Welcome to INFOTECH
Master of Science (M.Sc.)
Study Program in Information Technology

Dean of Studies: S. ten Brink
Examination/Admission Comm.: S. Simon
Course Director: L. Rörich
Secretary: T. Schweizer

office@infotech.uni-stuttgart.de
Introduction for new INFOTECH Master students

1. General tips and course orientation
2. Alumni/ Student Perspective:
   • Jajnabalkya Guhathakurta (alumnus)
   • Reem Mahmoud (student)
3. INFOTECH student organization and ETIT Student organization / Fachschaft
   • Laura Manoliu (INFOTECH)
   • Lena Gohlke (ETIT)
Who we are: The INFOTECH Team

Leonie Rörich (MA)
Course Director
INFOTECH
Office Hours:
Mo: 10:00-12:00
We: 13:00-14:00

Prof. Stephan ten Brink
Study Dean INFOTECH
• INFOTECH Study Commission

Prof. Sven Simon
Chairman
• INFOTECH Examination Commission
• Admission Commission

Timo Schweizer (Dipl.Ling.)
Secretary
INFOTECH
Office Hours:
Mo-Fr: 9:00-12:30
1. Facts: Why do the MSc. in INFOTECH?

- **International** and **interdisciplinary** in outlook, teaching and research
- Functional for **16 years**.
- Unique and successful blend of **Computer Science AND Electrical Engineering**
- Ever-growing plurality of subjects within Information Technology is reflected in **4 specializations**
- **Non-technical courses** are added in order to strengthen the graduates’ competences for **technical AND managerial industry positions**
1. Facts: Why do the MSc. in INFOTECH?

After INFOTECH:

• Over 80% of the graduates have achieved an overall average of their Master Degree examination of 'Good' or better

• Many of our graduates continue their studies in doctoral degree programs (20% or more)

• or find employment opportunities in research and development (R&D), technical management or business sectors of industrial companies in Germany and around the globe.
1. Facts: About Program Year 16

- Competitive admission process:
  - 1000-2000 applicants (Out of 60 Master Programs at the University, only Business Management and Administration has more applicants than INFOTECH)
  - 120 admissions
  - 60-75 students starting in Program Year 16
# 1. Facts

## Major Distribution Program Year 16

<table>
<thead>
<tr>
<th>Field</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication Engineering and Media Technology</td>
<td>12</td>
</tr>
<tr>
<td>Embedded Systems</td>
<td>47</td>
</tr>
<tr>
<td>Micro- and Optoelectronics</td>
<td>2</td>
</tr>
<tr>
<td>Computer Hardware/Software Engineering</td>
<td>15</td>
</tr>
</tbody>
</table>

### Choice of Major PY 16

- **ES**: 47
- **CHSE**: 15
- **MO**: 2
- **CEMT**: 12
2. Hints: Principles

• As a student you are **self-responsible**. We will never make any decision on behalf of you.

• **Flexibility**: Expectations about a semester don’t always come true, including the Master Thesis topic you might have wanted to pursue. Stay open to unforeseen opportunities!

• Deadlines are deadlines. Please keep them.

• Set yourself **SMART goals**: specific, measurable, apparent, realistic and time-bound
2. Hints: Behavioral Codes

- In case of **doubts/problems:**

1. Consult the different pages and documents that are accessible to you (INFOTECH Homepage and Blackboard)
2. Consult a fellow student or senior
3. Write an e-mail. You won’t get a faster or better answer by sending an e-mail twice or to many different people at once.

- **How to address whom:**

  Be polite, but short. Don’t use bloomy phrases and don’t reverence!

  Dear Prof./Dr./Ms. + surname […] is enough.

  Use the highest academic title (only necessary with Dr. and Prof.), otherwise Mr./Ms. + surname

- When you need an appointment with the INFOTECH office: Respect the opening hours and always wait until you are asked inside.
2. Hints: Good to know

- Please read the examination regulation (PO 2014) and the exam FAQ on the INFOTECH Homepage carefully and regularly and always check it in case of doubt.

- Make yourself acquainted with the Campus in Vaihingen: http://www.uni-stuttgart.de/ueberblick/wir_ueber_uns/uni_in_bildern/rundgang_v/

- Course counselling at the INFOTECH Office:
  - please always bring along the current transcript / grade sheet from LSF

- Dormitory contracts:
  - You can live for a maximum of two years in the dormitory: If you should take longer for your Master, you can try to prolong the room by contacting the Course Director → chances very low since freshmen students are given priority
  - You cannot sublet the room or leave for some months and get it back afterwards. You have to apply for a new room.
2. Hints: Additional information

• **Internship:**
  • No requirement anymore (regulations of University have changed) →
  • This means for a potential employer: We cannot give you a letter stating that the internship is a study requirement. We can only „recommend“ it.
  • Why might this be an issue? – Employer has to pay a higher wage
  • Example of 📏 **BOSCH**: Voluntary internships for a maximum of 3 months
  • Recommendation: ask your seniors from batch 2015 to see how they did it and take a vacation semester for the time of your industrial internship.
2. Hints: Additional information

- Student Jobs at the University / Hiwi (= Hilfswissenschaftler)

- Subscribe to mailing list: [http://www.ei.faveve.uni-stuttgart.de/email_jobs_list.php](http://www.ei.faveve.uni-stuttgart.de/email_jobs_list.php)
- Job portal Uni Stuttgart: [https://www.stellenwerk-stuttgart.de/](https://www.stellenwerk-stuttgart.de/)
- Homepages and Blackboards of the Institutes and INFOTECH Blackboard
- You can work a maximum of 84 hours per month as a Hiwi
2. Hints: Whom to contact when

- **Non-Academic questions**: Office of International Affairs (IZ), Studierendenwerk (Student Services such as housing, legal and social advice, psychological support), Admissions Office for Foreign Citizens and EU-Citizens (enrollment, semester fees)

- **General academic questions**, INFOTECH A1.1 German course, visa extension, rental contract issues with Studierendenwerk (exceptional cases only!): Course Director

- **Examination issues**: Examiner, Central Examination Office (Mr. vi Tan Le), Timo Schweizer, Prof. Sven Simon (Head of Examination Commission), Course Director

- **Students’ bid to enhance Study program or relevant critique**: Student representatives in the INFOTECH Study Commission and Fachschaft
2. Hints: Useful and most frequented links

- **C@mpus ★**
  - Course management
  - Technical issues: Contact support@campus.uni-stuttgart.de

- **LSF online portal (module/exam registration) ★**
  - [http://lsf.uni-stuttgart.de](http://lsf.uni-stuttgart.de)

- **ILIAS Learning Platform: Login with ac-account ★**
2. Hints: Useful and most frequented links

- Up-to-date information about courses, seminars, labs:
  - INFOTECH homepage
  - Institutes’ homepages and blackboards of Faculty 5
  - List of modules according to your Major, e.g. for Embedded Systems: [http://www.uni-stuttgart.de/infotech-program/cur14/es/index.html](http://www.uni-stuttgart.de/infotech-program/cur14/es/index.html) ★

- Examination regulations M.Sc. INFOTECH:
  - [http://www.uni-stuttgart.de/infotech-pdf-official_docs/ITecPO_2014_BiLingual.pdf](http://www.uni-stuttgart.de/infotech-pdf-official_docs/ITecPO_2014_BiLingual.pdf) ★ (German version is legally binding!)
  - [http://www.uni-stuttgart.de/infotech-support/ExamFAQ/index.html](http://www.uni-stuttgart.de/infotech-support/ExamFAQ/index.html) ★
3. Various: Important terms and abbreviations

- **1 SWS** (Semesterwochenstunde) = 45 Min.
- **ECTS credit point** (CP) = Leistungspunkt (LP)
- **1 ECTS** = 30 hours of work

**Module:**
- Courses are accredited via modules and can contain one (or more) **course(s)** (= lectures, exercises, seminars, lab sessions . . .)
- Module descriptions can be found in the module handbook (Modulhandbuch) or in LSF
  
  [Link to module handbook](http://www.uni-stuttgart.de/infotech/pdf/module_handbooks/Master_of_Science_Information_Technology_MDHB_SS16.pdf)

- For a course-module mapping in C@mpus:
  
  University of Stuttgart – Course Offer – Master of Science – Information Technology
3. Various: Important terms

- **Container Modules:**
  - Contain two modules. Once you register for the container module, you have to pass both parts and they are sometimes distributed over two semesters.
  - In INFOTECH: **Basic Modules, Non-Technical Modules** and the module 57660 (= supplementary module) „**Network Security (PART A: SUMMER) and Mobile Network Architecture Evolution (PART B: WINTER)“** are container modules.

- **Additional Elective:**
  - No ECTS, no grade, only listed on the transcript, can be any course from the University of Stuttgart from your field of interest (maximum 2)
  - Exam can be repeated as often as you want.
4. Course Infos: Technical Modules

• **Technical Modules** (choose one selection)

  (Selection I: IaCL+TIM)
  Information and Contract Law (IaCL): **WINTER**
  Technology and Innovation Management (TIM): **SUMMER**

  (Selection II: IaCL+BMA)
  Information and Contract Law (IaCL): **WINTER**
  Business Management and Administration (BMA): **SUMMER**

  (Selection III: BMA+TIM)
  Business Management and Administration (BMA): **SUMMER**
  Technology and Innovation Management (TIM): **SUMMER**

• **Core Modules** (5 in total, Major-specific): choose any from the list as shown in the Module handbook / LSF/ INFOTECH HP for your major

• **Supplementaries** (3 in total): choose any from the list as shown in the module handbook/ LSF/ INFOTECH HP for your major (Program-Curriculum 2014-Major)
4. Course Infos: Seminars and Labs

• You need to have a „seat“, working place, supervisor or something like this
• Labs = 6 CP
• Seminars = 3 CP
• Please avoid doing more than one lab course during your studies, also not voluntarily! [Seats are limited]

• Therefore
  • Labs and Seminars have to be registered with the Institute offering it
    → For both availability and registration check the lists on the pinboards of the institutes, online-registering systems etc. to do this.

Department of CS:
  - Registration usually online three months or more in advance (you will be informed).
    The offer varies from year to year.

Department of EEIT:
  - See institutes‘ homepages and news section of the INFOTECH HP shortly before
    new semester starts
## 4. Course-module mapping

### Basic Modules: 1st semester, view in Campus

- **[110] Basic Modules**
  - **[110] Computer Science**
    - **[56350] Computer Science Selection II: Computer Architecture and Organization, Concepts of Programming Languages**
    - **[56370] Computer Science Selection IV: Data Structures and Algorithms, Concepts of Programming Languages**
  - **[120] Electronics and Communication**
    - **[56400] Electronics and Communication Selection I: Communications, Signal and System Theory**
    - **[56420] Electronics and Communication Selection III: Communications, Electronic Circuits**
  - **[56330] Advanced Higher Mathematics**

### Non-Technical: 2nd semester

- **[200] Specializations**
  - **[300] Non Technical Modules**
  - **[61020] Master Thesis Project**

- **[05-200] Additional Events Infotech (voluntary, no ECTS-credits, no exam, no record in the transcript)**
  - **[05-200-2] Additional Events Infotech - Course Organization (Introduction for Master Students, Welcome Reception, etc.)**

### Registration for Welcome Reception and German Course

<table>
<thead>
<tr>
<th>Part</th>
<th>Lecturer (assistant)</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Rösch L</td>
<td>GP</td>
</tr>
<tr>
<td>1</td>
<td>Rösch L</td>
<td>GP</td>
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</tbody>
</table>
Create your personal schedule in
C@mpus: 1st semester

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<tbody>
<tr>
<td>07:00</td>
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<td></td>
</tr>
</tbody>
</table>
| 08:00             | Radio Frequency Technology: Introduction - Lecture
PWR 47 - V 47 05 (PF47E/GV 47)
Abhaltung: Vorlesung
| Mathematics for Infotech
PWR 47 - V 47 05 (PF47E/GV 47)
Abhaltung: Vorlesung
Vorlesende: Iancu, Ana    |
| Mathematics for Infotech, Exercises
PWR 47 - V 47 05 (PF47E/GV 47)
Abhaltung: Vorkurs, Vortragende: Berno, Manfred |
| 09:00             | Electronic Circuits - Lecture
PWR 47 - V 47 05 (PF47E/GV 47)
Abhaltung: Vorlesung
Vorlesende: Berto, Manfred |
| Concepts of Modern Programming Languages
PWR 47 - V 47 0 |
| 10:00             | Concepts of Modern Programming Languages, Exercises
PWR 47 - V 47 0 |
| 11:00             | Radio Frequency Technology: Introduction - Exercise
PWR 47 - V 47 05 (PF47E/GV 47)
Abhaltung: Übung, Vorlesende: Iancu, Ana |
| Communications - Lecture
PWR 47 - V 47 05 (PF47E/GV 47)
Abhaltung: Übung, Vorlesende: Rinke, Stefan |
| Operating Systems
Universität 38 - V 38 03 (UN38E/GA 3)
Abhaltung: Übung, Gruppe 01, Vorlesende: Taim, Muhammad |
| 12:00             | System and Signal Theory - Lecture
PWR 47 - V 47 05 (PF47E/GV 47)
Abhaltung: Vorlesung, Vorlesende: Brähm, André |
| Data Structures and Algorithms
Universität 38 - V 38 03 (UN38E/GA 3)
Abhaltung: Übung, Vorlesende: Berno, Manfred, Brunh, Andreas |
| Data Structures and Algorithms, Exercises
Universität 38 - V 38 02 (UN38E/GA 3)
Abhaltung: Übung, Vorlesende: Betto, Manfred |
| Operating Systems
Universität 38 - V 38 03 (UN38E/GA 3)
Abhaltung: Vorlesung, Vorlesende: Taim, Muhammad |
| 13:00             | Communication - Exercises
PWR 47 - V 47 0 |
| 14:00             | Computer Architecture And Organization
Universität 38 - V 38 02 (UN38E/GA 3)
Abhaltung: Vorlesung |
| 15:00             | Mathematics for Infotech, Exercises
PWR 47 - V 47 0 |
| 16:00             | Mathematics for Infotech, Exercises
PWR 47 - V 47 0 |
| 17:00             | Mathematics for Infotech, Exercises
PWR 47 - V 47 0 |
| 18:00             | Mathematics for Infotech, Exercises
PWR 47 - V 47 0 |
| 19:00             | Mathematics for Infotech, Exercises
PWR 47 - V 47 0 |
| 20:00             | Mathematics for Infotech, Exercises
PWR 47 - V 47 0 |
| 21:00             | Mathematics for Infotech, Exercises
PWR 47 - V 47 0 |

German Course for INFOTECH students starts 24.10.16
As soon as you are enrolled...

... you can create your personal schedule. Read the instruction by the C@mpus-team here (if not already done):

- [http://www.uni-stuttgart.de/campus/fuer_studierende/dokumentation/stundenplanerstellung_en.pdf](http://www.uni-stuttgart.de/campus/fuer_studierende/dokumentation/stundenplanerstellung_en.pdf)
4. Course Infos: Examinations

- Credits are acquired by passing examinations
- No exam writing without exam registration! Registration via LSF: November 16, 2016 - December 08, 2016
- ERASMUS Students: Registration via INFOTECH, see our welcome e-mail
- You can deregister until 7 days before the exam. If later: Send a valid reason/medical certificate to Chairman of Ex. Commission who has to accept it
- Exam repetition (as soon as possible with re-registration): Three third attempts, oral continuation only after the third written attempt
- An examination is passed if you receive a marking of
  - Very Good (numerical 1.0 to 1.5)
  - Good (numerical 1.6 to 2.5)
  - Satisfactory (numerical 2.6 to 3.5)
  - Sufficient (numerical 3.6 to 4.0)
  - Passed (non-numerical)
4. Course Infos: Master Thesis

• When to start:
  – Earliest after acquiring 78 ECTS and latest after acquiring 90 ECTS. Attention: It does not have to be commenced latest one month after the 90 ECTS. Don’t take the PO 2014, §22 by word in this case! But you need to stay within the 8 semesters (maximum study time)

• Which examiner?
  – One of the two examiners (“supervisors”) must be appointed as “Full” INFOTECH Examiners, as found at www.uni-stuttgart.de/infotech/home/2Home_Contacts_Inst.html and the Thesis has to be performed at the faculty 5 (ETIT). Exceptions may be granted by the Examination Commission.

• How to find a topic and where?
  – Don’t write e-mails asking for Thesis topics. You have to either apply to available topics (Institute Homepages and Blackboards) or make an appointment.
  – Doing the Master Thesis in industry might only work sometimes: There is no guarantee you will be able to find one! It is advisable to check with the related professors before making any commitments to external institutions.

• When do I get my final degree?
  – Preliminary Certificates available once the examiner confirms that the Thesis will be graded at least 4.0.
  – Issuing of Master degree certificate can take up to one year because of signing process.
  – Graduation ceremony: Either with CS or ETIT department in February of each year
**Please note:** Basic Modules for 1st semester are fix. Otherwise, this is an idealized scheme of the program – you can do it differently, just don’t exceed the **maximum duration of 8 semesters**!
## Course Plan

**Recommended (4 Semester Terms)**

<table>
<thead>
<tr>
<th>Winter Term</th>
<th>Summer Term</th>
<th>Winter Term</th>
<th>Summer Term</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Basic Module</strong></td>
<td>Select two modules</td>
<td>6 CP</td>
<td>If not passed: Repeat exam</td>
</tr>
<tr>
<td><strong>Computer Science</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Select two modules</td>
<td>6 CP</td>
<td>If not passed: Repeat exam</td>
</tr>
<tr>
<td><strong>Basic Module</strong></td>
<td>Select two modules</td>
<td>6 CP</td>
<td>If not passed: Repeat exam</td>
</tr>
<tr>
<td><strong>Electronics and Communication</strong></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Select two modules</td>
<td>6 CP</td>
<td>If not passed: Repeat exam</td>
</tr>
<tr>
<td><strong>Advanced Higher Mathematics</strong></td>
<td>obligatory</td>
<td>9 CP</td>
<td>If not passed: Repeat exam</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Identify interesting topics, institutes for Master Thesis</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>German Course A1.1</th>
<th>voluntary</th>
<th>Register via Campus: 25 seats</th>
<th>Supplementary Modules</th>
<th>Choose two to four modules</th>
<th>12-24 CP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additional courses: possible, but Collisions with BM might occur</td>
<td></td>
<td>Core Modules</td>
<td>Choose two to four modules</td>
<td>12-24 CP</td>
<td></td>
</tr>
</tbody>
</table>

**16 November-8 December: Exam registration in LSF!!**

Without registration, you cannot take the exam

Non-Technical (Part 1/2)

Choose one Selection out of III with two modules

3-6 CP

Core Modules

Seal the second part if not done in Summer Term: See Selection II

Register for Lab courses and Seminars from CS department in Summer Term

Seminar or Lab Course From CS or ETIT Department 3CP versus 6 CP

Seminar or Lab Course From CS or ETIT Department 3CP versus 6 CP

Sum: 27 CP

Sum: 30-32 CP

Sum 30-32 CP

Sum: 30 CP
Winter Term

<table>
<thead>
<tr>
<th>Basic Modules</th>
<th>Once the Selection has been signed and stamped in the INFOTECH Office (latest by 31-Oct-16), changes can only be granted by Chairman of Examination Commission</th>
</tr>
</thead>
<tbody>
<tr>
<td>German Course A 1.1</td>
<td>If you could not get a seat: There is an intensive course for six weeks off by the IZ in March for 250 €: Information will follow in January</td>
</tr>
</tbody>
</table>

Each lecture has an exercise. There are several exercise groups. The lecturer will announce who will be in which group. Make sure yourself that there are no collisions in your schedule.

Overlapping of courses can sometimes happen except with Basic Modules

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re-organize your schedule
5. Save the date(s):

• **Wednesday, 2nd of November 2016, 17:30– 19:00 Uhr in V 38.04**
  - Welcome Reception for international Master students of **faculty 5**
    - Words of welcome by the three Deans of Study
    - Get-together with foods and drinks
    - Link for registration: https://campus.uni-stuttgart.de/cusonline/wbLv.wbShowLVDetail?pStpSpNr=152920&pSpracheNr=2&pMUISuche=FALSE

• **Wednesday, 9th of November 2016, 18:00, City Hall Stuttgart, Mittlerer Sitzungssaal**
  Information event by the **Capital City of Stuttgart** for first-semester international students
  - How can I find a student job?
  - Where can I look for accommodation?
  - What is the Welcome Center, and how can it help me?

• **Thursday, 10th of November 2016, 11:30 – 13:00 in V 7.03.**
  - Infosession by the **Examination Office** for international Master students
    - LSF-functionalities
    - Exam registration
    - General examination rules!!
We wish you a successful study program!

Further questions?

E-Mail: office@infotech.uni-stuttgart.de