Master ‘s program Informatics

Willemijn van Gemert M.A.
Office of academic affairs - Informatics
Secretary of the examination board

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http://www.in.tum.de
Contact Persons

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  - complete application at Infopoint
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- Secretary of the Examination Board
  - Dr. Claudia Philipps
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- Academic Counseling
  - Dr. Angelika Reiser
  - Sybille Roden-Kinghorst
- International Affairs
  - Lena Krone (international degree students)
  - Martina von Imhoff (study abroad)
Master’s program Informatics

• **Goals of the program:**
  – qualifying for entry into professional practice or research
  – provide comprehensive view of the discipline’s interrelated issues
  – learn to work independently according to academic principles

• **Content of the program:**
  – Examinations: 90 Credits (ECTS)
  – Master’s Thesis: 30 Credits
  – Possibly additional fundamental exams „bridging courses“: max. 30 Credits

• **Duration:**
  – Regular time of studies: 4 Semester
  – At the latest at the end of the 7th semester

• **Academic title:**
  – Master of Science or Master of Science (TUM)
Curriculum Master Informatics

5 Credits
- Master-Seminar

10 Credits
- Advanced Practical Course

18 Credits
- Elective courses in Informatics
  - One of these areas has to be „Formal Methods and Applications“ or „Algorithms and Scientific Computing“

53 Credits
- Area of Specialization
  - 2nd area
  - 3rd area

16 Credits
- Interdisciplinary Project

30 Credits
- Master’s Thesis
  - Will be done in 6 months

30 Credits
- Master’s Thesis
  - Will be done in 6 months

6 Credits
- Soft Skills (Support Electives)

9 Credits
- 2nd area

10 Credits
- 3rd area

10 Credits
- Free choice

From all areas

3rd area

Orientation
## Curriculum Master Informatics

<table>
<thead>
<tr>
<th>Component</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
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<tr>
<td>Master-Seminar</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Advanced Practical Course</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Elective courses in Informatics</td>
<td>53</td>
<td>- 18 Credits&lt;br&gt;- Area of Specialization&lt;br&gt;- 8 Credits&lt;br&gt;- 8 Credits&lt;br&gt;- One of these areas has to be „Formal Methods and Applications“ or „Algorithms and Scientific Computing“&lt;br&gt;- 9 Credits&lt;br&gt;- 10 Credits&lt;br&gt;- From all areas&lt;br&gt;- 2nd Advanced Practical Course&lt;br&gt;- 3rd area&lt;br&gt;- Soft Skills (Support Electives)&lt;br&gt;- Orientation: practice&lt;br&gt;- Will be done in 6 months</td>
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<tr>
<td>Master’s Thesis</td>
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# Curriculum Master Informatics

<table>
<thead>
<tr>
<th>Category</th>
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<td></td>
</tr>
<tr>
<td>2&lt;sup&gt;nd&lt;/sup&gt; area</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>3&lt;sup&gt;rd&lt;/sup&gt; area</td>
<td>8</td>
<td></td>
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<tr>
<td>From all areas</td>
<td>9</td>
<td></td>
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<tr>
<td>Orientation: advanced practice</td>
<td>10</td>
<td></td>
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<tr>
<td>Continuing Advanced Practical Course</td>
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<tr>
<td>Soft Skills (Support Electives)</td>
<td>6</td>
<td></td>
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Curriculum Master Informatics

5 Credits  
- Master-Seminar

10 Credits  
- Advanced Practical Course

18 Credits  
- Elective courses in Informatics
  - One of these areas has to be "Formal Methods and Applications" or "Algorithms and Scientific Computing"

53 Credits  
- Area of Specialization
- 2nd area: 8 Credits
- 3rd area: 8 Credits

16 Credits  
- Interdisciplinary Project

30 Credits  
- Master's Thesis
- Will be done in 6 months

Orientation: basics
- 9 Credits
- Free choice from all areas
- 10 Credits

Soft Skills (Support Electives)  
- 6 Credits
Curriculum Master Informatics

5 Credits
- Master-Seminar

10 Credits
- Advanced Practical Course

53 Credits
- Elective courses in Informatics
  - 18 Credits
    - Area of Specialization
  - 8 Credits
    - 2nd area
  - 8 Credits
    - 3rd area
  - One of these areas has to be „Formal Methods and Applications“ or „Algorithms and Scientific Computing“

Orientation: research
- 9 Credits
  - From all areas

- 10 Credits
  - Guided research

16 Credits
- Interdisciplinary Project

30 Credits
- Master ‘s Thesis
  - Will be done in 6 months

Soft Skills (Support Electives)
Guided Research

Goals:
• Scientific literature research
• Development of an own (narrowly confined) result by means of scientific methods
• Structuring and writing of own scientific texts in English
• Presentation of the results in a short talk

Content:
• Student and advisor establish the topic and specify the task incrementally
• Self-depended (guided) scientific literature research
• Scientific elaboration of an own (narrowly confined) result with main focus on intensive literature research and writing scientific texts
• Student receives feedback on the results, suggestions for improvement opportunities and for further proceeding
• Creation of a short scientific report based on the experiences in English
• If meaningful and possible: submission of an article at a conference
• If meaningful and possible: participation at a conference
Curriculum Master Informatics

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16 Credits
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30 Credits
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30 Credits
- Master’s Thesis

53 Credits
- Elective courses in Informatics
  - 18 Credits
    - Area of Specialization
    - 2nd area
    - 3rd area

9 Credits
- Orientation: international

10 Credits
- Study abroad

6 Credits
- Soft Skills (Support Electives)

Will be done in 6 months

One of these areas has to be „Formal Methods and Applications“ or „Algorithms and Scientific Computing“.
Curriculum Master Informatics

- **5 Credits**
  - Master-Seminar

- **10 Credits**
  - Advanced Practical Course

- **53 Credits**
  - Elective courses in Informatics
    - 18 Credits
    - Area of Specialization
      - 2nd area (8 Credits)
      - 3rd area (8 Credits)
    - One of these areas has to be "Formal Methods and Applications" or "Algorithms and Scientific Computing"

- **16 Credits**
  - Interdisciplinary Project

- **30 Credits**
  - Master’s Thesis
    - Will be done in 6 months

- **16 Credits**
  - Soft Skills (Support Electives)

- **10 Credits**
  - From all areas
  - Free choice

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**Orientation**

- 9 Credits
- Free choice
Interdisciplinary Project (IDP)

- **Goal:** Bridging the gap between Informatics and its application
- **Standard application areas**
  - Mathematics
  - Electrical engineering
  - Medicine
  - Mechanical Engineering
  - Economics
- On special request the IDP can also be taken in another area
- **16 Credits**
- **Examination results include:**
  - Grades from lectures
  - Practical work
  - Documentation and Presentation
  - Grade calculation 3:7 (lecture:project) (starting from WS 16/17)
- **How-To for an IDP**
Study Plan - Structure of the four Terms

<table>
<thead>
<tr>
<th>Sem</th>
<th>Informatics Methodology and Knowledge</th>
<th>Informatics Practice</th>
<th>Informatics Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Elective Courses (24)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Elective Courses (14)</td>
<td>Advanced Practical Course (APC)(10)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Elective Courses (8) Master’s Seminar (5)</td>
<td>or 2\textsuperscript{nd} or continuing APC (10)</td>
<td>or Guided Research (10)</td>
</tr>
<tr>
<td>4</td>
<td>Master’s Thesis (30)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Additionally in the 1st to 3rd semester: Support Electives (6) and IDP(16)
- Students are not bound to follow this plan, it is a recommendation
  - lectures can be heard according to the individual needs …
Continuous Assessment Procedure

- Module examinations will be taken concurrently with the program
- Types: written, oral, project, ...
- Mandatory registration of examinations
  - always in TUMonline (https://campus.tum.de)
  - MyTUM-login necessary
  - information on registration of examinations see http://www.in.tum.de/en/current-students/administrative-matters/exams.html
- Withdrawal
  - withdrawal due to illness (or other conclusive reasons)
  - early withdrawal without indication of reasons possible
  - information on withdrawal see http://www.in.tum.de/en/current-students/administrative-matters/exams.html
Repitition of Examinations (§ 44 FPSO together with § 23 und § 24 APSO)

- Failed examinations of required modules have to be repeated at the next offered examination date
  - for required modules each semester a repeat examination is offered
  - in most cases until first week of lecture period of the following semester
- Repitition for the purpose of improving grades is not possible
- The number of repeat examinations is only restricted by the examination deadlines of § 10 APSO

Don‘t forget to register!
Examination Time Limits (APSO § 10)

• 2\textsuperscript{nd} semester: no examination passed $\rightarrow$ ir
• 3\textsuperscript{rd} semester: less than 30 credits $\rightarrow$ ir
• 4\textsuperscript{th} semester: less than 60 credits $\rightarrow$ ir
• 5\textsuperscript{th} semester: less than 90 credits $\rightarrow$ ir
• 6\textsuperscript{th} semester: examinations not yet taken $\rightarrow$ np
• 7\textsuperscript{th} semester: examinations not yet taken $\rightarrow$ ir

ir: irreversibly failed \hspace{5mm} np: not passed
Fundamental Examinations - Bridging courses

- Fundamental Examinations are listed in the letter of admission.
- They have to be passed in the first academic year.
- Failed Fundamentals Examinations may be repeated only once and at the next examination date within the first academic year.
- Pursuant to § 46 (3) FPSO admission to the Master’s Thesis is only possible after passing Fundamental Examinations.
- Bridging courses are not part of the Master’s examination.
- Examination results are not being taken into consideration for the overall grade.
Certificate of the Final Examination

- lists grade and topic of the final thesis and the overall grade
- overall grade
  - calculated as the weighted grade average of the modules and the Master’s thesis
  - the grade weights of the individual modules correspond to the credits assigned to each module
- date on final certificate
  - day when all module and examination requirements have been fulfilled
  - number of semesters is not printed
- in addition the student will receive a Transcript of Records that lists all passed modules with credits and grades
Student Code of Conduct

• course achievements and examinations have to be performed self-reliantly and on the basis of allowed resources only

• short text passages may be cited, but
  – clearly marked
  – literal citations must be quoted

• non-literal paraphrases must be quoted clearly, immediately, and reproducible

• this also holds for code, seminar papers and Master‘s Thesis

• images also have to be referenced, and possibly an allowance of the owner is necessary

• use a full bibliography and primary sources

• if explicitly allowed by the lecturer, coursework may be provided collaboratively

• cheating leads to failing with only one possibility of retake

• for further information see

Questions?
Successful Studies!