

How to Master: The ultimate guide for the MSc Computational Linguistics at Uni Stuttgart

By the world's best student representatives

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Disclaimer

Important: This is not an official document! It is published by the MSV/CL student representatives and updated approximately once per semester. Although we do our best to keep all the information in this document up-to-date and free of errors, we cannot guarantee the correctness or completeness of any of the information found here. If in doubt, please refer to the [Stuttgart_University_Homepage](#), the [official_FAQ](#), or the [Study_Program_Manager](#) (see also chapter 13).

1 Frequently Asked Questions

1.1 ... regarding your Study Plan / Study Program:

1.1.1 Which courses do I need to take?

Chapter 2 (section 2.4) addresses this issue.

1.1.2 Do I really need to go for 30 CP in my first semester?

You are free in your mapping of CPs onto semesters.

Following the recommended study plan (see section 2.4) is certainly the most convenient solution, but doing fewer CPs per semester (e.g. because you work parallel to your studies) is absolutely fine too.

1.1.3 How do I create my timetable? / How do I figure out when and where my courses will take place?

Once you are registered for your courses, C@mpus will create your timetable automatically. You can access it via the C@mpus homepage.

1.2 ... regarding Modules, Courses, Key Competences and the Module Table/Module Mapping

1.2.1 What are modules and how are they related to courses?

Modules consist of one or more courses, whose names may differ from the module name.

For example, the module *Topics in NLP* contains the course *Language and Vision* (3CP) and *Argument Mining* (3 CP).

1.2.2 Where can I find the *module handbook*?

The module handbook can be accessed via C@mpus and contains information on modules and courses.

Also, in section 14.2, you can find a link to the most recent module handbook.

1.2.3 What is the *module table* and where do I find it?

Note: Only for students who started before summer semester 2019! Students that started in summer 2019 or later need to use the course-module mapping (see section 1.2.4)

The module table is used for the mapping between modules and courses.

For more information see section 2.3.

1.2.4 What is the *course-module mapping* and where do I find it?

Note: Only for students who started in summer semester 2019 or later! Students that started before summer 2019 need to use the module table (see section 1.2.3)

The module table is used for the mapping between modules and courses.

For more information see section 2.3.

1.2.5 What should I do if I am not enrolled yet and cannot register for courses? / How do I get course material if I'm not enrolled?

Don't panic! The course registration is still possible at a later point.

Just ask your fellow students or your lecturer for the relevant materials and links, they'll surely help you out.

1.2.6 How do I register for courses?

A rough tutorial can be found in the `Introductory_slides`.

1.2.7 What are key competences?

Key competences (*Schlüsselqualifikationen*) are 3 CP courses designed for teaching you a non subject-specific skill.

These include e.g. a language, writing skills or many other interesting things.

More information about key competences can be found via the following links:

`General_Information`

`Language_and_Writing_Key_Compences`

More Key Competences can be found via C@mpus.

1.3 ... regarding Examinations and Exam Registrations:

1.3.1 Is a course registration binding? / If I register for a course, do I need to take the exam?

The course registration is not binding, i. e. you don't have to take the exam if you don't want to.

1.3.2 When and how do I register for exams?

Only during the registration period and only via C@mpus. Details in section 4.1.

1.3.3 What if I can't or don't want to attend an exam?

Up to 7 days prior to an exam you can deregister without specifying a reason.

To deregister during the 7 days leading up to the exam visit section 4.2.

1.3.4 What happens if I fail an exam?

You may (usually) try again. Specific information in section 4.3.

1.4 ... regarding C@mpus, Ilias and Webex:

1.4.1 What do I use C@mpus for?

Among other things, C@mpus is used for registering for exams and courses, viewing your exam results and accessing important documents like the ECUS stamp, your transcript of records or a confirmation of enrollment. C@mpus is also the place to go, to create and view your timetable.

C@mpus guide: [Guide](#).

Link to introductory slides: [C@mpus](#).

1.4.2 What do I use Ilias for?

In Ilias you can access your courses and course materials. The lecturers will mainly use Ilias to spread information regarding the courses.

Introduction to Ilias: [Guide](#) (available in German only).

1.4.3 What is Webex and how do I use it?

Webex is a tool used for web conferences.

A detailed Webex guide can be found here: [Webex_Guide](#).

1.5 ... regarding Mails:

1.5.1 How can I access my mails and how do I forward them to my private mail address?

Details regarding emails and forwarding them can be found in Section 6 and 14.6.

1.6 ... regarding Python, Linux etc.:

1.6.1 Where can I find an introduction to Python?

There is some good material online. Beginners might want to start with *Automate the Boring Stuff*, as you can access it for free online as PDF (see section 8).

1.6.2 What is Linux and how does it work?

You can find an excellent introduction to Linux by Antje Schweitzer in section 8.

1.7 ... regarding Eduroam, SSH and VPN:

1.7.1 What is eduroam and how do I use it?

Eduroam allows you to use Wi-Fi on the university campus.

A detailed guide on how to install and use eduroam can be found here: [Eduroam_Guide](#).

1.7.2 How do I log into the IMS computers using SSH?

A detailed guide on using SSH can be found in section 10.

1.7.3 How do I use the GPUs on the IMS servers?

It is recommended to set up a Python virtual environment for using GPUs on the IMS servers. A step-by-step guide for this is available here: [Python_env_for_GPU_on_IMS_servers](#).

1.7.4 VPN - What do I need it for?

You need a VPN to access certain online services of the university, e.g. for the e-books in the library (see section 12).

Sometimes you also need it to access exercises.

A detailed guide on VPN: [VPN-Guide](#).

1.8 Further Questions:

1.8.1 Where can I find exams from past semesters?

Mock exams and memory protocols of past exams are available for many courses. You can find out whether these exist for a specific course via ILIAS in the group *Fachgruppe Maschinelle Sprachverarbeitung / Computational Linguistics*: There, the folder *Altklausuren* contains all available resources sorted by course. **(NB: As of May 2022, this is in an experimental phase!)**

If you still have questions regarding memory protocols/mock exams, feel free to reach out to us via fscl@ims.uni-stuttgart.de.

2 Study plan and general information on your studies

2.1 Duration of your studies

The standard period of study (*Regelstudienzeit*) is **4 semesters**.

The maximum duration is **9 semesters**.

2.2 ECTS-Points / Credit points (CP) and Semesterwochenstunden (SWS)

Translating Credit points into hours:

- 1 CP = 45 minutes lecture time per week = approx. 30 hours of work in total
- 2 SWS = 1 slot (lecture, exercise, etc.) = 90 minutes

Courses at the IMS usually consist of 3 or 6 CP; while some may be worth even 9 CP or more:

- 3 CP = 90 minutes lecture = 1 slot = 2 Semesterwochenstunden (SWS)
- 6 CP = 120 minutes lecture = 2 slots = 4 SWS
- 9 CP = 210 minutes lecture = 3 slots = 6 SWS

In total:

- To successfully complete your master studies you'll need a total of **120 CP**.
- If you choose to finish your master within the standard duration (4 semesters) this would mean approx. 30 CP per semester = 20 SWS = 10 slots (x 1.5 hours per week).
- **Note:** CP will be awarded as soon as the last examination for the module has been successfully passed.

2.3 Course-Module Mapping (aka Module Table)

Since some **modules** consist of **two (or more) courses**, you need to **map your courses and modules**.

This mapping should be filled in, edited and/or completed **for each semester**.

For students who started before summer semester 2019:

- You have to fill in the so-called **Module Table** (*Modultabelle*).
- A link to a downloadable version of the Module Table (.xlsx - File) can be found here: [Module_Table](#).

For students who started in summer semester 2019 or later:

- You have to fill in the course-module mapping on ILIAS (go to ILIAS → Studying@IMS → my course-module mapping).

For more information on modules and on courses see sections 3.2 and 3.3.

In case of doubt, please contact our `study_program_manager` (see also chapter 13).

2.4 Study plan (suggestion)

The **link** to the study plan seen in Figure 1 can be found here: `Study_Plan_Link`.

M.Sc. “Computational Linguistics”

Study plan: *suggestion*

program structure MSc CL PO 2017, Uni Stuttgart

Semester	Obligatory modules	Elective modules	Other	ETCS Credit Points
1 (WiSe)*	Methods in CL ** [8SWS*** 12CP]	Elective courses worth ca. 18CP		30
2 (SoSe)*	CL Team Lab ° [4SWS 6CP]	Elective courses worth ca. 18CP	Key competences *** [2SWS 3CP]	27
3 (WiSe)*	CL Research Module ** [4SWS 9CP]	Elective courses worth ca. 24CP		33
4 (SoSe)*	Master's thesis [30CP]			30
Colour key:	IMS	IMS & Computer Science / Linguistics Departments	across UniS	

*) For a start in the summer semester, it is recommended to interchange obligatory modules.

However, the CL Team Lab is not recommended for 1st semester students without background in CL.

**) Offered in winter semesters

***) 2 SWS = 1,5h/week

°) Offered in summer semesters

Figure 1: Study plan suggestion for M.Sc. CL

1. Semester (suggestion):

- **Obligatory Module:** *Methods in Computational Linguistics* worth **12 CP**
 - **Non-CL background / for those who have to take the requirement module (*Auflagenmodul*):** choose *Methods in CL* only
 - **CL background / no requirement module (*Auflagenmodul*):** **either** take *Methods in CL* **or** choose **2 courses** from the list, i.e. worth **12 CP**
- **Elective Modules:** choose courses worth **18 CP** total

2. Semester (suggestion):

- **Obligatory Module:** *CL Team Lab* worth **6 CP**; choose one of the following, either
 - *CL Team Lab Phonetics* (Prof. Dr. Ngoc Thang Vu) or
 - *CL Team Lab* (Dr. Roman Klinger)
- **Elective Modules:** choose courses worth **18 CP** total
- **Key competences:** choose 1 key competence worth **3 CP** from the C@mpus catalogue

3. Semester (suggestion):

- **Obligatory Module:** *CL Research Module* worth **9 CP**
- **Elective Modules:** choose courses worth **18 CP** total

4. Semester (suggestion):

- **Obligatory Module:** *Master's Thesis* worth **30 CP**

2.5 Semester abroad

The **International Office** (*Dezernat Internationales*) offers spending a semester abroad for interested students.

General information regarding a semester abroad can be found here: [Semester_Abroad](#).

Information on exchange opportunities can be found here: [Exchange_Opportunities](#).

2.6 Checklist: Are you done with your studies? - You need to ...

- ... have **120 CP** in total.
- ... have at least **18 CP** in your primary and **6 CP** in your two secondary catalogues (cf. section 3).
- ... pass at least **one Key Competence** (you can do more, if you like to).
- ... pass the **requirements module** *Auflagenmodule* (there are no CP for this, but you still have to do it) in any semester you want to; but it's recommended to do it as soon as possible.

3 Catalogues, Modules and Courses

In general, one or more **courses** are grouped into one (or more) **module(s)**.

Note: Some courses can be used for several modules. Make sure to choose the right module for which you want the course to apply!

Similarly, one or more **module(s)** belong to one **catalogue**.

3.1 Catalogues - Important Information

- Within the **Computational Linguistics** catalogue there are **three catalogues** as can be seen in figure 2:

1. Core Computational Linguistics
2. Applied Natural Language Processing
3. Speech Processing

Note: You need to have **at least 18 CP** in **one** of these (→ **your primary catalogue**).

Note: You need to have **at least 6 CP** in **each** of the remaining **two** catalogues (→ **your secondary catalogues**).

For example: If you want **Speech Processing** to be your **primary catalogue**, you need to have at least the following CP in each catalogue:

1. Core Computational Linguistics → at least **6 CP**
2. Applied Natural Language Processing → at least **6 CP**
3. Speech Processing → at least **18 CP**

Note: You can always decide to go for more CPs in these catalogues!

Node filter-Name	rec. sem.	Credits	WF
[-] [976-2017] Computational Linguistics [📖]		120	1
[+] ▲ [100] Compulsory modules		27	1
[-] ▲ [300] Elective Modules		60	1
[-] ▲ [310] Computational Linguistics			1
[+] ▲ [3101] Core Computational Linguistics			1
[+] ▲ [3201] Applied Natural Language Processing			1
[+] ▲ [3301] Speech Processing			1

Figure 2: Catalogues for Elective Modules

- For the the remaining 30 CP there are no rules.

You can either choose modules from **Cognitive Science**, **Computer Science** and **Linguistics**, as can be seen in Figure 3,

or you can choose to focus on further modules from the **Computational Linguistics** catalogue, described above.

Node filter-Name	rec. sem.	Credits
[-] [976-2017] Computational Linguistics [M]		120
[+] ▲ [100] Compulsory modules		27
[-] ▲ [300] Elective Modules		60
[+] ▲ [310] Computational Linguistics		
[+] ▲ [350] Cognitive Science		
[+] ▲ [360] Computer Science		
[+] ▲ [370] Linguistics		
[+] [M] [100660] Mathematical Foundations of Machine Learning [M]		3
[+] ▲ [900] Interdisciplinary Key Qualifications		3
[+] [M] [80240] Master´s Thesis Computational Linguistics [M]		30
▲ [DV] 3rd attempts		
[+] ▲ [Auflagen] Required modules for non-CL graduates		

Figure 3: C@mpus overview on catalogues within Elective modules

3.2 Modules

One module consists of **one or more courses**, i.e. courses are accredited via modules.

Each course can be counted in **one module only** → even if a course can be taken for more than one module!

Note: You'll need to submit your **course-module mapping** each semester (cf. section 2.3).

Hint: If a module is not listed in our module handbook, ask the `study_program_manager` (see also chapter 13) early on whether it can be imported.

General module duration: 1 - 2 semesters.

For a module description check out the module handbook on this website: `Module_Handbook` (general description in German, but course information in English).

For more information on courses go to section 3.3.

3.2.1 Obligatory Modules: 57 CP total

- *Methods in Computational Linguistics* worth **12 CP**
 - **Non-CL background / for those who have to take the requirement module (*Auflagenmodul*):** choose *Methods in CL* only
 - **CL background / no requirement module (*Auflagenmodul*):** **either** take *Methods in CL* or choose **2 courses** from the list, i.e. worth **12 CP**
- *CL Team Lab* worth **6 CP**; choose one of the following, either
 - *CL Team Lab Phonetics* (Prof. Dr. Ngoc Thang Vu) or
 - *CL Team Lab* (Dr. Roman Klinger)
- *CL Research Module* worth **9 CP**
 - **Note:** the CP for this course will show up after registering for your master's thesis
- *Master's Thesis* worth **30 CP**

Node filter-Name	rec. sem.	Credits	WF
[-] [976-2017] Computational Linguistics		120	1
[-] ▲ [100] Compulsory modules		27	1
[+] M [35190] Computational Linguistics Team Laboratory		6	6
[+] M [72380] Methods in Computational Linguistics		12	12
[+] M [72390] Computational Linguistics Research Module		9	9

Figure 4: Compulsory Modules (without Master's Thesis)

3.2.2 Elective Modules: 60 CP total

- Can be taken either at the IMS, at the informatics department or at the linguistics department.
- Courses that belong to the general catalogues *Computational Linguistics* and *Cognitive Science* are electives
 - taught by **IMS** staff.
 - taught in **English**.
- Courses that belong to the general catalogue *Computer Science* are electives
 - taught by the informatics institute staff.
 - which can be taught in **English** but some are available in **in German only**.
- Courses that belong to the general catalogue *Linguistics*
 - are taught in **English** if they are provided by the institute for Linguistik/Anglistik (IfLA).
 - are taught in **German** if provided by the institute for Linguistik/Germanistik (ILG).
 - take place at the city centre campus (*Campus Mitte*).

3.2.3 Special Modules: Project Seminar and R&D Project for CL

Project Seminar:

Some **3 CP courses** can be extended to a **6 CP Project Seminar Module**.

The lecturer of the course chosen has to agree **at the beginning of the course** to the option of using the course as part of the project seminar module;

Note: If the lecturer agrees, this course can then not be used for any other modules!

Note: The course then needs to be registered as **Project Seminar**; and not within the module it would usually belong to.

Node filter-Name	rec. sem.	Credits
[-] [976-2017] Computational Linguistics		120
[-] [100] Compulsory modules		27
[-] [300] Elective Modules		60
[-] [310] Computational Linguistics		
[-] [3101] Core Computational Linguistics		
[-] [3201] Applied Natural Language Processing		
[-] [3301] Speech Processing		
[+] [72430] Project Seminar Computational Linguistics		6
[+] [100650] R&D Practical Project for CL		6

Figure 5: Project Seminar and R&D Project for CL

R&D Project for CL:

You need to complete an **external internship** or another kind of **practical project** for **at least 8 weeks in full-time (40 hours/week)**. The amount of working hours is important here, i.e. you need at least 320 working hours (e.g. 8 weeks full-time or 16 weeks part-time or ...).

Goal: gain experience in research and development by working on a comprehensive relevant NLP task which is embedded in a larger context.

Hint: Check with our `study_program_manager` (see also chapter 13) if your internship/project is considered relevant.

Write a report (2000 words: theoretical and practical aspects), find a mentor (ask our `study_program_manager` if in doubt) to grade your report and submit it.

Note: **Do not register for this module in C@mpus.**

3.2.4 Key Competences: at least 3 CP total

Key Competences can be taken e.g. at the *Language Center*, at the *Writing Center*, or at other institutes.

You need to have at least 3 CP, i.e. one passed Key Competence; feel free to go for as many as you wish, but only one is counting towards your total CPs.

You can choose your key competence freely from 6 *Domains of Competence*, as can be seen in figure 6:

Node filter-Name	rec. sem.	Credits
☐ [976-2017] Computational Linguistics 📄		120
☐ ▲ [100] Compulsory modules		27
☐ ▲ [300] Elective Modules		60
☐ ▲ [900] Interdisciplinary Key Qualifications		3
☐ ▲ [901] Domain of Competence 1: Methodical Competencies		
☐ ▲ [902] Domain of Competence 2: Soft Skills		
☐ ▲ [903] Domain of Competence 3: Communicative Competencies		
☐ ▲ [904] Domain of Competence 4: Personnel Skills		
☐ ▲ [905] Domain of Competence 5: Law, Economy, Politics		
☐ ▲ [906] Domain of Competence 6: Natural Scientific-Technical Fundamentals		

Figure 6: Key competences

3.3 Courses

If you are **not enrolled yet**, contact the person responsible for the cours(es) that you want to take. Also, in order to get the course material, be sure to let the lecturer know!

3.4 Requirement Module / Auflagenmodul

If you have to pass the requirement module, you should (have) receive(d) information on what you are expected to do.

Note: You have to pass the requirement module **before** you start with your master's thesis.

If you have a **non-CL background**:

Requirement module 1: Linguistics and NLP fundamentals for Computational Linguistics

- * If you have a background in computer science or related disciplines.
- * You have to pass an oral exam.

Requirement modules 2 and 3: Computer science and NLP fundamentals for Computational Linguists

- * If you have a background in (applied) linguistics or related disciplines.
- * **Note:** You have to pass **both** requirement modules 2 and 3.
- * You have to pass an oral exam for requirement module 2.
- * Requirement module 3 (a semester-long programming course) is only offered in the winter semester.
- * To pass requirement module 3 (the programming course), you have to complete and submit a project.

Node filter-Name	rec. sem.	Credits
[-] [976-2017] Computational Linguistics		120
[-] [100] Compulsory modules		27
[-] [300] Elective Modules		60
[-] [900] Interdisciplinary Key Qualifications		3
[-] [M] [80240] Master's Thesis Computational Linguistics		30
[-] [DV] 3rd attempts		
[-] [Auflagen] Required modules for non-CL graduates		
[-] [M] [68330] Requirements module 1: Linguistic and NLP fundamentals for Computational Linguists		3
[-] [P] [68331] Requirements module 1: Linguistic and NLP fundamentals for Computational Linguists		-
[-] [M] [68340] Requirements module 2: Computer science and NLP fundamentals for Computational Linguists		3
[-] [P] [68341] Requirements module 2: Computer science and NLP fundamentals for Computational Linguists		-
[-] [M] [100740] Auflagenmodul 3: Programming for Computational Linguistics		6
[-] [P] [100741] Programming for Computational Linguistics		-
[-] [U] [1007401] Programming for Computational Linguistics, seminar		-

Figure 7: The requirement module

Depending on which modules you need to pass, the contents may differ but the examination will be **oral**.

More information on the contents can be found on Ilias following this path:

Magazin → *Ingenieurwissenschaften* → *Maschinelle Sprachverarbeitung / Computational Linguistics* → *Arbeitsgruppen* → *Auflagenmodul**.

4 Exam(ination) regulations

In the exam(ination) regulations (*Prüfungsordnung*) you can find all important information about exams, the master thesis and all rights and responsibilities with respect to exams.

The following sections provide a short summary, but only the **information in the examination regulations is really binding**.

Here you can find the link to the examination regulations: `Examination_Regulation`.

Hint: You can find an indicative English translation in the *Downloads* section of this website: `Exam_regulations`.

4.1 Exam Registration

Exams (also repetition exams) have to be registered in the binding **exam registration period**.

The registration in the **winter term** usually starts in the **middle of November**;

In the **summer term in the middle of May**. Don't miss it!

You can find the exact dates and more information regarding exam regulations on this page: `Deadlines`.

For modules consisting of 2 (or more) courses:

- Register for a module in the semester in which you will finish all parts, i.e. if you (are able to) take all exams in the same semester.
- Otherwise, **DO NOT REGISTER YET!** Wait for the semester you'll finish your last exam in and register for the whole module then.

4.2 Deregistration

Typically, you can simply resign from an exam **until a week before the exam date** without specifying a reason.

If a regular deregistration via C@mpus ist not possible anymore, you have to use a **deregistration form**, that you can find in C@mpus in *My Requests* → *Antrag auf Genehmigung des Rücktritts*.

4.3 Failed exams and repetitions

You cannot repeat an exam you already passed.

You may repeat a failed exam once without consequences; you may attempt a second repetition only three times over the entire course of your study program.

Should you fail a second repetition as well, you can still get a passing grade (4.0) in an oral exam.

→ Further information in §17-19 of the `exam_regulations` (in German only).

Note: Two failed modules can be dropped!

5 Matriculation Number and Student ID Card (ECUS)

5.1 Matriculation Number (1234567)

You'll get your matriculation number once you're enrolled.

Usually, the matriculation number consists of **7 digits: 1234567**

Hint: Remember your matriculation number! You need to write it down on exams and you need it to pay your **semester and tuition fee**.

Note: Matriculation number and st-number are not the same!

5.2 Student ID Card (ECUS)

You'll receive your student ID card once you're enrolled.

You can use it as a digital wallet to, among things,

- eat in the **canteen / cafeteria**,
- get books in the **library**,
- **copy** on campus.

In combination with your **semester stamp** (*ECUS stamp*), you can use your ID card as ticket for public transports (VVS): **Mon. - Fri. after 6 p.m.; all day on weekends and holidays**. You can find your semester stamp on C@mpus under *My certificates*.

Furthermore, your ECUS acts as a key card for university buildings.

A full list and description on ECUS and its functionalities can be found here: [ECUS](#)

6 Mail Accounts - In General

6.1 Student Mail Account (st123456@stud.uni-stuttgart.de)

The **university** offers an email service. The email service is connected with the **st-Account**. You can reach this account with the following link:

<https://mail.uni-stuttgart.de>

Your email address looks like this: **st123456@stud.uni-stuttgart.de**

If you want to add an email program to your account or you want to establish a **forwarding**, then look at the following instruction: `Instructions`.

6.2 IMS - own mail account (firstname.lastname@ims.uni-stuttgart.de)

The **IMS** has its own mail service.

Your mail address looks like this: **firstname.lastname@ims.uni-stuttgart.de**.

If you have more than one first or lastname the single names are connected with a hyphen.

For an instruction on how to **forward** your mails, have a look at section 10.

7 Working together on shared documents

To work with several people at the same time for example on a seminar paper, we can recommend the following websites:

Overleaf (LaTeX): `Overleaf`.

Google Docs (Not LaTeX): `GoogleDocs`.

8 Python, Java, Linux and Co.

8.1 Python and Java for beginners

The book *Automate the Boring Stuff* offers a great introduction to the world of programming
Python: `AutomateTheBoringStuff`.

For an Introduction to **Java** have a look at these (free) e-books (in German only) : `Java-Hamster`.

8.2 Programming editors

PyCharm (Python) and **IntelliJ** (Java): `Jetbrains`.

Sublime (Java and Python): `Sublime`.

VisualStudio (almost all programming languages): `VisualStudio`.

Eclipse (Java): `Eclipse`.

Atom (pretty much everything): `Atom`.

8.3 Book recommendations

Great for looking stuff up *Speech and Language Processing* by *Jurafsky und Martin*. Available online and at the library.

→ link to PDF: `Jurafsky_and_Martin`.

Further literature: *Computerlinguistik und Sprachtechnologie* by *Carstensen et. al* (German only). Available on the library website via VPN as e-book . Explanation on how that works in section 12.

8.4 Introduction to Linux -Antje Schweitzer's slides

Link to the: `Linux-Introduction`

This **guide** explains most of the concepts you'll use, e.g. forwarding IMS mails and navigating directories.

Hint: Definitely worth going through it!

9 List of computers and servers

Here you can find a list of all servers and computers which you can access via ssh:

- **Server:** phoenix, kiwi
- **Computer:** bergente, brillenente, dunkelente, eiderente, kolbenente, kragenente, krickente, loeffelente, marmelente, pfeifente, reiherente, samtente, sichelente, spatelente, spiessente, tafelente

An example for a command with ssh looks like this (more on SSH in chapter 10):
ssh musterkm@bergente.ims.uni-stuttgart.de

10 Access via SSH to the IMS computers and forwarding your IMS mails ...

10.1 ... via Linux

Instruction for a **registration** with ssh on the IMS computers (Example for the name: Kim Mustermensch):

1. Register via ssh on the IMS computers. Looks like this for **Kim Mustermensch**:
ssh musterkm@phoenix.ims.uni-stuttgart.de
Warning: When you enter the password, it is not visible!
2. Go to your home directory. Verify with the command *pwd* in which directory you are at the moment. If you are in the home directory, the command *pwd* shows you the following:
/home/users0/musterkm
3. Create a new file with the name **.forward**. Use the command *nano .forward* for this.
4. Write your mail address in the file **.forward** (cf. figure 8)
5. If you have entered your mail address, press **Enter**, so that the **cursor is in the next line**.
6. Save the file afterwards with **strg** and **o**. Press **Enter** again.
7. Close the file with **strg** and **x**.
8. You have now forwarded your IMS mails to your own mail address! The IMS mails for Kim Mustermensch are now forwarded to the mail address:
kim.mustermensch@mail.de

Hint: For an exact **instruction** have a look at page 15 in the *Linux-Introduction* by Antje Schweitzer.

```
GNU nano 4.9.3      .forward      Verändert
kim.mustermensch@mail.de

[ 2 Zeilen gelesen ]
^G Hilfe      ^O Speichern  ^W Wo ist     ^K Ausschneid^J Ausrichten^C Cursor
^X Beenden    ^R Datei öffn^_ Ersetzen   ^U Text einfü^T Rechtschr.^_ Zu Zeile
```

Figure 8: The file `.forward` should look like this

10.2 ... via Mac

The login via SSH works the same as in section 10.1

Use **XQuartz** as X server if necessary, i.e. if you need to open a pop up window

Hint: For an exact **instruction** have a look at page 15 in the `Linux-Introduction` by Antje Schweitzer.

10.3 ... via Windows

Via the **terminal**, i.e. *windows command prompt*, (**cmd**) you can log into the Linux PCs using the same steps as in section 10.1.

If that doesn't work you can use the program **Putty** (see page 2 in the `Linux-Introduction`).

Once connected to SSH everything works as mentioned in sections 10.1 and 10.2.

Hint: For an exact **instruction** have a look at pages 15 to 16 in the `Linux-Introduction` by Antje Schweitzer.

11 Overview of the most important UNIX commands and their functions

Command	function
pwd	tells you the current path: e.g. /home/users0/musterkm
ls	lists the content of the folder (Data and subfolders)
ls -a	lists contents including hidden contents (might get ugly depending on the folder; and the blank space is intended)
cd	to navigate in between folders
cd	navigates to the home directory
cd .. cd ../	navigates one folder up
cd Folder/	navigates to the mentioned folder (mind upper and lower case!)
cd Folder/Subfolder	navigates to the mentioned folder
exit logout	to log out and cut the connection to the server
scp	backup: copying ONE FILE (secure copy)
scp -r	copying the whole FOLDER (secure copy recursive)

11.1 Copying files via Linux and Mac: scp and scp -r

Example 1: Copying ONE FILE from the SSH server to your PC

Step 1: Log in into your IMS account via SSH (see Section 10) and navigate to the target folder using `cd`

Step 2: Use `pwd` in (for instance) *Documents* to get the correct path
e.g. `/home/musterkm/Documents/test.txt`

Step 3: Log out with `exit` or `Logout`

Step 4: On your own device: `pwd` to get the path where you want to insert the file or the folder
e.g.: `/home/KimMustermensch/UniStuff/Test/`

Step 5: In general: `scp path/of/Source/test.txt path/of/Destination` (**mind the blank space in between the paths!!**)
e.g.: `scp /home/musterkm/Documents/test.txt /home/KimMustermensch/UniStuff/Test/` The password for the IMS account must be entered again.

Step 6: If everything worked, the `test.txt` file should now be on your PC inside the `Test` folder

Example 2: Copying ONE FOLDER from the SSH server to your PC

Step 1: Log in into your IMS account via SSH (see Section 10) and navigate to the target folder using `cd`

Step 2: Use `pwd` in (for instance) *Documents* to get the correct path
e.g. `/home/musterkm/Documents/Stuff`

Step 3: Log out with `exit` or `Logout`

Step 4: On your own device: `pwd` to get the path where you want to insert the file or the folder
e.g.: `/home/KimMustermensch/UniStuff/Test/` Enter your IMS password again

Step 5: In general: `scp path/of/Source/test.txt path/of/Destination` (mind the blank space in between the paths!!) z.B.:

`scp -r /home/users0/musterkm/Documents/Stuff/ /home/KimMustermensch/UniStuff/Test/`

Schritt 6: If everything worked, the Stuff folder file should now be on your PC inside the Test folder

11.2 Copying files via Windows: WinSCP

To copy files from windows to a linux device we recommend **WinSCP**.

Information on WinSCP and how to install it you can find here: [WinSCP](#)

12 VPN Access and online library access

A VPN-Client allows you to have a safe access to the university network on the go. This could be interesting if you want to download e-books, e.g.

You can see the instructions of the Tik-Website on this link: [VPN-Instructions](#) and you download the **Cisco AnyConnect VPN-Client** as described.

Register in the **Cisco AnyConnect VPN-Client**, as described in the VPN-Instructions in *Frequently asked questions*.

Afterwards log in on the website of the [Uni-Library](#).

Browse through the University library catalog to find the books that you want. If the books are available as e-books, it is indicated and you can download them.

You can find general information regarding the access to the electronical resources of the university library Stuttgart here: [Electronic_Resources](#)

13 Important contact persons and addresses

- **Study Program Manager MSV/CL: Dr. Stefanie Anstein:**
 - Link to the page of `Stefanie_Anstein`.
 - Stefanie Anstein's mail address: `stefanie.anstein@ims.uni-stuttgart.de`.
 - **Note:** You can always find out who is currently study program manager for your study program [here](#).
- **Examination Committee MSV/CL: Prof. Dr. Jonas Kuhn:**
 - Link to the page of `Jonas_Kuhn`
 - Mail address of the examination committee: `pruefungsausschuss-vorsitz@ims.uni-stuttgart.de`
 - Jonas Kuhn's mail address: `jonas.kuhn@ims.uni-stuttgart.de`
 - **Note:** You can always find out who is currently head of the examination committee for your study program [here](#).
- **IMS staff and contact information list:**
 - Link to the `IMS_staff`.
- **Student representatives MSV/CL:**
 - Mail address: `fscl@ims.uni-stuttgart.de`.
- **Student representatives informatics:**
 - Website (German only): `FIUS`.

14 Important Links

14.1 Welcome slides, study plan, C@mpus and Ilias

14.1.1 Welcome slides

- The welcome slides for our study program can be found [here](#).
- The student representatives' welcome slides can be found [here](#).

14.1.2 Study plan

- Printable `Study_Plan`.

14.1.3 C@mpus

- Information, support and documentation for C@mpus: `How_to_C@mpus`.

14.1.4 Ilias

- Link to the general Ilias introduction: `Ilias_Introduction` (in German only).

14.2 Module handbook and Examination regulations

14.2.1 Module handbook, Module table, course-module mapping

- Module handbook on the following website under *Module Handbook* (some descriptions are in German, but course information is in English!): `Module_Handbook`.
- Downloadable Module Table (.xlsx - File) (only for CL students who started before summer semester 2019): `Module_Table`.
- Course-Module mapping (for students who started in summer semester 2019 or later): go to ILIAS → Studying @ IMS → my course-module mapping

14.2.2 Examination regulations

- Examination Regulations (German only): `Examination_Regulation`.
- Information on Registrations, Deadlines and more: `Deadlines`.
- Generic deregistration form ("declaration of withdrawal") and more potentially useful forms: `Forms`.
- Examination Office: `Contact_Examination_Office`

14.3 LaTeX and Linux

14.3.1 LaTeX

- Learn LaTeX in 30 minutes (Overleaf): `LaTeX_Overleaf`
- LaTeX - Introduction (TU Graz): `LaTeX` (in German only).
- LaTeX - Introduction for Linguists: `LaTeX_For_Linguists_Intro` (in German only)

14.3.2 Linux

- Linux Tutorial by Antje Schweitzer: `Linux-Tutorial`.
- WinSCP (English): `WinSCPEnglish`.
- WinSCP (German short): `WinSCPGerman`

14.4 Python, Java and more

14.4.1 Python

- Python book for beginners: `AutomatetheBoringStuff`.

14.4.2 Java

- Java E-Books (in German only): `Java-Hamster`.
- Java Introduction (in German only): `JavaIstAuchEineInsel`.

14.4.3 More useful links

- Stackoverflow (helpful for coding issues): `Stackoverflow`.
- Wolframalpha (helpful for maths issues): `Wolframalpha`.
- Google's Machine Learning Glossary: `ML_Glossary`.
- DeepL Translator (works well with long texts): `DeepL`.
- Overleaf (creating shared LaTeX documents): `Overleaf`.
- Google Docs (creating shared GoogleDocs): `GoogleDocs`.

14.5 Recommended Books for Computational Linguistics

- Speech and Language Processing: `Jurafsky_and_Martin`.
- Computerlinguistik und Sprachtechnologie (available in the library; German only): `Carstensen_et_al`.

14.6 Tik Instructions

14.6.1 Tik Website and Support

- Tik (Technical Information and Communication Services) Website: `Tik`.
- Tik support: `Tik_Support`

14.6.2 Software and licenses for students

- List of free software and licenses: `Software_License_Link`.

14.6.3 Mails

- Instructions to mail services: `Mail_Instructions`.
- Online mail access (for st123456 - Mail): `Mail_Access`

14.6.4 VPN

- Instructions to VPN: `VPN_Instructions`

14.6.5 Webex

- Webex Guide: `Webex_Guide`.

14.6.6 Eduroam

- Eduroam guide: `Eduroam_Guide`.

14.7 Student representatives, Stuvus, Stupa

14.7.1 Student representatives MSV / CL and informatics

- Website of the student representatives MSV / CL: `SR_MSV_CL_Website`.
- MSV/CL Discord: `SR_MSV_CL_Discord`.
- Website of the student representatives Informatics (in German only): `FIUS_Website`.

14.7.2 Stuvus

- Website of the student representation (Stuvus): `Stuvus_Website`.

14.7.3 StuPa

- Website of the student parliament (StuPa): `StuPa_Website`.

14.8 Collection of general information and websites

14.8.1 Official FAQ

- `Official_FAQ`

14.8.2 Information regarding the IMS

- Information about the `Master` at the IMS.
- Contact and Directions: `Contact`.
- IMS staff: `IMS_Team`.

14.8.3 Important Go-Tos for Questions and Problems

- About your enrollment, exmatriculation and more: `Admissions_Office` (*Studiensekretariat*).
- About exams, deregistration and more: `Examination_Office` (*Prüfungsamt*).
- About financial support (BAföG): `Studierendenwerk`.

14.8.4 Uni library and ECUS

- Website of the `Uni-Library`.
- Accessing electronic resources: `Access_Resources`.
- Information regarding your `ECUS_Student_ID_card`.

14.8.5 Mint-Kolleg, Writing Center and Language Center

- Website of the `Mint-Kolleg`.
- Website of the `Writing_Center`.
- Website of the `Language_Center`.