester - the modules are listed as examples and are subject to change. Each semester, the degree program publishes a current list of electives in the respective field of study with the possible elective modules - see para. 3)

No.	Module/ Course	Type	Semester of study SWS			CP
			1	2	3	
36019	**Specialization module MM - 1**		**X**			**5**

36020	**Specialization module MM - 2**		**X**			**5**
36021	**Specialization module MM - 3**			**X**		**5**
Elective area Management 4.0						
36022	**Neuromarketing & Storytelling**					**5**
36206	Neuromarketing & Storytelling	V, Ü, P		4		5

No.	**Module/** Course	**Type**	**Semester** SWS			**CP**
			1	2	3	
36018	**Technology Management**					**5**
36107	Technology Management	V, Ü, P	4			5
36016	**HR Management 4.0**					**5**
36205	HR Management 4.0	V, Ü, P		4		5
36023	**Global SME Management**					**5**
36108	Global SME Management	V, Ü, P	4			5
36009	**SCM 4.0**					**5**
36203	SCM 4.0	V, Ü, P		4		5
36012	**Strategic Management & Transformation**					**5**
36105	Strategic Management & Transformation	V, Ü, P	4			5
	Number of SWS		**16**	**8**		
	Number of CP		**20**	**10**		
	Number of exams		**4**	**2**		

"Mittelstandsmanagement" - Free elective area (choice of six modules - two modules are to be chosen from the study specializations of the degree program, four modules can be chosen from the study specializations of the degree program or from the Master's program of Aalen University after approval by the examination board of the degree program)						
No.	**Module/** Course	**Type**	**Semester** SWS			**CP**
			1	2	3	
36301	**Elective module 1 -** Subjects from the specializations of the Master's degree program in SME Management		**X**			**5**
36302	**Elective module 2 -** Subjects from the specializations of the Master's degree program in SME Management			**X**		**5**
36303	**Elective module 3**					**5**
36110	Subjects from the Master's program of Aalen University after approval by the Examination Board		X			5
36304	**Elective module 4**					**5**
36207	Subjects from the Master's program offered by Aalen University after approval by the Examination Board			X		5
36305	**Elective module 5**					**5**
36208	Subjects from the Master's program offered by Aalen University after approval by the Examination Board			X		5
36306	**Elective module 6**					**5**
36209	Subjects from the Master's program offered by Aalen University after approval by the Examination Board			X		5
	Number of SWS		16 + WP	8 + WP		
	Number of CP		20 + 10 WP	10 + 20 WP		
	Number of exams		4 + 2 WP	2 + 4 WP		

Optional international semester (achievements of the 2nd semester can be recognized according to the Learning Agreement or contract abroad after approval by the Examination Board).

No.	**Module /** Courses	Type	Semester hours per week / semester			CP
			1.	2.	3.	
International module "International Management"						
36401	**International Management 1**					**5**
36210	International Management 1	V,Ü, P,S		X		5
36402	**International Management 2**					**5**
36211	International Management 2	V,Ü, P,S		X		5
36403	**International Management 3**					**5**
36212	International Management 3	V,Ü, P,S		X		5
36404	**International Management 4**					**5**
36213	International Management 4	V,Ü, P,S		X		5
36405	**International Management 5**					**5**
36214	International Management 5	V,Ü, P,S		X		5
36406	**International Management 6**					**5**
36215	International Management 6	V, Ü, P,S		X		5

Master's thesis						
No.	**Module/** Course	**Type**	**Semester** SWS			**CP**
			1	2	3	
9999	**Master thesis**				**X**	**30**
9999	Written master thesis				X	30
9998	Master's thesis colloquium				X	
	Total number of SWS		16 + WP	8 + WP		
	Total number of CP		20 + 10 WP	10 + 20 WP	**30**	
	Total number of exams		4 + 2 WP	2 + 4 WP	**1**	

C. FINAL PROVISION

§ Section 52 Entry into force

These Articles of Association shall enter into force on the day following their publication.