# Chair of Space Technology Technische Universität Berlin

# **MASTER OF SPACE ENGINEERING**

# STUDY GUIDE 2026-2028







## Dear Students,

On behalf of the MSE Team, I would like to extend a warm welcome to the Master of Space Engineering study programme and Berlin!

The global space industry is experiencing continuous growth since space technology and business is one of the key fields for national competence and economic growth.

The space sector is looking for young professionals with excellent knowledge in space technology and furthermore with intercultural and interdisciplinary skills.

Since its establishment in 1963, the Chair of Space Technology has successfully conducted research and educated systems engineers for the space industry, mainly focusing on design, practical realization and operation of small satellite missions.

We hope this study guide will help you get your bearings at the University and in Berlin.

- Professor Dr.-Ing. Klaus Brieß



Professor Dr.-Ing. Klaus Brieß Former Dean of MSE study programme



Professor Dr.-Ing. Enrico Stoll

Dean of MSE study programme

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# BEFORE DEPARTURE



# 1.1 VISA APPLICATION

# 1.1.1 WHO NEEDS A VISA TO ENTER GERMANY?

Citizens of Schengen states do not need a visa to enter Germany. The list of Schengen states can be found on the <u>website of the Federal Foreign Office</u>.

Citizens of some countries may enter Germany without a visa but need to apply for a residence permit within the first 90 days upon arrival. The list of those countries can be found on the website of the Federal Foreign Office.

You need a visa if you come from any country not listed above.

## 1.1.2 WHERE TO APPLY FOR A VISA?

On the website of the *Federal Foreign Office* you can find a list of the German embassies and German consulates in your country where you can apply for a visa and get information on *visa requirements*.

# 1.1.3 WHAT IS THE CORRECT TYPE OF VISA?

If you intend to study in Germany, you have to apply for a student visa (national visa). As a rule, it is not possible to prolong a Schengen visa in Germany and you are required to leave the country after three months.

Only a few countries are exempt from this regulation. Citizens of those countries may enter Germany for a longer stay without a visa and apply for a residence permit during their stay. *The website of the German Academic Exchange Service* explains the visa and residence permit requirements for entering Germany with or without visa.

# 1.1.4 WHICH DOCUMENTS ARE REQUIRED FOR VISA APPLICATION?

You will require the following documents to apply for a German visa:

- Completed application form
- Valid passport
- · Transcript of academic record
- Evidence of sufficient funds to cover your entire cost of studying and living in Germany; you will be expected to demonstrate funds of 11,904 EUR for one year.
- Letter of acceptance or confirmation of registration on the study programme from the university
- Passport photographs according to biometric specifications
- Demand Draft for Visa Fee

**PLEASE NOTE:** The list of the required documents may vary in different countries. Please check it with the German Embassy in your country!

# 1.1 VISA APPLICATION

# 1.1.5 WHEN TO START PREPARING FOR YOUR STAY?

We recommend to start preparing for your stay in advance, as the visa application procedure can take several months. You can find more information on visa regulations on the website of the *Federal Foreign Office*.

# 1.1.6 HOW TO EXTEND VISA ON ARRIVAL IN GERMANY?

If you are not a citizen of a Schengen state, you need to apply for a residence permit with the *Berlin Immigration Office* after your arrival in Germany. We recommend that you apply as quickly as possible, as it takes several months for the permit to be issued.

# 1.1.7 IS IT POSSIBLE TO EXTEND A RESIDENCE PERMIT AFTER FINISHING YOUR STUDY?

After you have successfully completed your studies in Germany, your residence permit can be extended for up to 18 months so that you can search for a job relevant to your qualifications in Germany.





# 1.2 ACCOMMODATION

## **PLEASE NOTE:**

The choice of accommodation in Berlin is wide and varied, ranging from rooms in dormitories, shared flats, and host families to hotels. However, it is very important to start looking for suitable housing well in advance, as demand is very high. On our website (mse. tu-berlin.de), you can find a small selection of links that may prove useful in your property search.

## 1.2.1 DORMITORIES

## **STUDIERENDENWERK**

Studierendenwerk Berlin is a student service organisation which provides the economic, social, medical and cultural support for students in German universities. If you wish to apply for rooms with Studierendenwerk Berlin, you will need to attach a letter of acceptance and proof of tuition fee payment to your application.

www.stw.berlin

## **HOME OF BERLIN**

Free rooms are usually bookable online 4 weeks before they become available.

www.home-in-berlin.de

## STUDENTENDORF BERLIN

www.studentendorf-berlin.com

## **WOHNHEIM BERLIN**

www.wohnheim-berlin.de

## **BERLINOVO**

www.berlinovo.de

## THE URBAN CLUB

www.the-urbanclub.com

## 1.2.2 PRIVATE ACCOMMODATIONS

www.airbnb.de

<u>www.9flats.com</u>

www.housetrip.com

www.uniplaces.com

www.wunderflats.com

<u>www.spotahome.com</u>

TU Berlin's housing platform

## 1.2.3 SHARED FLATS

www.wg-gesucht.de

## 1.2.4 ACCOMMODATION WITH HOST FAMILIES

www.homestay.com

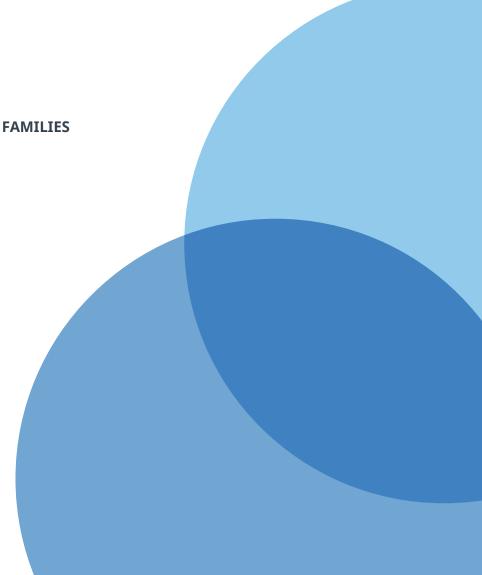
## 1.2.5 HOSTELS AND HOTELS

www.booking.com

www.hostelworld.com

www.german-hostels.de

www.pfefferbett.de







# SEMESTER DATES



# 2. SEMESTER DATES

## **SUMMER SEMESTER 2025**

**Dates of the semester** April 1st – September 30th

**Lecture period** April 13th – July 18th

## WINTER SEMESTER 2025 / 26

**Dates of the semester** October 1st – March 31st

**Lecture period** October 13th – February 14th

## **PUBLIC HOLIDAYS IN BERLIN**

Here you can find the overview of the public holidays in Berlin: publicholidays.de







# 3. TRANSPORT FROM THE AIRPORT

## 3.1 TRANSPORT FROM THE AIRPORT IN BERLIN

# BERLIN BRANDENBURG AIRPORT (IATA: BER, ICAO: EDDB)

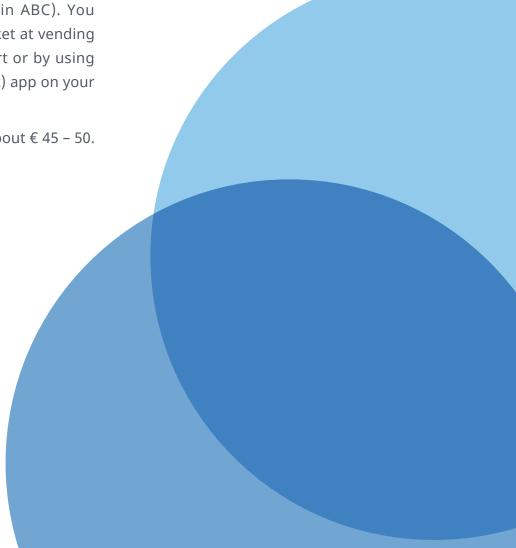
The airport is located in Schönefeld, just south of Berlin in the state of Brandenburg. The best way to get from the airport to the city is by train (Airport Express FEX, RE7 and RB7) or S-Bahn (S9 or S45).

For traveling within Berlin, especially from Berlin Brandenburg Airport (located in Zone C) into the city, you will need an "ABC Zone ticket" (Einzelfahrschein Berlin ABC). You can purchase the ABC Zone ticket at vending machines located at the airport or by using the BVG (Berlin public transport) app on your smartphone.

A taxi to the city centre costs about € 45 – 50.

## **BERLIN JOURNEY PLANNER**

Please visit the *Berlin Transport Company (BVG)* website where you can get a *Berlin journey planner* with information on Berlin public transport.



# 3.2 RESIDENCE PERMIT

If you are not a citizen of a Schengen state, you need to apply for a residence permit with the <u>Berlin Immigration Office</u> after your arrival in Germany. We recommend that you apply as quickly as possible, as it takes several months for the permit to be issued.





# 3.3 RESIDENCE REGISTRATION

When staying in Germany for more than three months, you must register your permanent address (i.e. not a hotel or hostel) with the authorities at the Einwohnermeldeamt or Bürgeramt within 14 days from moving in.

You can get registered at any <u>Bürgeramt in</u> <u>Berlin</u>. You need to book an appointment <u>online</u> (click on "Termin berlinweit suchen").

To register you need your passport or identification card, tenancy agreement, "Einzugsbestätigung" from your landlord and a completed registration form, which is available at the Einwohnermeldeamt and its website.

As proof of your registration, you will get a confirmation sheet (Anmeldebestätigung). Please keep it, as this serves as a proof of your address and is required by many institutions, e.g. banks, libraries, etc.

Further information in English can be found here: <a href="https://allaboutberlin.com/guides/">https://allaboutberlin.com/guides/</a>
<a href="mailto:anmeldung-in-english-berlin">anmeldung-in-english-berlin</a>



## **\**

# TO OPEN AN ACCOUNT, YOU WILL REQUIRE THE FOLLOWING DOCUMENTS:

- ✔ Passport or ID card,
- ✓ Student ID or certificate of enrolment or notification of admission from your university
  - Confirmation of residence registration (Required for German banks).

We recommend that you open a bank account with a European bank, as it allows you to transfer and withdraw money from cash machines of your bank and its partner banks free of charge. Furthermore, it allows automatic withdrawals for paying regular bills such as telephone bills, the monthly rent or health insurance.

Many banks offer free student accounts typically include a Girocard.

There are numerous banks operating in Berlin. There are also a number of online banks which offer the entire range of services via the Internet – from setting up the account to all necessary transactions.



# 3.5 HEALTH INSURANCE

In order to be enrolled at a university in Germany you need a valid health insurance.

# HEALTH INSURANCE FROM YOUR HOME COUNTRY MIGHT BE VALID IN GERMANY.

Usually, public health insurance policies from EU member states, as well as Iceland, Liechtenstein, Norway, Switzerland and Macedonia Bosnia-Herzegovina, Israel, Liechtenstein, Montenegro, Morocco, Norway, Serbia, Switzerland, Tunisia and Turkey are valid in Germany.

Please note that a non-German insurance policy must be reviewed and recognized by a state German insurance provider.

# IS YOUR HEALTH INSURANCE NOT VALID IN GERMANY?

There are two types of health insurance in Germany, compulsory and private health insurance. University students are normally insured by compulsory insurance funds at a favourable student rate. Exceptions are students who are at least 30 years old or who have been studying for more than 14 semesters. These students can either continue

being insured by a statutory health insurance fund at a higher rate or change to a private insurance.

If you start your study and you are older than 29, you can only be insured by a private company.



# STUDYING **AT TU BERLIN**

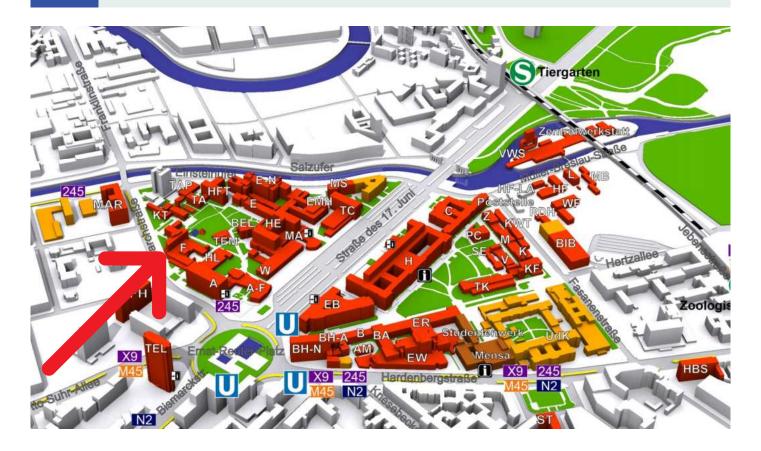


# 4.1 CAMPUS MAP

The main campus of TU Berlin is located in the borough of Charlottenburg and consists of numerous buildings. The following map comprises the location of the facilities and the main means of public transportation in the vicinity of TU Berlin. The building of the Chair of Space Technology is marked by the red arrow.



## **CAMPUS TU**



# 4.2 SEMESTER TICKET

Your student ID card (CampusCard) also functions as a Deutschland-Ticket. This ticket is valid for:

All public transport (ÖPNV) – including buses, trams, subways, and commuter trains (S-Bahn, U-Bahn)

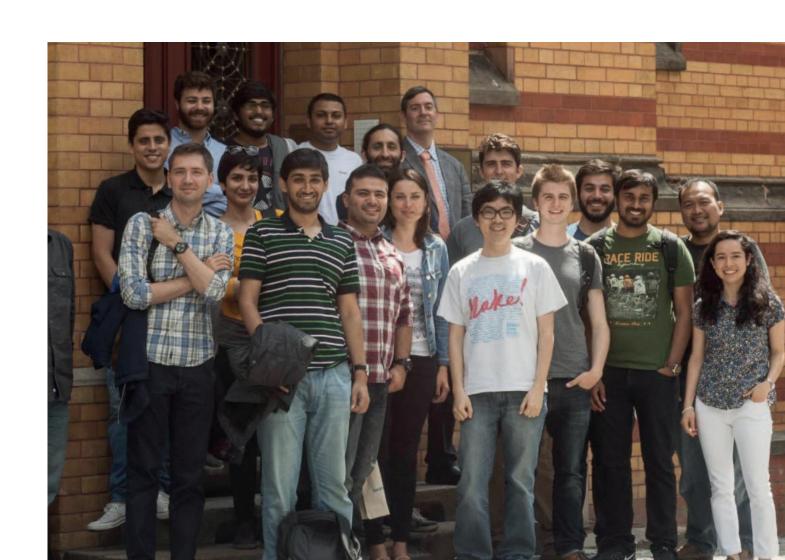
Regional trains (RE, RB) – throughout all of Germany. This means you can travel across the entire country on regional and local transport at no additional cost!

More Information

For details on the Deutschland-Ticket, other ticket options, and current tariffs, please visit the official website of the BVG (Berliner Verkehrsbetriebe): <a href="https://www.bvg.de">www.bvg.de</a>

The Deutschland-Ticket does not include longdistance trains such as ICE, IC, or EC.

You must carry your CampusCard and a valid photo ID when traveling.





# 4.3 CAFETERIAS

The Mensa is the main cafeteria of TU Berlin and Universität der Künste (UdK) located at the Hardenbergstraße (cf. 4.1). It offers numerous vegan and vegetarian dishes daily as well as an additional meat dish on Tuesdays and Thursdays and a fish dish on Fridays. Snacks, sandwiches and hot drinks are available from 08.00, and the vegan Pastaria is also located on the first floor. The Mensa uses a system of so-called MensaCards that can be charged with cash in the foyer of the Mensa building. You can get the MensaCard in all of studierendenWERKs canteens, coffee bars or Foodtrucks. Issuing a MensaCard requires a valid student ID card as well as a deposit of € 1.55 which will be refunded upon returning the MensaCard.

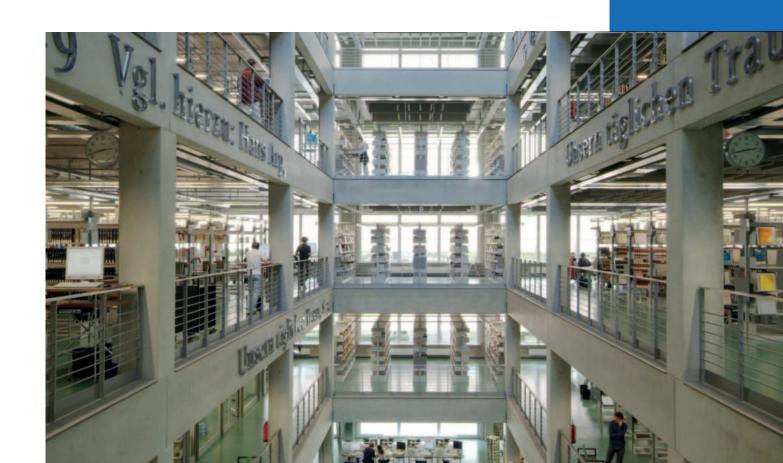
In addition to the Mensa, there are several other cafeterias on campus. The cafeterias in the EN, A and MAR buildings are the closest to the ILR building.



The main library of TU berlin is located in the Fasanenstraße (BIB on the campus map (cf. 4.1)). It offers a variety of scientific literature, including electronic resources, on the subjects of natural, humanitarian and social sciences, technology and general reference.

When using the library, your student ID card also serves as a library card and enables you to borrow books from the shelves in the Open Access Area or order items from the closed stacks via the Knowledge Portal Primo. The loan period can be extended online if the loaned items are not reserved by other students. If loan period is exceeded, a fee will be charged. Books can be returned at the counter in the library during regular opening hours or at a return machine in the foyer of the library.

There are several departmental libraries spread around the campus in addition to the main library. Visit *Library's website* to search for specific items, to access electronic resources and to find out more about the libraries of TU Berlin.





# 4.5 TU BERLIN IT SERVICE CENTRE

All students of TU Berlin are eligible for the TUB account and an email address of the Central Campus Management (ZECM) of the TU Berlin after applying for it. This account enables you to access various services with only one password such as:

- ✓ Access to the TU Berlin's service portal called tuPORT
- ✓ Use of wireless LAN on campus
- ✓ Use of the PC pools
- ✓ Private e-mail address
- ✓ Cloud service, Webex service, and several others

Further information on the TUB account can be found on the <u>Central Campus Management (ZECM) website</u>.



# 4.6 SPORTS PROGRAMME



The sports programme at Technische Universität Berlin offers a wide variety of activities—from diving, sailing, and martial arts to yoga, dance, and Pilates.

Most courses run for one semester. A modest participation fee is required.

Registration opens on April 1st. Popular courses fill up quickly, often within the first few hours—so register early!

More Information

For the full list of available courses, fees, and schedules, visit the TU Sport website:

www.tu-sport.de



# 4.7 LANGUAGE COURSES

There are several facilities and institutions that offer language courses for a variety of foreign languages and language levels. The courses usually last for one semester and you are generally credited 6 ECTS for completing each course. A list of available language courses can be found on the following websites:

www.skb.tu-berlin.de

www.zems.tu-berlin.de

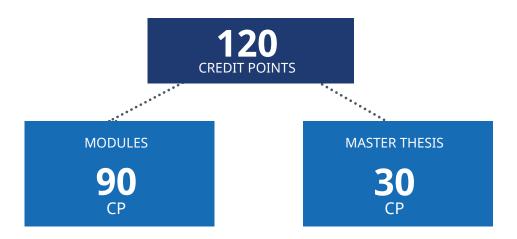


# PLANNING YOUR MSE STUDY



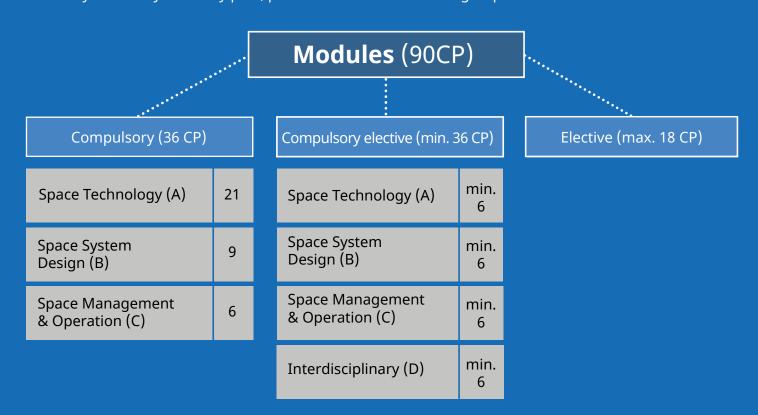
# 5.1 PROGRAMME STRUCTURE

The Master's programme comprises 120 credit points in total, 90 credit points in modules and 30 credit points in the master thesis.



The modules are divided into compulsory, compulsory elective and elective.

When you make your study plan, please consider the following requirements:



## V

# 5.1 PROGRAMME STRUCTURE

Of the compulsory courses, modules totalling 36 CP are taken as follows:

A - SPACE TECHNOLOGY 21 CP

**B - SPACE SYSTEM DESIGN** 9 CP

C - SPACE MANAGEMENT

**AND OPERATION** 6 CP

Of the compulsory elective courses, modules totalling min. 36 CP are taken as follows:

A - SPACE TECHNOLOGY min. 6 CP

**B - SPACE SYSTEM DESIGN** min. 6 CP

C - SPACE MANAGEMENT

**AND OPERATION** min. 6 CP

**D - INTERDISCIPLINARY** min. 6 CP

The elective area has a range of max. 18 CP.

Whereas the compulsory and compulsory elective courses can only be selected from

the MSE curriculum, the elective can be taken at any university in Germany.

Here are the course directories of the four Berlin's universities:

Technische Universität Berlin

Freie Universität Berlin

Humboldt-Universität zu Berlin

Universität der Künste Berlin

TU Berlin offers summer & winters courses with a discount for TU Berlin students <a href="www.tu.berlin/en/">www.tu.berlin/en/</a> international/summer-school

## **PLEASE CONSIDER THAT**

- Only the first 90 CP of fully completed modules will count towards your final degree;
- ✓ Only 85% of your modules with the best grades will be counted to determine your final grade.



# 5.2 CURRICULUM

## Space Technology

Fundamentals of Space Technology (C | 9 CP | PE)

Satellite Technology (C | 6 CP | WE)

Space Electronics (C | 6 CP | PE)

Radiation Workshop (CE | 3 CP | WE)

Spacecraft Dynamics and Control (CE | 9 CP | WE)

Spacecraft Propulsion Systems (CE | 6 CP | OE)

Space Sensors and Instruments (CE | 6 CP | PE)

C Compulsory

CP

CE Compulsory Elective

**Credit Points** 

OE Oral Exam

PΕ Portfolio Exam

WE Written Exam

### Space System and Operation Design

Space System Design Project (C | 9 CP | PE)

Space Technology Project (CE | 9 CP | PE)

Planetary Exploration and Space Robotics (CE | 6-12 CP | PE)

Space Engineering Focus Project (CE | 6 CP | PE)

# Space Management

Space Mission Planning and Operations (C | 6 CP | PE)

Human Spaceflight (CE | 6 CP | PE)

Space Flight Mechanics (CE | 6 CP | WE)

> Introduction to Satellite Geodesy (CE | 6 CP | PE)

Satellite Communication (CE | 6 CP | PE)

## Interdisciplinary

Project Management (CE | 6 CP | PE)

**Innovation Management** and Entrepreneurship (CE | 6 CP | PE)

Soft Skills (CE | 3 CP | PE)

German for Engineers (CE | 3-9 CP | PE)





# 5.3 PROGRAMME SCHEDULE

| Module                                     | Credit<br>Points | Courses                                       | C/<br>CE | Sem.1<br>CP | Sem. 2<br>CP | Sem. 3<br>CP | Sem. 4<br>CP |
|--|------------------|---|----------|-------------|--------------|--------------|--------------|
| A Space Technology                         | min. 27          |   |          |             |              |              |              |
| Fundamentals                               | 9                | Fundamentals of Space Technology 1            |          | 6           |              |              |              |
| of Space Technology                        |                  | Fundamentals of Space Technology 2            | C        |             | 3            |              |              |
| Satellite Technology                       | 6                | Satellite Technology                          | С        | 6           |              |              |              |
| Space Electronics                          | 6                | Space Electronics 1                           | С        | 3           |              |              |              |
| Space Electronics                          | 0                | Space Electronics 2                           |          |             | 3            |              |              |
| Radiation Workshop                         | 3                | Radiation Workshop                            | CE       |             | 3            |              |              |
| Spacecraft Dynamics and Control            | 9                | Spacecraft Dynamics and Control 1             | CE       | 3           |              |              |              |
| Spacecraft Dynamics and Control            |                  | Spacecraft Dynamics and Control 2             | 7 6      |             | 6            |              |              |
| Spacecraft Propulsion Systems              | 6                | Spacecraft Propulsion Systems                 | CE       |             |              | 6            |              |
| Space Sensors and Instruments              | 6                | Space Sensors and Instruments                 | CE       |             | 6            |              |              |
| B Space System Design                      | min. 15          |   |          |             |              |              |              |
| Space System Design Project                | 9                | Space System Design Project                   | С        |             | 9            |              |              |
| Space Technology Project                   | 9                | Space Technology Project                      | CE       |             |              | 9            |              |
| Planetary Exploration and Space Robotics 1 | 6                | Planetary Exploration and Space Robotics 1    | CE       |             | 6            |              |              |
| Planetary Exploration and Space Robotics 2 | 6                | Planetary Exploration and Space Robotics 2    | CE       |             |              | 6            |              |
| Space Engineering Focus Project            | 6                | Space Engineering Focus Project               | CE       |             |              |              |              |
| C Space Operations                         | min. 12          |   |          |             |              |              |              |
| Space Mission Planning and Operations      | 6                | Space Mission Planning<br>and Operations      | С        | 6           |              |              |              |
|  | 6                | Technical Aspects of Human Spaceflight        | C.F.     |             | 3            |              |              |
| Human Spaceflight                          |                  | Space Psychology                              | CE       | 3           |              | 3            |              |
| Space Flight Mechanics                     | 6                | Space Flight Mechanics                        | CE       |             |              | 6            |              |
| Introduction to Satellite Geodesy          | 6                | Introduction to Satellite Geodesy             | CE       | 6           |              | 6            |              |
| Satellite Communication                    | 6                | Satellite Communication                       | CE       |             |              | 6            |              |
| D Interdisciplinary                        | min. 6           |   |          |             |              |              |              |
| Project Management                         | 6                | Project Management                            | CE       | 6           |              |              |              |
| Innovation Management and Entrepreneurship | 6                | Innovation Management<br>and Entrepreneurship | CE       |             |              | 6            |              |
| Soft Skills                                | 3                | Soft Skills                                   | CE       |             | 3            |              |              |
| German for Engineers A1.1                  | 3                | German for Engineers A1.1                     | CE       | 3           |              | 3            |              |
| German for Engineers A1.2                  | 3                | German for Engineers A1.2                     | CE       |             | 3            |              |              |
| German for Engineers A2.1                  | 3                | German for Engineers A2.1                     | CE       | 3           |              | 3            |              |
| German for Engineers A2.2                  | 3                | German for Engineers A2.2                     | CE       |             | 3            |              |              |
|  |                  |   |          |             |              |              |              |
| Voluntary Internship                       | 6                |   |          |             |              |              |              |
| Master thesis                              | 30               |   |          |             |              |              | 30           |
| Total                                      | 120              |   |          |             |              |              | 120          |



# **RFT:INFOPOINT**

# **RFT:INFOPOINT**

Once you are officially enrolled at TU Berlin, you have access to the so-called RFT:Infopoint Infopoint via the online Information System for Instructors and Students (ISIS), where you can find more information about:

- Preparing for the Master's thesis
- ✓ Tips for selecting courses
- Access to journals and books
- Internships, theses and job positions
- Conferences
- Forms, e.g. master thesis registration form, etc.
- Rules for working in the labs, etc.
- Office hours and contact information of MSE staff
- A selection of Master's theses
- Elective recommendations for specialization tracks
- Additional information about MSE courses

Most announcements regarding MSE related activities, space events, thesis positions, job advertisements and many more are announced on the RFT:InfoPoint forum.

# 5.4 ADDITIONAL MODULES

You can take modules exceeding the required 90 Credit Points. Results of these modules can be included into the certificate if the candidate applies for that.





# 5.5 RECOGNITION OF PRIOR AND EXTRACURRICULAR ACHIEVEMENTS

## Recognition of achievements prior to the program

Relevant academic or professional achievements completed before the start of the Master's program may be recognized, provided they are equivalent in scope and content to modules within the curriculum. Further information can be found here: <a href="https://www.tu.berlin/en/i-a-office-of-student-affairs/recognition-of-earned-credits">www.tu.berlin/en/i-a-office-of-student-affairs/recognition-of-earned-credits</a>

## Recognition of professional student employment as a voluntary internship

Qualified professional activities undertaken as a student assistant or in a similar role may be recognized as the equivalent of a voluntary internship, if they are clearly related to the field of space engineering.

## Recognition of extracurricular projects within the module Space Engineering Focus Project

Participation in extracurricular space-related projects, such as student initiatives, competitions, or research activities, may be recognized within the module Space Engineering Focus Project, provided that the learning outcomes align with the objectives of the module.

# 5.6 MASTER THESIS



## Thesis evaluation and presentation

+ 8 months

- The evaluation process usually takes around six weeks
- •The date of presentation will be coordinated after handing in the thesis
- The presentation will take 15 minutes plus 10 minutes for Q&A

# Status report with your second evaluator + 2 weeks to + 5 months

- · Keep in touch with your second evaluator at TU Berlin
- Ask for advice, feedback and exchange ideas

## Define your topic

- 1 month

Submit your abstract (max. 2 pages) to your supervisor.

The abstract must contain:

- · The title of the thesis
- · Organization and contact of all supervisors
- Short description of the scope, the goals and the tasks
- Time schedule showing the duration of each main task
- Start date

## + 6 months

## **Submission**

Go through the submission checklist on the RFT:InfoPoint to ensure you submit the complete thesis

## - 2 weeks

## Register your thesis

## Prerequisites:

- You have completed 60 credit points
- Your abstract was approved by the supervisors
- You have 2 evaluators at TU Berlin

Your deadline will be set to six months from the last signature on the thesis registration form. You will be notified about your deadline.

## - 6 months

## Start looking for positions

Find a topic and an organization



### 5.7 EXAMINATION REGULATIONS

The following information is a reduced summary of the examination rules. For detailed information please refer to the Regulations Governing General Study and Examination Procedures (AllgStuPO) Part VI (Examination Organization).

Apart from the master's thesis, there are three types of assessment methods: oral, written and portfolio examinations. The examination method for every course is pre-assigned. For every course, the final mark is given in the following increments: 1.0 / 1.3 / 1.7 / 2.0, etc.

Registration is necessary in order to take exams. You can register for the exams via <u>Moses</u> (<u>System for planning and managing courses</u>, <u>exams and tutorials at TU Berlin</u>). The enrolment period for an exam usually commences from April 15 at the earliest in the summer semester, and from no earlier than October 15 in the winter semester and ends for:

- Oral exams on the date set by the examiner,
- ✓ Written exams one week before the specified exam date at the latest,
- ✓ Portfolio exams usually by May 31 for the summer semester and November 30 for the winter semester.

### **EXAMINATION REGULATION**

**EXAMINATION METHODS:** REGISTRATION DEADLINE:

Oral Exam Date set by examiner

Written Exam One week before the exam date

Portfolio 31. May | 30. November

WHERE? MOSES

### 5.7 EXAMINATION REGULATIONS

Below, the main characteristics of the three different examination methods are listed.

### **ORAL EXAM:**

- An oral exam takes between 20 and 60 minutes.
- ✓ An oral exam is carried out by at least one examiner in the presence of an observer.
- ✓ The content, result and progression of the exam shall be set out in examination minutes and disclosed to the candidate after the exam.

### WRITTEN EXAM:

- ✓ A written exam takes between 90 minutes and four hours.
- ✓ The corrected exams shall be made available to the student for review.

### **PORTFOLIO EXAM:**

- ✓ The portfolio examination consists of several different types of exam elements e.g. test, seminar paper, practical assignment, presentation, etc.
- ✓ The nature, scope and weighting of individual exam elements are pre-assigned.
- ✓ The results of individual exam elements are communicated within four weeks.





### 5.8 STUDY WORKLOAD

Many MSE students are new to the European Credit Transfer System, the teaching approach at the Chair of Space Technology and the topic space engineering. This document shall help students to estimate the workload during the semester.

### 5.8.1 EUROPEAN CREDIT TRANSFER SYSTEM

Credit Points (CP) according to the European Credit Transfer System (ECTS) provide information about the expected workload. 1 CP equals a workload of 25 to 30 hours. For a 6 CP course, it is assumed that a student invests 150 to 180 hours to successfully complete it. These hours are divided into presence and self-study whereas self-study contains preparation and wrap-up of content, literature research, exercises, homework, practical assignment, consultation, exam preparation, etc.

The distribution of the total hours for the self-study depends on the course. A typical workload distribution for a 6 CP course is given below.

15 weeks x 4 lecture hours = 60 hours
Preparation and wrap-up = 30 hours
Homework = 45 hours
Exam preparation = 15 hours
Total = 150 hours

In a full-time study programme, students typically are expected to do about 30 CP per semester. Although during a 15 week semester this would result in calculated 50 hours workload per week, the total expected workload per week is about 40 hours. The reason is that exams are usually spread over the lecture-free time.

A good practice while planning the semester schedule is to reserve an additional one-hour block for every lecture hour. By drawing this schedule in a calendar, students can be more aware of the upcoming workload than by visualizing a half-full calendar containing only presence hours.

### 5.8 STUDY WORKLOAD

### 5.8.2 JOBS, INTERNSHIPS AND EXTRA-CURRICULAR ACTIVITIES

Students should be very careful regarding the workload when deciding to take a job, an internship or pursue an extra-curricular activity. With 30 CP, the additional workload will lead to stress and much likely a superficial and unsatisfactory study experience. Students, as well as lecturers can be dissatisfied with the participation and results.

The student should make a trade-off between studying fast and collecting experience. In industry, experience is usually rated much higher than study duration. It is recommended to consider a schedule with less than 30 CP, especially when the project-based courses start in the second semester. When a student is able to complete 90 CP worth of courses within four semesters, he or she will not be charged additional study fees. A semester schedule with 20 to 25 CP is more reasonable when a student considers pursuing additional activities. (However, freshmen should not expect to find a student job position too early in the studies.)





### 5.9 PART-TIME STUDIES

It is possible to conduct MSE studies part-time. In part-time studies, half of the credit points stipulated in full-time studies can usually be acquired per semester.

If you want to study part-time, please inform the MSE team about it.



### 5.10 CREDITING OF STUDY PERIODS

Periods of study, coursework and exam results performed in a master's programme at another higher education institution can be accredited on request (article 20 of the study and examination procedures). Applications for accreditation should be made by the end of the second semester after admission to studies at TU Berlin. Please contact the MSE staff for more information.



### 5.11 TEMPORARY WITHDRAWAL

You can temporarily withdraw your studies for reason that include e.g. studies abroad, internships, illness, birth of a child and caretaking (article 22 of the study and examination procedures). Please contact the MSE staff for more information.

### 5.12 WITHDRAWAL, ABSENCE

Withdrawal from an enrolled exam shall be notified to the examiner and the MSE staff in writing at the latest on the last day before the examination (article 50 of the study and examination procedures). Withdrawal from a portfolio examination is possible until expiry of the enrolment deadline, unless a later date is proven for provision of the first evaluation-relevant assignment. Withdrawal from an exam in the event of a health disorder is fundamentally possible at any time. In all other cases, the exam or thesis is assessed as "inadequate".

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### 5.13 EXAMS RESETTING

Failed module exams can be repeated on two occasions. Failed modules from the compulsory elective and elective area may be replaced within the regular period of study provided that a right to take exams still exists.

Please inform the MSE team if you want to replace a failed module.



## SPACE EVENTS AND CULTURAL ACTIVITIES

### 6 EVENTS & ACTIVITIES

The MSE programme offers career and cultural opportunities beyond the classroom. Students can connect with the space community through fairs, conferences, company visits, and hackathons, while enjoying social events like the summer party, Christmas party, and graduation ceremony. MSE also encourages students to propose individual or group activities, with the programme team providing support for funding and coordination of extra-curricular experiences.



# ON INTERNSHIPS, MASTER THESES AND STUDENT JOBS



### 7 LEGAL REGULATIONS ON INTERNSHIPS

There is no compulsory internship in the MSE programme. If you do an internship, inform yourself about your rights for compensation.

### < 3 MONTHS DURATION

No minimum wage when the internship serves career orientation or is undertaken parallel to studies.

### > 3 MONTHS DURATION

Entitled to *minimum wage* from the first day you work.

### **MASTER'S THESIS**

- Your Master's thesis is a compulsory part of your studies and therefore you are not entitled to a salary.
- ✓ Your employer is free to offer you a voluntary salary or other compensation.

### **STUDENT JOBS**

### EU CITIZEN & CITIZEN FROM LICHTEN-STEIN, NORWAY OR SWITZERLAND

- ✓ No limitation in working hours
- National insurance contribution must be paid, if you work regularly more than 20 hours per week

### **NON-EU CITIZEN**

- Restricted to work 140 full or 280 half days per year
- ✓ Self-employment is not allowed
- Student assistants are not restricted in working hours
- ✓ To work more hours, you need to seek permission from the Agentur für Arbeit (local employment agency) and the Landesamt für Einwanderung (Berlin Immigration Office)

### ADDITIONAL INFORMATION

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### 8.1 TRAVELLING IN GERMANY

There are three main means of long distance public transportation:

- ✓ Trains
- ✓ Buses
- Sharing cars

In general, the most commonly used means of transportation are trains with the Deutsche Bahn. There are high-speed trains between any of the major cities in Germany. However, the fare for train tickets is significantly higher than for long-distance buses and shared cars. Exceptions to this rule are special offers that can be booked up to 3 months in advance on the website of Deutsche Bahn for a selection of train connections and departure times. The Deutsche Bahn also offers "Bahn Card" that grant a discount for 50 or 25 percent on each ride for one year for a fixed price. Train tickets can be booked from the website of the *Deutsche Bahn* or at ticket counters and ticket vending machines available at each train station.

In recent years, long-distance buses have become a popular and affordable alternative to trains.

The largest provider is FlixBus (<u>www.flixbus.de</u>) It offers cheap fares, many destinations, and modern buses.

Another popular option for flexible and affordable travel is ride-sharing — with BlaBlaCar (www.blablacar.de) being one of the leading platforms in Germany.



### 8.2 LICENSE FEE

Each household in Germany is obliged to pay a license fee for radio, television and new media. This fee can be paid monthly or quarterly and amounts to approx. 18 € per month.



### 8.3 TAX DEDUCTION FOR STUDY COSTS

In some countries, you may be able to deduct your study-related expenses from your taxes, potentially leading to a significant tax refund. Whether this applies depends on several factors, including:

- ✓ Your citizenship
- ✓ Your place of employment
- ✓ Your income level

Please note that the MSE staff cannot provide legal or tax advice on this matter. We strongly recommend that you explore your options and, if needed, consult a qualified tax professional or legal advisor to get tailored guidance.

### 8.4 EMERGENCIES

In case of emergencies, you can dial 110 to call the police and 112 to call the fire department and ambulance. These emergency numbers are free of charge from your mobile phone or any public telephone.

### **Medical Emergencies**

### **Emergency Rooms at Hospitals in Berlin**

In the event of a life-threatening emergency, call 112 immediately for an ambulance. If you don't require an ambulance, you can go to the emergency room of one of Berlin's hospitals.

### **Pharmacies**

### **After-Hours Pharmacy**

If you urgently require medicine outside pharmacy opening hours, you can use the after-hours pharmacy service. There is an after-hours pharmacy, or Nachtapotheke, in each district. To find the nearest one to you, check the display in the window of any pharmacy. You can also search for after-hours pharmacies and find further information at <u>aponet.de</u>. Please note that if you need a prescription drug, you must consult a doctor.

### **Mental Health**

### Psychological Counseling at TU Berlin

You can also contact the Telefonseelsorge emergency hotline. Support is available in German, English, and other languages. Call 0800-111 0 111 or 0800-111 0 222. If you need immediate assistance or would like to be admitted to a psychiatric unit, you can go to the emergency room of one of Berlin's hospitals with a psychiatric department and outpatient clinic at any time (see Berlin Hospital Directory).

### Psychological Counseling From Studierendenwerk Berlin

<u>Studierendenwerk Berlin</u> also offers psychological counseling in German and English. Counseling is free and confidential.

### **Psychiatric Emergencies**

If you need immediate assistance or would like to be admitted to a psychiatric unit, you can go to the emergency room of one of Berlin's hospitals with a psychiatric department and outpatient clinic at any time (see Berlin Hospital Directory).

### **Telefonseelsorge Emergency Hotline**

You can also contact the Telefonseelsorge emergency hotline. Support is available in German, English, and other languages. Call 0800-111 0 111 or 0800-111 0 222.



















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