M.Sc. Information Systems (Wirtschaftsinformatik)

Examination and Academic Regulations (FPSO)

October 11, 2024

Markus Ewert

Decision Sciences and Systems
School of Computation, Information and Technology
Technische Universität München

winfo-master@in.tum.de

Master Information Systems @ TUM

☐ The Master's program Information Systems is a 4-semester and interdisciplinary Master's program that aims to qualify graduates to design, implement, and analyze complex information systems.

- ■ Three pillars: **Informatics, Information Systems, Management**
- ■ Possible job profiles:
  - Software architect
  - IT project manager
  - IT consultant
  - Business Intelligence / Data Science
  - Various business functions (e.g. operations management, marketing, etc.)
  - CIO, CTO
- ■ Strong focus on informatics skills in planning, development, and management of complex information systems together with core business skills and a preparation for leadership roles

Agenda

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- ☐ Master's Examination

- ☐ Progress Monitoring

- ☐ Examinations

- ☐ Recognitions

- ☐ Repeat Examinations

- ☐ Master's Thesis

- ☐ Certificate and Diploma

- ☐ Program Structure

- ☐ Exemplary Curriculum

- ☐ Other

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Disclaimer

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Only the officially published regulations are binding.

These Examination and Academic Regulations (FPSO) for the Master's program in Information Systems (Wirtschaftsinformatik) complement the General Academic and Examination Regulations for Bachelor's and Master's programs at the Technische Universität München (APSO). The APSO shall have precedence.

Master's Examination (§§35, 43, 47 FPSO)

- ☐ Standard duration of study: **4 semesters (120 Credits)**
  - ◼ 3 semesters: Required and elective modules (90 Credits)
  - ◼ 1 semester: Master's Thesis (30 Credits)
- ☐ Scope:
  - ◼ Module examinations
    - At least 21 credits in required modules
    - At least 69 credits in elective modules
    - Master's Thesis with 30 ECTS
  - ◼ List of modules:
    - Appendix 1 of Examination and Academic Regulations (FPSO)
    - Program website: https://www.cit.tum.de/cit/studium/studiengaenge/master-information-systems/
    - Master's examination is **passed** if all module examinations and the Master's Thesis are successfully completed (i.e., graded with at least 4.0)
- · The **final grade** is the weighted average of the individual grades. The weights correspond to the credits.

Progress Monitoring I (§38 FPSO, §10 APSO)

- Students need to acquire
  1. At least 30 credits by the end of the third semester
  2. At least 60 credits by the end of the fourth semester
  3. At least 90 credits by the end of the fifth semester
  4. At least 120 credits by the end of the sixth semester
- If 1.-3. are not met, all missing module examinations are considered to have been **taken and irreversibly failed** (unless the examination board grants an extension)
- If 4. is not met, all missing module examinations are considered to have been **taken and failed**. If 4. is not met after the following semester, they are **irreversibly failed**.

Progress Monitoring II (§38 FPSO, §10 APSO)

☐ Students are expected to study purposefully

  ■ Rule of thumb: **30 credits** are to be acquired per semester

☐ Deadlines and minimum requirements

  ■ **At least one of the module examinations** listed in Appendix 1 must be successfully completed by the end of the second semester

  ■ **All bridge courses** must be successfully completed by the end of the first year (Appendix 2, No. 5)

Examinations (§41 FPSO, §§19-23 APSO)

☐ Module examinations typically take place after the lecture period

☐ **Registration**: Usually via TUMOnline (https://campus.tum.de/); ask the respective examiner for specific modalities

☐ **Type** of examination: mostly written or oral (see §41 FPSO for an extensive list)

☐ **Language** of examination:

　◼ Often English by default

　◼ German exams upon request and with the approval of the examiner in English

☐ An examination is **passed** (credits acquired) if graded with at least 4.0 (sufficient)

☐ Compensation for disadvantages or maternity protection are governed by §§19, 20 APSO

☐ The Examination Board Informatics is responsible for decisions concerning examination matters

Recognitions (§40 FPSO, §16 APSO)

☐ Recognition of **periods of study, coursework and examination results**

☐ Recognition of previous examination results is possible if

- ◼ The modules are recognized as equivalent in terms of contents by the respective TUM lecturers
- ◼ The examinations did not contribute to finishing another degree
- ◼ The no previous recognition request have been submitted
- ◼ The recognition request is submitted during the first year of study to the Examination Board

☐ Details on recognitions are governed by § 16 APSO (e.g. periods of study, grade conversion, etc.)

Repeat Examinations I (§§22, 24 APSO)

□ **Basics**

  ■ Passed examinations cannot be repeated

  ■ In case of non-attendance at a registered examination, the exam is considered to have been taken and failed

□ **Required modules**

  ■ Failed examinations must be repeated

  ■ They are to be repeated at the next examination date

  ■ Required modules have to be passed

□ **Elective modules**

  ■ Failed examinations can be repeated

  ■ Failed examinations can be replaced by other successfully passed elective modules

  ■ Passed elective modules can be replaced by other passed elective modules

Repeat Examinations II (§§22, 24 APSO)

☐ **Number of repetitions**

  ◼ **Bridge courses** need to be passed successfully by the end of the first year

  ◼ Other failed exams can be repeated **any number of times**, subject to the progress monitoring

☐ **Deception or misconduct**

  ◼ Exam is failed immediately

  ◼ Exam may not be repeated any number of times

  ◼ In severe cases the Master's examination is irreversibly failed

Master's Thesis (§46 FPSO, §18 APSO)

- ☐ **Prerequisites**
  - ◼ All bridge courses **must** be passed
  - ◼ Master's Thesis **should** commence after successful completion of all module examinations (earlier also possible)
- ☐ **Scope**: Written document (graded, 30 credits) and lecture / presentation (not graded)
- ☐ **Maximum Duration**: 6 months after registration
- ☐ **Language**: Should be written in English
- ☐ **Supervision**: Thesis supervisor from the School of CIT (collaboration with other schools possible)
- ☐ **Topic**: If attempts to obtain are topic are unsuccessful, the Examination Board ensures upon request that the student receives a topic
- ☐ **Return**: The thesis topic can be returned once within the first two months and only for valid reasons and with the consent of the Examination Board
- ☐ **Repetition**: If the Master's Thesis is failed, it can be repeated once with a new topic (registration within 6 weeks)

Certificate and Diploma (§48 FPSO, §§25, 26 APSO)

☐ Certificate and Diploma are issued as soon as the Master's Examination is passed.

☐ **Scope**: degree certificate, diploma, diploma supplement, transcript of records

☐ **Grades**: final grade, module grades, topic and grade of Master's Thesis

☐ **Degree**: Master of Science (M.Sc.); may also be used with „(TUM)"

☐ **Date**: Documents will be dated on the day when all examination and coursework requirements (incl. Master's Thesis) have been fulfilled

Program Structure I (Appendix I FPSO)

☐ 1. Required Modules (21 Credits)

◼ IN2309 Advanced Topics of Software Engineering (8 Credits)

◼ IN2087 Software Engineering for Business Applications - Master's Course: Web Application Engineering (8 Credits)

◼ IN2105 Business Process Technologies and Management (5 Credits)

☐ 2. Master's Thesis (30 Credits)

☐ 3. Electives – Development Lab (at least 10 Credits)

◼ IN2128 (Enterprise Software), IN2129 (Software Engineering), IN2130 (Process-oriented Applications)

Program Structure II (Appendix I FPSO)

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☐ 4. Electives – Support Electives (at least 6 Credits)

◼ E.g. data protection, business plan, IT law, etc.

◼ Language courses

List of currently available support electives: TUMOnline

Regulation for language courses:

◼ A maximum of 6 ECTS (usually 2 courses) is allowed.

◼ Courses must be conducted by the TUM Language Center.

◼ Courses must meet the required level:

- *English:* at least C2.

- *German*: Not mother tongue and bachelor was not taught in German.

- *Other languages:* Lower standards apply if the language is not your native tongue.

Program Structure III (Appendix I FPSO)

☐ 5. Electives (at least 53 Credits)

- At least 5 credits from „Algorithms"
- At least 5 credits from „Machine Learning and Data Analysis"
- At least 5 credits from „Information Systems"
- At least 5 credits from „Databases and Information Systems"
- At least 18 credits from „Management"

List of topic areas: „Software Engineering", „Management", „Algorithms", „Computer Graphics and –Vision", „Databases and Information Systems", „Digital Biology and Digital Medicine", „Formal Methods and their Applications", „Machine Learning and Analytics", „Computer Architecture, Computer Networks and Distributed Systems", „Robotics", „Security and Privacy", „Scientific Computing and High Performance Computing", „Information Systems", „Human Centered Engineering", „Fundamentals"

List of currently available elective modules: TUMOnline

Exemplary Curriculum, Begin Winter Semester

S	CP	Computer Science	Information Systems	Management
1	30	IN2309 Advanced Topics of Software Engineering Exam 8 CP (Compulsory Module)	IN2396 Advanced Seminar Information Systems Project 5 CP (Information Systems Electives)	WI000836 Advanced Planning in Supply Chains - Illustrating the Concepts and Methodology using SAP IBP Exam 6 CP (Management)
		IN2357 Machine Learning for Computer Vision Exam 5 CP (Machine Learning and Data Analysis)		
		IN2067 Robotics Exam 6 CP (Elective Modules)		
2	30		IN2087 Software Engineering for Business Applications Project 8 CP (Compulsory Module)	WI000234 Value-based Management Exam 6 CP (Management)
			IN2105 Business Process Technologies and Management Exam 5 CP (Compulsory Module)	
			IN2288 Event Processing Exam 5 CP (Databases and Information Systems)	
		IN9048 Innovation Generation in the Healthcare Domain Project 6 CP (Support Electives)		
3	31	IN2211 Auction Theory and Market Design Exam 5 CP (Algorithms)	IN2129 Practical Course Software Engineering for Business Information Systems Project 10 CP (Development Lab)	WI000977 Stochastic Modeling and Optimization Exam 6 CP (Management)
		IN2026 Visual Data Analytics Exam 5 CP (Elective Modules)		
		IN2293 Medical Augmented Reality Exam 5 CP (Elective Modules)		
4	30	IN2109 Master's Thesis Thesis 30 CP		

Exemplary Curriculum, Begin Summer Semester

S	CP	Computer Science	Information Systems	Management
1	29		IN2087 Software Engineering for Business Applications Project 8 CP (Compulsory Module)	WI000979 Inventory Management Exam 6 CP (Management)
			IN2105 Business Process Technologies and Management Exam 5 CP (Compulsory Module)	
			IN2288 Event Processing Exam 5 CP (Databases and Information Systems)	
			IN2396 Advanced Seminar Information Systems Project 5 CP (Information Systems Electives)	
2	30	IN2309 Advanced Topics of Software Engineering Exam 8 CP (Compulsory Module)	IN2129 Practical Course Software Engineering for Business Information Systems Project 10 CP (Development Lab)	WI000977 Stochastic Modeling and Optimization Exam 6 CP (Management)
		IN2361 Natural Language Processing Exam 6 CP (Machine Learning and Data Analysis)		
3	31	IN2239 Algorithmic Game Theory Exam 5 CP (Algorithms)		WI000234 Value-based Management Exam 6 CP (Management)
		IN2001 Algorithms for Scientific Computing Exam 8 CP (Elective Modules)		
		IN2267 Transaction Systens Exam 6 CP (Elective Modules)		
		IN9048 Innovation Generation in the Healthcare Domain Project 6 CP (Support Electives)		
4	30	IN2109 Master's Thesis Thesis 30 CP		

Going Abroad

☐ Plan individually and plan ahead:

◼ https://www.cit.tum.de/cit/studium/internationales/informatics-outgoing/studium-im-ausland/mobilitaetsfenster/

◼ Rule of thumb: third semester (start winter term) / fourth semester (start summer term) most suitable

☐ Make a conscious choice

◼ Our Master's program is ambitious even without a stay abroad

◼ Not every applicant can get the destination of their choice

☐ Plan your credit transfer

◼ Highest chances for credit transfer: CS electives, free electives

◼ Focus on required modules, development lab, management courses before going abroad

◼ Discuss possible credit transfers with the program coordinator before leaving

English Writing Center @TUM

☐ Free, one-to-one, 45-minute appointments to improve your writing in English

☐ Well-trained, native-English-speaking consultants

☐ For BSc, MSc and PhD students, as well as staff

☐ Up to 12 appointments per person each semester!

☐ Easy online booking system

https://www.sprachenzentrum.tum.de/en/sz/languages/english/english-writing-center/

Feedback

☐ Contact us!

- winfo-master@in.tum.de
- Your feedback is essential to improve our program!

☐ Participate in surveys

- Your feedback is essential to improve our program!

☐ Student Council: https://mpi.fs.tum.de/en/

☐ Gender Equality Officers:
https://www.cit.tum.de/en/cit/school/organization/talent-management-diversity/

Contact

☐ Academic Program Responsibility: Prof. Martin Bichler (bichler@cit.tum.de)

☐ Academic Study Advising: Vivija Simic, Sandra Kemler, Imme Proske (study-advising@in.tum.de)

☐ Academic Program Coordination: Markus Ewert (winfo-master@in.tum.de)

☐ Examination Board: Huda Hossain (hos@in.tum.de)

☐ Administrative Contact: Nurbike Calik (msc-winfo-sachb@in.tum.de)

☐ International Relations: Lena Hengstler (student-exchange@in.tum.de)

Links

☐ Program information: https://www.cit.tum.de/cit/studium/studiengaenge/master-information-systems/

☐ Contact & Downloads:
https://www.cit.tum.de/cit/studium/studierende/beratung/informatik/

☐ Faculty information for current students:
https://www.cit.tum.de/cit/school/aktuelles-events/

☐ University information for current students: https://www.tum.de/studium/im-studium

☐ Discord channel of the student union: https://discord.gg/PNyQkDr

☐ Facebook group for current students and alumni
https://www.facebook.com/groups/168253483227295/?fref=ts

Thank you for your attention and good luck in your studies!

Markus Ewert

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