Chair of Space Technology

Technische Universität Berlin

MASTER OF SPACE ENGINEERING

STUDY GUIDE 2023 - 2025







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 *website of the European Commission*.

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 <u>Federal Foreign Office</u> 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 <u>visa requirements</u>.

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 11,208 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!

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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 4-8 weeks for the permit to be issued.

INTERNATIONAL STUDENT COUNSELING

Place: Room H51 in the Main Building

Telephone: 314-24 359

www.betreuuna-int-stud.tu-berlin.de

TU Berlin International Student Counseling offers information, counseling and services of all kinds to international students transitioning to TU Berlin.



THE FOLLOWING DOCUMENTS ARE REQUIRED (original and a copy):

- Completed application for a residence permit
- ✓ Valid passport or ID card (please ensure that this is not due to expire until at least three months after the end of your stay)
- ✓ Biometric passport photo (please note the requirements set out by the Federal Foreign Office)
- ✓ Registration certificate from the Residents' Registration Centre (Bürgeramt - Anmeldebescheinigung)
- Proof of health insurance which is valid in Germany
- Evidence of sufficient funds to cover your entire cost of studying and living in Germany

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 large and varied, from rooms in dormitories to shared flats, hosting families to hotels. Nevertheless, it is very important to start looking for a suitable accommodation in advance as the demand is high.

We have compiled a small selection of websites 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.house-of-nations.de

STUDENTENDORF BERLIN

www.studentendorf-berlin.com

WOHNHEIM BERLIN

www.wohnheim-berlin.de

EASYLIVING

www.easy-living4u.de

THE URBAN CLUB

www.the-urbanclub.com

1.2.2 PRIVATE ACCOMMODATIONS

www.airbnb.de

www.9flats.com

www.housetrip.com

1.2.3 SHARED FLATS

www.zwischenmiete.de

www.wg-gesucht.de

www.easywg.de

1.2.4 ACCOMMODATION WITH HOST FAMILIES

www.homestaybooking.com

1.2.5 HOSTELS/SHORT TERM HOUSING

www.aletto.de

www.hostelworld.com

www.meininger-hotels.com

www.german-hostels.de

www.pfefferbett.de

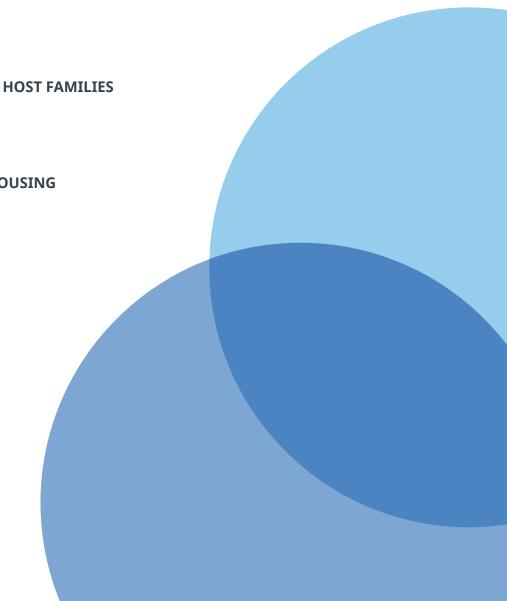
1.2.6 FLATSHARE AGENCIES

CITY MITWOHNZENTRALE

www.city-mitwohnzentrale.com

ZEITRAUM WOHNKONZEPTE

<u>www.zeit-raum.de</u>



1.3 CHECKLIST

1.3 CHECKLIST

Here is the checklist of documents that we recommend you to bring to Berlin with you. Please note that this list is not universal and can differ from applicant to applicant.

- ✓ Valid passport and visa
- ✓ Documents required for matriculation
- Vaccination card
- Credit card / debit card
- Address of your accommodation
- International driver's license in case you wish to drive in Germany
- Photocopies of all important documents





SEMESTER DATES



2. SEMESTER DATES

SUMMER SEMESTER 2023

Dates of the semester April 1st – September 30th

Lecture period April 17th - July 23rd

WINTER SEMESTER 2023 / 24

Dates of the semester October 1st – March 31st

Lecture period October 16th - February 18th

No lectures: Statutory public holidays during this period.

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)

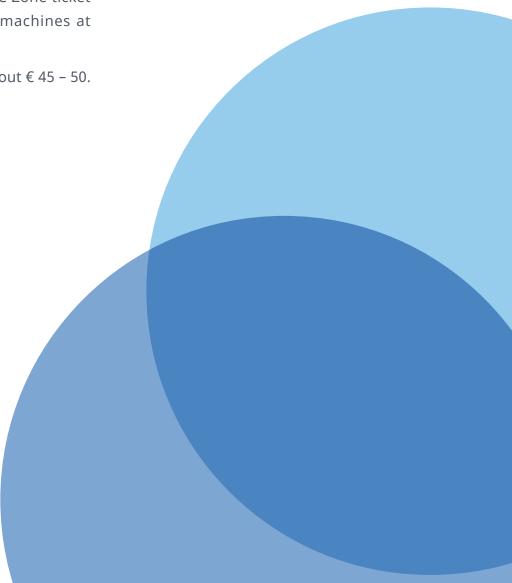
The airport is located in Schönefeld, just south of Berlin in the state of Brandenburg. The best way to get from the airport to the city is by train (Airport Express FEX, RE7 and RB7) or S-Bahn (S9 or S45).

You will need an 'ABC Zone ticket' (Einzelfahrschein Berlin ABC). This ABC Zone ticket can be purchased at vending machines at Berlin Brandenburg Airport.

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

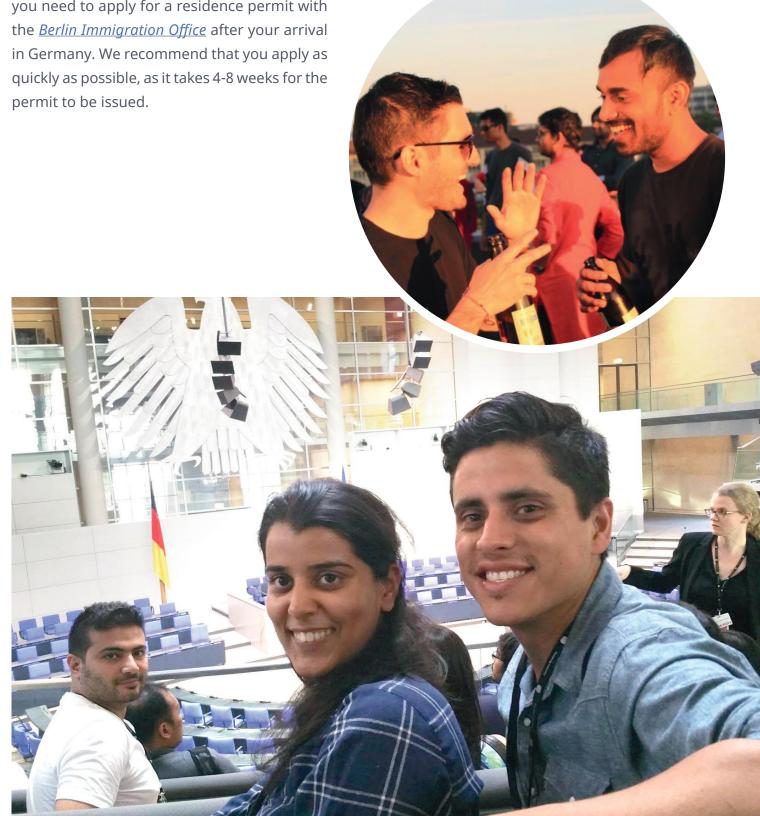
BERLIN JOURNEY PLANNER

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





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: https://allaboutberlin.com/guides/ anmeldung-in-english-berlin



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 (Anmeldebestätigung).

We recommend that you open a bank account with a German 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 or the monthly rent.

Many banks offer free student accounts including an EC card.

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 university in Germany you need 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, Iceland, Israel, Liechtenstein, Macedonia, Montenegro, Morocco, Norway, Serbia, Switzerland, Tunisia and Turkey are valid in Germany.

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.



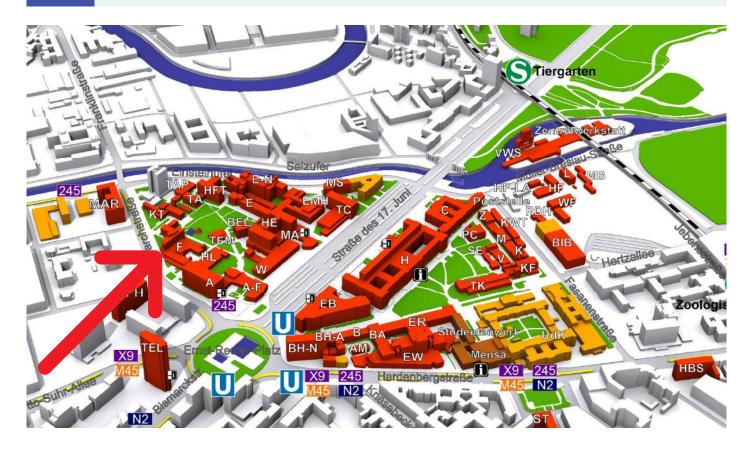
STUDYING ATTUBERLIN



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.



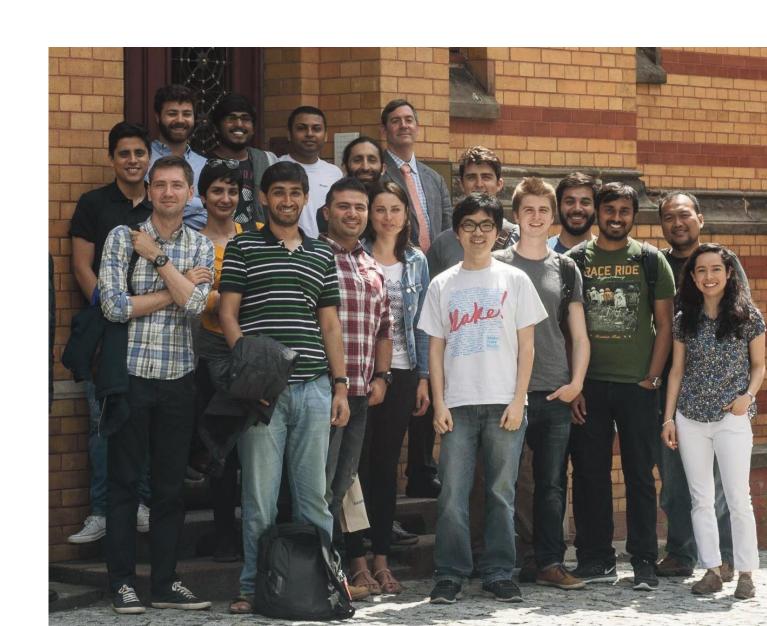


4.2 SEMESTER TICKET

Your student ID card (campus card) also functions as a semester ticket (Semesterticket Berlin ABC) on public transport. The semester ticket can be used in the ABC local transport zones operated by the Berlin-Brandenburg Transport Consortium (VBB) and is valid for one semester after you have successfully enrolled or re-registered at the University.

Your Semesterticket entitles you to take up to three children up to the age of 6, luggage and a bicycle for free.

Further information about the TU Berlin semester ticket can be found link here.



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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 Wednesdays and 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 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 is varied, from diving, sailing, martial arts to yoga, dance and Pilates. The courses usually last for one semester and they charge a modest fee for participation. Beginning April 1st, you can sign up for the various sport programmes. Please note that popular courses can be fully booked within the first couple of hours. For more information and a list of available sport programmes, visit the *TU Sport website*.

Unfortunately, the information accessible on the TU Sport website is solely provided in German. If you have any questions on the TU Sport programme, or if you need assistance in booking a specific course, feel free to contact us.



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

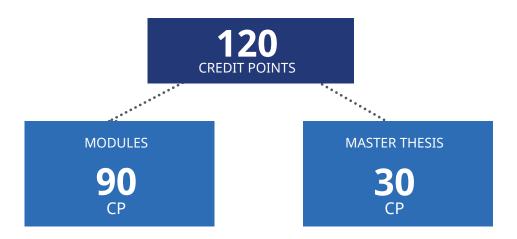


PLANNING YOUR MSE STUDY



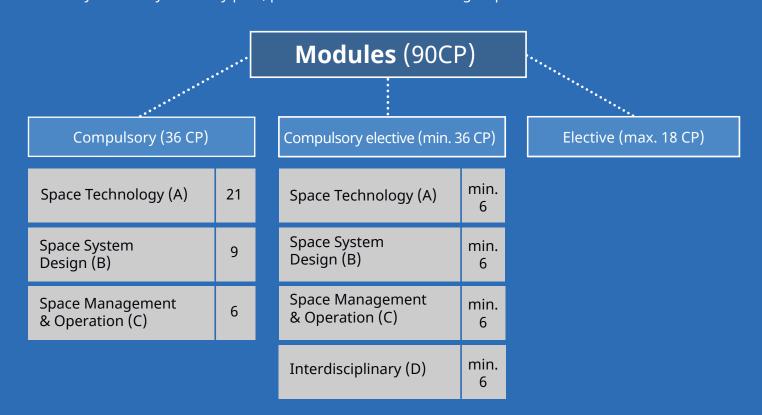
5.1 PROGRAMME STRUCTURE

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:



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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-Univeristät zu Berlin

Universität der Künste Berlin

TU Berlin offers summer & winters courses with a discount for TU Berlin students <u>www.summer-univer-sity.tu-berlin.de</u>

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 | PE)

Spacecraft Propulsion Systems (CE | 6 CP | OE)

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

CP Credit Points

C Compulsory

CE Compulsory Elective

OE Oral Exam

PE Portfolio Exam

WE Written Exam

Space System Space Space

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 Management and Operation

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

Human Spaceflight and Space Psychology (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)

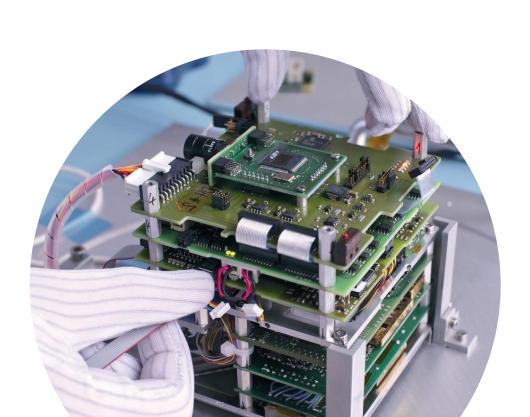
Interdisciplinary

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 Cro		Courses	C/ CE	Sem.1 CP	Sem. 2 CP	Sem. 3 CP	Sem. 4 CP
A Space Technology min. 27							
Fundamentals of Space Techno-	9	Fundamentals of Space Technology (1)	C	6			
logy		Fundamentals of Space Technology (2)			3		
Satellite Technology	6	Satellite Technology	С	6			
Chara Flacturenia	6	Space Electronics (1)		3			
Space Electronics		Space Electronics (2)	C		3		
Radiation Workshop	3	Radiation Workshop	CE		3		
Character Dunamics and Control	9	Spacecraft Dynamics and Control 1		3			
Spacecraft Dynamics and Control		Spacecraft Dynamics and Control 2	CE		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	
C Space Operations	min. 12						
Space Mission Planning and Operations	6	Space Mission Planning and Operations	С	6			
Human Spaceflight	6	Technical Aspects of Human Spaceflight	CE		3		
Truman spacenight		Space Psychology		3		3	
Space Flight Mechanics	6	Space Flight Mechanics	CE			6	
Introduction to Satellite Geodesy	6	Introduction to Satellite Geodesy	CE	6			
Satellite Communication	6	Satellite Communication	CE			6	
D Interdisciplinary	min. 6						
Project Management	6	Project Management	CE	6		6	
Innovation Management and Entrepreneurship	6	Innovation Management and Entrepreneurship	CE	6		6	
Soft Skills	3	Soft Skills	CE	3		3	
German for Engineers	3-9	German for Engineers	CE	3	3	3	
Total (modules only)	90						
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
- ✓ Software and IT services
- ✓ Homework submission guidelines
- ✓ Tips for selecting courses
- Access to journals and books
- Internships, theses and job positions
- Conferences
- Master thesis registration
- ✓ And more

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. Students can also apply for excluding them from the calculation of the total grade.





5.5 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 make sure that you deliver the thesis completely before the deadline.

- 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

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5.6 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
Written Exam
Portfolio

Date set by examiner
One week before the exam date
31. May | 30. November

WHERE? MOSES



5.6 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.



5.7 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.

5.7.1 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.



5.7 STUDY WORKLOAD

5.7.2 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.)





5.8 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, you must apply for it in writing before the semester start using the form Antrag auf Teilzeitstudium.



5.9 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.



5.10 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.



5.11 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".

5.12 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 takes exams still exists.

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



SPACE EVENTS AND **CULTURAL** ACTIVITIES



6 EVENTS & ACTIVITIES

Besides the curriculum, the MSE programme provides lots of opportunities that are beneficial for your career and your cultural education. Get connected to the space community during space fairs and excursions. Learn more about the German culture and cool down from studying in one of our free-time group activities.

THE REGULAR ACTIVITIES IN MSE INCLUDE AMONGST OTHERS:

- ✓ The biyearly IAA Symposium on Small Satellites for Earth Observation
- ✓ The biyearly Berlin Air Show (ILA) in summer
- ✓ The annually Space Tech Expo Europe in fall
- ✓ Visit to Airbus Defence & Space and OHB in the city of Bremen
- ✓ The Aerospace department's summer party
- ✓ The MSE Christmas party
- ✓ The MSE graduation ceremony

Germany has a vast array of space conferences, companies, communities, hackathons and funding opportunities. In MSE, you'll get the chance to propose activities that you would like to participate in individually or with your whole class. The MSE team is always ready to talk about support to fund and coordinate extra-curricular activities.

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 your 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 120 full or 240 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)





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 month 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, the abundance of long-distance buses as a competitor for the train service has significantly increased. The largest provider of bus services is *FlixBus*.

Another popular means of travelling in Europe is sharing cars e.g. <u>www.blablacar.de</u>



8.2 NEW MEDIA LICENSE FEES

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 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.

For emergency on-call doctors call 030/31 00 31 (24 hr/day)

For emergency on-call dentists call 030/89 00 43 33

(after 8 PM on weekdays and 24 hr/day on the weekends)



8.4 TAX RETURN

Some countries may allow that you deduct your costs for studying from tax. This can cause a significant return of tax. There are many factors like citizenship, place of employment, amount of income, etc. considered in this. The MSE staff cannot provide any legal advice on this topic but strongly recommends that you look into your options and advice from a legal professional if necessary.



















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