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<tr>
<th>Version</th>
<th>Valid as of</th>
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<tr>
<td>Fall-Spring</td>
<td>Sep 01, 2019</td>
<td>As per July 2019</td>
<td>Second version with updated qualification procedures and personal development program.</td>
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1 Program Overview

1.1 Concept

1.1.1 The Jacobs University Educational Concept

Jacobs University aims at educating students for both an academic and a professional career, putting an emphasis on four core objectives: academic quality, self-development/personal growth, internationality and the ability to succeed in the working world (employability). Hence, study programs at Jacobs University offer a comprehensive, structured approach to prepare students for graduate education as well as career success by combining disciplinary depth and interdisciplinary breadth supplemented with skills education and extra-curricular elements.

In this context, it is Jacobs University’s aim to educate talented young people from all over the world, regardless of nationality, religion, and material prerequisites, to become citizens of the world who are able to take responsible roles for a democratic, peaceful, and sustainable development of the societies they live in. This is achieved employing high levels of teaching quality as well as manageable study loads and supportive study conditions. Study programs and related study abroad programs convey academic knowledge as well as the ability to interact positively with other individuals and groups in culturally diverse environments. The ability to succeed in the working world is a core objective both in terms of the actual disciplinary subject matter but also with regard to social skills and intercultural competence. Study-program-specific modules and additional specializations provide the necessary depth, interdisciplinary offerings and the minor option provide breadth while university-wide general foundation and methods modules, mandatory German language requirements, and an extended internship period strengthen the employability of students. The concept of living and learning together on an international campus with many cultural and social activities supplements this education. In addition to that, Jacobs University offers professional advising and counselling, as well as other guidance services.

Jacob University’s educational concept is appreciated both nationally and internationally. While the university has consistently achieved top marks over the last decade in Germany’s most comprehensive and detailed university ranking by the
Centre for Higher Education (CHE), it has also been listed by the renowned Times Higher Education (THE) magazine as one of the top 300 universities worldwide in 2018. The (THE) Ranking is considered as one of the most widely observed university rankings. It is based on five major indicators: research, teaching, research impact, international orientation, and the volume of research income from industry.

1.2 Program Concept

The Foundation Year program at Jacobs University is an exceptional academic program, designed to provide high school graduates with the opportunity to develop academic skills and gain subject orientation while acquiring the credentials for admission to an English-language university. The Foundation Year Program places focus on more than only academic excellence. Here at Jacobs University we know the importance of personal growth; this is why we have developed a program that in addition to strong academic focus offers a personal development program that will help our students flourish in a university environment.

The foundation year program at Jacobs University aims to help students:

- Improve mathematical competence by providing intensive mathematics and statistics training;
- Develop academic reading, writing, and reasoning skills by offering academic English classes at different levels with an introduction to scientific methods;
- Bolster foundational knowledge required for their academic discipline of choice;
- Prepare for the SAT exam by providing SAT training;
- Find an undergraduate program that would best suit their interests by offering guidance through an individualised career advising program and by encouraging participation in undergraduate classes from various disciplines;
- Expand their academic and personal qualifications through academic advising and participation in a personal development program customised to the needs of a foundation year student;
- Broaden socio-cultural horizons and intercultural skills through study trips, on-site visits and involvement in the diverse international campus community.
1.2.1 **Options after the successful completion of the foundation year program:**

Upon successful completion of the Foundation Year Program the graduates will be granted admission to Jacobs University’s undergraduate programs. Students who entered the Foundation Year Program to qualify for undergraduate studies at another university will receive individual support with their application process. Based on the previous years, at least 80% of Foundation Year students, choose to continue their tertiary education at Jacobs University. These students have the opportunity to transfer credit points and grades for the undergraduate classes they have successfully completed towards the respective undergraduate modules.

1.2.2 **Intended Learning Outcomes:**

By the end of the program, students will be able to:

- have a broader understanding of what is expected of them in a university environment;
- have a more detailed overview of the different majors available at Jacobs university;
- have experienced different undergraduate modules and what the relative learning outcomes require;
- have a better understanding of what study direction they would like to pursue;
- improve their academic English thinking, reading and writing skills;
- improve their mathematics skills/scores;
- improve or acquire SAT scores;
- improve their personal and professional development;
- learn and work in an intercultural and diverse environment.

1.3 **Specific Advantages of the Foundation Year Program at Jacobs University:**

Jacobs University Foundation Year Program is specifically designed for:

- Students seeking orientation: students who have different academic interests and are undecided regarding the academic field they would like to pursue benefit from a year especially conceived to help them find a possible study direction and flourish within a university environment.
• Students seeking specialisation: students who need to improve their academic knowledge, their study skills and/or languages skills benefit from completing additional studies to maximise their academic and personal potential prior to gaining direct access to undergraduate programs.

• Students seeking personal growth: students who do not feel ready to begin with their undergraduate studies benefit from an additional year of studying to experience university life and academic options in order to prepare for higher education.

• Students seeking an international experience: students who plan to study abroad in English-speaking countries for a degree benefit from a first year of acculturation and preparation in their home country. Students who want to profit from an international experience while being in Europe also benefit from the program to secure a higher education path in a selective and high-ranked university in Germany.

The unique advantages for students of the Foundation Year study program offered by Jacobs University are:

• Access to a selective high-ranked university located in Europe, where they can maximise their potential and secure a high career path;
• An academic excellence’s preparatory program characterized by its highly individualized approach and tailored to students’ specific needs;
• The unique opportunity to acquire the credentials towards their degree qualification at Jacobs University or required for admission to English-speaking universities;
• A rare chance to get support and assistance in one’s personal and professional development in order to maximise one’s potential;
• A guarantee admission to the undergraduate program of their choice at Jacobs University on successful completion of the program;
• The close supervision, guidance and counselling delivered in English all along the program which offer students a smoother transition to higher education and let them mature and grow in their ability to engage with their studies;
• The rich international experience of living and studying on a multicultural campus and enjoying intense daily interactions with international students.

1.4 Program Structure:
The Foundation Year Program consists of two semesters as well as a mandatory intersession program between the first and second semester. As per the University’s academic calendar, the first (Fall) semester begins on the first Monday of September (after the orientation period) and ends in December. After the first semester the students enjoy a winter break and then continue to their academic intersession starting in the second week of January. After the academic intersession the foundation year students continue to the second (Spring) semester which starts on the first Monday of February and ends with the graduation ceremony in the first week of June.

Students who are required to take the SAT – standardized university admissions test, have the opportunity to participate in the additional intensive SAT weekend trainings. The SAT tests will take place in December and in March.

1.5 Admission Requirements:
Admission to Jacobs University’s Foundation Year is selective and based on a candidate’s school and/or university achievements, recommendations, self-presentation, and performance on required standardized tests. The application process is selective and seeks out motivated students who show both the intellectual and social promise to thrive in a diverse international study environment.

The following documents need to be submitted with the application to the Foundation Year Program:

• The Online Application Form, including a short motivation statement
• Your high school diploma/certificate and transcripts
• A recommendation letter from a teacher or a guidance counsellor
• A proof of English language proficiency (minimum score of 65 on the TOEFL iBT / 5.5 on the IELTS (UK) / 46 on the Pearson PTE Academic or the Cambridge Certificate (FCE) or minimum score of 90 on Duolingo).

All Foundation Year applicants must own a high school diploma or local equivalent prior to the start of the program. This certificate or diploma, if obtained in another country, must be recognised as a higher education entrance qualification in Germany. Please note that we cannot accept O-Levels or AS-Levels as an entrance qualification.

German language proficiency is not required as all classes at Jacobs University are taught in English.

1.6 Fees and Services:

The total cost for the Foundation Year Program is € 23,000. The direct costs of attendance for the program include tuition, room and board.

- Tuition: € 17,000
- Room and board: € 6,000
- Total cost of attendance: € 23,000

The room and board cover the cost for the student’s college room, basic utility expenses like heating, water, electricity, internet access, plus three meals per day for nine months (September to May). Please note that as fully experiencing life at university is Foundation Year students are not allowed to live outside campus.

The program fee also includes a semester ticket that allows students to travel on local public transportation at no additional cost for the entire year (including local trains to neighbouring cities like Hannover, Hamburg, Osnabrück, and Oldenburg), testing fees as well as all services listed below.

Foundation Year Services:

- Expert guidance in the transition to undergraduate studies
- Professional academic advising
- SAT/TOEFL test preparation and registration
- Residential colleges with modern single rooms
- In-college cafeterias with full board
- Fully equipped recreation centre and multimedia rooms
- Orientation Week to facilitate the transition to Jacobs University
- Host family program
- General support (visa, airport pick-up etc.)
- University campus with 24-hour security.

1.7 Scholarships:

Foundation Year students are eligible for scholarships only after the successful completion of their foundation year if they choose to enrol at Jacobs University. Scholarship candidates are selected based on their academic and social achievement in the Foundation Year. The SAT result, GPA (grade point average) result and amount of ECTS credits are taken into consideration.

1.8 Rules and Regulations:

During the orientation week (O-week) the students will be provided with the rules and regulations of Jacobs University and the Foundation Year Program.

1.8.1 ACADEMIC REGULATIONS

_Policies and Procedures:_

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Numerical grade</th>
<th>Letter Grade</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>≥95%</td>
<td>1.00</td>
<td>A+</td>
<td>Excellent (A)</td>
</tr>
<tr>
<td>≥90%</td>
<td>1.33</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>≥85%</td>
<td>1.67</td>
<td>A-</td>
<td>Very Good (B)</td>
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<tr>
<td>≥80%</td>
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<td>Good (C)</td>
</tr>
<tr>
<td>≥75%</td>
<td>2.33</td>
<td>B</td>
<td></td>
</tr>
<tr>
<td>≥70%</td>
<td>2.67</td>
<td>B-</td>
<td></td>
</tr>
<tr>
<td>≥65%</td>
<td>3.00</td>
<td>C+</td>
<td></td>
</tr>
<tr>
<td>≥60%</td>
<td>3.33</td>
<td>C</td>
<td>Satisfactory (D)</td>
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</table>
Grading:

The following graded scheme applies to both foundation year, undergraduate and graduate study programs at Jacobs university.

Jacobs University Grading Scheme:

*Audit requirements are determined by the respective course instructors.

The criteria for an UG course to be considered as an audit: the student attended 80% of the course (5 absences are allowed) they are assigned a “PASS” and the course appears as an audit on their transcript.

In Elective (E) UG courses, attendance requirements and grading schemes are set by the respective instructors. All registered undergraduate courses will appear on student’s final transcript of the foundation year. This will indicate credit transfers to Jacobs UG programs.

Excuse Policies:

FY students follow the same excuse policy as UG students and can find a more detailed overview of the excuse policies on the university’s website:

Dropping of UG courses: it is of utmost importance for foundation year students to “drop the courses” they have no longer interest in. As students are responsible to register for UG courses in accordance with their academic advisor, each student is also responsible for dropping the course before the deadline. If a FY student fails to do so the UG modules will reflect on their final transcript without a score and would need
further investigation which results in the student will not receiving his/her transcript in time to apply for other universities.

Form more detail with regards to the policies and procedures please visit Jacobs University’s website: https://www.jacobs-university.de/study/learning-languages/registration-regulations

1.8.2 Medical Excuse from academic obligations

In case of sickness or medical emergencies please take note of the following procedures:

Application for Excuse from Academic Obligations

(1) Procedure of medical excuse:

In order to be excused due to an illness or emergency, the form (below on page 13) needs to be completed by a certified physician and be submitted to the Student Records Office by the third calendar day from the beginning of the illness.

*Please note that these three days include the first day of the illness. If the third calendar day is a Saturday, Sunday or a public holiday, the deadline is extended to the next working day.

(2) Medical excuse after deadline:

If students submit a medical excuse form after the deadline, an excuse may be issued, if applicable, only for the submission date and the two calendar days preceding it. Predated or backdated medical excuse forms – i.e., when the visit to the physician takes place outside of the documented sickness period – will be accepted provided that the visit to the physician precedes or follows the period of illness by no more than one working day.

Please submit the original form on time, it does not need to be submitted in person. You may drop it off in the designated Student Records Office mailbox in the RLH Building, or send it by mail.
Important Note:
We are not accepting the yellow certificate (Arbeitsunfähigkeitsbescheinigung) as of September 1, 2018.

(3) Inform Instructor/lecturer of medical excuse in time:
Regardless of the reason for their absence, students must inform the Instructor on Record before the beginning of the examination or class/lab session, that they will not be able to attend. The day after the excuse ends, students must contact the Instructor of Record. Students have the right to take one make-up exam within the deadline for students to submit materials for incompletes as published in the Academic Calendar. Failure to do so will lead to a continued incomplete of the module until the missing requirements are fulfilled or definitively failed. Once the medical excuse form has been reviewed, the instructors will be informed about the absence and students would need to follow up and coordinate for the make-up, if applicable.

The university reserves the right to ask for a second medical opinion and/or to reject the medical excuse form. If you need special arrangements due to a disability please refer to the Special Arrangement Application. Please use the link below for all relevant documentation:

http://student-records.user.jacobs-university.de/forms/
# Student Records Office

**Bescheinigung einer Krankschreibung/Prüfungsunfähigkeit**  
*Excuse from academic obligations*

| Daten zur Person und zur Veranstaltung (vom Studierenden auszufüllen) /  
Personal information and course-related information (to be completed by the student): |
<table>
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<tr>
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<tbody>
<tr>
<td>Full Name / Matriculation No.</td>
</tr>
<tr>
<td>E-Mail</td>
</tr>
<tr>
<td>Major(s)</td>
</tr>
<tr>
<td>Academic Advisor</td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th>Betroffene(r) Kurs(e) / Affected course(s):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course No. / Course Name</td>
</tr>
<tr>
<td>Instructor’s Name / E-Mail</td>
</tr>
</tbody>
</table>

**Erklärung des Arztes / Physician’s statement**

Meine Untersuchung bei o.g. Patienten/Patientin hat aus ärztlicher Sicht folgendes ergeben (bitte ankreuzen) / After the medical examination assessing the aforementioned patient’s ability to fulfill his/her academic obligations, I come to the following conclusion (please check):

- der o.g. Patient ist krank/prüfungsunfähig / the above mentioned patient is incapable of fulfilling his/her academic obligations
- der o.g. Patient ist prüfungsfähig / the above mentioned patient is capable of fulfilling his/her academic obligations
- der o.g. Patient ist prüfungsfähig, ggf. mit Einschränkungen (siehe Nachteilsausgleich) / the above mentioned patient is capable of fulfilling his/her academic obligations, but with the special arrangements (to be accompanied with the Special Arrangement Application)

Dauer der Krankheit/Prüfungsunfähigkeit / Duration of medical excuse:

Von / from:  

bis einschließlich / until (incl.):

**Praxisstempel und Unterschrift / Doctor’s Stamp and Signature**

Ich bestätige hiermit, dass ich den/die o.g. Patienten/Patientin zur oben bescheinigten Erkrankung persönlich untersucht habe / I hereby confirm that I have personally seen the above mentioned patient concerning the above confirmed illness.

Datum / Date  

Praxisstempel und Unterschrift / Signature

**Unterschrift des/der Studierenden / Student’s Signature**

Hiermit reiche ich meinen Nachweis der Krankheit/Prüfungsunfähigkeit ein. Sämtliche Angaben zu meiner Person und zur betroffenen Prüfung/ zu den betroffenen Prüfungen habe ich ausgefüllt. / I hereby submit proof of illness/my inability to take an examination. I have completed the personal information section and submitted all information on the course(s)/exam(s) concerned.

Datum / Date  

Unterschrift des/der Studierenden / Student’s Signature
2 Foundation Year Student Specific Information

**Academic Advising**

An integral part of the Foundation Year Program is an intensive, personalized advising concept that closely monitors the academic achievements of individual students. A goal of Jacobs University’s academic advising system is to provide detailed information to students concerning their academic possibilities in the program and above all to provide support in enabling the students to perform to the best of their abilities.

FY students should meet with their Academic Advisor at least twice a semester. Students are also encouraged to meet with the Foundation Year Team (pre-degree team) for a personal and academic counselling at least once per semester. In general, academic advising sessions are confidential. However, if necessary, joint sessions with the FY co-ordinator or additional instructors may be scheduled.

**Academic Advising includes (is not limited to):**

- Approval of course registrations;
- Assistance and information on course choices;
- Development of an individual study plan;
- Regular feedback regarding academic standing;
- Recommendations and feedback regarding academic maturity and skills.

**FOUNDATION YEAR TEAM**

For academic advising, more information, assistance or support please contact the foundation year team or faculty:

**Pre-degree officers**

Ms. Serap Akbuga s.akbuga@jacobs-university.de + 49 421 200 4335
Ms. Hanri Landers h.landers@jacobs-university.de + 49 421 200 4331

**Recruitment counsellor**

Ms. Magali Pantobe m.pantobe@jacobs-university.de + 49 421 200 4313
Foundation Year Faculty Program Co-ordinators:

Prof. Dr. Adalbert Wilhelm  a.wilhelm@jacobs-university.de  + 49 421 200 3402
Dr. Irina Chiaburu  i.chiaburu@jacobs-university.de  + 49 421 200 3361

Academic Advisors

Prof. Dr. Adalbert Wilhelm  a.wilhelm@jacobs-university.de  + 49 421 200 3402
Dr. Irina Chiaburu  i.chiaburu@jacobs-university.de  + 49 421 200 3361
Dr. Isabel Wünsche  i.wunsche@jacobs-university.de  + 49 421 200 3311
Dr. Eoin Ryan  e.ryan@jacobs-university.de  + 49 421 200 4764

REGISTRAR’S OFFICE (STUDENT RECORDS)

The Registrar’s office handles all student records at Jacobs University and serves a number of functions:

- Enrolment and Ex-matriculation
- Student Visa and Residence Permit
- Health Insurance
- Course Administration (e.g. Registration, Drop/Add)
- Excuse from Academic Obligations
- Overall Academic and Student Administration

Please contact the Registrar's Office:

Student Records website  registrar@jacobs-university.de  + 49 421 200 4229

ADDITIONAL STUDENT SERVICES

Student Counselling

Our services for students include psychological counselling, life coaching, mediation, support groups, workshops, awareness campaigns and many more interesting offerings. All our services are free and confidential.

To make an appointment  counseling@jacobs-university.de  + 49 421 200 4300
Psychological Counsellors and Intercultural Educational Officers

Frank Haber  
[Email] f.haber@jacobs-university.de  
[Phone] +49 421 200-4325

Angelika von Rohden  
[Email] a.vonrohden@jacobs-university.de  
[Phone] +49 421 200-4324

Florence Yu  
[Email] f.yu@jacobs-university.de  
[Phone] +49 421 200-4329

Student Service Centre (SSC)

The university Student Service Centre assist students with a wide range of everyday student concerns. The SSC provides advice and practical help with a variety of services including housing, medical attention, deliveries, documentation and information on local events.

Please contact the Student Service Centre:

SSC  
[Email] studentservice@jacobs-university.de  
[Phone] +49 421 200 4208

The SSC is located in Reimar Lüst Hall, Room 104 and is open 5 days a week.

HEALTH AND SAFETY:

During O’week (orientation week) all students will receive mandatory health and safety regulations, information and drills. The information below assists students in case of emergencies.

Emergency:

For all emergencies on campus **please dial 911 from any campus phone.** Give your name, location, and relevant details of the situation to the Security Officer, who will coordinate further steps with local authorities, if necessary.

Off-Campus Emergencies:

When you go off campus, it’s strongly recommended to carry your ID/passport (residence permit, if applicable) along with the health insurance card with you.
Foundation Year Handbook 2019-2020

Please, note that a driver’s license is not valid for identification purposes in Germany. It’s also advisable to obtain a copy of the ‘Emergency ID’ (in German ‘Notfall-Ausweis’), fill it out, and have it with you whenever you leave campus. Copies of ‘Emergency IDs’ are available at the College Offices. For any questions, please contact Resident Mentors (resident-mentors-list@jacobs-university.de)

FIRE SAFETY:

Every residential college on campus has a modern fire safety system in full accordance with German Law. Safety regulations, information and safety drills are mandatory and each student will be provided with the needed safety information during orientation week or upon their arrival at Jacobs University.

General Safety Regulations:

1. It’s advisable to carry your Campus Card at all times when on campus.
2. It’s recommended to get a copy of Notfall Ausweis, fill it in, and have it with you every time you leave campus.
3. When traveling off-campus, it’s recommended to have your passport and residence permit (if applicable) with you.
4. It’s recommended not to leave your valuable belongings (computers, phones, etc.) unattended even for a short period of time.
5. Fire drills are mandatory for every college resident!
6. Liability insurance will cover costs of items damaged unintentionally.

For more information please visit the Jacob’s University website:

3 The Curricular Structure

General

The curricular structure at Jacobs University provides multiple elements enhancing employability, interdisciplinarity, and internationality. The unique Jacobs Track, offered across all undergraduate study programs, provides a broad range of tailor-made modules designed to foster career competences. In the case of Foundation Year students, ‘tailor-made’ applies to the whole curriculum. With enthusiastic support of their academic advisors and the Foundation Year team, the students choose a course plan that best reflects their interests and needs. In addition to preparatory classes which help the students improve critical academic skills and competences, Foundation Year Program offers its students the opportunity to participate in undergraduate courses from different majors. Moreover, all credit points earned in undergraduate courses during the foundation year can be transferred towards undergraduate studies at Jacobs or other universities.

The Foundation Year Program consists of three types of courses:

1. (M*) Mandatory Courses
2. (ME*) Mandatory Elective Courses
3. (E) Elective Courses

(M*) Mandatory Courses are compulsory for all FY students. Mandatory courses are compulsory for all FY students, unless eligible for exemption.

(ME*) Mandatory Elective Courses are compulsory for all FY students, but the students may choose which of these to take.

(E) Elective courses are additional courses that FY students may take if approved by their Academic Advisor.

Eligibility for exemption: Students who were previously engaged in the Preparatory courses such as English and Maths and achieved above the expected criteria, will be exempted from taking the course.
Foundation Year Program

The foundation year program is divided into the following types of courses:

The foundation year curriculum is divided into preparatory courses and orientation classes. Once these two components are completed as per the graduation requirements, the FY students will receive admission to undergraduate programs and the opportunity to transfer credits.

**PREPARATORY COURSES:**

All FY students will be admitted to placement tests during the first two weeks of the Fall semester. The placement tests will determine which of the following preparatory courses the students will be obligated to take. Students who are placed in preparatory courses must pass these to receive guaranteed admission to the undergraduate program at Jacobs University.

- Academic English (M*)
- Mathematics (M*)
- SAT Training (Math+Eng) (M*)
- Personal Development (M*)
Academic English, Mathematics, SAT training, and Personal development are categorised as **Mandatory (M*)** courses for all FY students. Only students who have reached the set benchmark of 1100 points on the SAT (CR & Math) or completed a German Abitur or an equivalent prior to entering Jacobs University are exempted from SAT training. Students who pass mathematics the placement test, which takes place during the first week of the Fall semester, are exempted from taking the Foundations of Mathematics module throughout the year.

**Academic English:**

Students take a placement test at the beginning of the first semester to determine which English class to take. The Foundation Year Program offers four English courses:

- **Academic English:** is offered in the Fall and Spring semesters (2x 75 min/week). The class is developed to help students with B1+ to B2 English proficiency levels improve their reading, writing, speaking, and listening skills. (5 ECTS per semester).

- **Advanced Academic English** is offered in the Fall and Spring semesters (2x 75 min/week). This course, targeting students who have already reached B2+ C1 CEFR proficiency levels, focuses on academic skills and literacy practices necessary for meeting the demands of university-level education. (5 ECTS per semester)

- **Academic Writing, Reading and Thinking**: is offered in the Fall and Spring semesters (2x75 min/week). The purpose of this class is to introduce students who are either native speakers or have CEFR proficiency levels of C1+ and higher to fundamental skills needed for studying at university, with a particular focus on studying in the fields of social sciences and humanities. (5 ECTS per semester)

- **Academic English for Scientists and Engineers**: is offered in the Fall semester and is repeated in spring (2x75 min/week). Developed for students with C1+ or higher levels of English proficiency, who are interested in majoring in natural sciences or engineering, the course will help to develop language skills needed for reading and writing in the sciences and other technical fields at a university level. (5 ECTS per semester)
Foundations of Mathematics:

Students take a placement test at the beginning of the first semester to determine whether they need to take Foundations of Mathematics. Students who reach **25 points or more** are exempted from the course.

- **Foundations of Mathematics**: is offered in the Fall semester (2x 75-minute classes per week, plus one tutorial for facilitation purposes). A tutorial is offered for this course to assist students with mathematical questions, home work, and test preparation. (5 ECTS per semester)

Sat Training:

- **SAT Training English & Advanced SAT Training English**: The course is provided in the Fall semester and is taught on two levels (1 class per week, 75 min). The course prepares students for the SAT Critical Reading Section. The class is mandatory (M*) for all students who have not met the required benchmark on the SAT prior to attending Jacobs University (1100 points in CR & Maths). (5 ECTS per semester)

- **Advanced SAT Training Mathematics**: The course is provided in the Fall semester and is taught on two levels (1 class per week, 75 min). The SAT Maths prepares students for the Mathematics Section of the SAT’s. The class is mandatory (M*) for all students who have not met the required benchmark on the SAT prior to attending Jacobs University (1100 points in CR & Maths). (5 ECTS per semester)

Personal Development:

The personal development program is designed specifically for the foundation year students to assist them with the transition from school to university.

Most students drop out after the first 6 months of university as they are not equipped to handle the pressures of tertiary education. Therefore, the foundation year team focused on specific personal development competencies a student needs to flourish in a tertiary environment and provides the foundation year students the opportunity to acquire these skills.
- The course runs throughout the foundation year (1 class per week, 2 hours). The students receive 2.5 ECTS per semester for this course and are awarded a pass/fail grade.

**ORIENTATION COURSES:**

The orientation classes allow for specific assistance with regards to Undergraduate modules. The orientation courses are designed to prepare students with the skills they need to flourish in a tertiary environment, specifically Jacobs University.

Participation in Foundation courses, Undergraduate (UG) courses and Language courses is categorised as **Mandatory Elective (ME*) courses** for all FY students. Students have the opportunity to personalise their orientation courses to prepare them towards a more specific field of study.
FOUNDATION COURSES:

The Foundation courses are developed to prepare students for specific fields of study.

1st Semester:

- **Foundations of sciences and Engineering**
  - (ME*)
  - OR
  - (ME*)

- **Foundations of Business and Social Sciences**
  - (ME*)
  - OR
  - (ME*)

- **Foundations of Psychology**

The students have the option to choose one of three Foundations courses. It is compulsory for the students to choose one of the three as these courses form part of the mandatory criteria of the first (fall) semester of the Foundation Year.

**Foundations of Sciences & Engineering:**
- This course is offered in the Fall semester (75-min class per week, plus one tutorial class). The course is graded, and students can earn 2.5 ECTS credits. The course is classified as a ME* course, therefore the student has the option to take any ONE of the three options as these are compulsory modules.

**Foundations of Business & Social Sciences:**
- This course takes place in the Fall semester (2 x75-min classes per week, plus one tutorial class). The course targets students interested in the field of Diversity. It is graded and students earn 5 ECTS credits. The course is classified as a ME* course, therefore the student has the option to take any ONE of the three options as these are compulsory modules.

**Foundations of Psychology:**
- This course is offered in the Fall semester (75-min class per week). The course is graded, and students can earn 2.5 ECTS credits per semester. The course
will continue in the second semester as Practical Methods in Psychological Sciences. The course is classified as a ME* course, therefore the student has the option to take any ONE of the three options as these are compulsory modules.

2nd Semester:

- German Politics and Culture (M*)
- Mathematics for Engineering & Natural Sciences (ME*)
- Mathematics and Statistics for Business and Social Sciences (ME*)
- Practical Methods in Psychological Sciences (ME*)

German Politics & Culture:

- This course is offered during the Intersession period. The course is graded, and students can earn 2.5 ECTS credits. The course is mandatory for all Foundation Year students. Those students who distinguish themselves in class will be rewarded with participation in excursions.

Mathematics for Engineering & Natural Sciences:

- This course is offered in the Spring semester (2x75-min classes per week, plus one tutorial class). The course is graded, and students can earn 5 ECTS credits per semester. The course is classified as a ME* course, therefore the student has the option to take any ONE of the three options as these are compulsory modules.
Mathematics and Statistics for Business and Social Sciences:

- This course is offered in the Spring semester (75-min class per week). The course is graded, and students can earn 5 ECTS credits per semester. The course is classified as a ME* course, therefore the student has the option to take any ONE of the three options as these are compulsory modules.

Practical Methods in Psychological Sciences:

- This course is offered in the Spring semester (75-min class per week). The course is graded, and students can earn (2.5 ECTS credits) per semester. The course is classified as a ME* course, therefore the student has the option to take any ONE of the three options as these are compulsory modules.

Big Questions modules

The modules of the Big Questions area (10 CP) intend to broaden the students’ horizon with applied problem solving between and beyond the disciplines. The offerings comprise problem-solving oriented modules that tackle global challenges from the perspectives of different disciplinary backgrounds and that allow, in particular, a reflection of the acquired disciplinary knowledge in economic, societal, technological, and/or ecological contexts. Working together with students from different disciplines and cultural backgrounds, the modules of this area will cross the boundaries of traditional academic disciplines.

Students are required to take 10 CP from modules in the Area. This curricular component is offered as a portfolio of modules, from which students can make free selections during their 5th and 6th semester, with the aim to reach an exposure to the full spectrum of economical, societal, technological, and/or ecological contexts. The size of Big Questions Modules is either 2.5 or 5 CP.
UNDERGRADUATE CHOICE MODULES:

The aim of foundation year is for students to find their ideal career path and flourish in a tertiary educational environment. Therefore, the students are provided the opportunity to join undergraduate courses which follow the general format of courses at Jacobs University, such as: Lectures, seminars, labs and tutorials. As presented below, students are permitted to **choose up to three undergraduate choice lectures** if they are exempted from some of the preparatory courses:

The UG choice courses will be regarded as credit or audit courses. During the **drop and add period**, students can attend UG courses and decide whether to take those courses for credit or audit.

A course with the referral of an “audit” is defined as: a student does not receive credit points or a grade for this UG course; attend 80% of the course and are assigned a “PASS” on their transcript; and students can attend follow-up courses for each proficiency level they have attended. It is compulsory for students to be assigned to an academic advisor to assist them with choosing the appropriate undergraduate (UG) courses. **The registration for courses in both semesters must be approved by their Academic Advisor.**
LANGUAGE COURSES:

The language courses, provided as part of the orientation courses, allow our students the opportunity to learn another language during their foundation year. The language courses will take place during the first (fall) and second (spring) semester.

Communication skills and foreign language competences foster students’ intercultural awareness and enhance their employability in a globalized and interconnected world. Jacobs University supports its students in acquiring and improving these skills by offering a variety of language modules at all proficiency levels.

Emphasis is put on fostering German language skills of international students as they are an important prerequisite for non-native speaking students to learn about, explore, and eventually integrate into their host country and its professional environment. Students who meet the requirements of the German proficiency level (e.g., native speakers) are required to select modules in any other modern foreign language offered (Chinese, French or Spanish). Hence, acquiring 10 CP in language modules, with German mandatory for non-native speakers, is a requirement for all students. This curricular component is offered as a four-semester sequence of foreign Language Modules. The size of the Language Modules is 2.5 CP.
FY GRADUATION REQUIREMENTS

In order for a FY student to graduate and/or receive guaranteed admission to the Undergraduate (UG) programs they need to fulfil the minimum graduation requirements.

There are two options for guaranteed admission to the UG programs at Jacob’s University:

1. **Fast Track Admission:**

   After the successful completion of the first semester, the FY students who want to enrol at Jacobs University can receive early admission status. The criteria for early admission status are as follows:

   ✓ Successful completion of the preparation courses with a minimum result of 60%;
   ✓ Successful completion of the orientation courses with a minimum result of 40%
   ✓ A valid SAT/ACT/Test AS score of 1200 and or equivalent to a German Abitur (Hochschulzugangsberechtigung (HZB)).
✓ Successful completion of the FY program as per graduation requirements.

UG courses will not be included in the calculation of the final GPA, although students will be able to transfer the credits (ECTS) to the respective undergraduate program if they completed the UG courses successfully.

2. FY Graduation requirements with Admission to Undergraduate programs:

After successful completion of the second semester, the FY students who want to enrol at Jacobs University can receive guaranteed admission. In order to graduate from the Foundation Year Program and receive guaranteed admission, the following minimum graduation requirements apply:

✓ Successful completion of the preparation courses with a minimum result of 60%;
✓ Successful completion of the orientation courses with a minimum result of 40%
✓ UG courses will not be included in the calculation of the GPA (general point average) Students will have the opportunity to transfer ECTS credits to UG programs;
✓ A valid SAT/ACT/Test AS score of 1050 and or equivalent to a German Abitur (Hochschulzugangsberechtigung (HZB)).

Below are the FY completion, graduation and admission to UG possibilities:

<table>
<thead>
<tr>
<th>FAST TRACK ADMISSION early admission status</th>
<th>FY GRADUATION &amp; GUARANTEED ADMISSION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparatory: 60%</td>
<td>Preparatory: 60%</td>
</tr>
<tr>
<td>Orientation: 40%</td>
<td>Orientation: 40%</td>
</tr>
<tr>
<td>SAT: 1200</td>
<td>SAT: 1050</td>
</tr>
<tr>
<td>Successful completion of the FY program</td>
<td></td>
</tr>
</tbody>
</table>

Students who do not meet the passing requirements and yet would like to continue their studies at Jacobs University, will be considered by a special admission committee. The admission committee consists of the Director of Admissions and the Dean of study. The review will be based on a transcript and a report submitted by the Pre-degree team. Students will be invited to a hearing and are advised to stay on campus until the first week of June.
FY Completion

Students who do not fulfil the above requirements and are not considered by the admissions committee, are eligible to receive a participation certificate only. Students with a GPA of 50% and or less will receive a participation certificate. These students have the possibility to re-apply to the Foundation Year Program if they would like to improve their scores and have another chance to apply to Jacobs University undergraduate programs.
Preparation modules: 1st Semester (Fall)

Below is a detailed overview of each of the preparation course modules offered in the first semester.

ACADEMIC ENGLISH

ACADEMIC ENGLISH I

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Course No.</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic English I</td>
<td>001141</td>
<td>2.5 ECTS</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Module Coordinator</th>
<th>Course Affiliation (component of module)</th>
<th>Mandatory Status</th>
<th>Level</th>
<th>Pre-requisites</th>
<th>Room:</th>
<th>Day and Time:</th>
</tr>
</thead>
</table>
| Irina Chiaburu     | Language Preparation course              | Mandatory        | Year 1 | NONE          |       | Monday 14:15 – 15:30  
|                    |                                          |                  | Fall  |              |       | Friday 11:15 – 12:30 |

Course Description / Content / Aims

*Academic English* offers Foundation Year students with intermediate English language proficiency (B1+ to B2) an opportunity to improve their reading, listening, speaking, and writing skills, thus making their transition to English-speaking university environment smoother. The course will allow them to explore academic content from a number of disciplines and to develop learning skills essential for academic success. It will also help them to build up their academic vocabulary and to improve their grammar. The course comes with a weekly tutorial for the students who may need additional support.

The following topics will be covered:

- Learning styles
- Reading strategies (skimming, annotating, summarizing, paraphrasing to simplify)
- Reading strategies (activating background knowledge, understanding bibliographic information, keeping vocabulary log, outlining)
- Listening for numerical information
- Asking questions, expressing agreement/disagreement
- Listening for signal words/phrases, listening for main ideas), note-taking.
- Developing a reading purpose, making text-to-text connections, using text structure to organize information
- Writing compare and contrast essays
- Understanding chronology, drawing conclusions, paraphrasing to simplify
- Revising
- Listening for the main idea
- Persuading and countering
- Identifying headings in lecture, listening to a lecture
- Debating pros and cons
- Preparing for text patterns, using illustrations and graphics for reviewing, paraphrasing to simplify
- Writing cause and effect statements
- Dealing with technical vocabulary, integrating information from two sources
- Writing about evidence or support
- Identifying redundancy and emphasizing ideas

<table>
<thead>
<tr>
<th>Workload / Contact Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type</strong></td>
</tr>
<tr>
<td>(Lecture/Seminar/Lab)</td>
</tr>
<tr>
<td>Seminar</td>
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</table>

<table>
<thead>
<tr>
<th>Methods of Assessment</th>
<th>Weighing</th>
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<tbody>
<tr>
<td>Homework assignments</td>
<td>45%</td>
</tr>
<tr>
<td>Attendance and participation in class activities</td>
<td>20%</td>
</tr>
<tr>
<td>Quizzes</td>
<td>35%</td>
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</table>

ADVANCED ACADEMIC ENGLISH I

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Course No.</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advance Academic English I</td>
<td>001144</td>
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<thead>
<tr>
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<th>Mandatory Status</th>
<th>Level</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Irina Chiaburu</td>
<td>Language Preparation course</td>
<td>Mandatory</td>
<td>Year 1</td>
<td>☒Fall ☒Spring</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pre-requisites</th>
<th>Room:</th>
<th>Day and Time:</th>
</tr>
</thead>
<tbody>
<tr>
<td>NONE</td>
<td></td>
<td>Tue: 15:45 – 18:30</td>
</tr>
</tbody>
</table>

**Course Description / Content / Aims**

The purpose of this two-semester course is to prepare students with B2+ and C1 English proficiency levels for an English-speaking academic environment. The course focuses on some of the essential skills one needs to master in order to succeed at a university. In the fall semester the students will learn how to work with complex texts, apper hend abstract ideas, evaluate evidence, and think critically about arguments; in the spring, they will concentrate on developing their writing skills. In addition to fostering academic competencies, the course has a strong grammar and vocabulary components, which will allow the students to strengthen their foundations and to build their linguistic confidence.

The following topics will be covered:

- Learning styles and strategies
- Reading fast and slow: Pre-viewing a text (skimming, scanning); focusing reading through questions. In depth reading, monitoring comprehension (SQRRR).
- Annotating a text.
- Vocabulary skills: Using context to understand new vocabulary -- synonyms, examples, contrast, inference clues.
- Academic thought patterns: Note taking.
- Main idea vs supporting details (primary vs. secondary details)
- Writing summaries and paraphrases
- Reading for evidence
- Evaluating arguments and developing counterarguments
- Understanding specificity of academic written discourse

<table>
<thead>
<tr>
<th>Type (Lecture/Seminar/Lab)</th>
<th>Number of Sessions (per Semester)</th>
<th>Duration (minutes)</th>
<th>Total (hours)</th>
</tr>
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<tbody>
<tr>
<td>Seminar</td>
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<table>
<thead>
<tr>
<th>Element</th>
<th>Weighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework Assignments</td>
<td>30%</td>
</tr>
<tr>
<td>Quizzes</td>
<td>20%</td>
</tr>
<tr>
<td>Attendance and participation</td>
<td>10%</td>
</tr>
<tr>
<td>Final assignment</td>
<td>40%</td>
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</table>

READING, WRITING AND THINKING AT UNIVERSITY

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Course No.</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading, Writing and Thinking at University</td>
<td>001134</td>
<td>5 ECTS</td>
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<tr>
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<th>Course Affiliation (component of module)</th>
<th>Mandatory Status</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eoin Ryan</td>
<td>English Preparation</td>
<td>Mandatory</td>
<td>Year 1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pre-requisites</th>
<th>Room:</th>
<th>Day and Time:</th>
</tr>
</thead>
<tbody>
<tr>
<td>NONE</td>
<td></td>
<td>Monday, 14:15 -15:30</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wednesday, 19:15 - 20:30</td>
</tr>
</tbody>
</table>

Course Description / Content / Aims
One of the key differences between studying in high school and studying at university is the amount of learning that must happen outside the lecture hall or seminar room. For each hour in class a university student is expected to put in two to four hours of independent studying. Most of this time will be spent reading, and students who have decided to study the social sciences or humanities will often be expected to absorb intimidating amounts of pages. To make things worse, not all these pages will be of the same information value and density: some will be clear and enlightening, others abstruse and confusing.

Reading, Thinking and Writing at University is a course designed to prepare you for what can seem the intractable challenge of managing your reading workload. It will also help you to build intellectual and learning skills that will make studying more manageable and rewarding.

The following topics will be covered:
- Vocabulary and Precision
- Grammar (the core SVO structure of English)
- Approaching an academic text
- Time management (slow reading, skimming, different types of texts)
- Identifying an argument
- Slow texts and fast texts, texts that report research vs texts that are research
- Note-taking
- Querying a text, interrogating a text, actively looking for information
• Summarizing viewpoints / identifying different viewpoints Practical skill: efficient, direct communication vs complex academic communication
• The uses and abuses of presentations (Power points)

Intended Learning Outcomes (ILOs)
This course aims to:
• Introduce students to fundamental skills needed for studying at university, with a particular focus on studying in the fields of social sciences and humanities
• Develop students’ skills for reading academic texts
• Enhance students’ critical thinking skills
• Familiarize students with different academic discourses and tactics for reading themselves into a discourse
• Develop students’ abilities as writers of academic texts.

[Note: this is a two-semester course; in the first semester the emphasis is on reading skills, although some writing skills will also be introduced.]

On completion of this course, students should:
• Be familiar with different strategies for academic reading, from swift synopsis reading to in-depth focused attention on texts
• Recognize typical functional parts of academic texts
• Be able to deploy such skills to approach reading in a variety of disciplines.
• Locate, identify, and critique textual arguments
• Utilize the features of good academic writing to write their own papers
• Write papers that develop cogent arguments in a clear and structured way.

<table>
<thead>
<tr>
<th>Type (Lecture/Seminar/Lab)</th>
<th>Number of Sessions (per Semester)</th>
<th>Duration (minutes)</th>
<th>Total (hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interactive Learning</td>
<td>14</td>
<td>150</td>
<td>35 hours</td>
</tr>
</tbody>
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Methods of Assessment

<table>
<thead>
<tr>
<th>Element</th>
<th>Duration</th>
<th>Weighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active Participation:</td>
<td>Students are expected to attend all class meetings and to complete all assigned readings. Additionally, active participation in discussions and group assignments during class is an essential part of the course which also contributes to the participation grade. This participation grade is worth 10% of each student’s final grade.</td>
<td>25%</td>
</tr>
<tr>
<td>Homework:</td>
<td>There will be regular homework assignments, usually set on Wednesdays. These assignments will be due on Monday in class. You have to complete and hand in at least 6 homework assignments. All your homework assignments will be graded, but your final homework grade will be calculated from your best four results. Although you are ultimately graded on four assignments, if you do not submit the required six then you will be penalized 10% per missing assignment. Your final homework grade then contributes 30% of your course grade. <strong>Note:</strong> Submissions will only be accepted as hard copy in class and need to have your name and the assignment number on it. Late submissions will not be accepted.</td>
<td>35%</td>
</tr>
<tr>
<td>Final Presentation:</td>
<td>Over the last few weeks of semester students will develop a small research project which they will then present in class (providing a handout to the class, and a written copy of the presentation to the instructor).</td>
<td>40%</td>
</tr>
</tbody>
</table>
### Course Description / Content / Aims

Academic English for Scientists and Engineers is a course for students who are interested in majoring in natural sciences or engineering and who are already proficient in English. The course will help them to develop language skills necessary for doing scientific work at the university level and beyond. The course looks at skills for reading comprehension, but its primary focus is on various aspects of scientific communication – writing about and presenting research to other members of the scientific community.

The following topics will be covered:
- Vocabulary and Formality Precision (Latin-English, French-English, German-English)
- The core SVO structure of English
- Approaching a text (the IMRaD parts of a typical scientific text are shortcuts)
- Reading and annotating a text
- Finding a direction for your research: doing literature review, finding research gaps, building evidence to argue a point
- Building a bibliography, choosing a research project
- Designing and describing an experiment
- Evaluating results, noting problems, presenting data
- Using visuals and numbers (graphs, stats, …)
- Presenting results, discussion, and conclusions
- Writing introductions, abstracts and titles
- Preparing the presentation

### Intended Learning Outcomes (ILOs)

This course aims to:
- Introduce students to fundamental skills needed for reading and writing in the sciences and other technical fields at a university level
- Enhance students’ critical thinking skills
- Familiarize students with tactics for reading themselves into a discourse and participating in that discourse
- Develop students’ abilities as writers of scientific and technical texts

On completion of this course, students should:
- Be familiar with different strategies for academic reading
- Recognize the functional parts of typical technical texts
- Utilize the features of good academic writing to write their own papers
- Write papers that develop cogent arguments in a clear and structured way.
<table>
<thead>
<tr>
<th>Workload / Contact Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type</strong> (Lecture/Seminar/Lab)</td>
</tr>
<tr>
<td>Interactive Learning</td>
</tr>
<tr>
<td>Private Study</td>
</tr>
<tr>
<td>Exam and Preparation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Methods of Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Element</strong></td>
</tr>
<tr>
<td>Active Participation</td>
</tr>
<tr>
<td>Home Work</td>
</tr>
<tr>
<td>Mid-term Exam</td>
</tr>
<tr>
<td>Tests/Reports</td>
</tr>
</tbody>
</table>

**FOUNDATIONS OF MATHEMATICS**

**FOUNDATIONS OF MATHEMATICS**

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Course No.</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foundations of Mathematics</td>
<td>001101</td>
<td>5</td>
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<table>
<thead>
<tr>
<th>Module Coordinator</th>
<th>Course Affiliation (component of module)</th>
<th>Mandatory Status</th>
<th>Mandatory Status</th>
<th>Level</th>
<th>Room:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stefan Juricke</td>
<td>Preparation for UG Mathematics</td>
<td>Mandatory</td>
<td></td>
<td>Year 1</td>
<td></td>
</tr>
<tr>
<td>Khadeeja Afzal</td>
<td>Gözde Özden</td>
<td></td>
<td></td>
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<table>
<thead>
<tr>
<th>Pre-requisites</th>
<th>Day and Time:</th>
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</thead>
<tbody>
<tr>
<td>NONE</td>
<td>Stephan Juricke Monday:15:45 – 18:30</td>
</tr>
</tbody>
</table>
Course Description / Content / Aims

Mathematics is a subject of vital importance for almost any areas of modern society. An understanding of mathematics is not only needed for natural sciences and engineering but has many applications in social sciences such as economics, finance, operational research and statistics. Students with a thorough understanding in mathematics will achieve greater understanding of social sciences. Besides the knowledge and understanding of mathematics itself, students with a solid foundation in mathematics have valuable analytical and problem-solving skills. They are more able to think logically and objectively. These students will be in high demand in almost every field.

The following topics will be covered:
- Coordinates, points and lines
- Surds
- Graphs
- Quadratics
- Inequalities
- Index notation
- Graphs of nth power functions
- Polynomials
- Transforming graphs
- Circles
- Trigonometry
- Sequences
- The binomial theorem
- The sine and cosine rules
- Geometric sequences
- Exponentials and logarithms
- Factors and remainders
- Radians

Intended Learning Outcomes (ILOs)

The Foundation Year Mathematics (FYM) I and II courses are intended for students of all levels wishing to improve their mathematical skills and knowledge before commencing with their respective university studies.

The main goals* of the Foundation Year Mathematics courses are to help students to:
- develop their understanding of mathematics and mathematical processes;
- develop their abilities to reason logically and recognize incorrect reasoning;
- generalize and to construct mathematical proofs;
- extend their range of mathematical skills and techniques and use them in increasingly difficult and unstructured problems;
- develop an understanding of coherence and progression in mathematics and of how different areas of mathematics are connected;
- recognize how a specific situation may be represented mathematically and understand the relationship between ‘real world’ problems and mathematical models and how these can be refined and improved;
- use mathematics as an effective means of communication;
- develop an awareness of the relevance of mathematics to other fields of study, to the world of work and to society in general;
- take increasing responsibility for their own learning and the evaluation of their own mathematical development.
<table>
<thead>
<tr>
<th>Type</th>
<th>Number of Sessions (per Semester)</th>
<th>Duration (minutes)</th>
<th>Total (hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interactive Learning</td>
<td>14 weeks</td>
<td>150</td>
<td>35 hours</td>
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<tr>
<td>Private Study</td>
<td>-</td>
<td>-</td>
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</tr>
<tr>
<td>Exam and Preparation</td>
<td>-</td>
<td>-</td>
<td>-</td>
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</table>

**Methods of Assessment**

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<thead>
<tr>
<th>Element</th>
<th>Duration</th>
<th>Weighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final Exam</td>
<td>Click here to enter text</td>
<td>45%</td>
</tr>
<tr>
<td>Midterm Exam</td>
<td>-</td>
<td>30%</td>
</tr>
<tr>
<td>Active Participation</td>
<td>-</td>
<td>25%</td>
</tr>
</tbody>
</table>

**Further Grading Information:**

For all Foundation Year Courses the following attendance and excuse policies apply: In general, attendance is mandatory and absence has to be officially excused by a doctor’s note submitted to the registrar’s office. Unexcused absence is only tolerated up to a maximum of 7% of allotted time slots for each course. Make-up examinations or delayed submission for homework assignments will only be granted, if a student has been officially excused by the registrar’s office and has followed the official excuse policies at Jacobs University (http://www.jacobs-university.de/policies-undergraduate). Overall, a participation of 50% (including excused and unexcused absences) of classes (lectures and associated tutorials) is the minimum requirement to pass a course and have it listed on the transcript.

---

**SAT TRAINING**

**SAT TRAINING: ENGLISH**

<table>
<thead>
<tr>
<th><strong>Course Name</strong></th>
<th><strong>Course No.</strong></th>
<th><strong>ECTS</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>SAT English Prep I</td>
<td>001111,001112</td>
<td>5 ECTS</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Module Coordinator</strong></th>
<th><strong>Course Affiliation</strong></th>
<th><strong>Mandatory Status</strong></th>
<th><strong>Level</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Meron Biruk Beshewamyeleh</td>
<td>(component of module)</td>
<td>Mandatory if not exempted</td>
<td>Year 1</td>
</tr>
<tr>
<td></td>
<td>Preparing for UG</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Pre-requisites</strong></th>
<th><strong>Room:</strong></th>
<th><strong>Day and Time:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>NONE</td>
<td></td>
<td>Tuesday 14:15 - 15:30</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wednesday 14:15 - 15:30</td>
</tr>
</tbody>
</table>

**Course Description / Content / Aims**

This is a comprehensive course that provides students a unique opportunity to prepare for the SAT Reading and Language Test. Students will build their reading, writing and critical thinking skills through both theoretical sessions and practical exercises. They will master content and learn strategies and tactics to tackle specific questions in each section. Over the span of the course, students will build their skills and improve their scores through practice tests. The structure of the course includes lectures, sample SAT test questions to supplement theoretical discussions and interactive classroom activities. The class meets twice a week to cover all aspects of the critical reading and writing and language test sections of the SAT.

Some of the topics covered include the following:

- Reading techniques, time and stress management
• Strategies for tackling different SAT question types
• Revising sentence structure
• Revising paragraph organization
• Reviewing grammar rules frequently tested: such as structure of tenses and punctuation

Intended Learning Outcomes (ILOs)
• Students will be able to master general SAT test taking strategies.
• Students will be able to identify the common mistakes in grammar, punctuation, and usage tested in the SAT Writing and language test.
• Students will be able to identify and tackle various types of reading comprehension questions that are based on five passages with different complexity levels.
• Students will be able to identify key words in questions and answer sets to locate and infer specific information from reading passages.
• Students will be able to master process of elimination and spot tricky questions easily.
• Students will be able to overcome exam anxiety through effective time management lessons and activities.

Workload / Contact Hours

<table>
<thead>
<tr>
<th>Type</th>
<th>Number of Sessions (per Semester)</th>
<th>Duration (minutes)</th>
<th>Total (hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture Style</td>
<td>14</td>
<td>2 x 75 min</td>
<td>35 hours</td>
</tr>
</tbody>
</table>

Methods of Assessment

This is a Pass or Fail course. To earn a Pass, students are required to have 80% of attendance, to participate in practice tests administered in class, and to complete individual take home assignments. Online resources will be utilized that necessitate students’ active engagement.

PERSONAL DEVELOPMENT

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Course No.</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Development</td>
<td>JTSK-990100</td>
<td>2.5</td>
</tr>
</tbody>
</table>

Module Coordinator
Lisa Heindl

Course Affiliation (component of module)
Personal development and self-reflection

Mandatory Status
Mandatory

Level
Year 1

☐Fall  ☐Spring

Pre-requisites
none

Room:

Day and Time:
Thursday
Group 1: 09:00 – 11:00
Group 2: 11:15 – 13:15

Course Description / Content / Aims
The foundation year’s personal development program will embody the mission statement of Jacobs University. As such, the program will focus on increasing the self-competence and social skills of its FY students in a community characterized by diversity. The program is developed and based on FY students specific needs to flourish within Jacob’s University environment.
The following topics will be covered:

- Self-Efficacy: Setting goals for the FY
- MBTI personality assessment
- University Time-Management
- Planning your career / university path
- Self-Awareness: Skills assessment Stress Management
- Self-Awareness: Motivators
- Intrinsic motivation: Forming positive habits
- Effective study groups
- Deep Work & Flow: Focus and concentration
- Visualizing a Presentation: The poster
- Self-Awareness: Interests
- Self-confidence

Intended Learning Outcomes (ILOs)

The personal development program aims to assist FY students to develop the following competencies:

- Self-awareness
- Self-management
- Relationship Skills
- Social Awareness
- Responsible decision making – critical thinking

### Workload / Contact Hours

<table>
<thead>
<tr>
<th>Type (Lecture/Seminar/Lab)</th>
<th>Number of Sessions (per Semester)</th>
<th>Duration (minutes)</th>
<th>Total (hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interactive Learning</td>
<td>14</td>
<td>120</td>
<td>28 hours</td>
</tr>
</tbody>
</table>

### Methods of Assessment

<table>
<thead>
<tr>
<th>Element</th>
<th>Content</th>
<th>Weighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>PERSONALITY POSTER (1)</td>
<td>Students create a poster that summarizes both the insights they have collected about personal aptitudes, strengths, motivators, resources and interests as well as information about different career options. Students present their posters and debate implications for their future university / career path with other students and the trainer.</td>
<td>PASS/FAIL</td>
</tr>
<tr>
<td>SEMESTER REPORT</td>
<td>During Intersession, students evaluate the academic and personal experience of the first semester in writing and assess whether they were able to reach their original goals. Focal points of the self-evaluation include an assessment of their self-management and team work skills. In a joint session at the beginning of the new semester, students formulate a new strategy and redefine goals.</td>
<td>PASS/FAIL</td>
</tr>
</tbody>
</table>
Orientation modules: 1st Semester (Fall)

Below is a detailed overview of each of the orientation course modules offered in the first semester. The following descriptions will allow students an overview of what to expect in each foundation year orientation course.

FOUNDATIONS OF SOCIAL SCIENCE & BUSINESS

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Course No.</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foundations of Social Science and Business</td>
<td>001133</td>
<td>5 ECTS</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Module Coordinator</th>
<th>Course Affiliation (component of module)</th>
<th>Mandatory Status</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Irina Chiaburu</td>
<td>Orientation Course</td>
<td>Mandatory</td>
<td>Year 1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pre-requisites</th>
<th>Room:</th>
<th>Day and Time:</th>
</tr>
</thead>
<tbody>
<tr>
<td>NONE</td>
<td></td>
<td>Wednesday: 15:45-18:30</td>
</tr>
</tbody>
</table>

Course Description / Content / Aims

The purpose of the course is to introduce academic fields of social science and business to Foundation Year students interested in these areas. Course participants will learn what constitutes each of the fields and explore some of the key concepts, theories and methodologies relevant to each. The goal of the first half of the course is to teach the students how to think about various aspects of the social world from a sociological perspective. The goal of the second -- to foster critical understanding of fundamental and current topics in business and economics. Throughout the course, the students will be encouraged to reflect on the complexities of the social world as an object of inquiry and will learn how researchers deal with such challenges.

The following topics will be covered:

- The complexities of studying social life
- Different approaches to studying society
- Theoretical thinking and major sociological paradigms
- Social organization: social structures and social processes
- Social and economic stratification
- Key social institutions
- Culture, subcultures and countercultures
- Greed and capitalism: the morality of market transactions
- Globalization: Wealth and income inequality
- Competition
- Entrepreneurship and innovations
- Challenges of starting and running a business
### Workload / Contact Hours

<table>
<thead>
<tr>
<th>Type (Lecture/Seminar/Lab)</th>
<th>Number of Sessions (per Semester)</th>
<th>Duration (minutes)</th>
<th>Total (hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture</td>
<td>28</td>
<td>75</td>
<td>35</td>
</tr>
</tbody>
</table>

### Methods of Assessment

<table>
<thead>
<tr>
<th>Element</th>
<th>Weighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midterm Exam</td>
<td>30 %</td>
</tr>
<tr>
<td>Final Exam</td>
<td>30%</td>
</tr>
<tr>
<td>Homework Assignments</td>
<td>25 %</td>
</tr>
<tr>
<td>Active participation</td>
<td>15%</td>
</tr>
</tbody>
</table>

### FOUNDATION YEAR INTRODUCTION TO PSYCHOLOGY

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Course No.</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foundation Year Introduction into Psychology</td>
<td>001192</td>
<td>2.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Module Coordinator</th>
<th>Course Affiliation (component of module)</th>
<th>Mandatory Status</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dora Simunovic</td>
<td>Orientation Course</td>
<td>Mandatory</td>
<td>Year 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>☒ Fall ☒ Spring</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pre-requisites</th>
<th>Room:</th>
<th>Day and Time:</th>
</tr>
</thead>
<tbody>
<tr>
<td>NONE</td>
<td></td>
<td>Thursday</td>
</tr>
<tr>
<td></td>
<td></td>
<td>14:15-15:30</td>
</tr>
</tbody>
</table>

### Course Description / Content / Aims

Introduction into Psychology will familiarize Foundation Year students with the different branches of psychology, beginning with personality psychology, over cognitive, developmental, and clinical, to social cultural and evolutionary psychology. The aim of the course is to enable students to use basic terms, theories and ideas from psychological science and apply it to a number of sister disciplines, including sociology, economics, international business, and international relations. Additionally, the course will work on the students’ academic reading skills, in the effort of making them more comfortable with consuming scientific publications and research. A lot of focus will be given to group work and presentations, as well as discussion and debate in class.

The following topics will be covered:

- Psychology as a Science
- Personality psychology
- Cognitive Psychology I: Neuroscience
- Cognitive Psychology II: Complex Cognition
- Developmental Psychology
- Clinical Psychology
- Social Psychology
- Cultural and Evolutionary Psychology
FOUNDATIONS OF SCIENCE AND ENGINEERING

Course Name
Foundations of Science and Engineering

Course No.
001103

ECTS
2.5

Module Coordinator
Alexander Lerchl

Course Affiliation (component of module)
Preparation Course

Mandatory Status
Optional

Level
Year 1
☒ Fall ☐ Spring

Pre-requisites
NONE

Room:

Day and Time:
Thursday
15:45 – 17:00

Course Description / Content / Aims

Science is a systematic approach leading to increased knowledge, testable hypotheses and predictions of natural phenomena (natural sciences) and the origin, behavior and development of humans and societies (social sciences). By stringently applying general rules for testing hypotheses and observing phenomena, respectively, discoveries of formerly unknown principles and rules can be made. These discoveries can be totally irrelevant to our daily lives, or relevant to a degree which makes us entirely dependent from such discoveries. If, for example, the grid of high-voltage power lines would collapse due to a phenomenon called solar storm, chaos, riots and carnages would result within a few days. Scientific discoveries and technological inventions sometimes are highly useful, but highly dangerous at the same time, e.g. nuclear technology and gene editing. The lecture will give an overview of fundamental aspects of science and technological applications.

Topics that will be covered include:

Intended Learning Outcomes (ILOs)

Discipline Specific Skills
- Command of basic concepts from psychological science
- Ability to consume scientific literature
- Grasp of psychology’s importance for other fields in social science and practice, and vice versa
- Experience with group work and academic presentation
• Science is everywhere, but what is science?
• The individual and the society: ethical principles
• Science toolbox: hypothesis, verification, falsification
• How to lie with statistics
• The dilemma of science and technology: Pandora's box(es)
• The Manhattan project- from a theory to the atomic bomb
• Nuclear power plants: benefits and risks
• Computers and software: Big Brother is watching YOU!
• Anthropology, psychology, and the future of mankind

<table>
<thead>
<tr>
<th>Workload / Contact Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type</strong></td>
</tr>
<tr>
<td>Lecture</td>
</tr>
<tr>
<td>Seminar</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Methods of Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Element</strong></td>
</tr>
<tr>
<td>Midterm Exam</td>
</tr>
<tr>
<td>Final Exam</td>
</tr>
<tr>
<td>Attendance</td>
</tr>
</tbody>
</table>
THE INTERSESSION

After the first semester the students enjoy a winter break and then continue to their academic intersession starting in the second week of January 2020. The intersession is two weeks of intensive classes between the two semesters.

GERMAN POLITICS AND CULTURE

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Course No.</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>GERMAN POLITICS &amp; CULTURE</td>
<td>001121</td>
<td>2.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Module Coordinator</th>
<th>Module Coordinator</th>
<th>Mandatory Status</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Culture Focus:</td>
<td>Politics Focus:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dr. Stefan Baumgarten</td>
<td>Alexandra Mittelstädt</td>
<td>Mandatory</td>
<td>Year 1</td>
</tr>
<tr>
<td>Office: South Hall, R. 115</td>
<td>Office: South Hall, R. 215</td>
<td></td>
<td>INTERSESSION</td>
</tr>
<tr>
<td>Office hours: Wed, 22 Jan, 10:00 – 13:00 <a href="mailto:s.baumgarten@jacobs-university.de">s.baumgarten@jacobs-university.de</a></td>
<td>Office hours: Wed, 22 Jan, 10:00 – 13:00 <a href="mailto:a.mittelstaedt@jacobs-university.de">a.mittelstaedt@jacobs-university.de</a></td>
<td></td>
<td></td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Pre-requisites</th>
<th>Room:</th>
<th>Day and Time:</th>
</tr>
</thead>
<tbody>
<tr>
<td>NONE</td>
<td></td>
<td>13 - 24 January 2020</td>
</tr>
</tbody>
</table>

Course Description / Content / Aims

This course provides students with an introduction to German politics, society, and culture. Germany’s history, politics and culture from World War II until today will be covered as well as recent political events, societal changes, and cultural developments.

The topics that will be covered include the following:

- Germany’s political legacy: Failure of the Weimar Republic, Nazi Seizure of Power, division and unification of Germany
- German cultural foundations: Germany at glance, German ways of life, German culture and society
- Politics in Germany today: Institutions and government, German federalism, Germany and the European Union
- Culture in Germany today: Art and literature, music and film, popular culture
- Growing Diversity in Germany: Challenges and Opportunities
### Intended Learning Outcomes (ILOs)

Students will acquire knowledge of the political and cultural institutions as well as societal and cultural structures of Germany. The aim is to learn how to analyze and interpret political, societal, and cultural developments, as well as to identify the influence of political and cultural institutions, and put them into a broader, especially European, context. Another aspect of this course is to train students’ teamwork and presentation skills.

### Workload / Contact Hours

<table>
<thead>
<tr>
<th>Type (Lecture/Seminar/Lab)</th>
<th>Number of Sessions (per Semester)</th>
<th>Duration (minutes)</th>
<th>Total (hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seminar – Interactive learning</td>
<td>18</td>
<td>75min</td>
<td>22.5 hours</td>
</tr>
</tbody>
</table>

### POLICIES

For all Foundation Year courses, the following attendance and excuse policies apply: In general, attendance is mandatory; absence has to be officially excused by a doctor’s note submitted to the registrar’s office. Overall, a participation of 80% of classes is the minimum requirement to pass a course and to have it listed on the transcript. This means that a maximum of two sessions can be missed unexcused. Coming late for class more than two times will be counted as an unexcused missed session.

### Methods of Assessment

<table>
<thead>
<tr>
<th>Element</th>
<th>Weighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presentation: In-class group presentation</td>
<td>100%</td>
</tr>
</tbody>
</table>

### Assignments & Grading Criteria for In-class group presentation

Each student will have to participate in an in-class group presentation (max. 5 students per group). In-class group presentations will take place in week 2 and should be 20 minutes long (PowerPoint or a similar software program is expected). Following the presentation, additional 5 minutes will be given for discussion. Presentation topics can be chosen freely but must relate to one of the sessions. A group presentation will be given a single grade.

### Grading criteria for the in-class group presentation

a) **Academic Content**: command of subject, focus, structure (logic & clarity), correctness of content, critical assessment of the topic, handling of discussion questions.

b) **Presentation Skills**: time management, visualization, verbalization, contact with the audience.
**PERSONAL DEVELOPMENT – INTERSESSION**

<table>
<thead>
<tr>
<th><strong>Course Name</strong></th>
<th>Personal Development</th>
<th><strong>Course No.</strong></th>
<th>JTSK-990100</th>
<th><strong>ECTS</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Module Coordinator</strong></td>
<td>Lisa Heindl</td>
<td><strong>Course Affiliation (component of module)</strong></td>
<td>Personal development and self-reflection</td>
<td><strong>Mandatory Status</strong></td>
</tr>
<tr>
<td><strong>Level</strong></td>
<td>Intersession</td>
<td><strong>Pre-requisites</strong></td>
<td>none</td>
<td><strong>Room:</strong></td>
</tr>
<tr>
<td><strong>Course Schedule</strong></td>
<td></td>
<td><strong>Day and Time:</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>SESSION</strong></th>
<th><strong>Topic</strong></th>
<th><strong>Day and Date</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Team Day</td>
<td>The specific date of the team work day will be announced during the first semester.</td>
</tr>
</tbody>
</table>

- Effective Team Work abilities.

The team day is a designated day which provides all the FY students the opportunity to work together as a team in a team work challenge.
Preparation modules: 2\textsuperscript{nd} Semester (Spring)

Below is a detailed overview of each of the preparation course modules offered in the second semester. The following overview offers students a gist of what to expect in each course.

Below is a detailed overview of some of the preparation course modules offered in the second semester.

ACADEMIC ENGLISH

ACADEMIC ENGLISH II

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Course No.</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced Academic English II</td>
<td>001144</td>
<td>5 ECTS</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Module Coordinator</th>
<th>Course Affiliation (component of module)</th>
<th>Mandatory Status</th>
<th>Level</th>
<th>Room:</th>
<th>Day and Time:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Irina Chiaburu</td>
<td>Preparatory Course</td>
<td>Mandatory</td>
<td>Year 1</td>
<td>☒Fall ☒Spring</td>
<td></td>
</tr>
</tbody>
</table>

Pre-requisites

Advanced Academic English I

Course Description / Content / Aims

(FY) Advanced Academic English II is a continuation of the (FY) Advanced Academic English course taught in the fall semester. Whereas the former focuses on reading and critical thinking, the latter aims at helping the students develop their writing skills. Although elements of clear writing style form an important component of the course, at the heart of this seminar lie the many skills necessary for writing with sources -- from the challenge of conceptual synthesis to conundrums surrounding citation rules. The students will try their hands at writing literature reviews, will learn how to develop research questions based on their readings, and will discover how to use scholarly texts to develop and then support their position on a given subject.

Topics covered in this course include:

- The importance of framing and contextualizing the ideas of others
- Reviewing paragraphing: patterns of paragraph development, using support for key ideas
- Writing with evidence: Using existing research as support
- Logic and mechanics of referencing
- Synthesizing ideas from multiple sources: Strategies and challenges
- Literature review: Finding relevant and reliable sources
- Working with sources: Finding patterns of ideas, generalizing and organizing ideas
- Strategies for finding a topic and formulating the research question
- Forming a position and developing a thesis statement.
• Writing about facts and writing about opinions.

<table>
<thead>
<tr>
<th>Workload / Contact Hours</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type</strong> (Lecture/Seminar/Lab)</td>
<td><strong>Number of Sessions (per Semester)</strong></td>
</tr>
<tr>
<td>Seminar</td>
<td>14</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Methods of Assessment</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Element</strong></td>
<td><strong>Duration</strong></td>
</tr>
<tr>
<td>Final project</td>
<td></td>
</tr>
<tr>
<td>Literature review</td>
<td></td>
</tr>
<tr>
<td>Homework assignments</td>
<td></td>
</tr>
<tr>
<td>Quizzes</td>
<td>Click here to enter text.</td>
</tr>
<tr>
<td>Active class participation</td>
<td></td>
</tr>
</tbody>
</table>

**FOUNDATIONS OF MATHEMATICS**

**FOUNDATIONS OF MATHEMATICS II**

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Course No.</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foundations of Mathematics II</td>
<td>00110</td>
<td>2.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Module Coordinator</th>
<th>Course Affiliation (component of module)</th>
<th>Mandatory Status</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stefan Juricke</td>
<td>Preparation course</td>
<td>Mandatory</td>
<td>Year 1</td>
</tr>
<tr>
<td>Khadeeja Afzal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gözde Özden</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pre-requisites</th>
<th>Room:</th>
<th><strong>Day and Time:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>NONE</td>
<td>Stefan Juricke</td>
<td>Monday: 15:45 – 18:30</td>
</tr>
<tr>
<td></td>
<td>Khadeeja+Gözde</td>
<td>Wednesday: 15:45 – 18:30</td>
</tr>
</tbody>
</table>

**Course Description / Content / Aims**

Mathematics is a subject of vital importance for almost any areas of modern society. An understanding of mathematics is not only needed for natural sciences and engineering but has many applications in social sciences such as economics, finance, operational research and statistics. Students with a thorough understanding in mathematics will achieve greater understanding of social sciences. Besides the knowledge and understanding of mathematics itself, students with a solid foundation in mathematics have valuable analytical and problem-solving skills. They are more able to think logically and objectively. These students will be in high demand in almost every field.
The following topics will be covered:

- Summation of series
- Mathematical induction
- Roots of polynomial equations
- Complex numbers
- Matrices
- Rational functions and graphs
- Polar coordinates
- Hyperbolic functions
- Differentiation and integration
- Numerical methods
- Differential equations
- Vectors
- Complex numbers
- Groups

**Intended Learning Outcomes (ILOs)**

The Foundation Year Mathematics (FYM) I and II courses are intended for students of all levels wishing to improve their mathematical skills and knowledge before commencing with their respective university studies. 

The main goals* of the Foundation Year Mathematics courses are to help students to:

- develop their understanding of mathematics and mathematical processes;
- develop their abilities to reason logically and recognize incorrect reasoning;
- generalize and to construct mathematical proofs;
- extend their range of mathematical skills and techniques and use them in increasingly difficult and unstructured problems;
- develop an understanding of coherence and progression in mathematics and of how different areas of mathematics are connected;
- recognize how a specific situation may be represented mathematically and understand the relationship between “real world” problems and mathematical models and how these can be refined and improved;
- use mathematics as an effective means of communication;
- develop an awareness of the relevance of mathematics to other fields of study, to the world of work and to society in general;
- take increasing responsibility for their own learning and the evaluation of their own mathematical development.

**Workload / Contact Hours**

<table>
<thead>
<tr>
<th>Type (Lecture/Seminar/Lab)</th>
<th>Number of Sessions (per Semester)</th>
<th>Duration (minutes)</th>
<th>Total (hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interactive Learning</td>
<td>14 weeks</td>
<td>150</td>
<td>35 hours</td>
</tr>
<tr>
<td>Private Study</td>
<td>-</td>
<td>-</td>
<td>Click here to enter text.</td>
</tr>
<tr>
<td>Exam and Preparation</td>
<td>-</td>
<td>-</td>
<td>Click here to enter text.</td>
</tr>
</tbody>
</table>

**Methods of Assessment**

<table>
<thead>
<tr>
<th>Element</th>
<th>Duration</th>
<th>Weighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final Exam</td>
<td></td>
<td>45%</td>
</tr>
<tr>
<td>Midterm Exam</td>
<td></td>
<td>30%</td>
</tr>
<tr>
<td>Active Participation</td>
<td>Click here to enter text.</td>
<td>25%</td>
</tr>
</tbody>
</table>
**FYM II Course Schedule**

**Intended Learning Outcomes (ILOs)**

**Statistics 1**
- Representation and description of data
- Probabilities
- Permutations and combinations
- Probability distributions
- Correlation and Regression

**Core Mathematics 3 (C3):**
- Successive transformations
- Functions
- Exponential growth and decay
- Trigonometry
- The modulus function
- Differentiation \((C1 \ cont’d)\)
- Investigating shapes of graphs \((C1 \ cont’d)\)
- Applications of differentiation \((C1 \ cont’d)\)
- Extending differentiation and integration
- Differentiating exponentials and logarithms
- The chain rule
- Differentiating products

**Core Mathematics 4 (C4):**
- Differentiating trigonometric functions
- Vectors
- Scalar products of vectors
- The binomial expansion
- Rational functions
- Integration \((C2 \ cont’d)\)

---

**Further Grading Information:**
For all Foundation Year Courses, the following attendance and excuse policies apply: In general, attendance is mandatory; absence must be officially excused by a doctor's note submitted to the registrar's office. Unexcused absence is only tolerated up to a maximum of 7% of allotted time slots for each course. Make-up examinations or delayed submission for homework assignments will only be granted, if a student has been officially excused by the registrar's office and has followed the official excuse policies at Jacobs University (http://www.jacobs-university.de/policies-undergraduate). Overall, a participation of 50% (including excused and unexcused absences) of classes (lectures and associated tutorials) is the minimum requirement to pass a course and have it listed on the transcript.
### PERSONAL DEVELOPMENT

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Course No.</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Development</td>
<td>JTSK-990100</td>
<td>2.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Module Coordinator</th>
<th>Course Affiliation (component of module)</th>
<th>Mandatory Status</th>
<th>Level</th>
<th>Day and Time:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lisa Heidl</td>
<td>Personal development and self-reflection</td>
<td>Mandatory</td>
<td>Year 1</td>
<td>Thursday</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Group 1: 09:00 – 11:00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Group 2: 11:15 – 13:15</td>
</tr>
</tbody>
</table>

**Pre-requisites**

NONE

**Course Description / Content / Aims**

The foundation year’s personal development program will embody the mission statement of Jacobs University. As such, the program will focus on increasing the self-competence and social skills of its FY students in a community characterized by diversity. The program is developed and based on FY students specific needs to flourish within Jacob’s University environment.

- Topics covered in this module include:
  - Communication etiquette / channels
  - Presentation Skills I: Crafting a Presentation
  - Understanding and appreciating diversity
  - Culture & non-violent communication
  - Non-verbal communication & body language
  - Critical thinking
  - Team conflicts & team solutions
  - Public speaking
  - Effective decision making
**Intended Learning Outcomes (ILOs)**
Specific competency skill learning: the personal development program aims to assist FY students to develop the following competencies:
- Self-awareness
- Self-management
- Relationships skills
- Social awareness
- Responsible decision making – critical thinking

**Workload / Contact Hours**

<table>
<thead>
<tr>
<th>Type (Lecture/Seminar/Lab)</th>
<th>Number of Sessions (per Semester)</th>
<th>Duration (minutes)</th>
<th>Total (hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interactive Learning</td>
<td>14</td>
<td>2 hours</td>
<td>28 hours</td>
</tr>
</tbody>
</table>

**Methods of Assessment**

<table>
<thead>
<tr>
<th>Element</th>
<th>Content</th>
<th>Weighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEMESTER REPORT</td>
<td>During Intersession, students evaluate the academic and personal experience of the first semester in writing and assess whether they were able to reach their original goals. Focal points of the self-evaluation include an assessment of their self-management and team work skills. In a joint session at the beginning of the new semester, students formulate a new strategy and redefine goals.</td>
<td>PASS/FAIL</td>
</tr>
<tr>
<td>FINAL REFLECTION</td>
<td>In a final session before graduation, students have the chance to reflect the foundation year experience for themselves and in exchange with others. Students explore whether they could reach their original goals, formulate insights gained and define goals and fields of growth for the future. The day is concluded with the end-of-the-year BBQ.</td>
<td>PASS/FAIL</td>
</tr>
</tbody>
</table>
Orientation modules: 2nd Semester (Spring)

Below is a detailed overview of each of the orientation course modules offered in the second semester. The following syllabi will allow students a more detailed overview of what to expect in each foundation year orientation course and assist them in the preparation of classes.

**PRACTICAL METHODS IN PSYCHOLOGICAL SCIENCE**

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Course No.</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practical Methods in Psychological Science</td>
<td>001193</td>
<td>2.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Module Coordinator</th>
<th>Course Affiliation (component of module)</th>
<th>Mandatory Status</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dora Simunovic</td>
<td>Orientation course</td>
<td>Mandatory</td>
<td>Year 1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pre-requisites</th>
<th>Room:</th>
<th>Day and Time:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preferably intro to Psychology</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Course Description / Content / Aims**

Practical Methods in Psychological Science will introduce the basics of research methods in psychology to Foundation Year students and have them put it in practice by collaborating in a small-scale study.

Foundation Year students will be asked to construct a research question and then utilize one (or more) methods discussed in class to test that question. To this end, they will work in groups to define the relevant concepts, construct the measurements, specify the sample, collect data, interpret the results and present a part of the research. In other words, Foundation Year students themselves will be in charge of all aspects of conducting scientific research in social sciences (except for the analysis), actively supported by the lecturer and an assistant. This experiential learning process will help them better understand the scientific method more generally, as well as the specific challenges connected to social science research. It will also expose them to advanced concepts and measurement methods which should help them consume information (particularly statistics-based reports) more critically.

- Topics covered in this module include:
  - Basics of the Scientific Method
  - Methods in Social Science
  - Setting up the research question
  - Designing a study
  - Collecting data
  - Data analysis

**Intended Learning Outcomes (ILOs)**

Discipline Specific Skills

- Experiential understanding of the scientific method
- Command of basic concepts from scientific research in social sciences
- Ability to effectively summarize complex results and present them (orally and in writing)
- Experience with large-scale scientific collaboration.
**Workload / Contact Hours**

<table>
<thead>
<tr>
<th>Type</th>
<th>Number of Sessions (per Semester)</th>
<th>Duration (minutes)</th>
<th>Total (hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seminar</td>
<td>14</td>
<td>75</td>
<td>17.5</td>
</tr>
<tr>
<td>Private Study</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Exam and Preparation</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Methods of Assessment**

<table>
<thead>
<tr>
<th>Element</th>
<th>Duration</th>
<th>Weighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attendance</td>
<td></td>
<td>15%</td>
</tr>
<tr>
<td>Active participation</td>
<td></td>
<td>15%</td>
</tr>
<tr>
<td>Data Collection</td>
<td></td>
<td>10%</td>
</tr>
<tr>
<td>Group Presentation</td>
<td></td>
<td>30%</td>
</tr>
<tr>
<td>Written report</td>
<td></td>
<td>30%</td>
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</tbody>
</table>

**MATHEMATICS AND STATISTICS FOR BUSINESS AND SOCIAL SCIENCES**

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Course No.</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics and Statistics for Business and Social Sciences</td>
<td>001135</td>
<td>2.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Module Coordinator</th>
<th>Course Affiliation (component of module)</th>
<th>Mandatory Status</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adalbert Wilhelm</td>
<td>Orientation Course</td>
<td>mandatory</td>
<td>Year 1 ☐ Fall ☒ Spring</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pre-requisites</th>
<th>Room:</th>
<th>Day and Time:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foundation of Mathematics</td>
<td></td>
<td>Monday 15:45 – 17:00 17:15 – 18:30</td>
</tr>
</tbody>
</table>

**Course Description / Content / Aims**

We live in the age of information and every day we are bombarded by a huge amount of numbers, rankings, statistics, forecasts, and predictions. Claims backed up by numbers appear more convincing and modern science requires empirical evidence for each statement made. Students will learn about the fundamental principles on which statistical decision making is built on. In a rather formula-free presentation of the topics, students will engage in various case studies illustrating the key statistical concepts and everyday applications. On demand, more technical descriptions will be provided to foster students’ knowledge.

Topics covered in this course include:
- Math and statistics in the Age of Information
- Functions, logarithms and the antilog
- Probability
- Discrete and continuous probability distributions
- Conditional Probability and Bayes Theorem
Mathematics is an important subject whose usefulness is documented through its countless applications in sciences and engineering. It's essential for any student, wishing to pursue their interests in sciences, social sciences, and engineering, that they be familiar with a reasonable mathematical thinking process. The thinking process, however, varies for different fields. In this course we intend to explore some of the critical thinking in mathematics at a foundation level through various simple topics from algebra and calculus that suits well between an undergraduate and high school. We also use computer algebra system and graphing utilities as tools.

Topics covered in this course include:

- Polynomials as an important tool
- Mathematical induction
- Solving system of linear equations
- Introduction to Matrix algebra
• Functions and graphs
• Applications of differentiation
• Applications of integration
• Numerical integration
• Introduction to differential equations

Intended Learning Outcomes (ILOs)
• familiarity with the mathematical thinking
• problem solving
• writing down the mathematical thoughts and communicating
• integrating computer algebra systems and graphing utilities in a work ow

Workload / Contact Hours

<table>
<thead>
<tr>
<th>Type (Lecture/Seminar/Lab)</th>
<th>Number of Sessions (per Semester)</th>
<th>Duration (minutes)</th>
<th>Total (hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seminar-interactive learning</td>
<td>14</td>
<td>2x 75min</td>
<td>35 hours</td>
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Methods of Assessment

<table>
<thead>
<tr>
<th>Element</th>
<th>Weighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework</td>
<td>20%</td>
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<tr>
<td>Midterm</td>
<td>35%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>45%</td>
</tr>
</tbody>
</table>
7 Appendix

7.1 Big Questions Module

- The modules of the Big Questions area intend to broaden the students’ horizon with applied problem solving between and beyond the disciplines. The offerings comprise problem-solving oriented modules that tackle global challenges from the perspectives of different disciplinary backgrounds and that allow, in particular, a reflection of the acquired disciplinary knowledge in economic, societal, technological, and/or ecological contexts. Working together with students from different disciplines and cultural backgrounds, the modules of this area will cross the boundaries of traditional academic disciplines.

- Students are required to take 10 CP from modules in the Area. This curricular component is offered as a portfolio of modules, from which students can make free selections during their 5th and 6th semester, with the aim to reach an exposure to the full spectrum of economical, societal, technological, and/or ecological contexts. The size of Big Questions Modules is either 2.5 or 5 CP.

Big Questions are divided into the 3 tracks of Jacobs University:

(1) Digitalization: Challenges and opportunities for business and society;
(2) Global Health – Historical context and future challenges;
(3) Global Challenges to International Peace and Security.
<table>
<thead>
<tr>
<th><strong>Module Name</strong></th>
<th><strong>Module Code</strong></th>
<th><strong>Level (type)</strong></th>
<th><strong>ECTS</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Big Questions: Digitalization: Challenges and opportunities for business and society</td>
<td>JTBQ-01</td>
<td>Year 3 (Jacobs Track)</td>
<td>5.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Module Components</strong></th>
<th><strong>Number</strong></th>
<th><strong>Type</strong></th>
<th><strong>ECTS</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Digitalization: challenges and opportunities for business and society</td>
<td>JTBQ-01</td>
<td>Lecture/Projects</td>
<td>5.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Module Coordinator</strong></th>
<th><strong>Program Affiliation</strong></th>
<th><strong>Mandatory Status</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Wilhelm</td>
<td>• Big Questions Area: All undergraduate study programs</td>
<td>Mandatory elective for students of all undergraduate study programs</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Entry Requirements</strong></th>
<th><strong>Frequency</strong></th>
<th><strong>Forms of Learning and Teaching</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-requisites</td>
<td>annually</td>
<td>• 17.5 h Lectures</td>
</tr>
<tr>
<td>Co-requisites</td>
<td></td>
<td>• 90 h Project work</td>
</tr>
<tr>
<td>Knowledge, Abilities, or Skills</td>
<td></td>
<td>• 17.5 h Private Study</td>
</tr>
<tr>
<td>None</td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• the ability and openness to engage in interdisciplinary issues of global relevance</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• media literacy, critical thinking and a proficient handling of data sources</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Duration</strong></th>
<th><strong>125 hours</strong></th>
</tr>
</thead>
</table>

**Recommendations for Preparation**

Critical following of media coverage on the module’s topics in question.
Content and Educational Aims

All “Big Questions” (BQ) modules deal with the economic, technological, societal and environmental contexts of the global issues and challenges of the coming decades. The BQ modules intend to raise awareness of those challenges and broaden the students’ horizon with applied problem solving beyond the borders of their own disciplines. Knowledge and skills offered in the interdisciplinary BQ modules are relevant for every university graduate in order to become an informed and responsible citizen in a global society.

Digitalization is currently one of the major change drivers in our globalized world affecting all aspects of our lives: from private aspects, such as the way we find and select friends and partners, to economic principles such as the replacement of human labor by robots and artificial intelligence. Big data and the massive storage and analysis of comprehensive information of customers and citizens is a further buzz word of the digitalization process which instills both hopes and fears to the public.

From a business perspective, digitalization is often portrayed as a sea of big opportunities while at the same time many companies are under pressure to comply and adapt to rapidly changing processes and business approaches. The public debate on digitalization, particularly on big data, is torn between the two poles portrayed by the writers George Orwell and Aldous Huxley: complete surveillance and oppression on the one end, irrelevance and narcissism on the other. The technological research quite naturally is mostly concerned with the technical feasibility of the approaches, the continuously increasing challenges with respect to the digitalization process, and the creative solutions needed to tackle them. In this module you will get an overview on digitalization by looking at it from various aspects, primarily the business and societal point of view. There will be a fundamental exposition to the technological side of digitalization as far as it needed for assessing the societal and business implications.

Intended Learning Outcomes

Students acquire transferable and key skills in this module.

By the end of this module, students will be able to

- use their disciplinary factual and methodological knowledge to reflect on interdisciplinary questions by comparing approaches from various disciplines;
- summarize and evaluate the current debate about big data, the pros and cons, from both a business perspective as well as a societal perspective
- prioritize the major threads and opportunities of digitalization
- advance a knowledge-based opinion on how technological possibilities and innovations can drive business practices and initiate public discourse and debate
- complete a self-designed project, collect information, distill information and summarize in a suitable reporting format
- overcome general teamwork problems in order to perform well-organized project work
### Usability and Relationship to other Modules

- The module is a mandatory elective module of the Big Questions area that is part of the Jacobs Track (Methods and Skills modules; Community Impact Project module; Language modules; Big Questions modules).
- Students are encouraged to relate the content of their previous modules to the topics of this module and contribute such knowledge and competences to class discussions and activities.

### Assessment

Type: Team project  
Scope: All intended learning outcomes of the module
### Module Name

**Big Questions:** Global Health – Historical context and future challenges

<table>
<thead>
<tr>
<th>Module Name</th>
<th>Module Code</th>
<th>Level (type)</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>JTBQ-04</td>
<td>JTBQ-04</td>
<td>Year 3 (Jacobs Track)</td>
<td>5.0</td>
</tr>
</tbody>
</table>

### Module Components

<table>
<thead>
<tr>
<th>Number</th>
<th>Name</th>
<th>Type</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>JTBQ-04</td>
<td>Global Health – Historical context and future challenges</td>
<td>Lecture</td>
<td>5.0</td>
</tr>
</tbody>
</table>

### Module Coordinator

A. M. Lisewski

#### Program Affiliation

- Big Questions Area: All undergraduate study programs

#### Mandatory Status

Mandatory elective for students of all undergraduate study programs

### Entry Requirements

- **Pre-requisites**
  - None
- **Co-requisites**
  - None
- **Knowledge, Abilities, or Skills**
  - the ability and openness to engage in interdisciplinary issues of global relevance
  - media literacy, critical thinking and a proficient handling of data sources

### Frequency and Teaching

- **Frequency:** annually
- **Forms of Learning and Teaching**
  - Lectures (35 hours)
  - Private Study (90 hours)

### Duration

- 1 semester
- **125 h**

### Recommendations for Preparation

Critical following of the media coverage on the module’s topics in question.
**Content and Educational Aims**

All “Big Questions” (BQ) modules deal with the economic, technological, societal and environmental contexts of the global issues and challenges of the coming decades. The BQ modules intend to raise awareness of those challenges and broaden the students’ horizon with applied problem solving beyond the borders of their own disciplines. Knowledge and skills offered in the interdisciplinary BQ modules are relevant for every university graduate in order to become an informed and responsible citizen in a global society.

This module gives a historical, societal, technical, scientific and medical overview over the past and future milestones and challenges of global health. Particular focus is on future global health issues in a world that is interconnected both through mobility and through communication networks. Presented are the main milestones along the path to modern health systems, including the development of public hygiene, health monitoring and disease response, and health related breakthroughs in science, technology, and economy. Focus is given to children, maternal and adolescent health, as these are most critical to the wellbeing of next generations. The module also provides key concepts in global health, epidemiology and demographics such as the connection between a society’s economical level and its population’s health status, measures of health status, demographic and epidemiologic transitions, as well as modern issues such as the growing fragmentation (to a personal level) of disease conditions and the resulting emergence of personalized medicine. Finally, attention is also given to publicly less prominent global health issues, such as re-emergent diseases, neglected tropical diseases, and complex humanitarian crises.

**Intended Learning Outcomes**

Students acquire transferable and key skills in this module.

By the end of this module, students will be able to

- use their disciplinary factual and methodological knowledge to reflect on interdisciplinary questions by comparing approaches from various disciplines;
- explain the historical context of today’s global health surveillance and response systems and institutions.
- discuss and evaluate the imminent and future challenges of public hygiene and response to disease outbreaks in a global society network context.

**Usability and Relationship to other Modules**

- The module is a mandatory elective module of the Big Questions area, that is part of the Jacobs Track (Methods and Skills modules; Community Impact Project module; Language modules; Big Questions modules)
- Students are encouraged to relate the content of their previous modules to the topics of this module and contribute such knowledge and competences to class discussions and activities.
**Assessment**

Type: Final written exam; duration: 60 min.
Scope: All intended learning outcomes of the module
Global Challenges to International Peace and Security

<table>
<thead>
<tr>
<th>Module Name</th>
<th>Module Code</th>
<th>Level (type)</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Big Questions: Global Challenges to International Peace and Security</td>
<td>JTBQ-10</td>
<td>Year 3 (Jacobs Track)</td>
<td>5.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Module Components</th>
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<tbody>
<tr>
<td><strong>Number</strong></td>
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<tr>
<td>JTBQ-10</td>
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<table>
<thead>
<tr>
<th>Module Coordinator</th>
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<tbody>
<tr>
<td>C. Knoop</td>
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<table>
<thead>
<tr>
<th>Program Affiliation</th>
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<tbody>
<tr>
<td>• Big Questions Area: All undergraduate study programs</td>
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<table>
<thead>
<tr>
<th>Mandatory Status</th>
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<tbody>
<tr>
<td>Mandatory elective for students of all undergraduate study programs</td>
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<tr>
<th>Entry Requirements</th>
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<tbody>
<tr>
<td><strong>Pre-requisites</strong></td>
</tr>
<tr>
<td>None</td>
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<table>
<thead>
<tr>
<th>Frequency</th>
<th>Forms of Learning and Teaching</th>
</tr>
</thead>
<tbody>
<tr>
<td>annually</td>
<td>• Lecture (35h)</td>
</tr>
<tr>
<td></td>
<td>• Private Study (90h)</td>
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<table>
<thead>
<tr>
<th>Duration</th>
<th>125 hours</th>
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<tbody>
<tr>
<td>1 semester</td>
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**Recommendations for Preparation**
Critical following of the media coverage on the module’s topics in question.
Content and Educational Aims

All “Big Questions” (BQ) modules deal with the economic, technological, societal and environmental contexts of the global issues and challenges of the coming decades. The BQ modules intend to raise awareness of those challenges and broaden the students’ horizon with applied problem solving beyond the borders of their own disciplines. Knowledge and skills offered in the interdisciplinary BQ modules are relevant for every university graduate in order to become an informed and responsible citizen in a global society.

We live in a multi-polar world where multiple crisis situations have rather become the rule than the exception. World peace and security are challenged by various developments and factors, such as the risk of proliferation of weapons of mass destruction, the spread of international terrorism, organized and cybercrime but also by the man-made and natural effects of climate changes and the growing gap between the few very rich and the many utterly poor people living on our planet. This module provides an introduction to some of the most important threat scenarios for global peace and security. The students will learn about the tools available to deal with these challenges with a focus on the European Union, the African Union and the United Nations. In this context the concepts of multilateralism and bilateral efforts to achieve world peace and security will also be examined.

Intended Learning Outcomes

Students acquire transferable and key skills in this module.

By the end of this module, the student should be able to:

- use their disciplinary factual and methodological knowledge to reflect on interdisciplinary questions by comparing approaches from various disciplines
- breakdown the complexity of global threats to peace and security
- identify, explain and evaluate important tools available to international actors in the interest of world peace and security
- formulate well-justified criticism of these tools and explain their limits
- summarize and present a module related topic in an appropriate verbal and visual form

Usability and Relationship to other Modules

- The module is a mandatory elective module of the Big Questions area, that is part of the Jacobs Track (Methods and Skills modules; Community Impact Project module; Language modules; Big Questions modules)
- Students are encouraged to relate the content of their previous modules to the topics of this module and contribute such knowledge and competences to class discussions and activities.

Assessment

Type: Oral presentation; duration: 10 minutes
Scope: All intended learning outcomes of the module