

---

# **Study Programme: Applied Computer Science (Master of Science)**

Examination Regulations

Schmalkalden University of Applied Sciences, Faculty of  
Computer Science

March 18, 2025

---

**Präambel   unofficial reading document for reference only**

## Contents

First Section – General . . . . .	4
<b>§1 Scope of Validity</b>	<b>4</b>
<b>§2 Type and purpose of the Master’s examination</b>	<b>4</b>
<b>§3 Admission Requirements</b>	<b>4</b>
<b>§4 Degree</b>	<b>4</b>
<b>§5 Standard period of study, study structure, protection periods in accordance with the Maternity Protection Act, parental and carer’s leave</b>	<b>4</b>
<b>§6 Admission to Examinations</b>	<b>5</b>
<b>§7 Structure of the exam</b>	<b>6</b>
<b>§8 Types of Examinations</b>	<b>6</b>
<b>§9 Oral Examination</b>	<b>7</b>
<b>§10 Written Examination</b>	<b>7</b>
<b>§11 Alternative Examination</b>	<b>8</b>
<b>§12 Assessment of examination performance and formation of grades</b>	<b>8</b>
<b>§13 Failure to Attend, Withdrawal, Deception, Breach of Regulations</b>	<b>9</b>
<b>§14 Passing and Failing</b>	<b>10</b>
<b>§15 Repeating of Examinations</b>	<b>11</b>
<b>§16 Recognition of periods of study, academic achievements and examination results</b>	<b>11</b>
<b>§17 Examination Board</b>	<b>11</b>
<b>§18 Examiners and Assessors</b>	<b>12</b>
<b>§19 Responsibilities</b>	<b>13</b>
Second Section – Master’s examination . . . . .	14
unofficial reading document	2

<b>§20</b>	<b>Type and Scope of the Master's examination</b>	<b>14</b>
<b>§21</b>	<b>Master's Thesis</b>	<b>14</b>
<b>§22</b>	<b>Submission, Assessment and Repetition of the Master's thesis</b>	<b>15</b>
<b>§23</b>	<b>Passing the Master's Examination, Determination of the Overall Grade</b>	<b>16</b>
<b>§24</b>	<b>Certificate</b>	<b>16</b>
<b>§25</b>	<b>Master's certificate</b>	<b>17</b>
	Third Section – Final provisions . . . . .	18
<b>§26</b>	<b>Invalidity of the Master's Examination</b>	<b>18</b>
<b>§27</b>	<b>Access to the Examination Files</b>	<b>18</b>
<b>§28</b>	<b>Gender equality clause</b>	<b>18</b>
<b>§29</b>	<b>Entry into force/transitional provisions</b>	<b>18</b>
	Annex 1 – Type of examination . . . . .	20

**First Section – General****§ 1 Scope of Validity**

These examination regulations apply to the international degree programme Applied Computer Science (Master of Science) at the Faculty of Computer Science at Schmalkalden University of Applied Sciences.

**§ 2 Type and purpose of the Master's examination**

- 1) The Master's examination determines whether the candidate has an overview of the interrelationships in the respective subject area, has the ability to apply scientific methods and knowledge and has acquired the in-depth specialist knowledge required for the area of the Master's degree programme in Applied Computer Science.
- 2) The examinations for the Master's examination are carried out in accordance with §7 paragraph 3 during the course of study following the respective courses.

**§ 3 Admission Requirements**

Admission requirements are regulated in § 2 of the Study Regulations (ger. Studienordnung).

**§ 4 Degree**

The academic degree *Master of Science (M.Sc.)* is awarded on successful completion of the Master's examination.

**§ 5 Standard period of study, study structure, protection periods in accordance with the Maternity Protection Act, parental and carer's leave**

- 1) The standard period of study, including the Master's thesis, is four semesters. Periods of leave of absence in accordance with §8 of the enrolment regulations of Schmalkalden University of

Applied Sciences are not taken into account when calculating the standard period of study, nor are periods of maternity leave, parental leave and carer's leave in accordance with paragraph 6.

- 2) According to the European Credit Transfer System (ECTS), 30 credit points are awarded for one semester. One credit point corresponds to a study volume (workload) of 30 hours.
- 3) The Master's examination comprises modules with a study volume of 120 credit points in accordance with the breakdown in §20. Each of the four semesters comprises 30 credit points, including the final semester with Master's thesis and Master's colloquium.
- 4) The faculty shall draw up study regulations for the degree programme. The study regulations regulate the content and structure of the degree programme and the study volume in credit points on the basis of these examination regulations.
- 5) The courses offered and the examination procedure must be organised in such a way that the Master's examination can be completed at the end of the fourth semester.
- 6) The use of the protection periods in accordance with the Maternity Protection Act, the use of parental leave in accordance with the Parental Allowance and Parental Leave Act and the use of care leave in accordance with the Care Leave Act are authorised by the Examination Board upon application. The necessary evidence must be enclosed with the respective application.

## **§ 6 Admission to Examinations**

- 1) Only students enrolled in the Applied Computer Science degree programme at the Faculty of Computer Science at Schmalkalden University of Applied Sciences may take part in the Master's examination.
- 2) The student must register for the examinations via the media provided by the Central Examination Office. The examination periods are based on the academic year schedule confirmed by the Presidential Board. An additional examination period for the Faculty of Computer Science is in the two calendar weeks before the start of the lecture period. The registration period begins 4 weeks and ends 2 weeks before the start of the examination period. The registration deadlines are cut-off deadlines. Cancellation is possible up to the third working day before the examination date. The Central Examination Office must be notified.
- 3) Admission to an examination may only be refused if
  - a) the requirements stipulated in paragraphs 1 and 2 are not met *or*
  - b) the documents are incomplete *or*

- c) the candidate has definitively failed the Master's examination in the chosen degree programme within the scope of the Basic Law (ger.: Grundgesetz) or is in an examination procedure in the chosen degree programme that has not yet been completed.

## **§ 7 Structure of the exam**

- 1) The Master's examination consists of the module examinations in accordance with §20.
- 2) Examinations are individual concrete examination procedures (§8). An examination performance is assessed and graded in accordance with §12 paragraph 2.
- 3) Oral examinations (§9) or written examinations (§10) must be taken in specified examination periods.
- 4) The examinations are regularly taken in English. In justified exceptional cases, the examination board may authorise examinations in German.

## **§ 8 Types of Examinations**

- 1) Examination performances can be
  - a) oral (§9),
  - b) written (§10)
  - c) or by alternative examination performance (§11).
- 2) The examination performance should demonstrate that the candidate has sufficient in-depth specialist knowledge in the examination area and is able to solve tasks in the examination area independently. Written examinations that are predominantly based on the multiple-choice method are excluded.
- 3) The type of examination performance for each individual module is regulated in Annex 1. The details are specified in the module description. In justified exceptional cases, the examiner may choose a different method of taking the examination if he/she has announced this to the university before the start of the lecture period.
- 4) If the candidate can credibly demonstrate that he/she is unable to take examinations in the intended form in whole or in part due to a long-term or permanent physical disability or chronic illness, the candidate shall be permitted to take the examinations within an extended processing time or to take equivalent examinations in another form as compensation for disadvantage. A medical certificate may be required for this purpose.

- 5) Should provisions of these examination regulations jeopardise the use of statutory maternity leave or periods of parental leave or unreasonably impair the care of close relatives in accordance with the provisions of Section 55 (4) ThürHG, the Examination Board must provide a remedy.
- 6) For examinations that are to be completed in electronic form or in electronic communication, the statutes governing interdisciplinary provisions for examination procedures in electronic form or in electronic communication at Schmalkalden University of Applied Sciences (Online Examination Statutes) apply.

## **§ 9 Oral Examination**

- 1) In an oral examination, the candidate should demonstrate that he/she is able to recognise the interrelationships of the examination area and to classify specific questions in these contexts. An oral examination should also establish whether the candidate has in-depth specialised knowledge.
- 2) Oral examinations are held in front of at least two examiners according to §18 (peer examination) or in front of one examiner in the presence of an expert assessor according to §18 as a group examination or as an individual examination. The examinations board appoints the assessors.
- 3) An oral examination should last at least 15 minutes and no longer than 45 minutes per candidate.
- 4) The main subjects and results of the oral examination are to be recorded in minutes. The result is to be announced to the candidate on the day of the oral examination.
- 5) Students who wish to take the same examination in a later examination period should be admitted as listeners, subject to room conditions, unless the candidate objects. However, admission does not extend to the consultation and announcement of the examination results to the candidate.

## **§ 10 Written Examination**

- 1) In a written examination (written examination), the candidate should demonstrate that he/she can solve problems and work on topics using the usual methods of the examination subject in a limited time and with limited aids. It should also be established whether the candidate has in-depth specialised knowledge.
- 2) The written examination tasks are set by an examiner according to §18. The written examinations must be completed simultaneously by all candidates in the subject and on the examination date in question.



- 3) The duration of a written examination is generally 120 minutes. Deviations can be regulated in the respective module description.
- 4) Examinations are assessed by one examiner. In the case of the last possible repeat examination, the written examination must be assessed by two examiners. The grade is calculated from the arithmetic mean of the individual assessments. If one of the examiners assesses the written examination as *not sufficient* (5.0), the Examination Board shall decide.

## **§ 11 Alternative Examination**

- 1) Alternative examinations are controlled examinations that are assessed according to the same standards and are generally taken outside the specified examination periods. They may take the form of seminar papers, assignments, presentations, case studies, project work, drafts, computer programmes, exercises to be solved or a combination of the aforementioned options within the scope of the workload associated with the credit points. They may be supplemented by a written or oral examination.
- 2) Alternative examinations are set by an examiner according to §18. The form of the examinations shall be announced publicly by the relevant examiner at the beginning of the lecture period of each semester. The submission deadline is announced at the same time.
- 3) Registration takes place in accordance with §6 paragraph 2.
- 4) Irrespective of the deadlines set by the person responsible for the course for the provision of the components of an alternative examination, the assessment of the alternative examination shall take place at the latest at the end of the respective semester on the basis of the performance then available.

## **§ 12 Assessment of examination performance and formation of grades**

- 1) The performance of individual candidates is assessed for an examination. The work of groups can only be recognised as examination performance for individual candidates insofar as the individual performances of the individual candidates to be assessed are clearly distinguishable and assessable in themselves. The differentiation must be based on objective criteria.
- 2) The grades for the individual examination performances are determined by the respective examiners. The following grades are to be used for the assessment of examination performances:

Grade	Value	Meaning
1	excellent	A performance that exceeds the average requirements in a special way.
2	good	A performance that is well above the average requirements.
3	satisfactory	A performance that meets average requirements.
4	sufficient	A performance that still fulfils the requirements despite its shortcomings.
5	insufficient	A performance that no longer fulfils the requirements due to significant deficiencies.

Individual grades can be increased or decreased by 0.3 to intermediate values in order to differentiate the assessment of examination performance; the grades 0.7; 4.3; 4.7 and 5.3 are excluded.

- 3) If a module consists of several courses, each individual course is assessed by an examination. Credit points are allocated to each course in accordance with the module descriptions. The grade of the module is calculated from the average of the grades of the individual examinations weighted by the credit points. Only the first decimal place after the decimal point is taken into account. All other digits are cancelled without rounding. The grade is as follows:

Range	Value
Average of 1.0 up to and including 1.5	excellent
Average of 1.6 up to and including 2,5	good
Average of 2.6 up to and including 3,5	satisfactory
Average of 3.6 up to and including 4,0	sufficient
Average from and over 4.1	insufficient

## § 13 Failure to Attend, Withdrawal, Deception, Breach of Regulations

- 1) An examination is deemed to have been assessed as “insufficient” (5.0) if the candidate misses a binding examination date without a valid reason or if he/she withdraws from an examination that he/she has started without a valid reason. The same applies if a written examination is not completed within the specified time limit.

- 2) The reason given for the withdrawal or failure must be reported to the examination board immediately in writing and substantiated. In the event of illness of the candidate, a child to be cared for by the candidate or a relative in need of care, the submission of a medical certificate and, in cases of doubt, a certificate from a doctor appointed by the university may be requested. If the reason is recognised, a new examination date will be scheduled and this attempt will not be counted as an examination attempt.
- 3) If the candidate attempts to influence the result of his/her examination performance by cheating, carrying or using unauthorised aids, the performance in question will be assessed as “insufficient” (5.0). A candidate who disrupts the proper conduct of an examination may be excluded from continuing the examination by the respective examiner or invigilator. In this case, the performance is assessed as “insufficient” (5.0).
- 4) The candidate may request a review by the Examination Board within 4 weeks of decisions pursuant to paragraph 3 sentences 1 and 2. Incriminating decisions must be communicated to the candidate immediately in writing, stating the reasons and providing information on legal remedies.

## **§ 14 Passing and Failing**

- 1) An examination is passed if the grade is at least “sufficient” (4.0).
- 2) Examination results must be assessed and published in compliance with data protection regulations no later than four weeks after the start of the lecture period of the following semester.
- 3) If the candidate has failed an examination or if the Master’s thesis has been graded lower than “sufficient” (4.0), the candidate will be informed of this. He/she will be informed of the deadline within which the examination or Master’s thesis can be repeated.
- 4) The Examination Board decides on the final failure of the Master’s examination. The decision must be communicated to the candidate in writing without delay, stating the reasons and providing information on legal remedies.
- 5) If the candidate has not passed the Master’s examination, a certificate will be issued upon request and upon presentation of the relevant evidence and the certificate of de-registration, which contains the examination achievements and their grades as well as the missing examination and study achievements and indicates that the Master’s examination has not been passed.

## **§ 15 Repeating of Examinations**

- 1) Failed examinations may be repeated a maximum of two times. Failed attempts at other universities in the Federal Republic of Germany shall be taken into account. If a retake is no longer possible, the examination has been definitively failed.
- 2) It is not permitted to repeat an examination that has been passed.
- 3) A repeat examination should be taken on the next examination date.

## **§ 16 Recognition of periods of study, academic achievements and examination results**

- 1) Study and examination achievements from Computer Science degree programmes or from related degree programmes will be credited upon application, provided that the university can prove no significant differences to the applicant. When recognising periods of study, coursework and examinations completed outside the Federal Republic of Germany, the equivalence agreements approved by the Standing Conference of the Ministers of Education and Cultural Affairs of the Länder and the German Rectors' Conference as well as agreements within the framework of university partnerships must also be observed.
- 2) A Master's thesis from another degree programme or another field of study cannot be recognised for this degree programme.
- 3) The Examination Board decides on the recognition of study and examination achievements. It may require supplementary examination achievements. The Examination Board may request expert opinions as proof of equivalence.
- 4) If coursework and examinations are recognised, the grades and ECTS credit points - insofar as the grading systems are comparable - are to be adopted and included in the calculation of the overall grade. In the case of incomparable grading systems, the note "passed" is included. The crediting is labelled in the certificate.
- 5) For the recognition of non-university qualifications, the statutes on the recognition of knowledge and skills acquired outside of universities at Schmalkalden University of Applied Sciences apply.

## **§ 17 Examination Board**

- 1) An examination board is formed for the organisation of examinations and the tasks assigned by these examination regulations. It consists of four professors and two students of the faculty. The

term of office of the members is two years. The term of office for student members is one year.

- 2) The Chairperson, Deputy Chairperson, the other members of the Examination Board and their deputies are appointed by the Faculty Council. As a rule, the Chairperson conducts the business of the Examination Board.
- 3) The Examination Board ensures that the provisions of the examination regulations are complied with. It reports regularly to the faculty on the development of examination and study times, including the actual completion times for the Master's thesis, as well as on the distribution of examination grades and overall grades. The report must be published by the faculty in an appropriate manner. The Examination Board makes suggestions for the reform of the study regulations or study plans and examination regulations.
- 4) The Examination Board has a quorum if, in addition to the chairperson or deputy chairperson and another representative of the professorial staff, at least two other members with voting rights are present. It decides by simple majority. In the event of a tie, an application is deemed to have been rejected.
- 5) The examination committee may delegate the fulfilment of its tasks to the chairperson for all standard cases.
- 6) The members of the Examination Committee have the right to attend the examination.
- 7) The members of the Examination Committee and their deputies are subject to official secrecy. If they are not in public service, they must be sworn to secrecy by the chairperson.

## **§ 18 Examiners and Assessors**

- 1) Only professors and other persons authorised to conduct examinations in accordance with state law who, unless there are compelling reasons for not doing so, have taught independently and under their own responsibility at a university in the subject area to which the examination relates are appointed as examiners. Only those who have passed the corresponding Master's examination or a comparable examination are appointed as assessors. Authorised members of the university who have taught courses in the subject area to which the examination relates are examiners for the subject area. Authorised examiners who are not members of the university may be appointed by the examination board to take the examinations, provided that they have independently and autonomously taught the courses in the subject area to which the examination relates. Assessors are appointed by the Examination Board at the suggestion of the examiner.
- 2) For examiners and assessors, §17 paragraph 7 applies accordingly.

## **§ 19 Responsibilities**

Unless otherwise stipulated in these Examination Regulations, the Examination Board decides on matters relating to the Examination Regulations.

**Second Section – Master’s examination****§ 20 Type and Scope of the Master’s examination**

The Master’s examination consists of:

- a) the examinations of the compulsory modules totalling 10 credit points,
- b) the examinations of the modules of the compulsory elective area totalling 80 credit points,
- c) the Master’s thesis (27 credit points),
- d) the Master’s colloquium (3 credit points).

**§ 21 Master’s Thesis**

- 1) In the Master’s thesis, the candidate should demonstrate that he/she is able to work on a problem in a specialised field independently and methodically on a scientific basis. If a student is enrolled in several degree programmes at the same time, a separate Master’s thesis must be written for each programme.
- 2) The Master’s thesis is issued and supervised by an authorised examiner in accordance with §18 paragraph 1; the topic and time of issue must be recorded by the supervisor’s signature and filed in the faculty secretariat. If the supervisor is not employed at the university in a field relevant to this degree programme, the approval of the Examination Board is required. The candidate must be given the opportunity to make suggestions for the topic of the Master’s thesis. Upon request, the Chair of the Examination Board shall ensure that a candidate receives a topic for the Master’s thesis in good time.
- 3) The Master’s thesis may be issued if all examinations have been passed except for a maximum of 10 credit points. The open examination must be passed by the time of submission at the latest. The Master’s colloquium can only be taken once all other examinations and the Master’s thesis have been passed.
- 4) The Master’s thesis may also be admitted in the form of a group thesis if the contribution of the individual candidate to be assessed as an examination performance is clearly distinguishable and assessable on the basis of the specification of sections, page numbers or other objective criteria that enable a clear delimitation and fulfils the requirements according to paragraph 1.
- 5) The processing time for the Master’s thesis is 24 weeks. The topic, task and scope of the Master’s thesis must be limited by the supervisor in such a way that the deadline for completion can be met. The topic may be returned once and only within two weeks of being issued, stating reasons. Returning the topic later than this will be assessed as failure to complete the thesis. If the topic

is not completed, the Master's thesis will be assessed as *insufficient* (5.0). In exceptional cases, the Examination Board may extend the processing time by a maximum of two months upon request, provided that the candidate is not responsible for the extension due to personal reasons. An application for an extension of the processing time should be submitted at least two weeks before the deadline for submission of the Master's thesis. A medical certificate must be submitted immediately for requests for extensions due to illness. In all other cases, the application must be accompanied by a statement from the Master's thesis supervisor stating the reasons why the result achieved within the set processing time of 24 weeks is *not sufficient* (5.0) for an assessment of the Master's thesis.

## **§ 22 Submission, Assessment and Repetition of the Master's thesis**

- 1) The Master's thesis must be submitted to the examination board via the faculty secretariat by the deadline; the submission date must be recorded. If the Master's thesis is submitted late, it shall be graded as "insufficient" (5.0).
- 2) When submitting the Master's thesis, the candidate must confirm in writing that he/she has written his/her thesis - in the case of a group thesis, the part of the thesis marked accordingly - independently and has not used any sources or aids other than those specified.
- 3) Two bound copies of the Master's thesis and a digital version must be submitted or postmarked no later than the last day of the deadline. The presentation documents for the Master's colloquium must be submitted in a digital version on the day of the colloquium. The digital versions of the Master's thesis and the Master's colloquium must use a digitally editable document format.
- 4) As a rule, the Master's thesis is to be assessed by two examiners. One of the examiners should be the supervisor of the Master's thesis. The grade is calculated from the arithmetic mean of the individual assessments. If one of the examiners assesses the thesis as "insufficient" and the other examiner assesses it as at least "sufficient", a third examiner is appointed by the Examination Board. If this examiner also assesses the work as "insufficient", it is "failed". If the third examiner assesses the work as at least "sufficient", the grade is calculated from the arithmetic mean of the three individual assessments, whereby at least the grade "sufficient" must be awarded.
- 5) The candidate presents their thesis, which has been assessed as at least "sufficient", to two examiners in a colloquium. One of the examiners is the supervisor of the Master's thesis. The colloquium is assessed. The grade for the colloquium is calculated from the arithmetic mean of the examiners' grades. If the colloquium is not graded as at least "sufficient", it is deemed to have been failed and can be repeated once.
- 6) The Master's thesis can only be repeated once if the grade is worse than "sufficient" (4.0). However,



the topic of the Master's thesis may only be returned within the period specified in §21 paragraph 5 if the candidate has not made use of this option in the first attempt.

## **§ 23 Passing the Master's Examination, Determination of the Overall Grade**

- 1) The overall grade of the Master's examination is calculated as the weighted arithmetic mean of the grades of the examinations, the Master's thesis and the Master's colloquium. The weighting is based on credit points, whereby the Master's thesis is awarded 27 credit points, the Master's colloquium 3 credit points and the examinations according to the credit points allocated to them in the study regulations.
- 2) The Master's examination is passed if
  - a) at least the grade "sufficient" (4.0) has been achieved in all examinations
  - b) the Master's thesis and the Master's colloquium have been graded at least "sufficient" (4.0).
- 3) The overall grade shall be calculated in accordance with §12 paragraph 3.

## **§ 24 Certificate**

- 1) The candidate receives a certificate for passing the Master's examination. The certificate shall include the module designations and the grades of the examinations, the topic of the Master's thesis, its grade and the overall grade as well as the respective credit points.
- 2) The certificate bears the date of the colloquium. It is signed by the Dean of the Faculty and the Chair of the Examination Board.
- 3) The university issues a Diploma Supplement (DS) in accordance with the "Diploma Supplement Model" of the European Union / UNESCO. The text agreed between the Standing Conference of the Ministers of Education and Cultural Affairs of the Länder and the German Rectors' Conference in the currently valid version is to be used as a representation of the national education system (DS section 8). At the student's request to the Examination Board, further information on the course of study can be included in the Diploma Supplement under section 6.1.

## **§ 25 Master's certificate**

- 1) At the same time as the certificate, the candidate receives the Master's certificate with the date of the certificate. This certifies the award of the academic degree "Master of Science (M. Sc.)".
- 2) The Master's certificate is signed by the President of the University and bears the seal of the University.

**Third Section – Final provisions****§ 26 Invalidity of the Master's Examination**

- 1) If the candidate has cheated in an examination performance and this fact only becomes known after the certificate has been issued, the grade of the examination performance can be corrected in accordance with §13 paragraph 3. If necessary, the examination may be declared “insufficient” and the Master's examination may be declared failed. The same applies to the Master's thesis.
- 2) If the requirements for taking an examination were not met without the candidate intending to deceive about this and this fact only becomes known after the certificate has been issued, this deficiency shall be remedied by passing the examination. If the candidate has wilfully and wrongly obtained the opportunity to take the examination, the examination may be declared “insufficient” and the Master's examination may be declared failed.
- 3) The candidate 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 must also be withdrawn together with the incorrect certificate if the Master's examination has been declared failed due to cheating.

**§ 27 Access to the Examination Files**

Within one year of completion of the examination procedure, the candidate will be granted access to his/her written examination papers, the report on the Master's thesis and the examination records within a reasonable period of time upon request.

**§ 28 Gender equality clause**

Status and function designations according to these regulations apply to all genders.

**§ 29 Entry into force/transitional provisions**

- 1) These examination regulations come into force on the first day of the month following their publication in the Schmalkalden University of Applied Sciences' official gazette.

- 2) These examination regulations apply for the first time to students commencing the Master's degree programme in Applied Computer Science (Master of Science) at Schmalkalden University of Applied Sciences in the winter semester 2024/25.

**Schmalkalden, the December 12th, 2024**

**President of the University, Prof. Dr. Gundolf Baier**

---

## Annex 1 – Type of examination

### Compulsory Modules

The type of examination in accordance with §8 paragraph 1 is either oral (O), written (W) or alternative (A).

**Table 3:** compulsory courses of the study program Applied Computer Science (Master of Science)

module name	ECTS	WWL	Type of Exam	Semester
Seminar	5	4	A	3
Project	5	4	A	3

**Table 4:** compulsory elective courses of the study program Applied Computer Science (Master of Science)

module name	ECTS	WWL	Type of Exam	Semester
Distributed Systems	5	3	W	1
Signals and Systems	5	4	W	1
IT-Security	5	4	W	1
Computer Graphics	5	3	W	1
Mobile Systems	5	4	A	2
Computational Intelligence	5	4	W	1
Agile Software Development	5	4	W	2
Web Applications	5	4	W	3
IT-Security Advanced Chapters	5	4	W	3
Text Analysis and Data Search	5	4	W	3
Selected Chapters Functional Programming	5	4	W	2
Knowledge Discovery in Databases	5	4	W	1
3D Content Creation	5	4	A	2
Interactive Systems	5	4	A	3

<b>module name</b>	<b>ECTS</b>	<b>WWL</b>	<b>Type of Exam</b>	<b>Semester</b>
Image Processing I	5	4	W	1
Image Processing II	5	2	W	3
Media Production	5	4	A	2
Virtual and Augmented Environments	5	4	A	2
Service-oriented Networks	5	4	W	2
Human Machine Interaction	5	4	A	2
Metamodeling Platforms for Application Development	5	2	W	1