JACOBS UNIVERSITY

Study Program Handbook

Integrated Social and Cognitive Psychology

Bachelor of Science

Subject-specific Examination Regulations for Integrated Social and Cognitive Psychology (Fachspezifische Prüfungsordnung)

The subject-specific examination regulations for Integrated Social and Cognitive Psychology are defined by this program handbook and are valid only in combination with the General Examination Regulations for Undergraduate degree programs (General Examination Regulations = Rahmenprüfungsordnung). This handbook also contains the program-specific Study and Examination Plan (Chapter 6).

Upon graduation, students in this program will receive a Bachelor of Science (BSc) degree with a scope of 180 ECTS (for specifics see Chapter 6 of this handbook).

Version	Valid as of	Decision	Details
Fall 2020 – V1.2	Sep 01, 2020	Approved by the Academic Senate on July 24, 2019.	Master version, editorial changes, indicative literature added, change of semester sequence in the module Neuroscience Methods.

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1.1 Concept

1.1.1 The Jacobs University Educational Concept

Jacobs University aims to educate students for both an academic and a professional career by emphasizing 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 with supplemental 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 circumstances, to become citizens of the world who are able to take responsible roles for the democratic, peaceful, and sustainable development of the societies in which they live. This is achieved through a high-quality teaching 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 for all study programs at Jacobs University, both in terms of actual disciplinary subject matter and also to the 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 the 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 students' education. In addition, Jacobs University offers professional advising and counseling.

Jacobs University's educational concept is highly regarded 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 Center 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.

1.1.2 Program Concept

The Jacobs BSc in Integrated Social and Cognitive Psychology (ISCP) is built on a multi-level approach. Studying human behavior at the level of the individual, group and the society and culture reflects the insight that individual behavior is constrained and shaped by factors that range from biological and psychological variables to socio-cultural contexts, such as, for instance, interpersonal, intergroup, and even intercultural relationships. These factors interact intricately to affect behavior. Our program focuses on equipping you with the skills to analyze, model, and eventually influence those multi-level interactions in ways that help individuals and groups attain positive outcomes, both performance-related (e.g., academic or job performance) and personal (e.g., subjective well-being, health behavior). Consistent with the multi-level approach, our teaching explicitly addresses diversity as a defining

feature of behaviors and interactions. It is therefore geared toward taking general explanations to the next level that apply across people and contexts. In addition to familiarizing you with a comprehensive range of theoretical perspectives on human behavior, the multi-level approach enables you to fruitfully combine those perspectives. This maximizes the explanatory and predictive power of any research approach or practice strategy. Also, it is aimed at analyzing and explaining human behavior in the complex contexts in which it unfolds, and to eventually enable and support behavior change in people and organizations alike.

The Jacobs BSc program in Integrated Social and Cognitive Psychology builds a solid foundation for graduates to pursue careers in a range of directions and, in particular, roles that contribute to developing, evaluating, and applying strategies for facing the challenges of diversifying societies. People live and work together in novel cultural and generational constellations, which creates countless opportunities for 'richer' social interactions and for learning from each other. It takes evidence-based strategies to reap the benefits of and to tackle the issues that may follow demographic diversity. In research, cognitive and social psychologists contribute to a solid evidence base that informs good diversity practices in numerous professional fields. In personnel executive roles, psychologists design diversity management strategies in the workplace. In marketing functions, psychologists advise companies on diversifying their product portfolios and advertising campaigns to meet increasingly diverse customer needs. In our program, you equip yourself with the essential knowledge and skills that will help you develop a career in any of those directions.

1.2 Specific Advantages of ISCP at Jacobs University

Whether as a practitioner or researcher, acting competently and professionally requires specialist skills, competencies, and knowledge for which the ISCP Program lays a solid foundation. A thorough understanding of individual behavior in its social contexts requires in-depth knowledge of both the biological and psychological constraints that shape individual cognitions, behaviors, and personalities. Beyond teaching you that knowledge, we emphasize *using* that knowledge to model in detail the interplay of social contexts and individual behaviors that influence one another.

The program's focus on social psychology and cognitive psychology gives you particular opportunities to build comprehensive qualitative, quantitative, and experimental research skills. Thanks to our small classes, you will be able to work intensively with professors to gather first-hand experience of harnessing a wide array of research methods to study the ways in which people perceive their environments, themselves and others, and how the people behave, decide, develop, feel, interact, learn, and remember. Once you have acquired essential analytical and conceptual tools in the introductory modules, you will begin to apply them to your own research projects, thus turning mere knowledge into real skills, even for ambitious research projects.

Our program gets you to 'immerse' yourself in research and will help clarify your academic interests, strengths, and weaknesses. Additionally, the program will strengthen your knowledge and skills to attain your career goals. As social psychology and cognitive psychology were foundational for the development of modern psychology, shaping it through their seminal theories and models, the advanced skills and knowledge you acquire in our program will be assets for helping you working your way into any field related to this multi-faceted discipline.

We pay great attention to meeting the latest standards of outcomes-based education. All courses adhere to constructive alignment standards. Each course has clearly defined learning outcomes that all students are intended to reach. Aligned with the intended outcomes, the teaching activities let you

apply the knowledge and practice the skills defined in the intended outcomes. Assessments are also aligned with the overall learning outcomes and allow for competence-oriented exams. Therefore, you will have clear criteria for what to learn, how to learn it, and if you have learned it. Our instructors will help you make the most of learning and performance-related feedback and to keep track of your academic development.

In sum, consistent with our multi-level approach, you will learn both to analyze the biological, psychological, and social levels of the mind and behavior in detail and to keep the sight of the big picture by exploring how these levels relate to one another. This involves making connections with both the natural sciences (e.g., biology, biochemistry, neuroscience) and the social sciences (e.g., economics, political science, sociology). This thorough overview will help you

- explore which psychological topics and approaches your interests and talents best suited to;
- analyze from a psychological perspective the trends and challenges of a globalizing world;
- develop your skills at generating boundary-spanning ideas for research and practice;
- adopt a transdisciplinary perspective and collaborate with researchers in other disciplines;
- choose from and prepare for a broad range of master's programs.

1.3 Program-Specific Educational Aims

1.3.1 Qualification Aims

Psychologists work in a broad range of fields. Diverse as these fields may be, they have two things in common. First, high-quality professional practice is evidence-based. An in-depth understanding of how that evidence is obtained is therefore crucial for working competently and responsibly. Moreover, psychologists themselves contribute to generating such evidence. Second, in any job role, much of a psychologist's work will be about making informed decisions – whether designing the experimental treatment of a study or selecting a training program for a group of employees. Therefore, the Jacobs BSc in ISCP is designed to help you build the knowledge, competency, and skills it takes to make use of and contribute to psychology's evidence base, and to become a competent decision-maker.

This requires *psychological literacy, or* "being insightful and reflective about one's own and others' behaviour and mental processes" (McGovern et al, 2010, p. 11) in order to be able to apply psychological principles to individual, social, and organizational issues at work, in relationships, and the broader community. Against this backdrop, our program aims to provide an intellectual environment that allows you to develop into a respectfully critical scientific thinker, and an ethically and socially responsible member of your community. Specifically, the qualification aims of the Jacobs BSc in ISCP are to:

- promote specialist capabilities in specific areas of psychology congruent with the research foci of Jacobs University, supported by its stimulating and supportive environment that is enriched by research and current practice in psychology;
- enable you to build the academic and transferable skills that will prepare you confidently for employment, further study, or training for professional practice;
- enable you to help shape social processes through evidence-based practice and responsible, informed decisions.

1.3.2 Intended Learning Outcomes

By the end of the ISCP program, you will be able to demonstrate

academic and scientific proficiency, as well as employability skills by

- explaining the inherent variability and diversity of psychological functioning and the implications of the latter for psychological theories and applications;
- demonstrating a critical understanding of core conceptualizations of cognition and social interaction (e.g., connectionism, information processing approach, neuroscience approach, social-cognitive framework);
- applying quantitative theories to design behavior modification interventions in applied settings (e.g., health care programs, personnel trainings) considering both personal variables (e.g., attitudes, beliefs) and contextual variables (e.g., peer and supervisor support);
- critically discussing the relationship between qualitative (ideographic) and quantitative (nomothetic) research approaches and drawing implications for theory building and for the development of interventions in psychological practice;
- developing theoretical accounts with increased explanatory power or predictive validity by combining different theories from different levels (e.g., neuroscience and social cognition perspectives);
- designing and conducting experimental and non-experimental studies (that may include neuroscience methods), analyzing the data and discussing findings regarding the behavior and experiences of individuals and groups;
- demonstrating basic knowledge of the ethical context of psychology (including legal and regulatory issues in the practice of psychology such as in internships) and designing your research in accordance with the codes of conduct set forth by professional bodies (e.g., APA).;

personality development Skills by

- displaying basic mindfulness and self-awareness and engaging in reflection regarding psychological practice;
- articulating your values and expectations toward your learning and professional development and undertaking self-directed study to meet specified objectives;
- adhering to professional values and recognizing situations that challenge adherence to those values;

competence for engagement in society by

- reflecting on new technologies and innovations in psychology and making decisions regarding their legitimacy, reliability and effectiveness;
- explaining the relationships between psychology and related sciences (e.g., biology, computer science, economics, sociology) and identifying avenues to collaborate and synergize;
- communicating effectively and fluently research ideas and findings through written, oral, and visual means to other psychologists and to professionals from other disciplines;
- articulating the role of psychologists as change agents and demonstrating knowledge of individual, institutional and systems-level barriers to change;
- evaluating based on relevant psychological evidence the arguments in societal debates that pertain to diversity (e.g., demographic change, migration);

1.4 Career Options

The BSc in Integrated Social and Cognitive Psychology at Jacobs opens doors for a professional career and lays the groundwork for an academic career, especially in an international context. You will be a strong candidate for junior positions in all jobs that require skills in analyzing, designing, or improving human interaction, presentation, and communication. Therefore, your career opportunities will be in fields such as advertising, counseling, diversity management health promotion, human resource management, intercultural relations, management consulting, market research, media, as well as applied research in companies, public institutions, and non-governmental organizations.

Moreover, you will be well prepared for international specialized Master programs in psychology and its neighboring fields, as well as for integrated, research-focused Master-PhD Programs.

Requirements to practice in psychology differ by country, and often even by state. Please check the requirements of the respective country or state. A degree in ISCP qualifies for entry into many accredited M.Sc. programs in the U.S., the UK and other countries that in turn are requirements for licensure in those countries. For details, please check the respective university webpages. Given its interdisciplinary focus, a degree in ISCP does not guarantee admission to general Master programs in Psychology or Psychotherapy at German universities and hence does not prepare for licensure as a Psychotherapist in Germany.

For more information, see the website of the German Society of Psychology at https://studium.dgps.de/ (site available in German only).

Graduates of the Psychology BA (former program of ISCP) have been admitted to renowned institutions such as:

- University of Exeter, Social Psychology, MSc
- University of Amsterdam; Cultural Psychology, MSc
- University of Groningen, Industrial and Organizational Psychology, MSc
- University of Heidelberg, Psychology, M.Sc.
- University of East Anglia, The Gut-Brain Axis in Ageing and Dementia, direct PhD
- Florida International University, Legal Psychology, direct PhD
- LMU München, Systemic Neurosciences, MSc
- Karolinska Institutet, Biomedicine, MSc
- King's College London, Terrorism, Security & Society, DWS, MA
- University of Aberdeen, Strategic Studies & Management, MSc
- Columbia University, Developmental Psychology, MA
- University of Cambridge, Biological Science (Psychology), MPhil
- University of Oxford, Psychological Research, MSc
- London School of Economics, Social and Cultural Psychology, MSc
- University College London, Mental Health Services, MSc

Jacobs University's Career Services Center (CSC) and the Alumni Office will support your career development. The CSC provides you with high-quality training and coaching on writing your CV and cover letters, preparing for job interviews, presenting effectively, as well as on business etiquette, employer research and many other things that will help you identify and pursue a rewarding career after your time at Jacobs University. The Alumni Office helps you establish a long-lasting and worldwide network, which comes in handy when exploring job options in academia, industry, and elsewhere.

1.5 Admission Requirements

Admission to Jacobs University is selective and based on a candidate's school and/or university achievements, recommendations, self-presentation, and performance on required standardized tests. Students admitted to Jacobs University demonstrate exceptional academic achievements, intellectual creativity, and the desire and motivation to make a difference in the world.

The following documents need to be submitted with the application:

- Recommendation Letter
- Official or certified copies of high school/university transcripts
- Educational History Form
- Standardized test results (SAT/ACT/TestAS) if applicable
- ZeeMee electronic resume (optional)
- Language proficiency test results (TOEFL, IELTS or equivalent)

German language proficiency is not required, instead all applicants need to submit proof of English proficiency.

For students who have acquired the right to study at a university in the country they have acquired their higher education entrance qualification, Jacobs University accepts the common international university entrance tests as a replacement for the entrance examination. Applicants who have a subject-related entrance qualification (fachgebundene Hochschulreife) may be admitted only to respective study programs.

For more detailed information about the admission visit: https://www.jacobs-university.de/study/undergraduate/application-information

1.6 More Information and Contact

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2 The Curricular Structure

2.1 General

The curricular structure provides multiple elements for enhancing employability, interdisciplinarity, and internationality. The unique Jacobs Track, offered across all undergraduate study programs, provides comprehensive tailor-made modules designed to achieve and foster career competency. Additionally, a mandatory internship of at least two months after the second year of study and the possibility to study abroad for one semester give students the opportunity to gain insight into the professional world, apply their intercultural competences and reflect on their roles and ambitions for employment and in a globalized society.

All undergraduate programs at Jacobs University are based on a coherently modularized structure, which provides students with an extensive and flexible choice of study plans to meet the educational aims of their major as well as minor study interests and complete their studies within the regular period.

The framework policies and procedures regulating undergraduate study programs at Jacobs University can be found on the website (https://www.jacobs-university.de/academic-policies).

2.2 The Jacobs University 3C Model

Jacobs University offers study programs that comply with the regulations of the European Higher Education Area. All study programs are structured according to the European Credit Transfer System (ECTS), which facilitates credit transfer between academic institutions. The three-year under-graduate program involves six semesters of study with a total of 180 ECTS credit points (CP). The undergraduate curricular structure follows an innovative and student-centered modularization scheme - the 3C-Model - that groups the disciplinary content of the three study years according to overarching themes:

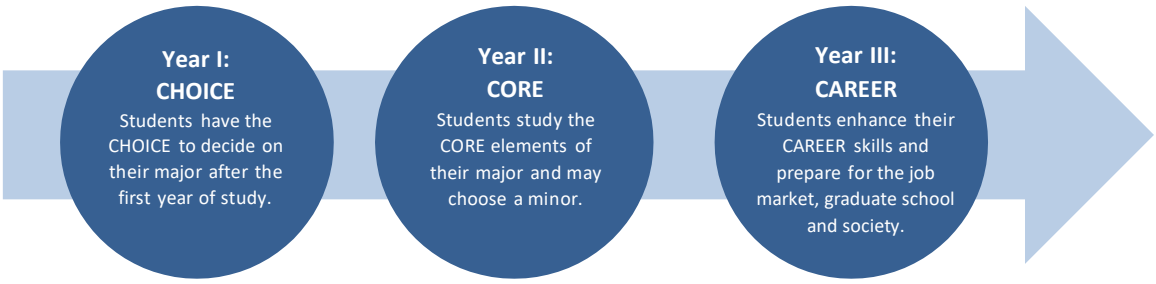


Figure 1: The Jacobs University 3C-Model

2.2.1 Year 1 – CHOICE

The first study year is characterized by a university-specific offering of disciplinary education that builds on and expands upon the students' entrance qualifications. Students select introductory modules for a total of 45 CP from the CHOICE area of a variety of study programs, of which 15-30 CP will be from their intended major. A unique feature of our curriculum structure allows students to select their major freely upon entering Jacobs University. The Academic Advising Coordinator offers curricular counseling

to all Bachelor students independently of their major, while Academic Advisors support students in their decision-making regarding their major study program as contact persons from the faculty.

To pursue ISCP as a major, students need to take the following CHOICE modules (15 CP) as mandatory modules:

- CHOICE Module: Essentials of Cognitive Psychology (7.5 CP)
- CHOICE Module: Essentials of Social Psychology (7.5 CP)

The *Essentials of Cognitive Psychology* module establishes a general framework for human cognition in which the many phenomena of associated with thinking, interaction, and communication can be analyzed and predicted. Attention, perception, learning, and memory will be some of the topics addressed in the first semester, as well as intelligence, language, emotion, motivation, and personality. This module covers the historical foundations of psychology, influential and current theories and models, as well as empirical research methods. The module also includes methods for critical thinking (evaluating current approaches and research results); the scientific cycle including basics of theory of science.

In the *Essentials of Social Psychology* module, you will deal with the influence that the actual or perceived presence of others can have on people's behavior and analyze how individual experience is embedded in different contexts at different levels of complexity, from immediate social situations, and institutions, to cultural meaning systems. This module will increase your insight into recent developments in social psychology, as well as help you acquire a broad and thorough understanding of the most important topics in social psychological research today.

Students can select the remaining CHOICE modules (30 CP) in their first year of studies according to their interests, which allows for a change of major until the beginning of the second year, when the major choice becomes fixed (see 2.2.1.1 below).

2.2.1.1 Major Change Option

Students can still change to another major at their beginning of the second year of studies if they have taken the corresponding mandatory CHOICE modules in their first year of studies. All students must participate in a seminar on the major change options in the O-Week and consult their Academic Advisor in the first year of studies prior to changing their major.

ISCP students that would like to retain an option for a major change are strongly recommended to register for the CHOICE modules of one of the following study programs in their first year. The module descriptions can be found in the respective Study Program Handbook.

- Global Economics and Management (GEM)
  CHOICE Module: Microeconomics (7.5 CP)
  CHOICE Module: Macroeconomics (7.5 CP)
  CHOICE Module: Introduction to International Business (7.5 CP)
  CHOICE Module: Introduction to Finance and Accounting (7.5 CP)

- International Business Administration (IBA)
  CHOICE Module: Microeconomics (7.5 CP)
  CHOICE Module: Macroeconomics (7.5 CP)
  CHOICE Module: Introduction to International Business (7.5 CP)
  CHOICE Module: Introduction to Finance and Accounting (7.5 CP)

- International Relations: Politics and History (IRPH)
  CHOICE Module: Introduction to International Relations Theory (7.5 CP)
  CHOICE Module: Introduction to Modern European History (7.5 CP)

- Society, Media and Politics (SMP)
  CHOICE Module: Introduction to the Social Sciences 1: Politics and Society (7.5 CP)
  CHOICE Module: Introduction to the Social Sciences 2: Media and Society (7.5 CP)

- Biochemistry and Cell Biology (BCCB)
  CHOICE Module: General Biochemistry (7.5 CP)
  CHOICE Module: General Cell Biology (7.5 CP)
  CHOICE Module: General and Inorganic Chemistry (7.5 CP)
  CHOICE Module: General Organic Chemistry (7.5 CP)

- Medicinal Chemistry and Chemical Biology (MCCB)
  CHOICE Module: General Medicinal Chemistry & Chemical Biology (7.5 CP)
  CHOICE Module: General and Inorganic Chemistry (7.5 CP)
  CHOICE Module: General Biochemistry (7.5 CP)
  CHOICE Module: General Cell Biology (7.5 CP)

- Chemistry and Biotechnology (CBT)
  CHOICE Module: General Chemistry (7.5 CP)
  CHOICE Module: General Organic Chemistry (7.5 CP)
  CHOICE Module: General Biochemistry (7.5 CP)
  CHOICE Module: Introduction to Biotechnology: Microbiology and Genetic (7.5 CP)

- Physics (Phys)
  CHOICE Module: Classical Physics (7.5 CP)
  CHOICE Module: Modern Physics (7.5 CP)

  CHOICE Module: Applied Mathematics (7.5 CP)
  OR
  CHOICE Module: Introduction to Robotics and Intelligent Systems (7.5 CP)

- Mathematics (Math)
  CHOICE Module: Analysis I (7.5 CP)
  CHOICE Module: Advanced Linear Algebra (7.5 CP)
  CHOICE Module: Applied Mathematics (7.5 CP)

- Computer Science (CS)
  CHOICE Module: Programming in C and C++ (7.5 CP)
  CHOICE Module: Algorithms and Data Structures (7.5 CP)
  CHOICE Module: Introduction to Computer Science (7.5 CP)
  CHOICE Module: Introduction to Robotics and Intelligent Systems (7.5 CP)

- Robotics and Intelligent Systems (RIS)

CHOICE Module: Introduction to Robotics and Intelligent Systems (7.5 CP)
CHOICE Module: Module: Algorithms and Data Structures (7.5 CP)
CHOICE Module: Programming C and C++ (7.5 CP)

- Industrial Engineering and Management (IEM)
  CHOICE Module: General Industrial Engineering (7.5 CP)
  CHOICE Module: General Logistics (7.5 CP)
  CHOICE Module: Introduction to International Business (7.5 CP)
  CHOICE Module: Introduction to Finance and Accounting (7.5 CP)

2.2.2 Year 2 – CORE

In their second year, students take a total of 45 CP from a selection of in-depth, discipline-specific CORE modules. Building on the introductory CHOICE modules and applying the methods and skills acquired so far (see 2.3.1), these modules aim to expand the students' critical understanding of the key theories, principles, and methods in their major for the current state of knowledge and best practice.

To pursue ISCP as a major, at least 30 CP from the following mandatory elective CORE modules need to be taken:

- CORE Module: Learning and Memory (5 CP)
- CORE Module: Social Cognition (5 CP)
- CORE Module: Organizational Psychology & Communication (5 CP)
- CORE Module: Neurobiology of Behavior (5 CP)
- CORE Module: Neuroscience Methods (5 CP)
- CORE Module: Attention, Sensation, and Perception (5 CP)
- CORE Module: Judgment & Decision Making (5 CP)
- CORE Module: Health Psychology (5 CP)
- CORE Module: Cultural Psychology (5 CP)

The remaining 15 CP can be selected according to interest and with the aim of pursuing a minor in a second field of studies, or students complement their studies by taking all of the above listed mandatory elective CORE modules.

The Learning and Memory module is geared toward understanding how information is stored and retrieved, why we forget, and whether we can improve memory. In the Neurobiology of Behavior module, students will acquire knowledge about basic brain structures and how they contribute to cognitive processing and social interactions, and how neuropsychologists arrive at their insights in the Neuroscience Methods module. In the Attention, Sensation and Perception module, students learn how humans perceive the world through their senses; how (and why) perceptions deviate from the physical world; how attention shapes perception; and how all this can be investigated through psychophysical methods.

In the Social Cognition module, students will take an in-depth look – from the lab to the 'real world' – at the role of the actual or imagined presence of others. Students will also look at culture as one of the less obvious drivers in the Cultural Psychology module, analyzing why people from different corners of the world perceive the same things in very different manners. In the Organizational Psychology and

Communication module, students will adopt a social cognition perspective in the study of behavior in organizations, as well as of the fundamental processes of (non-)verbal communication and interaction.

The Judgment & Decision Making module teaches students how humans make judgments about (uncertain) events, decisions that do or do not involve uncertainty, and how and why they deviate from normative (rational) decisions. As a practical application, students will learn how to conduct a decision analysis.

Students will learn to apply and to design models for health, behavior change, stress development and management in the Health Psychology module by focusing on the interaction between biology, health, and behaviors.

2.2.2.1 Minor Option

ISCP students can take CORE modules (or more advanced Specialization modules) from a second discipline, which allows them to incorporate a minor study track into their undergraduate education, within the 180 CP required for a bachelor's degree. The educational aims of a minor are to broaden the students' knowledge and skills, support the critical reflection of statements in complex contexts, foster an interdisciplinary approach to problem-solving, and to develop an individual academic and professional profile in line with students' strengths and interests. This extra qualification will be highlighted in the transcript.

The Academic Advising Coordinator, Academic Advisor, and the Study Program Chair of the minor study program support students in the realization of their minor selection; the consultation with the Academic Advisor is mandatory when choosing a minor.

As a rule, this requires ISCP students to:

- select two CHOICE modules (15 CP) from the desired minor program in the first year and
- substitute 15 CP of mandatory elective ISCP CORE modules in the second year with the default minor CORE modules of the minor study program.

The requirements for the specific minors are described in the handbook of the study program offering the minor (Chapter 3.2) and are marked in the respective Study and Examination Plans. For an overview of accessible minors, please check the Major/Minor Combination Matrix which is published at the beginning of each academic year.

2.2.3 Year 3 – CAREER

During their third year, students prepare and make decisions about their career path after graduation. To explore available choices and to gain professional experience, students undertake a mandatory summer internship. The third year of studies allows ISCP students to take Specialization modules within their discipline, but also focuses on the responsibility of students beyond their discipline (see Jacobs Track).

The 5th semester also opens a mobility window for a diverse range of study abroad options. Finally, the 6th semester is dedicated to fostering the students' research experience by involving them in an extended Bachelor thesis project.

2.2.3.1 Internship / Start-up and Career Skills Module

As a core element of Jacobs University's employability approach students are required to engage in a mandatory two-month internship of 15 CP that will usually be completed during the summer between the second and third years of study. This gives students the opportunity to gain first-hand practical experience in a professional environment, apply their knowledge and understanding in a professional context, reflect on the relevance of their major to employment and society, reflect on their own role in employment and society, and find a professional orientation. The internship can also establish valuable contacts for the students' Bachelor's thesis project, for the selection of a Master program graduate school or further employment after graduation. This module is complemented by career advising and several career skills workshops throughout all six semesters that prepare students for the transition from student life to professional life. As an alternative to the full-time internship, students interested in setting up their own company can apply for a start-up option to focus on developing of their business plans.

For further information, please contact the Career Services Center (https://www.jacobs-university.de/career-services).

2.2.3.2 Specialization Modules

In the third year of their studies, students take 15 CP from major-specific or major-related, advanced Specialization modules to consolidate their knowledge and to be exposed to state-of-the-art research in the areas of their interest. This curricular component is offered as a portfolio of modules, from which students can make free selections during their 5th and 6th semester. The default specialization module size is 5 CP, with smaller 2.5 CP modules being possible as justified exceptions.

To pursue ISCP as major, 15 CP need to be taken from the following mandatory elective Specialization Modules:

- Specialization: Human Neuroscience Advanced Lab (Intersession) (2.5 CP)
- Specialization: Pathophysiology and Psychotherapy of Depression (2.5 CP)
- Specialization: Managing Demographic Change in Organizations (2.5 CP)
- Specialization: Psychology of Food (2.5 CP)
- Specialization: Lifespan Behavioral Neuroscience (5 CP)
- Specialization: The Science of Happiness (5 CP)
- Specialization: Applying Social Science Research (5 CP)

The specialization modules are intended to let you apply the general psychological skills you acquired during your first two years of study to specific fields of empirical research or professional practice in order to expand and refine those skills and to foster self-reflection on your career perspectives. In order to provide you with ample opportunity to apply your skills and to reflect the broad range of subfields in psychology, we offer specialization modules of 2.5 CP in addition to the 5 CP default size.

As defined by the specific needs for action in a given field, you will familiarize with and acquire new and advanced methods of problem analysis, data collection and analysis, and problem-solving. The modules in application-oriented fields (e.g., Managing demographic change in organizations) may also focus on exploring additional professional skills (e.g., Conflict management) and specific career profiles.

The respective modules are listed in Chapter 7.

2.2.3.3 Study Abroad

Students have the opportunity to study abroad for a semester to extend their knowledge and abilities, broaden their horizons and reflect on their values and behavior in a different context as well as on their role in a global society. For a semester abroad (usually the 5th semester), modules related to the major with a workload equivalent to 22.5 CP must be completed. Modules recognized as study abroad CP need to be pre-approved according to Jacobs University study abroad procedures. Several exchange programs allow students to directly enroll at prestigious partner institutions worldwide. Jacobs University's participation in Erasmus+, the European Union's exchange program, provides an exchange semester at a number of European universities that include Erasmus study abroad funding.

For further information, please contact the International Office (https://www.jacobs-university.de/study/international-office).

ISCP students that wish to pursue a study abroad in their 5th semester are required to select their modules at the study abroad partners such that they can be used to substitute between 10-15 CP of major-specific Specialization modules and between 5-15 CP of modules equivalent to the non-disciplinary Big Questions modules or the Community Impact Project (see Jacobs Track). In their 6th semester, according to the study plan, returning study-abroad students complete the Bachelor Thesis/Seminar module (see next section), they take any missing Specialization modules to reach the required 15 CP in this area, and they take any missing Big Questions modules to reach 15 CP in this area. Study abroad students are allowed to substitute the 5 CP Community Impact Project (see Jacobs Track below) with 5 CP of Big Questions modules.

2.2.3.4 Bachelor Thesis/Seminar Module

This module is a mandatory graduation requirement for all undergraduate students. It consists of two module components in the major study program guided by a Jacobs faculty member: the Bachelor Thesis (12 CP) and a Seminar (3 CP). The title of the thesis will appear on the students' transcripts.

Within this module, students apply the knowledge skills, and methods they have acquired in their major discipline to become acquainted with actual research topics, ranging from the identification of suitable (short-term) research projects, preparatory literature searches, the realization of discipline-specific research, and the documentation, discussion, and interpretation of the results.

With their Bachelor Thesis students demonstrate mastery of the contents and methods of their major-specific research field. Furthermore, students show the ability to analyze and solve a well-defined problem with scientific approaches, a critical reflection of the status quo in scientific literature, and the original development of their own ideas. With the permission of a Jacobs Faculty Supervisor, the Bachelor Thesis can also have an interdisciplinary nature. In the seminar, students present and discuss their theses in a course environment and reflect on their theoretical or experimental approach and conduct. They learn to present their chosen research topics concisely and comprehensively in front of an audience and to explain their methods, solutions, and results to both specialists and non-specialists.

2.3 **The Jacobs Track**

The Jacobs Track, an integral part of all undergraduate study programs, is another important feature of Jacobs University's educational model. The Jacobs Track runs parallel to the disciplinary CHOICE, CORE, and CAREER modules across all study years and is an integral part of all undergraduate study

programs. It reflects a university-wide commitment to an in-depth training in scientific methods, fosters an interdisciplinary approach, raises awareness of global challenges and societal responsibility, enhances employability, and equips students with augmented skills desirable in the general field of study. Additionally, it integrates (German) language and culture modules.

2.3.1 Methods and Skills Modules

Methods and skills such as mathematics, statistics, programming, data handling, presentation skills, academic writing, and scientific and experimental skills are offered to all students as part of the Methods and Skills area in their curriculum. The modules that are specifically assigned to each study programs equip students with transferable academic skills. They convey and practice specific methods that are indispensable for each students' chosen study program. Students are required to take 20 CP in the Methods and Skills area. The size of all Methods and Skills modules is 5 CP.

To pursue ISCP as major, the following Methods and Skills modules (15 CP) need to be taken as mandatory modules:

- Methods Module: Academic Writing and Academic Skills (5 CP)
- Methods Module: Data Collection and Empirical Research Methodologies (5CP)
- Methods Module: Qualitative Research Methods (5CP)

For the remaining 5 CP ISCP students can choose between the following two Methods modules:

- Methods Module: Applied Statistics with R (5CP)
- Methods Module: Applied Statistics with SPSS (5CP)

2.3.2 Big Questions Modules

The modules in the Big Questions area (10 CP) intend to broaden students' horizons with applied problem solving between and beyond their chosen disciplines. The offerings in this area comprise problem-solving oriented modules that tackle global challenges from the perspectives of different disciplinary backgrounds that allow, in particular, a reflection of acquired disciplinary knowledge in economic, societal, technological, and/or ecological contexts. Working together with students from different disciplines and cultural backgrounds, these modules 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 of being exposed to the full spectrum of economic, societal, technological, and/or ecological contexts. The size of Big Questions Modules is either 2.5 or 5 CP.

2.3.3 Community Impact Project

In their 5th semester students are required to take a 5 CP Community Impact Project (CIP) module. Students engage in on-campus or off-campus activities that challenge their social responsibility, i.e., they typically work on major-related projects that make a difference in the community life on campus, in the campus neighborhood, Bremen, or on a cross-regional level. The project is supervised by a faculty coordinator and mentors.

Study abroad students are allowed to substitute the 5-CP Community Impact Project with 5 CP of Big Questions modules.

2.3.4 Language Modules

Communication skills and foreign language abilities foster students' intercultural awareness and enhance their employability in an increasingly 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 the German language skills of international students as they are an important prerequisite for non-native students to learn about, explore, and eventually integrate into their host country and its professional environment. Students who meet the required 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.

3 ISCP as a Minor

The minor in Social and Cognitive Psychology is an asset in any field that requires significant interaction with people and is a great way to make you more attractive to employers. Students with a major in Biology BCCB, Business (GEM, IBA), Computer Science, or Industrial Engineering and Management (IEM) may find an ISCP minor to be particularly relevant. They can expect to glean from the ISCP minor and apply to their own fields:

- an appreciation for the variety of influences on human behavior;
- an understanding of psychological research and the applications of psychology;
- insight into human reasoning and decision making;
- interpersonal skills, including cross-cultural understanding; and
- increased critical thinking skills.

3.1 Qualification Aims

The ISCP minor is designed to let you build your basic *psychological literacy,* i.e. by being insightful and reflective about your own and others' behavior and mental processes, you will be able to understand which psychological principles govern social interactions in relationships, the workplace, and in society. The intellectually stimulating environment of the minor will support the development of your skills as a respectfully critical scientific thinker and an ethically and socially responsible member of your community. Insights into research and current practice in psychology will enable you to build both academic and transferable skills that contribute to your employability, further study, or training for professional practice.

3.1.1 Intended Learning Outcomes

With a minor in ISCP students will be able to:

- describe the inherent variability and diversity of psychological functioning and the selected implications of the latter for psychological theories and applications;

- demonstrate a critical understanding of core conceptualizations of cognition and social interaction (e.g., connectionism, information processing approach, neuroscience approach, social-cognitive framework);
- explain how theories from different levels (e.g., neuroscience and social cognition perspectives) may be combined into theoretical accounts with increased explanatory power or predictive validity;
- demonstrate basic knowledge of the ethical context of psychology including legal and regulatory issues in the practice of psychology (e.g., in internships);
- explain the relationships between psychology and related sciences (e.g., biology, computer science, economics, sociology) and describe avenues to collaboration and synergies;
- and articulate the role of psychologists as agents of change agents and demonstrate knowledge of the individual, institutional, and systems-level barriers to change.

3.2 Module Requirements

A minor in ISCP requires 30 CP. The default option to obtain a minor in ISCP is marked in the Study and Examination Plan in Chapter 6. It includes the following CHOICE and CORE modules:

- CHOICE Module: Essentials of Cognitive Psychology (7.5 CP)
- CHOICE Module: Essentials of Social Psychology (7.5 CP)
- CORE Module: Learning and Memory (5 CP)
- CORE Module: Social Cognition (5 CP)
- CORE Module: Organizational Psychology and Communication (5 CP)

Scheduling and prerequisites allowing, substitutions of the default minor CORE modules with other ISCP CORE modules are possible.

3.3 Degree

After successful completion, the minor in Integrated Social and Cognitive Psychology will be listed on the final transcript under PROGRAM OF STUDY and BA/BSc – [name of the major] as “Minor: Integrated Social and Cognitive Psychology”.

4 ISCP Undergraduate Program Regulations

4.1 Scope of these Regulations

The regulations in this handbook are valid for all students who entered the Integrated Social and Cognitive ISCP undergraduate program at Jacobs University in Fall 2020. In case of conflict between the regulations in this handbook and the general Policies for Bachelor Studies, the latter applies (see http://www.jacobs-university.de/academic-policies).

Jacobs University Bremen reserves the right to substitute modules by replacements and/or reduce the number of mandatory/mandatory-elective modules offered.

4.2 Degree

Upon successful completion of the study program, students are awarded a Bachelor of Science degree in Integrated Social and Cognitive Psychology.

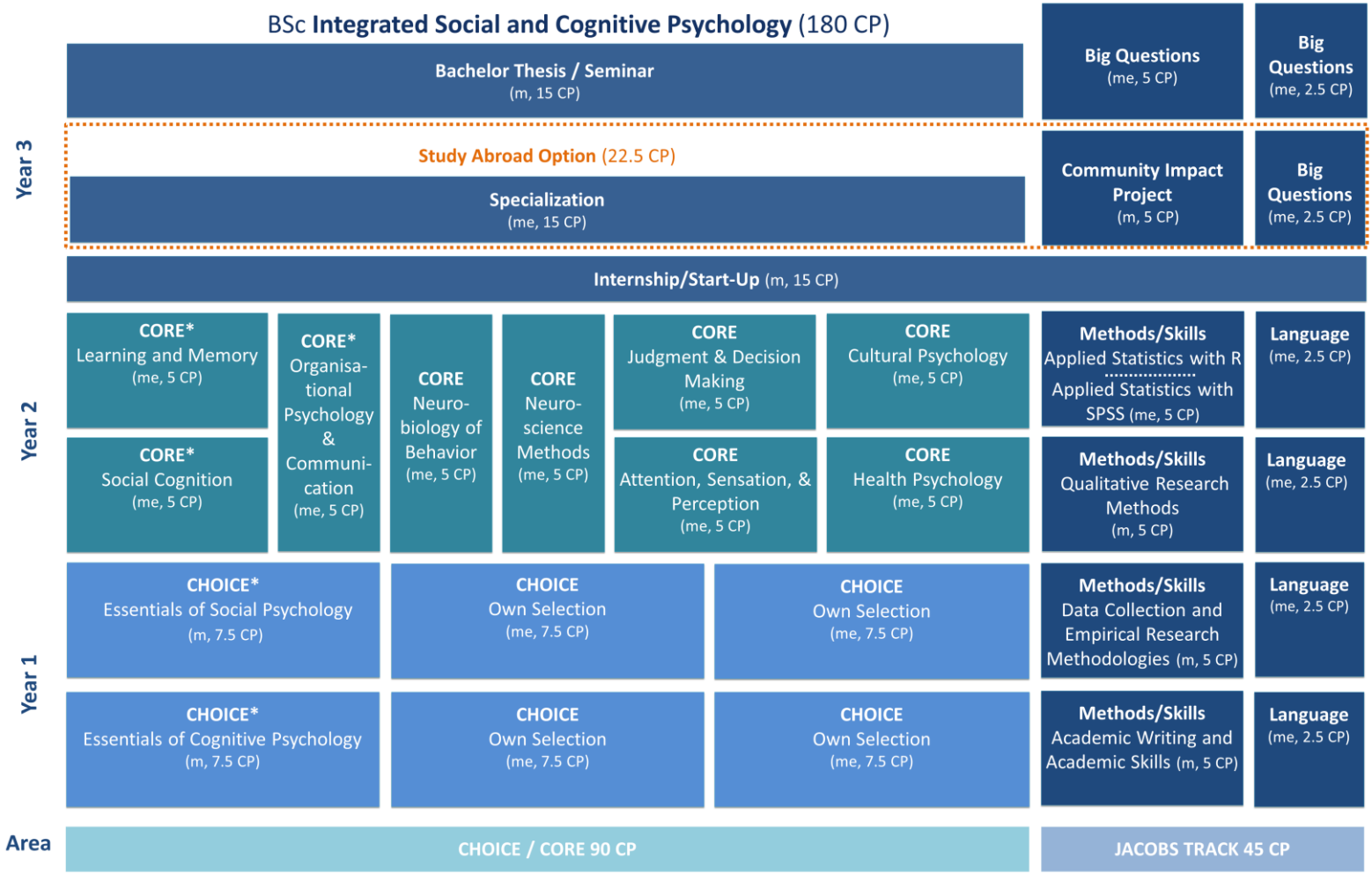
4.3 Graduation Requirements

In order to graduate, students need to obtain 180 CP. In addition, the following graduation requirements apply:

Students need to complete all mandatory components of the program as indicated in the study and examination plan in Chapter 6 of this handbook.

5 Schematic Study Plan for ISCP

Figure 2 shows schematically the sequence and types of modules required for the study program. A more detailed description, including the assessment types, is given in the Study and Examination Plans in the following section.



* mandatory for minor students (default minor)
m = mandatory
me = mandatory elective

Figure 2: Schematic Study Plan

6 Study and Examination Plan

Integrated Social and Cognitive Psychology BSc

Matriculation Fall 2020

	Program-Specific Modules	Type	Assessment	Period	Status[1]	Sem.	CP
Year 1 - CHOICE							**45**
Take the mandatory CHOICE modules listed below							
	Unit: Introduction to Psychology (Default minor)						**15**
CH-340	**Module: Essentials of Cognitive Psychology**				**m**	**1**	**7.5**
CH-340-A	Essentials of Cognitive Psychology	Lecture	Written examination	Examination period			7.5
CH-341	**Module: Essentials of Social Psychology**				**m**	**2**	**7.5**
CH-341-A	Essentials of Social Psychology	Lecture	Written examination	Examination period			7.5
	Unit: CHOICE (own selection)					**1/2**	**30**
Take four further CHOICE modules from those offered for all other study programs.[2]							
Year 2 - CORE							**45**
Take all CORE modules listed below or replace 15 CP with suitable CORE modules from other study programs[2]							
	Unit: Human Behavior in Social-Cognitive Context (Default minor)						**15**
CO-680	**Module: Learning and Memory**				**me**	**4**	**5**
CO-680-A	Learning & Memory	Seminar	Written examination	Examination period			2.5
CO-680-B	Learning & Memory Lab	Lab	Lab report	Examination period			2.5
CO-681	**Module: Social Cognition**				**me**	**3**	**5**
CO-681-A	Social Cognition	Seminar	Written examination	Examination period			2.5
CO-681-B	Social Cognition Lab	Lab	Lab report				2.5
CO-682	**Module: Organizational Psychology & Communication**				**me**	**3/4**	**5**
CO-682-A	Organizational Psychology	Seminar		Examination period		4	2.5
CO-682-B	Communication and Interaction	Seminar	Written examination			3	2.5
	Unit: A neuro-cognitive perspective on behavior						**15**
CO-683	**Module: Neurobiology of Behavior**				**me**	**3/4**	**5**
CO-683-A	Neurobiology of Behavior I	Lecture		Examination period		3	2.5
CO-683-B	Neurobiology of Behavior II	Lecture	Written examination			4	2.5
CO-684	**Module: Neuroscience Methods**				**me**	**3/4**	**5**
CO-684-B	Neuroscience Lab	Lab	Lab report	Examination period		3	2.5
CO-684-A	Neuroscience Methods	Seminar	Presentation	During the semester		4	2.5
CO-685	**Module: Attention, Sensation, & Perception**				**me**	**3**	**5**
CO-685-A	Attention, Sensation & Perception	Seminar		Examination period			2.5
CO-685-B	Attention, Sensation & Perception Lab	Lab	Lab report				2.5
	Unit: Applied Social and Cognitive Psychology						**15**
CO-686	**Module: Judgment & Decision Making**				**me**	**4**	**5**
CO-686-A	Judgment & Decision Making	Seminar	Written examination	Examination period			5
CO-687	**Module: Health Psychology**				**me**	**3**	**5**
CO-687-A	Health Psychology	Seminar		Examination period			2.5
CO-687-B	Health Psychology Lab	Lab	Written examination				2.5
CO-688	**Module: Cultural Psychology**				**me**	**4**	**5**
CO-688-A	Culture & Cognition	Seminar	Written examination	Examination period			2.5
CO-688-B	Cultural Psychology Lab	Lab	Lab report	Examination period			2.5
Year 3 - CAREER							**45**
CA-INT-900	**Module: Internship / Start-up and Career Skills**				**m**	**4/5**	**15**
CA-INT-900-0	Internship / Start-up and Career Skills	Internship	Report/Business Plan	During the 5th semester			
Module Code	**Module: Thesis / Seminar Psychology**				**m**	**6**	**15**
CA-ISCP-800-T	Thesis Psychology	Thesis	Thesis	15th of May			12
CA-ISCP-800-S	Seminar Psychology	Seminar	Presentation	During the semester			3
	Unit: Specialization				**m**		**15**
Take a total of 15 CP of specialization modules							
CA-S-ISCP-801	Human Neuroscience Advanced Lab (Intersession)	Lab/Seminar	Lab report	Examination period	me	5	2.5
CA-S-ISCP-802	Pathophysiology and Psychotherapy of Depression	Lecture	Presentation Review paper	During the semester Examination period	me	6	2.5
CA-S-ISCP-803	Managing Demographic Change in Organizations	Seminar	Essay	Examination period	me	6	2.5
CA-S-ISCP-804	Psychology of Food	Seminar	Presentation	During the semester	me	6	2.5
CA-S-ISCP-805	The Science of Happiness	Seminar	Project and presentation	During the semester	me	6	5
CA-S-xxx	Specialization elective (selected modules from M.Sc. Psychologie and SMP)	Various	Various	Various	me	5/6	5
Total CP							**180**

	Jacobs Track Modules (General Education)	Type	Assessment	Period	Status[1]	Sem.	CP
15							
	Unit: Methods / Skills						**10**
JTMS-MET-01	**Module: Academic Writing and Academic Skills**				**m**	**1**	**5**
JTMS-01	Academic Writing and Academic Skills	Lecture	Term paper	Examination period			
JTMS-MET-06	**Module: Data Collection and Empirical Research Methodologies**				**m**	**2**	**5**
JTMS-06	Data Collection and Empirical Research Methodologies	Lecture	Research project	Examination period			
	Unit: Language						**5**
	German is the default language. Native German speakers take modules in another offered language.						
JTLA-xxx	**Module: Language 1**				**m**	**1**	**2.5**
JTLA-xxx	Language 1	Seminar	Various	Various	me		
JTLA-xxx	**Module: Language 2**				**m**	**2**	**2.5**
JTLA-xxx	Language 2	Seminar	Various	Various	me		
15							
	Unit: Methods / Skills						**10**
JTMS-MET-04	**Module: Qualitative Research Methods**				**m**	**3**	**5**
JTMS-04	Qualitative Research Methods	Lecture	Research paper	Examination period			
	Take one of the two listed mandatory elective methods modules:						
JTMS-MET-03	**Module: Applied Statistics with R**				**me**	**4**	**5**
JTMS-03	Applied Statistics with R	Lecture	Written examination	Examination period			
JTMS-MET-02	**Module: Applied Statistics with SPSS**				**me**	**4**	**5**
JTMS-02	Applied Statistics with SPSS	Lecture	Written examination	Examination period			
	Unit: Language						**5**
	German is default language. Native German speakers take modules in another offered language.						
JTLA-xxx	**Module: Language 3**				**m**	**3**	**2.5**
JTLA-xxx	Language 3	Seminar	Various	Various	me		
JTLA-xxx	**Module: Language 4**				**m**	**4**	**2.5**
JTLA-xxx	Language 4	Seminar	Various	Various	me		
15							
	Unit: Big Questions						**10**
JTBQ-xxx	**Module: Big Questions**				**m**	**5/6**	**5**
Take a total of 10 CP of Big Questions modules with each 2.5 or 5 CP		Lecture	Various	Various	**me**		
	Unit: Community Impact Project						**5**
JTCI-CI-950	**Module: Community Impact Project**				**m**	**5**	**5**
JTCI-950	Community Impact Project	Project	Project	Examination period			

[1] Status (m = mandatory, me = mandatory elective)

[2] For a full listing of all CHOICE / CORE / CAREER / Jacobs Track units / modules please consult the **CampusNet online catalogue** and /or the study program handbooks.

Figure 3: Study and Examination Plan

7 Module Descriptions

7.1 Essentials of Cognitive Psychology

<table>
<tr><td colspan="3">Module Name
Essentials of Cognitive Psychology</td><td>Module Code
CH-340</td><td>Level (type)
Year 1 (CHOICE)</td><td>CP
7.5</td></tr>
<tr><td colspan="6">Module Components

Number | Name | Type | CP
Ch-340-A | Essentials of Cognitive Psychology | Lecture | 7.5</td></tr>
<tr><td colspan="2">Module Coordinator

Adele Diederich</td><td colspan="2">Program Affiliation

• Integrated Social and Cognitive Psychology (ISCP)</td><td colspan="2">Mandatory Status

Mandatory for ISCP</td></tr>
<tr><td>Entry Requirements

Pre-requisites

☒ None</td><td>

Co-requisites

☒ None</td><td>

Knowledge, Abilities, or Skills

• none</td><td>Frequency

Annually (Fall)

Duration

1 semester</td><td colspan="2">Forms of Learning and Teaching

• Lecture (52.5 hours)
• Private study (135 hours)

Workload

187.5 hours</td></tr>
<tr><td colspan="6">Recommendations for Preparation

None.</td></tr>
<tr><td colspan="6">Content and Educational Aims

The module provides a comprehensive overview of the major fields of cognitive psychology and beyond. It focuses on how humans attent and perceive their environment; learn and remember information; solve problems and make decisions; differ in intelligence and personality; communicate via language; experience emotions; and what drives them (motivation) etc. The module covers the historical foundations of psychology, current influential theories and models as well as empirical research methods. This module also includes methods for critical thinking (evaluating current approaches and research results); the scientific cycle, including the basics of theory of science. The emphasis of this module is on human behavior, and it provides the basis for all other modules in psychology and prepares students for subsequent CORE and Specialization modules.</td></tr>
<tr><td colspan="6">Intended Learning Outcomes

By the end of this module, you will be able to:
• explain basic concepts in psychology (sensation, perception, learning, memory, problem solving, decision making, intelligence, personality, language, emotion, motivation);
• explain the difference between scientific psychology and everyday psychology;
• identify the limitations of theoretical approaches.</td></tr>
<tr><td colspan="6">Indicative Literature

Not Specified</td></tr>
<tr><td colspan="6">Usability and Relationship to other Modules

• Mandatory for a major in ISCP
• Mandatory for a minor in ISCP
• Pre-requisite for all psychology modules
• Elective for all other undergraduate study programs.</td></tr>
</table>

Assessment

Type: Written examination

Duration: 180 Minutes

Weight: 100%

Scope: All intended learning outcomes of the module.

7.2 Essentials of Social Psychology

<table>
<tr><td colspan="3">Module Name
Essentials of Social Psychology</td><td>Module Code
CH-341</td><td>Level (type)
Year 1 (CHOICE)</td><td>CP
7.5</td></tr>
<tr><td colspan="6">Module Components

Number | Name | Type | CP
CH-341-A | Essentials of Social Psychology | Lecture | 7.5</td></tr>
<tr><td colspan="2">Module Coordinator

Ulrich Kühnen</td><td colspan="2">Program Affiliation

• Integrated Social and Cognitive Psychology (ISCP)</td><td colspan="2">Mandatory Status

Mandatory for ISCP</td></tr>
<tr><td rowspan="2">Entry Requirements

Pre-requisites

☒ Essentials of Cognitive Psychology</td><td rowspan="2">Co-requisites

☒ None</td><td rowspan="2">Knowledge, Abilities, or Skills
• none</td><td>Frequency

annually (Spring)</td><td colspan="2">Forms of Learning and Teaching

• Lecture (52.5 hours)
• Private study (135 hours)</td></tr>
<tr><td>Duration

1 semester</td><td colspan="2">Workload

187.5 hours</td></tr>
<tr><td colspan="6">Recommendations for Preparation

None.</td></tr>
<tr><td colspan="6">Content and Educational Aims

In this module, you will begin to explore the influence that the actual or perceived presence of others can have on people's behaviors, thoughts, judgments and emotions – which are very much influenced by contextual factors such as the living environment, the social structure, or the political sphere, to name a few. However, context also refers to factors that influence how an object or a person is perceived, such as the perceiver's mood, expectations, needs and prior knowledge of a perceiver. Other social psychology issues of interest include how people interact, how inter-group conflict can be understood, and when people help each other or aggress against each other.

This module reviews important aspects of social psychological research, which then will be discussed in more detail in the respective CORE and Specialization seminars. Therefore, you will be familiarized with fundamental theories and concepts such as theories of attribution, dissonance, and self-perception theory, person perception and social encoding, stereotypes, inter-group conflict, motivation, and social identity.</td></tr>
<tr><td colspan="6">Intended Learning Outcomes

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

• explain seminal individual-level and group-level theories of social psychology;
• explain major research approaches to psychological phenomena;
• analyze selected current social debates (e.g., about migration) in social psychological terms
• name and describe relationships with related sciences (e.g., biology, sociology);
• describe current 'hot topics' in social psychological research.</td></tr>
<tr><td colspan="6">Indicative Literature

Gilovich, T., Keltner, D., Chen, S. & Nisbett, R. (2018). Social Psychology. 5th International Student Edition. New York: W.W. Norton & Company ltd.</td></tr>
<tr><td colspan="6">Usability and Relationship to other Modules

• Mandatory for a major in ISCP</td></tr>
</table>

- Mandatory for a minor in ISCP
- Pre-requisite for all psychology modules.
- Elective for all other undergraduate study programs.

Assessment

Type: Written examination — Duration: 180 Minutes
Scope: All intended learning outcomes of the module. — Weight: 100%

7.3 Learning and Memory

Module Name			***Module Code***	***Level (type)***	***CP***
Learning and Memory			CO-680	Year 2 (CORE)	*5*
Module Components					
Number	*Name*			*Type*	*CP*
CO-680-A	Learning and Memory Seminar			Seminar	2.5
CO-680-B	Learning and Memory Lab			Lab	2.5
Module Coordinator Song Yan	***Program Affiliation*** • Integrated Social and Cognitive Psychology (ISCP)			***Mandatory Status*** Mandatory elective for ISCP	
Entry Requirements *Pre-requisites* ☒ Essentials of Cognitive Psychology	*Co-requisites* ☒ none	*Knowledge, Abilities, or Skills* • Basic statistics • Scientific writing	***Frequency*** Annually (Spring) ***Duration*** 1 semester	***Forms of Learning and Teaching*** • Seminar/lab (35 hours) • Private study (90 hours) ***Workload*** 125 hours	

Recommendations for Preparation

None.

Content and Educational Aims

The study of memory seeks to understand how information is stored and retrieved, how new information is integrated with existing information, why we forget, and whether or not we can improve memory. This module provides an introduction to the current models of memory and the mechanisms of learning and memory, including its neural basis and scientific approaches for studying about learning and memory. By conducting basic experiments, the concept of model testing is trained, i.e., stating assumptions and deriving predictions, empirical testing, and possible modifications to the model. Throughout the module APA style is strictly followed.

Upon successful completion of this module, you should have knowledge of models and methods of research in the study of learning and memory. The aim of the module is to provide you with a solid understanding of the cognitive processes that give rise to the phenomena of learning and memory, research methods with which to study learning and memory phenomena, and the practical experience to conduct experimental work on these phenomena.

Intended Learning Outcomes

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

1. describe the basic processes of learning and memory;
2. distinguish types of memory stores and their functions;
3. explain the relationships and differences between learning and memory;
4. critically evaluate research findings;
5. conduct lab experiments related to learning/memory and evaluate the results.

Indicative Literature

Gluck, M., Mercado, E., & Myers, C. (2016). Learning and Memory. From Brain to Behavior. 3rd ed. New York: Worth Publishers.

Neath, I. & Suprenant, A.M. (2003). Human Memory: an introduction to research, data, and theory. Australia; Belmont, CA: Thomson/Wadsworth.

Usability and Relationship to other Modules

- Mandatory elective for a major in ISCP
- Mandatory for a minor in ISCP
- Elective for all other undergraduate study programs.

Assessment

Type: Lab report Length: 1500 Words
Weight: 50%

Scope: All intended learning outcomes of the lab (5).

Type: Written examination Duration: 60 minutes
Weight: 50%

Scope: All intended learning outcomes of the lecture (1-4).

Completion: To pass this module, both assessment components have to be passed.

7.4 Social Cognition

<table>
<tr><td colspan="2">Module Name
Social Cognition</td><td>Module Code
CO-681</td><td>Level (type)
Year 2 (CORE)</td><td>CP
5</td></tr>
<tr><td colspan="5">Module Components

Number | Name | Type | CP
CO-681-A | Social Cognition | Seminar | 2.5
CO-681-B | Social Cognition Lab | Lab | 2.5</td></tr>
<tr><td>Module Coordinator

C. Stamov Roßnagel</td><td colspan="2">Program Affiliation

• Integrated Social and Cognitive Psychology (ISCP)</td><td colspan="2">Mandatory Status

Mandatory elective for ISCP</td></tr>
<tr><td>Entry Requirements

Pre-requisites

☒ Essentials of Cognitive Psychology</td><td>

Co-requisites

☒ None</td><td>

Knowledge, Abilities, or Skills
• None.</td><td>Frequency

annually (Fall)

Duration

1 semester</td><td>Forms of Learning and Teaching

• Seminar (35 hours)
• Private study (90 hours)

Workload

125 hours</td></tr>
<tr><td colspan="5">Recommendations for Preparation

Social Cognition self-assessment on Campusnet.</td></tr>
<tr><td colspan="5">Content and Educational Aims

Individual experience is embedded in various social contexts ranging in layers of complexity from one's immediate social situation (e.g., others being present) to institutions (such as the workplace or the educational system) to cultural meaning systems. The components of this module investigate the dynamic and mutual relationship between individual actors and their social contexts across these layers of complexity. How is individual experience influenced by the actual or presumed presence of others? Do people act differently as members of social groups than they do as individuals? What are the implications of our insights into the social embeddedness of human behavior for interventions aimed at modifying behaviors?

This module will promote your insight into recent developments in social psychology as well as help you acquire a broad and thorough understanding of today's most important topics in social psychological research. You will refine your methodological skills by analyzing extant research as well as designing new studies. Moreover, you will be given sufficient opportunity to familiarize yourself with the approaches to and issues of application-oriented research.</td></tr>
<tr><td colspan="5">Intended Learning Outcomes

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

1. explain seminal models and fundamental processes of social cognition and group processes;
2. describe and critically evaluate the social-cognitive approach;
3. analyze and contrast selected alternative explanations;
4. explain major sources of individual-level and group-level social influence;
5. name needs for and outline strategies to modify or extend current theories and models;
6. apply social cognitive theorizing to explain or predict real-world phenomena.</td></tr>
<tr><td colspan="5">Indicative Literature

Not specified</td></tr>
</table>

Usability and Relationship to other Modules

- Mandatory elective for a major in ISCP
- Mandatory for a minor in ISCP
- Pre-requisite for certain Specialization modules in psychology (see Section 3.4 of the ISCP Handbook)
- Elective for all other study programs

Assessment

Type: Term paper — Length: 2000 words
Weight: 50%.

Scope: Intended learning outcomes (1-5)

Type: Lab report — Length 1500 Words
Weight: 50%

Scope: Intended learning outcomes (1-3, 6)

Completion: To pass this module, both assessment components have to be passed.

7.5 Organizational Psychology & Communication

<table>
<tr><td colspan="3">Module Name
Organizational Psychology & Communication</td><td>Module Code
CO-682</td><td>Level (type)
Year 2 (CORE)</td><td>CP
5</td></tr>
<tr><td colspan="6">Module Components

Number | Name | Type | CP
CO-682-A | Organizational Psychology | Seminar | 2.5
CO-682-B | Communication and Interaction | Seminar | 2.5</td></tr>
<tr><td>Module Coordinator

C. Stamov Roßnagel</td><td colspan="3">Program Affiliation

• Integrated Social and Cognitive Psychology (ISCP)</td><td colspan="2">Mandatory Status

Mandatory elective for ISCP</td></tr>
<tr><td>Entry Requirements

Pre-requisites

☒ Essentials of Cognitive Psychology</td><td>

Co-requisites

☒ none</td><td>

Knowledge, Abilities, or Skills

• Basics of correlational statistics
• Concepts of generalizability, external, internal, and ecological validity</td><td>Frequency

Annually (Fall)

Duration

2 semesters</td><td colspan="2">Forms of Learning and Teaching

• Seminars (35 hours)
• Private study (90 hours)

Workload

125 hours</td></tr>
<tr><td colspan="6">Recommendations for Preparation
Organizational Psychology self-assessment on Campusnet</td></tr>
<tr><td colspan="6">Content and Educational Aims

Building on the conceptual and methodological foundations established in the Social Cognition module, the general question guiding this module is how insights into the socio-cultural embeddedness of human behavior can help us ‘understand’ (e.g., assess, diagnose) and change behavior in complex real-world settings. One such setting are organizations, i.e. structured social units in which people collaborate to reach collective goals. We explore how individual-level and organizational-level factors (e.g., climate) interact to shape workers’ organizational behavior in terms of motivation, communication, and collaboration. We will pay special attention to the opportunities and challenges of the increasing diversity of people in contemporary organizations.
Communication, and the social interaction it involves, is a fascinating example of both such opportunities and challenges. While communicative processes unfold differently as a function of the diversity contexts they are embedded in, at the same time those processes are the means to systematically influence social interactions in diverse groups, teams, and organizations in a solution-oriented manner. Different as communicative processes may be at the surface level (including, for instance, verbal interactions, nonverbal cues, and human-computer interaction), there are fundamental cognitive and social processes that underlie human communication in all its forms. We will look at how communication shapes personal relationships and differentiates potentially hazardous misunderstandings from successful interactions in a range of settings, such as sales communication, supervisor-employee interactions, therapeutic change talk, and conflict resolution and negotiation.
In addition to providing you with insights into current ‘hot topics’ in social and cultural psychology, this module focuses on the approaches and contemporary issues of application-oriented research in both fields. Using case studies from actual consulting projects as examples, you will refine your skills for analyzing real-life situations in a theory-based fashion and of designing strategies for assessments and interventions in selected communication settings.</td></tr>
</table>

Intended Learning Outcomes

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

- explain how quantitative theories may and may not be applied to individuals, groups, or organizations;
- explain how evidence-based problem solutions are generated;
- apply qualitative and quantitative methods to design case-specific data collection strategies;
- demonstrate the ability to communicate high-level research findings to non-experts without information loss;
- apply social influence theories to develop strategies for stakeholder management.

Indicative Literature

Not specified

Usability and Relationship to other Modules

- Mandatory for a major in ISCP
- Mandatory for a minor in ISCP
- Pre-requisite for certain Specialization modules in psychology (see Section 3.4 of the ISCP Handbook).
- Elective for all other undergraduate study programs.

Assessment

Type: Written final

Duration: 120 minutes
Weight: 100%

Scope: All intended learning outcomes of the module.

7.6 Neurobiology of Behavior

<table>
<tr><td colspan="3">Module Name
Neurobiology of Behavior</td><td>Module Code
CO-683</td><td>Level (type)
Year 2 (CORE)</td><td>CP
5</td></tr>
<tr><td colspan="6">Module Components

Number | Name | Type | CP
CO-683-A | Neurobiology of Behavior I | Lecture | 2.5
CO-683-B | Neurobiology of Behavior II | Lecture | 2.5</td></tr>
<tr><td colspan="2">Module Coordinator

Ben Godde</td><td colspan="2">Program Affiliation

• Integrated Social and Cognitive Psychology (ISCP)</td><td colspan="2">Mandatory Status

Mandatory elective for ISCP</td></tr>
<tr><td>Entry Requirements

Pre-requisites

☒ Essentials of Cognitive Psychology</td><td>

Co-requisites

☒ None</td><td>

Knowledge, Abilities, or Skills
• None</td><td>Frequency

Annually (Fall)

Duration

2 semesters</td><td colspan="2">Forms of Learning and Teaching

• Lectures (35 hours)
• Private study (90 hours)

Workload

125 hours</td></tr>
<tr><td colspan="6">Recommendations for Preparation

None.</td></tr>
<tr><td colspan="6">Content and Educational Aims

This module introduces state-of-the-art knowledge of structure-function relationships in the mammalian nervous system, particularly at the large-scale systems level. Starting from the organization of neural systems and the neuroanatomy of the brain, this module focuses on the neurobiological basis of cognitive processing in the areas of perception, motor control, attention, emotion, memory, learning, and language, etc. How do neurons communicate? What do drugs do to the brain and how do they alter behavior? How is the brain involved in making decisions? How does the brain change? These and other questions as well as critical perspectives are addressed in this module.

With a clear focus on the human brain, the module provides a basic review of the brain as a biological organ, including its basic structure and operations, and teaches students how the brain gives rise to a wide variety of complex behaviors. You will learn how to integrate knowledge obtained from several levels of analysis – neurons, circuits, systems – into a coherent understanding of the brain's structure and function. Thus, this module, lays the groundwork for other modules in psychology that relate behavior to underlying neural mechanisms. You will learn to evaluate the challenges and limits of modern, neuro-oriented psychology.</td></tr>
<tr><td colspan="6">Intended Learning Outcomes

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

• explain the brain's basic structure and processes;
• describe how brain structures and functions relate to psychological processes, phenomena, and behaviors;
• critically evaluate the neuroscience approach to psychology.</td></tr>
<tr><td colspan="6">Indicative Literature

Kolb, B. & Wishaw I.Q (2015).Fundamentals of Human Neuropsychology, 7th ed. New York: Worth Publishers.
Breedlove, S.M. & Watson, N.V. (2017). Behavioral Neuroscience, 8th ed. Sunderland: Sinauer.</td></tr>
<tr><td colspan="6">Usability and Relationship to other Modules

• Mandatory elective for a major in ISCP</td></tr>
</table>

- Pre-requisite for any neuroscience-related 3rd-year module.
- Elective for all other undergraduate study programs.

Assessment

Type: Written examination — Duration: 120 minutes
Scope: All intended learning outcomes of the module. — Weight: 100%

7.7 Neuroscience Methods

<table>
<tr><td colspan="3">Module Name
Neuroscience Methods</td><td>Module Code
CO-684</td><td>Level (type)
Year 2 (CORE)</td><td>CP
5</td></tr>
<tr><td colspan="6">Module Components

Number | Name | Type | CP
CO-684-A | Neuroscience Methods Seminar | Seminar | 2.5
CO-684-B | Neuroscience Methods Lab | Lab | 2.5</td></tr>
<tr><td colspan="2">Module Coordinator

Ben Godde</td><td colspan="2">Program Affiliation

• Integrated Social and Cognitive Psychology (ISCP)</td><td colspan="2">Mandatory Status

Mandatory elective for ISCP</td></tr>
<tr><td>Entry Requirements

Pre-requisites

☒ Essentials of Cognitive Psychology</td><td>

Co-requisites

☒ none</td><td>

Knowledge, Abilities, or Skills
• None</td><td>Frequency

Annually (Fall)

Duration

2 semesters</td><td colspan="2">Forms of Learning and Teaching

• Seminar/lab (35 hours)
• Private study (90 hours)

Workload

125 hours</td></tr>
<tr><td colspan="6">Recommendations for Preparation

None</td></tr>
<tr><td colspan="6">Content and Educational Aims

In neurobiology and cognitive psychology, respectively, a vast array of methods exists for investigating neuropsychological processes from single cells up to complex human behavior. Apart from basic research, these methods are very important in clinical investigations. Both in terms of methods that enable researchers to analyze processes (e.g. structural and functional neuroimaging, magnetoencephalography) and of techniques for manipulating processes (e.g. brain stimulation, optogenetic methods), fundamental new techniques have been developed recently.

Based on this, a thorough overview of available methods and their specific purposes is essential. With a strong focus on human brain imaging and electrophysiology, this module provides you with both practical skills and the conceptual knowledge to responsibly choose modern human brain imaging techniques for specific research or diagnostics purposes and to critically discuss their application potential as revealed by seminal or recent publications in the field.</td></tr>
<tr><td colspan="6">Intended Learning Outcomes

Upon completion of this module, you will be able to

1. choose and apply appropriate methods to answer specific research questions;
2. interpret empirical results in the context of the chosen methods,
3. draw implications for further research from specific findings;
4. critically assess and compare the advantages and disadvantages of selected techniques.</td></tr>
<tr><td colspan="6">Indicative Literature

Kolb, B. & Wishaw I.Q (2015).Fundamentals of Human Neuropsychology, 7th ed. Chapter 7: Imaging the brain’s activity. New York: Worth Publishers.</td></tr>
<tr><td colspan="6">Usability and Relationship to other Modules

• Mandatory elective for a major in ISCP
• Pre-requisite for any neuroscience-related 3rd-year module.</td></tr>
</table>

- Elective for all other undergraduate study programs.

Assessment

Type: Lab report Length 1500 Words
Weight: 50%
Scope: Intended learning outcomes of the lab (1).

Type: Presentation Length: 15-20 minutes (+ Summary: ~ 500 words)
Weight: 50%
Scope: Intended learning outcomes of the lecture (2-4).

Completion: To pass this module, both assessment components have to be passed.

7.8 Attention, Sensation, & Perception

<table>
<tr><td colspan="3">Module Name
Attention, Sensation, & Perception</td><td>Module Code
CO-685</td><td>Level (type)
Year 2 (CORE)</td><td>CP
5</td></tr>
<tr><td colspan="6">Module Components

Number | Name | Type | CP
CO-685-A | Attention, Sensation & Perception Seminar | Seminar | 2.5
CO-685-B | Attention, Sensation & Perception Lab | Lab | 2.5</td></tr>
<tr><td>Module Coordinator

Adele Diederich</td><td colspan="3">Program Affiliation

• Integrated Social and Cognitive Psychology (ISCP)</td><td colspan="2">Mandatory Status

Mandatory elective for ISCP</td></tr>
<tr><td>Entry Requirements

Pre-requisites

☒ Essentials of Cognitive Psychology</td><td>

Co-requisites

☒ none</td><td>

Knowledge, Abilities, or Skills

• Basic statistics
• Scientific writing</td><td>Frequency

Annually (Fall)

Duration

1 semester</td><td colspan="2">Forms of Learning and Teaching

• Seminar/lab (35 hours)
• Private study (90 hours)

Workload

125 hours</td></tr>
<tr><td colspan="6">Recommendations for Preparation

Wolfe, J.M. et al. (2015). Sensation & Perception, 4ed. . Oxford: Sinauer.</td></tr>
<tr><td colspan="6">Content and Educational Aims

Attention and perception are essential processes for humans and animals to learn about the world around them. Sensation refers to the process of detecting a stimulus or a stimulus property in the environment. It is the necessary collection of information about the surroundings in which perceptions are made. Perception refers to the way in which we interpret the information gathered by our senses. Attention research seeks to understand how attention allows and affects detection, perception, and the encoding of information. Perception includes vision, audition, touch, smell, and taste. Attention focuses on divided, selective involuntary and voluntary attention and attention across modalities.

Upon successful completion of this module, you understand the models and methods of research in perception and attention. The aim of this module is to provide you with a basic understanding of the physiological processes that give rise to perceptual phenomena, behavioral research methods that include programming to investigate perceptual and attentional phenomena, and practical experience to conduct experimental work on those phenomena.</td></tr>
<tr><td colspan="6">Intended Learning Outcomes

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

• describe the basic processes of attention and perception;
• explain the link between different sensory modalities (cross modal interaction);
• demonstrate an understanding of the connection between neurophysiological processes and perceptual phenomena;
• critically evaluate research findings;
• conduct lab experiments related to attention/perception and evaluate the results.</td></tr>
</table>

Indicative Literature

Not specified

Usability and Relationship to other Modules

- Mandatory elective for a major in ISCP
- Elective for all other undergraduate study programs.

Assessment

Type: Lab Report Length: 1500 Words

Weight: 100%

Scope: All intended learning outcomes of the module.

7.9 Judgment & Decision Making

Module Name			***Module Code***	***Level (type)***	***CP***
Judgment & Decision Making			CO-686	Year 2 (CORE)	*5*
Module Components					
Number	*Name*			*Type*	*CP*
CO-686-A	Judgment & Decision Making			Seminar	5.0
Module Coordinator Adele Diederich	***Program Affiliation*** • Integrated Social and Cognitive Psychology (ISCP)			***Mandatory Status*** Mandatory elective for ICSP	
Entry Requirements *Pre-requisites* ☒ Essentials of Cognitive Psychology	*Co-requisites* ☒ None	*Knowledge, Abilities, or Skills* • Basics in probability theory • Scientific writing	***Frequency*** Annually (Spring) ***Duration*** 1 semester	***Forms of Learning and Teaching*** • Seminar (35 hours) • Private study (90 hours) ***Workload*** 125 hours	
Recommendations for Preparation None.					
Content and Educational Aims Judgment and decision-making are broad and complex areas of great theoretical interest and practical impact in almost all of contemporary disciplines. The focus here is on psychological perspectives. Applications of decision-making research in marketing, medicine, law, and other areas are discussed. This module includes topics such as heuristics and biases, decision making under risk and uncertainty, preference and choice, confidence, and more. Upon successful completion of this module, you understand the models and methods of research in judgment and decision making. The aim of this module is to provide you with basic concepts from probability theory and expected utility theory to serve as a benchmark for evaluating judgments and decision-making. Psychological models of decision-making that describe human judgment and decision making are discussed. Historical background and classic paradigms are also provided to enable you to understand and evaluate current research.					
Intended Learning Outcomes By the end of this module, you will be able to • describe the major models and theories of behavioral decision making; • explain this field's major methods, results, and controversies; • select generalizable findings and apply them to solve actual decision-making problems; • discuss applications of decision-making research in marketing, medicine, and law.					
Indicative Literature Not specified					

Usability and Relationship to other Modules

- Mandatory elective for a major in ISCP
- Elective for all other undergraduate study programs.

Assessment

Type: Written examination Duration: 120 Minutes
Weight: 100%

Scope: All intended learning outcomes of the module.

7.10 Health Psychology

<table>
<tr><td colspan="2">Module Name
Health Psychology</td><td>Module Code
CO-687</td><td>Level (type)
Year 2 (CORE)</td><td>CP
5</td></tr>
<tr><td colspan="5">Module Components

Number | Name | Type | CP
CO-687-A | Health Psychology Seminar | Seminar | 2.5
CO-687-B | Health Psychology Lab | Lab | 2.5</td></tr>
<tr><td>Module Coordinator

Sonia Lippke</td><td colspan="3">Program Affiliation

• Integrated Social and Cognitive Psychology (ISCP)</td><td>Mandatory Status

Mandatory elective for ISCP</td></tr>
<tr><td>Entry Requirements

Pre-requisites

☒ Essentials of Cognitive Psychology</td><td>

Co-requisites

☒ none</td><td>

Knowledge, Abilities, or Skills

• Knowledge of history and methods in Psychology
• Skills to measure sensation, perception, attention, intelligence, emotion, motivation and personality
• Ability to support learning, critical thinking, problem solving, decision making</td><td>Frequency

Annually (Fall)

Duration

1 semester</td><td>Forms of Learning and Teaching

• Seminar/lab (35 hours)
• Private study (90 hours)

Workload

125 hours</td></tr>
<tr><td colspan="5">Recommendations for Preparation
Marks, D. F., Murray, M. & Estacio, E. V. (2018). Health psychology. London: Sage.
Naidoo, J., & Wills, J. (2016). Foundations for Health Promotion. Elsevier Health Sciences.</td></tr>
<tr><td colspan="5">Content and Educational Aims

Within the layered approach of the ISCP program, this module focuses on the interaction between biology, health and behavior. Theories and models of health, behavior change, and stress development and management are introduced, as well as health promotion including both a biological and social-cognitive approach. Theoretical knowledge will be translated into applications by use of through practical experiences.

The interaction between biology and behavior will be investigated using the example of health and health behaviors. An understanding of factors important for the prevention of illness and maintenance of physical and mental health will be obtained. You will understand how motivation and behavioral change can be promoted and learn how to conduct applied and laboratory research as well as practical applications.</td></tr>
<tr><td colspan="5">Intended Learning Outcomes

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

• identify factors that impact health, well-being, and coping with stress;
• critically evaluate the theories and models covered in terms of their usefulness to improve motivation and behavior;
• design research programs in the field of health psychology and set up quality management systems;</td></tr>
</table>

- apply scientific approaches and evidence-based theories.

Indicative Literature

Marks, D. F., Murray, M. & Estacio, E. V. (2018). *Health psychology*. London: Sage.

Davey, G. C. (Ed.) (2011). *Applied psychology.* Hoboken, N.J.: Wiley-Blackwell

Naidoo, J., & Wills, J. (2016). Foundations for Health Promotion. Elsevier Health Sciences.

Schaie, & S. L. Willis (Eds.), Handbook of the Psychology of Aging (8th ed.). Cambridge, MA: Academic Press.

Usability and Relationship to other Modules

- Mandatory elective for a major in ISCP
- Pre-requisite for certain Specialization modules in psychology (see Section 3.4 of the ISCP Handbook).
- Elective for all other undergraduate study programs.

Assessment

Type: Written examination Duration: 120 minutes

Weight: 100%

Scope: All intended learning outcomes of the module.

7.11 Cultural Psychology

<table>
<tr><td colspan="3">Module Name
Cultural Psychology</td><td>Module Code
CO-688</td><td>Level (type)
Year 2 (CORE)</td><td>CP
5</td></tr>
<tr><td colspan="6">Module Components

Number | Name | Type | CP
CO-688-A | Culture and Cognition | Seminar | 2.5
CO-688-B | Cultural Psychology Lab | Lab | 2.5</td></tr>
<tr><td>Module Coordinator

Ulrich Kühnen</td><td colspan="3">Program Affiliation

• Integrated Social and Cognitive Psychology (ISCP)</td><td colspan="2">Mandatory Status

Mandatory elective for ISCP</td></tr>
<tr><td rowspan="2">Entry Requirements

Pre-requisites

☒ Essentials of Social Psychology</td><td rowspan="2">

Co-requisites

☒ none</td><td rowspan="2">

Knowledge, Abilities, or Skills</td><td>Frequency

Annually (Spring)</td><td colspan="2">Forms of Learning and Teaching

• Seminar and lab (35 hours)
• Private study (90 hours)</td></tr>
<tr><td>Duration

2 semesters</td><td colspan="2">Workload

125 hours</td></tr>
<tr><td colspan="6">Recommendations for Preparation

None.</td></tr>
<tr><td colspan="6">Content and Educational Aims

Cognitive scientists and cultural theorists traditionally have thought about cultures' influences on cognition quite differently. From a cognitive science perspective, the study of cognition is typically construed as the search for those aspects of mental experience that are univerally true for all. In fact, for much of the 20th century, most psychologists assumed that all normal human beings were equipped with the same set of attentional, perceptual, memorial, learning, and inferential procedures. From a cultural studies perspective, there is no avoiding the cultural framework within which individuals think and act. The idea of a universal mental experience is often rejected outright by many cultural theorists; every human thought and perception is uniquely situated within a very specific framework informed by history, tradition, language, and social context, etc. The goal of this module is to explore the dynamics of both perspectives by asking which aspects of human thinking and judgment are universal or culturally shaped. Spanning both individual-level and group-level analyses of the socio-cultural embeddedness of human experience and behavior, this module will help you acquire a broad and thorough understanding of today’s most important current topics in cultural psychologyl research.</td></tr>
<tr><td colspan="6">Intended Learning Outcomes

Upon completion of this module, you will be able to

1. critically reflect on empirical and theoretical scientific articles from cultural psychology;
2. integrate current research evidence in cultural psychology into its scientific context;
3. describe the influence of one’s own cultural experiences;
4. interpret based on the background of evidence-based insights, the interactions of people from different cultural backgrounds;
5. critically comment on societal debates related to migration.</td></tr>
<tr><td colspan="6">Indicative Literature

Not specified</td></tr>
<tr><td colspan="6">Usability and Relationship to other Modules</td></tr>
</table>

- Mandatory elective for a major in ISCP
- Pre-requisite for certain Specialization modules in psychology (see Section 3.4 of the ISCP Handbook).
- Elective for all other undergraduate study programs.

Assessment

Type: Lab report — Length: 1500 Words
Weight: 50%

Scope: All intended learning outcomes of the lab (1-2).

Type: Written examination — Duration: 60 minutes
Weight: 50%

Scope: All intended learning outcomes of the lecture (3-5)

Completion: To pass this module, both assessment components have to be passed.

7.12 Human Neuroscience Advanced Lab

Module Name	***Module Code***	***Level (type)***	***CP***
Human Neuroscience Advanced Lab	CA-S-ISCP-801	Year 3 (CAREER - Specialization)	*2.5*

Module Components

Number	*Name*	*Type*	*CP*
CA-ISCP-801	Human Neuroscience Advanced Lab	Lab / Seminar	2.5

Module Coordinator	***Program Affiliation***	***Mandatory Status***
Ben Godde	• Integrated Social and Cognitive Psychology (ISCP)	Mandatory elective for ISCP

Entry Requirements

Pre-requisites	*Co-requisites*	*Knowledge, Abilities, or Skills*
☒ Ess. of Cog. Psych. ☒ Neurobiol. of Behavior ☒ Neuroscience Methods	☒ None	• None

Frequency	***Forms of Learning and Teaching***
Annually (Fall)	• Seminar/Lab (17.5 hours) • Private study (42.5 hours)
Duration	***Workload***
1 semester	60 hours

Recommendations for Preparation

None.

Content and Educational Aims

This modul provides in-depth theoretical and practical insights into modern methods in human brain research, such as electroencephalography, brain imaging, and brain stimulation techniques. This module expands on the CORE module on Neuroscience Methods and prepares you to independently design and conduct experimental studies using these methods, as well as to process, analyze, and interpret acquired data. This module is mandatory if you aim to write a bachelor thesis using these methods.

Intended Learning Outcomes

Upon completion of this module, students will be able to…

- select the appropriate brain imaging method for a specific research question;
- design, prepare, and conduct a study using methods such as electroencephalography or transcranial brain stimulation;
- process and analyze experimental data obtained with modern brain imaging techniques;
- interpret and evaluate findings obtained using such methods.

Indicative Literature

Kolb, B. & Wishaw I.Q (2015).Fundamentals of Human Neuropsychology, 7th ed. Chapter 7: Imaging the brain's activity. New York: Worth Publishers.

Usability and Relationship to other Modules

- Mandatory elective Specialization module for 3rd year ISCP major students.

Assessment

Type: Lab report — Length: 1500 Words
Scope: All intended learning outcomes of the module. — Weight: 100%

7.13 Pathophysiology and Psychotherapy of Depression

<table>
<tr><td colspan="3">Module Name
Pathophysiology and Psychotherapy of Depression</td><td>Module Code
CA-S-ISCP-802</td><td>Level (type)
Year 3 (CAREER - Specialization)</td><td>CP
2.5</td></tr>
<tr><td colspan="6">Module Components

Number | Name | Type | CP
CA-ISCP-802 | Pathophysiology and Psychotherapy of Depression | Seminar | 2.5</td></tr>
<tr><td>Module Coordinator

Ahmed Karim</td><td colspan="3">Program Affiliation

• Integrated Social and Cognitive Psychology (ISCP)</td><td colspan="2">Mandatory Status

Mandatory elective for ISCP</td></tr>
<tr><td rowspan="2">Entry Requirements

Pre-requisites

☒ Ess. of Cog. Psych.</td><td rowspan="2">Co-requisites

☒ none</td><td rowspan="2">Knowledge, Abilities, or Skills</td><td>Frequency

Annually (Spring)</td><td colspan="2">Forms of Learning and Teaching

• Seminars (17.5 hours)
• Private study (45 hours)</td></tr>
<tr><td>Duration

1 semester</td><td colspan="2">Workload

62.5 hours</td></tr>
<tr><td colspan="6">Recommendations for Preparation</td></tr>
<tr><td colspan="6">Content and Educational Aims

Depression is one of the most common psychiatric disorders, and the percentage of people who are affected at one point in their life varies from 7% to 21%. In this practical block of this module, we will discuss the pathophysiology of depression (including genetic vulnerability, deficits in the monoaminergic system, HPA axis dysfunction, and structural or functional abnormalities in the brain), etiological factors which can cause depression, and the effects of different psychiatric and psychotherapeutic interventions. In addition to antidepressant medication, Cognitive Behavioral Therapy (CBT) has the most research evidence for the treatment of depression in children and adolescents. Using different role-plays, you will have the opportunity to try different CBT methods in this seminar under the supervision of the lecturer Prof. Karim, who is a licensed Psychotherapist and a Neuroscientist. Moreover, using our mobile psychophysiological research device you will be able to directly measure how CBT methods can induce psycho- and neurophysiological change in your body (e.g. EMG, EDA, EOG, ECG). We will also discuss the effects of invasive and non-invasive brain stimulation on the treatment of depression and on the neural correlates of depression.</td></tr>
<tr><td colspan="6">Intended Learning Outcomes

Upon completion of this module, students will be able to:

1. understand the pathophysiology of depression;
2. explain etiological factors that can cause depression;
3. use diagnostic instruments for clinical assessment;
4. explain CBT methods and psychophysiological effects;
5. reflect on the empirical studies of treatment methods, including medication, psychotherapy and brain stimulation.</td></tr>
<tr><td colspan="6">Indicative Literature

Not specified</td></tr>
<tr><td colspan="6">Usability and Relationship to other Modules

• Mandatory elective Specialization module for 3rd year ISCP major students.</td></tr>
</table>

Assessment

Type: Presentation — Duration: 20 min. Weight: 50%

Scope: Intended Learning Outcomes (1-3)

Type: Review paper — Length: 4-8 pages Weight: 50%

Scope: Intended Learning Outcomes (4-5)

Completion: This module is passed with a weighted average grade of 45% or higher.

7.14 Managing Demographic Change in Organizations

<table>
<tr><td colspan="3">Module Name
Managing Demographic Change in Organizations</td><td>Module Code
CA-S-ISCP-803</td><td>Level (type)
Year 3 (CAREER - Specialization)</td><td>CP
2.5</td></tr>
<tr><td colspan="6">Module Components

Number | Name | Type | CP
CA-ISCP-803 | Managing Demographic Change in Organizations | Seminar | 2.5</td></tr>
<tr><td>Module Coordinator

C. Stamov Roßnagel</td><td colspan="3">Program Affiliation

• Integrated Social and Cognitive Psychology (ISCP)</td><td colspan="2">Mandatory Status

Mandatory elective for ISCP and SMP</td></tr>
<tr><td colspan="3">Entry Requirements

Pre-requisites
☒ Data Collection and Empirical Research Methodologies

☒ Qualitative Research Methods

and

☒ Applied Statistics with SPSS

Or

☒ Applied Statistics with R

Co-requisites
☒ none

Knowledge, Abilities, or Skills
• Basics of correlational statistics
• Concepts of generalizability, external, internal, ecological validity</td><td>Frequency

Annually (Spring)

Duration

1 semester</td><td colspan="2">Forms of Learning and Teaching

• Seminars (17.5 hours)
• Private study (45 hours)

Workload

62.5 hours</td></tr>
<tr><td colspan="6">Recommendations for Preparation
None.</td></tr>
</table>

Content and Educational Aims

In many industrialized countries, organizations face an aging labor force. Fewer young workers than ever be-fore enter the labor force, while older workers retire at a higher age than previous cohorts. The general question that this demographic change raises is how organizations might have to adapt their personnel management strategies to keep productivity high. How does team-work, learning, or leadership change in an increasingly age-diverse work-place? How do the generations (e.g., Gen Y, Generation X, Boomers) actually differ from a personnel development point of view?
Applying general models of lifespan development, organizational climate, leadership, training and development, and work teams to real-world cases, you will slip into organizational consultants' shoes and develop strategies for organizational demographic change management that you will then present to the CHRO of your (fictitious) company. We will pay particular attention to the theory-practice gap and its implications for practical work in consultant roles and will learn how to appropriately use research findings in strategy development.
This module attaches particular importance to an in-depth treatment of the approaches and contemporary issues of application-oriented research. Using case studies from actual consulting projects as real-life examples, you will refine your ability to analyze real-life situations based on a theory-based fashion and to design strategies for assessments and interventions in selected workplace settings.

Intended Learning Outcomes

Upon completion of this module, students will be able to

- explain how age-related changes in cognition and motivation influence work processes and outcomes;
- develop a theory-based strategy for analyzing individual companies training and development needs;
- apply organizational psychological theories to define specific interventions that address the negative effects of aging on individual and team performance;
- translate research findings into implications that inform personnel-related decision-making.

Indicative Literature

Boehm, S.A., & Kunze, F. (2015). Age Diversity and Age Climate in the Workplace. In P.M. Bal, D.T.A.M. Kooij, & D.M. Rousseau (Eds), Aging Workers and the Employee-Employer Relationship (pp. 33-56). Heidelberg: Springer.

Hobfoll, S.E., Halbesleben, J., Neveu, J.-P., & Westman, M. (2018). Conservation of Resources in the Organizational Context: The Reality of Resources and Their Consequences. Annual Review of Organizational Psychology and Organizational Behavior, 5, 103-128.

Truxillo,D.M., Cadiz,D.M. , & Hammer, L.B. (2015). Supporting the Aging Workforce: A Review and Recommendations for Workplace Intervention Research. Annual Review of Organizational Psychology and Organizational Behavior, 2, 351-381.

Usability and Relationship to other Modules

- Mandatory elective Specialization module for 3rd year ISCP and SMP major students.

Assessment

Type: Presentation Duration: 20 minutes
Weight: 100%

Scope: All intended learning outcomes of the module.

7.15 Psychology of Food

Module Name	***Module Code***	***Level (type)***	***CP***
Psychology of Food	CA-S-ISCP-804	Year 3 (CAREER - Specialization)	*2.5*

Module Components

Number	*Name*	*Type*	*CP*
CA-ISCP-804	Psychology of Food	Seminar	2.5

Module Coordinator	***Program Affiliation***	***Mandatory Status***
Sonia Lippke	• Integrated Social and Cognitive Psychology (ISCP)	Mandatory elective for ISCP and SMP

Entry Requirements

Pre-requisites

☒ Intro to Psychology I and II

Co-requisites

☒ None

Knowledge, Abilities, or Skills

- None beyond formal pre-requisites

Frequency

Annually (Spring)

Forms of Learning and Teaching

- Seminars (17.5 hours)
- Private study (35 hours)
- Exam Preparation (15 hours)

Duration

1 semester

Workload

62.5 hours

Recommendations for Preparation

None.

Content and Educational Aims

In this module, we will look at several psychological aspects related to food, nutrition, food waste behavior, eating, and dieting. We will cover topics such as mood, emotions, stress, different social influences, food cravings, and weight control. The module will be complemented by selected specialized topics including food choices, historical changes in food consumption patterns, intercultural differences, health, and food attractiveness. We will discuss state of the art social-cognitive models to explain behavior and to support behavioral change, techniques, general challenges, and evidence-based approaches to understand all these matters and to make informed choices, as well to help others effectively.
A significant amount of time will be devoted to practical training and exercises to obtain a deeper understanding of theoretical aspects and to enable you to apply this new knowledge to your professional work.

Intended Learning Outcomes

By completion of this module, students will be able to

Discipline Specific Skills

To understand, predict, and change psychological aspects related to food consumption and to be able to answer questions like:

- Why do people continue eat specific products despite knowing their damaging effects?
- How can we investigate the interrelations of food, nutrition, and health?
- How can habituated food consumption behaviors be altered?
- How and why does obesity "spread" in social networks?
- How can diet recommendations be translated into policies?

Transferable and Key Skills

- Understand comprehensively complex patterns and interrelations;
- summarize and critically reflect on research findings;

- translate scientific knowledge and research findings into everyday language to be disseminated to a wider audience;
- design a poster to disseminate research findings.
- Work in a team of students and present results of this teamwork.

Indicative Literature

Conner, M. & Armitage, C. J. (2002). The social psychology of food. Buckingham: Open University Press.

Conner, M. & Norman, P. (2005). Predicting Health Behaviour (2nd ed.). Glasgow: Open University Press.

Filgueiras, A. R., de Almeida, V. B. P., Nogueira, P. C. K., Domene, S. M. A., da Silva, C. E., Sesso, R. & Sawaya, A. L. (2019). Exploring the consumption of ultra-processed foods and its association with food addiction in overweight children. *Appetite*.

Lippke, S., Corbet, J. M., Lange, D., Parschau, D. & Schwarzer, R. (2016). Intervention engagement moderates the dose-response relationships in a dietary intervention. *Dose Response, 14* (1), 1-10.

Logue, A. W. (2004). The psychology of eating and drinking (3rd ed.). New York: Brunner-Routledge.

Meurer, S. T., Lopes, A. C. S., Almeida, F. A., Mendonça, R. D. D. & Benedetti, T. R. B. (2019). Effectiveness of the VAMOS strategy for increasing physical activity and healthy dietary habits. A randomized controlled community trial. *Health Education & Behavior*. Advance online publication. doi: 10.1177/1090198118820095.

Ogden, J. (2010). The Psychology of eating. From healthy to disordered behaviour (2nd ed.). Chichester: Wiley-Blackwell.

Shepherd, R. & Raats, M. (2006). The psychology of food choice. Wallingford: CABI.

Usability and Relationship to other Modules

- Mandatory elective Specialization module for 3rd year ISCP and SMP major students.

Assessment

Type: Presentation	Duration: 15 min.
Scope: All intended learning outcomes of the module	Weight: 100%

7.16 The Science of Happiness

Module Name	***Module Code***	***Level (type)***	***CP***
Science of Happiness	CA-S-ISCP-805	Year 3 (CAREER - Specialization)	*5*

Module Components

Number	*Name*	*Type*	*CP*
CA-ISCP-805	The Science of Happiness	Seminar	5

Module Coordinator	***Program Affiliation***	***Mandatory Status***
Song Yan	• Integrated Social and Cognitive Psychology (ISCP)	Mandatory elective for ISCP and SMP

Entry Requirements

Pre-requisites	*Co-requisites*	*Knowledge, Abilities, or Skills*
☒ None	☒ none	• Knowledge of general psychological concepts • Basics of psychological research methods

Frequency	***Forms of Learning and Teaching***
Annually (Spring)	• Seminars (35 hours) • Private study (90 hours)
Duration	***Workload***
1 semester	125 hours

Recommendations for Preparation
None.

Content and Educational Aims

Following the principles of positive psychology, this module will focus on the theories and research centered on the nature of happiness and psychological well-being. Topics covered will include concept(s) and measurement of happiness, determinants and correlates of happiness, theories of psychological well-being, culture and happiness, benefits of happiness and the implications of happiness research.

The aim of this module is to give you a greater understanding of what happiness is. Alongside theory, you will also engage in a series of exercises designed to increase your own happiness and benefit from learning and applying the psychological science of well-being.

This module will be a combination of lectures/presentations, class discussions and self-exploration exercises.

Intended Learning Outcomes

By completion of this module, students will be able to

Discipline Specific Skills;

- demonstrate an understanding of concepts and contemporary approaches to happiness;
- become acquainted with scientific studies on subjective well-being;
- identify the practical application of the science of happiness both for personal life and professional goals;

Transferable and Key Skills

- reflect and think critical;
- apply techniques to increase happiness and overall quality of life;
- apply discussion and Communication skills;
- apply independent learning strategies.

Indicative Literature

David, S. A., Boniwell, I., & Conley Ayers, A. (2013).The Oxford handbook of happiness. New York, NY, US: Oxford University Press. doi:10.1093/oxfordhb/9780199557257.001.0001
Link: https://ebookcentral.proquest.com/lib/jacob/detail.action?docID=1591550

Sarracino, F. (2013).The Happiness Compass: theories, actions and perspectives for well-being. Hauppauge, NY, US: Nova Science Publishers, Inc.
Link https://ebookcentral.proquest.com/lib/jacob/detail.action?docID=2193860

Schmitz, B. (2016). Art-of-living: A concept to enhance happiness. Cham, Switzerland: Springer International Publishing. doi:10.1007/978-3-319-45324-8.
Link: https://ebookcentral.proquest.com/lib/jacob/detail.action?docID=4701656

Myers, D. G., & Diener, E. (2018). The Scientific Pursuit of Happiness. Perspectives on Psychological Science, 13(2), 218–225. https://doi.org/10.1177/1745691618765171

Diener, E., & Ryan, K. (2009). Subjective well-being: A general overview. South African journal of psychology, 39(4), 391-406.

Usability and Relationship to other Modules

- Mandatory elective Specialization module for 3rd year ISCP and SMP major students.

Assessment

Type: Project & Presentation

Duration of the presentation: 20 minutes
Weight: 100%

Scope: All intended learning outcomes of the module.

7.17 Applying Social Science in Research

<table>
<tr><td colspan="2">Module Name
Applying Social Science in Research</td><td>Module Code
CA-S-SMP-802</td><td>Level (type)
Year 3 (CAREER - Specialization)</td><td>CP
5</td></tr>
<tr><td colspan="5">Module Components

Number | Name | Type | CP
CA-SMP-802 | Applying Social Science in Research | Seminar | 5</td></tr>
<tr><td>Module Coordinator

Hilke Brockmann</td><td colspan="2">Program Affiliation

• Society, Media and Politics (SMP)</td><td colspan="2">Mandatory Status

Mandatory elective for SMP, IRPH and ISCP</td></tr>
<tr><td colspan="2">Entry Requirements

Pre-requisites
☒ None

Co-requisites
☒ None

Knowledge, Abilities, or Skills
• None</td><td>Frequency

Annually (Fall)

Duration

1 semester</td><td colspan="2">Forms of Learning and Teaching

• Contact time (35 hours)
• Private Study (90 hours)

Workload

125 hours</td></tr>
<tr><td colspan="5">Recommendations for Preparation

Study the syllabus thoroughly. Think about your studies so far: Which topics has interested you most, what “gets you going”. Which methods were most fun for you to apply or study? Think of a broad topical field that would interest you most to do a study on and tell the other students about it in our first session.</td></tr>
<tr><td colspan="5">Content and Educational Aims

This module aims at applying the theoretical and methodological potential that the students have acquired this far to current and ongoing socio-political debates of our time and training them to translate it into state-of-the-art research designs. Students are empowered to apply the skills they have acquired in the social sciences during their studies to a field of empirical research in the field of society, politics, or media. They are encouraged to find projects of their own interest and are professionally guided toward an efficient implementation of an adequate research design.
Social scientists are at the forefront of societal discussions centered on the challenges of the 21st century – be that old and new criticisms of global financial capitalism in crisis, new concepts of possible alternative ways of living together in urban space, the critical discussion on ethnic, gender, - or sexual discrimination, and the revenant ghost of nationalism – where instead of “alternative facts” they struggle to provide a scientific, rational basis for the relevant debates. Students will experience the relevance of scientific arguments for practical social issues and how scientific theory and research can be applied to social practice. It is supposed to reflect problems in contemporary societies’ and to flexibly adapt the dynamic nature of topics under debate.
The module is designed to match the specific demand of students, resulting from their interests, their specific career profiles, or new developments in science and society. Topics will be chosen flexibly, depending on current issues and, more importantly, students’ interest.</td></tr>
</table>

Intended Learning Outcomes

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

Discipline Specific Skills

- explain and critically apply key concepts of the social sciences relating to society, media and politics, identify and critically analyze complex social issues, develop critical faculties and an interdisciplinary perspective on social issues;
- learn about and apply quantitative and qualitative methods of empirical research in social science, and design an appropriate approach toward choosing methods for a research project.

Transferable and Key Skills

- apply media and communication skills in diverse and non-peer social contexts;
- work in a team and deal with diversity, develop communicative competence as well as cooperation and conflict resolution skills, strengthen empathy and tolerance of ambiguity;
- foster social responsibility of the students toward the societies they will soon be returning to, and explain the links between personal experience and social change.

Indicative Literature

Angrist, J. D. & Pischke, J.-S. (2009). Mostly harmless econometrics: An empiricists companion. Princeton, NJ: Princeton University Press.

Creswell, J. W. & Clark, V. L. P. (2017). Designing and conducting mixed methods research. London: Sage.

Dion, M. L. (2018). Gendered citation patterns across political science and social science methodology fields. Political Analysis, 26(3), 312-327.

Moullin, J. C., Dickson, K. S., Stadnick, N. A., Rabin, B., & Aarons, G. A. (2019). Systematic review of the Exploration, Preparation, Implementation, Sustainment (EPIS) framework. Implementation Science 14(1). Published online 05 January 2019.

Pearl, J., Glymour, M., & Jewell, N. P. (2016). Causal inference in statistics. A primer. Chichester: Wiley.

Usability and Relationship to other Modules

- This module is a mandatory-elective for SMP and ISCP major students in their third year of study.
- The module builds on the knowledge and skills acquired in the first two years of study.

Assessment

Type: (Research) Project (including research report on data collection and analysis, and an extended abstract).

Weight:100%

Scope: All intended learning outcomes of the module.

Module Name	***Module Code***	***Level (type)***	***CP***
Applying Social Science in Research	CA-S-SMP-802	Year 3 (CAREER - Specialization)	*5*

Module Components

Number	*Name*	*Type*	*CP*
CA-SMP-802	Applying Social Science in Research	Seminar	5

Module Coordinator	***Program Affiliation***	***Mandatory Status***
Hilke Brockmann	• Society, Media and Politics (SMP)	Mandatory elective for SMP, IRPH and ISCP

Entry Requirements			***Frequency***	
Pre-requisites	*Co-requisites*	*Knowledge, Abilities, or Skills*	Annually (Fall)	***Forms of Learning and Teaching***
☒ None	☒ None	• None		• Contact time (35 hours) • Private Study (90 hours)
			Duration	***Workload***
			1 semester	125 hours

Recommendations for Preparation

Study the syllabus thoroughly. Think about your studies so far: Which topics has interested you most, what "gets you going". Which methods were most fun for you to apply or study? Think of a broad topical field that would interest you most to do a study on and tell the other students about it in our first session.

Content and Educational Aims

This module aims at applying the theoretical and methodological potential that the students have acquired this far to current and ongoing socio-political debates of our time and training them to translate it into state-of-the-art research designs. Students are empowered to apply the skills they have acquired in the social sciences during their studies to a field of empirical research in the field of society, politics, or media. They are encouraged to find projects of their own interest and are professionally guided toward an efficient implementation of an adequate research design.
Social scientists are at the forefront of societal discussions centered on the challenges of the 21st century – be that old and new criticisms of global financial capitalism in crisis, new concepts of possible alternative ways of living together in urban space, the critical discussion on ethnic, gender, - or sexual discrimination, and the revenant ghost of nationalism – where instead of "alternative facts" they struggle to provide a scientific, rational basis for the relevant debates. Students will experience the relevance of scientific arguments for practical social issues and how scientific theory and research can be applied to social practice. It is supposed to reflect problems in contemporary societies' and to flexibly adapt the dynamic nature of topics under debate.
The module is designed to match the specific demand of students, resulting from their interests, their specific career profiles, or new developments in science and society. Topics will be chosen flexibly, depending on current issues and, more importantly, students' interest.

Intended Learning Outcomes

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

Discipline Specific Skills

- explain and critically apply key concepts of the social sciences relating to society, media and politics, identify and critically analyze complex social issues, develop critical faculties and an interdisciplinary perspective on social issues;
- learn about and apply quantitative and qualitative methods of empirical research in social science, and design an appropriate approach toward choosing methods for a research project.

Transferable and Key Skills

- apply media and communication skills in diverse and non-peer social contexts;
- work in a team and deal with diversity, develop communicative competence as well as cooperation and conflict resolution skills, strengthen empathy and tolerance of ambiguity;
- foster social responsibility of the students toward the societies they will soon be returning to, and explain the links between personal experience and social change.

Indicative Literature

Angrist, J. D. & Pischke, J.-S. (2009). Mostly harmless econometrics: An empiricists companion. Princeton, NJ: Princeton University Press.

Creswell, J. W. & Clark, V. L. P. (2017). Designing and conducting mixed methods research. London: Sage.

Dion, M. L. (2018). Gendered citation patterns across political science and social science methodology fields. Political Analysis, 26(3), 312-327.

Moullin, J. C., Dickson, K. S., Stadnick, N. A., Rabin, B., & Aarons, G. A. (2019). Systematic review of the Exploration, Preparation, Implementation, Sustainment (EPIS) framework. Implementation Science 14(1). Published online 05 January 2019.

Pearl, J., Glymour, M., & Jewell, N. P. (2016). Causal inference in statistics. A primer. Chichester: Wiley.

Usability and Relationship to other Modules

- This module is a mandatory-elective for SMP and ISCP major students in their third year of study.
- The module builds on the knowledge and skills acquired in the first two years of study.

Assessment

Type: (Research) Project (including research report on data collection and analysis, and an extended abstract).

Weight:100%

Scope: All intended learning outcomes of the module.

7.18 Life-span Developmental Neuroscience

Module Title	Life-span Developmental Neuroscience
Module Number	MPSY-ERG-01
CP	5
Workload	125 hours
Duration	1 semester
Frequency of Module Offer	Annually (Spring)
Program Affiliation	Master of Science in Psychologie
Mandatory Status	Mandatory for a Master in Psychologie, mandatory elective for the undergraduate program ISCP
Module Representative	Prof. Dr. Ben Godde
Content and Educational Aims	Aging is usually perceived to be associated with continuous decline of body and brain function. With regards to mental capacities this may lead to cognitive decline and finally dementia. Today we know that aging is a lifespan developmental process with gains and losses – even in brain functions and mental abilities. In this course students will learn about contemporary hypotheses on changes in brain structure and function related to adult age development and which behavioral consequences these changes have. Further, internal and external influencing factors as well as potential interventions for maintaining function into old age and for successful and productive aging are discussed.
Intended Learning Outcomes	By the end of this module, you will be able to: ▪ understand contemporary theories of brain and cognitive adult development and aging; ▪ differentiate between biological and psychological theories of aging and lifespan development; ▪ apply these theories to findings from current research studies in the field; ▪ describe and evaluate potential strategies and interventions for healthy and productive aging.
Literatur	Cabeza R, Nyberg L, Park D (Eds) (2010). Cognitive Neuroscience of Aging. Oxford: Oxford University Press. Craik FIM & Salthouse TA (2008). The handbook of aging and cognition. Abingdon: Psychol Press.
Assessment	Term paper: written summary and self-evaluation of the presentations in the context of the course, 3000 words Weight: 100% Scope: all intended learning outcomes of the module Module achievement: 2 presentations 25-30 minutes (not graded)

Entry Requirements	Pre-requisites	Passed module in Biological Psychology or equivalent from undergraduate studies
	Co-requisites	
	Knowledge, Skills and Competencies	Basic knowledge of the structure and function of the central nervous system.
Recommendations for Preparation	Cabeza R, Nyberg L, Park D (Eds) (2010). Cognitive Neuroscience of Aging. Oxford: Oxford University Press. Craik FIM & Salthouse TA (2008). The handbook of aging and cognition. Abingdon: Psychol Press.	
Forms of Learning and Teaching	▪ Seminar and lecture (35 hours) ▪ Private study (90 hours)	
Language of tuition	English	
Relationship to other Modules	Module of the module area 'Ergänzungsbereich' Mandatory elective for advanced (3rd year) undergraduate students in Psychology	

7.19 Internship / Startup and Career Skills

<table>
<tr><td colspan="2">Module Name
Internship / Startup and Career Skills</td><td>Module Code
CA-INT-900</td><td>Level (type)
Year 3
(CAREER)</td><td>CP
15</td></tr>
<tr><td colspan="5">Module Components

Number | Name | Type | CP
CA-INT-900-0 | Internship | Internship | 15</td></tr>
<tr><td>Module Coordinator

Predrag Tapavicki &
Christin Klähn (CSC Organization);
SPC / Faculty Startup Coordinator (Academic responsibility);</td><td colspan="2">Program Affiliation

• CAREER module for undergraduate study programs</td><td colspan="2">Mandatory Status

Mandatory for all undergraduate study programs except IEM</td></tr>
<tr><td colspan="2">Entry Requirements

Pre-requisites

☒ at least 15 CP from CORE modules in the major

Co-requisites

☒ None

Knowledge, Abilities, or Skills

• Information provided on CSC pages (see below)
• Major specific knowledge and skills</td><td>Frequency

Annually (Spring/Fall)

Duration
1 semester</td><td colspan="2">Forms of Learning and Teaching

• Internship/Start-up
• Internship event
• Seminars, info-sessions, workshops and career events
• Self-study, readings, online tutorials

Workload

375 Hours consisting of:
• Internship (308 hours)
• Workshops (33 hours)
• Internship Event (2 hours)
• Self-study (32 hours)</td></tr>
<tr><td colspan="5">Recommendations for Preparation

• Reading the information in the menu sections titled “Internship Information,” “Career Events,” “Create Your Application,” and “Seminars & Workshops” at the Career Services Center website: http://csc-microsite.user.jacobs-university.de/
• Completing all four online tutorials about job market preparation and the application process, which can be found here: http://csc-microsite.user.jacobs-university.de/create-your-application/tutorials/
• Participating in the internship events of earlier classes</td></tr>
<tr><td colspan="5">Content and Educational Aims

The aims of the internship module are reflection, application, orientation, and development: for students to reflect on their interests, knowledge, skills, their role in society, the relevance of their major subject to society, to apply these skills and this knowledge in real life whilst getting practical experience, to find a professional orientation, and to develop their personality and in their career. This module supports the programs’ aims of preparing students for gainful, qualified employment and the development of their personality.</td></tr>
</table>

The full-time internship must be related to the students' major area of study and extends lasts a minimum of two consecutive months, normally scheduled just before the 5th semester, with the internship event and submission of the internship report in the 5th semester. Upon approval by the SPC and CSC, the internship may take place at other times, such as before teaching starts in the 3rd semester or after teaching finishes in the 6th semester. The Study Program Coordinator or their faculty delegate approves the intended internship a priori by reviewing the tasks in either the Internship Contract or Internship Confirmation from the respective internship institution or company. Further regulations as set out in the Policies for Bachelor Studies apply.

Students will be gradually prepared for the internship in semesters 1 to 4 through a series of mandatory information sessions, seminars, and career events.
The purpose of the Career Services Information Sessions is to provide all students with basic facts about the job market in general, and especially in Germany and the EU, and services provided by the Career Services Center.
In the Career Skills Seminars, students will learn how to engage in the internship/job search, how to create a competitive application (CV, Cover Letter, etc.), and how to successfully conduct themselves at job interviews and/or assessment centers. In addition to these mandatory sections, students can customize their skill set regarding application challenges and their intended career path in elective seminars.
Finally, during the Career Events organized by the Career Services Center (e.g. the annual Jacobs Career Fair and single employer events on and off campus), students will have the opportunity to apply their acquired job market skills in an actual internship/job search situation and to gain their desired internship in a high-quality environment and with excellent employers.

As an alternative to the full-time internship, students can apply for the StartUp Option. Following the same schedule as the full-time internship, the StartUp Option allows students who are particularly interested in founding their own company to focus on the development of their business plan over a period of two consecutive months. Participation in the StartUp Option depends on a successful presentation of the student's initial StartUp idea. This presentation will be held at the beginning of the 4th semester. A jury of faculty members will judge the student's potential to realize their idea and approve the participation of the students. The StartUp Option is supervised by the Faculty StartUp Coordinator. At the end of StartUp Option, students submit their business plan. Further regulations as outlined in the Policies for Bachelor Studies apply.

The concluding Internship Event will be conducted within each study program (or a cluster of related study programs) and will formally conclude the module by providing students the opportunity to present on their internships and reflect on the lessons learned within their major area of study. The purpose of this event is not only to self-reflect on the whole internship process, but also to create a professional network within the academic community, especially by entering the Alumni Network after graduation. It is recommended that all three classes (years) of the same major are present at this event to enable networking between older and younger students and to create an educational environment for younger students to observe the "lessons learned" from the diverse internships of their elder fellow students.

Intended Learning Outcomes

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

- describe the scope and the functions of the employment market and personal career development;
- apply professional, personal, and career-related skills for the modern labor market, including self-organization, initiative and responsibility, communication, intercultural sensitivity, team and leadership skills, etc.;
- independently manage their own career orientation processes by identifying personal interests, selecting appropriate internship locations or start-up opportunities, conducting interviews, succeeding at pitches or assessment centers, negotiating related employment, managing their funding or support conditions (such as salary, contract, funding, supplies, work space, etc.);
- apply specialist skills and knowledge acquired during their studies to solve problems in a professional environment and reflect on their relevance in employment and society;
- justify professional decisions based on theoretical knowledge and academic methods;
- reflect on their professional conduct in the context of the expectations of and consequences for employers and their society;
- reflect on and set their own targets for the further development of their knowledge, skills, interests, and values;
- establish and expand their contacts with potential employers or business partners, and possibly other students and alumni, to build their own professional network to create employment opportunities in the future;
- discuss observations and reflections in a professional network.

Indicative Literature

Not specified

Usability and Relationship to other Modules

- Mandatory for a major in BCCB, CBT, CS, EES, GEM, IBA, IRPH, ISCP, Math, MCCB, Physics, RIS, and SMP.
- This module applies skills and knowledge acquired in previous modules to a professional environment and provides an opportunity to reflect on their relevance in employment and society. It may lead to thesis topics.

Assessment

Type: Internship Report or Business Plan and Reflection
Length: approx. 3.500 words
Scope: All intended learning outcomes
Weight: 100%

7.20 Bachelor Thesis and Seminar

<table>
<tr><td colspan="3">Module Name

Bachelor Thesis and Seminar</td><td>Module Code

CA-ISCP-800</td><td>Level (type)

Year 3
(CAREER)</td><td>CP

15</td></tr>
<tr><td colspan="6">Module Components

Number | Name | Type | CP
CA-ISCP-800-T | Thesis | Thesis | 12
CA-ISCP-800-S | Thesis Seminar | Seminar | 3</td></tr>
<tr><td>Module Coordinator

Study Program Chair</td><td colspan="3">Program Affiliation

• All undergraduate programs</td><td colspan="2">Mandatory Status

Mandatory for all undergraduate programs</td></tr>
<tr><td colspan="3">Entry Requirements

Pre-requisites

☒ Students must be in their third year and have taken at least 30 CP from CORE modules in their major.

Co-requisites

☒ None

Knowledge, Abilities, or Skills

• comprehensive knowledge of the subject and deeper insight into the chosen topic;
• ability to plan and undertake work independently;
• skills to identify and critically review literature.</td><td>Frequency

Annually (Spring)

Duration

1 semester</td><td colspan="2">Forms of Learning and Teaching

• Self-study/lab work (350 hours)
• Seminars (25 hours)

Workload

375 hours</td></tr>
<tr><td colspan="6">Recommendations for Preparation

• Identify an area or a topic of interest and discuss this with your prospective supervisor in a timely manner.
• Create a research proposal including a research plan to ensure timely submission.
• Ensure you possess all required technical research skills or are able to acquire them on time.
• Review the University's Code of Academic Integrity and Guidelines to Ensure Good Academic Practice.</td></tr>
</table>

Content and Educational Aims

This module is a mandatory graduation requirement for all undergraduate students to demonstrate their ability to address a problem from their respective major subject independently using academic/scientific methods within a set time frame. Although supervised, this module requires students to be able to work independently and systematically and set their own goals in exchange for the opportunity to explore a topic that excites and interests them personally and that a faculty member is interested in supervising. Within this module, students apply their acquired knowledge about their major discipline and their learned skills and methods for conducting research, ranging from the identification of suitable (short-term) research projects, preparatory literature searches, the realization of discipline-specific research, and the documentation, discussion, interpretation, and communication of research results.

This module consists of two components, an independent thesis and an accompanying seminar. The thesis component must be supervised by a Jacobs University faculty member and requires short-term research work, the results of which must be documented in a comprehensive written thesis including an introduction, a justification of the methods, results, a discussion of the results, and a conclusion. The seminar provides students with the opportunity to practice their ability to present, discuss, and justify their and other students' approaches, methods, and results at various stages of their research in order to improve their academic writing, receive and reflect on formative feedback, and therefore grow personally and professionally.

Intended Learning Outcomes

On completion of this module, students should be able to

1. independently plan and organize advanced learning processes;
2. design and implement appropriate research methods, taking full account of the range of alternative techniques and approaches;
3. collect, assess, and interpret relevant information;
4. draw scientifically-founded conclusions that consider social, scientific, and ethical factors;
5. apply their knowledge and understanding to a context of their choice;
6. develop, formulate, and advance solutions to problems and debates within their subject area, and defend these through argument;
7. discuss information, ideas, problems, and solutions with specialists and non-specialists.

Usability and Relationship to other Modules

- This module builds on all previous modules in the undergraduate program. Students apply the knowledge, skills, and competencies they have acquired and practiced during their studies, including research methods and their ability to acquire additional skills independently as and if required.

Assessment

Type: Thesis
Scope: All intended learning outcomes, mainly 1-6.
Weight: 80%

Length: approx. 6.000 – 8.000 words (15 – 25 pages), excluding front and back matter.

Type: Presentation

Duration: approx. 15 to 30 minutes
Weight: 20%

Scope: The presentation focuses mainly on ILOs 6 and 7, but by nature of these ILOs it also touches on the others.
Completion: To pass this module, both assessment components have to be passed.

Two separate assessments are justified by the size of this module and the fact that the justification of solutions to problems and arguments (ILO 6) and discussion (ILO 7) should at least have verbal elements. The weights of the types of assessments are commensurate with the sizes of the respective module components.

7.21 Jacobs Track Modules

7.21.1 Methods and Skills Modules

7.21.1.1 Academic Writing and Academic Skills

<table>
<tr><td colspan="2">Module Name

Academic Writing and Academic Skills</td><td>Module Code

JTMS-MET-01</td><td>Level (type)

Year 1 (Methods)</td><td>CP

5</td></tr>
<tr><td colspan="5">Module Components

Number | Name | Type | CP
JTMS-01 | Academic Writing and Academic Skills | Lecture/Tutorial | 5</td></tr>
<tr><td>Module Coordinator

Mandi Larsen</td><td colspan="2">Program Affiliation

• Jacobs Track – Methods and Skills</td><td colspan="2">Mandatory Status

Mandatory for ISCP, IRPH and SMP</td></tr>
<tr><td colspan="2">Entry Requirements

Pre-requisites
☒ None

Co-requisites
☒ None

Knowledge, Abilities, or Skills
• none</td><td>Frequency

Annually (Fall)

Duration

1 semester</td><td colspan="2">Forms of Learning and Teaching

• Lecture (20 hours)
• Tutorials (15 hours)
• Literature search and review (35 hours)
• Preparation of draft paper (35 hours)
• Peer review (10 hours)
• Revision of final paper (10 hours)

Workload

125 hours</td></tr>
<tr><td colspan="5">Recommendations for Preparation

None</td></tr>
<tr><td colspan="5">Content and Educational Aims

In this module, students acquire basic skills necessary for academic work and academic writing. The module introduces students to the differences between academic and non-academic sources, how to make use of online databases of academic literature, and how to properly conduct a literature search. Techniques will be demonstrated for the critical reading and understanding of academic sources (e.g., monographs, edited volumes, journal articles) necessary for their studies. The module also focuses on the fundamentals of academic writing, including the development of a clear thesis statement, organized structure, and rational argumentation. Students are presented with simple approaches to summarizing, paraphrasing, and synthesizing ideas and results found in academic social science literature. Additionally, students will acquire proficiency in citation and referencing rules, as well as style guides.</td></tr>
<tr><td colspan="5">Intended Learning Outcomes

By the end of this module, students should be able to:
• recognize the difference between academic and non-academic sources;
• conduct an academic literature review;
• successfully synthesize various academic sources to create a coherent argument;
• accurately apply citation and referencing rules;
• write a clearly structured and organized academic paper.</td></tr>
</table>

Indicative Literature

Spatt, B. (2016). Writing from sources. Boston, MA: Bedford/St. Martin's.

Bailey, S. (2006). Academic writing: A handbook for international students. New York, NY: Routledge.

Usability and Relationship to other Modules

- The module is a mandatory / mandatory elective module of the Methods and Skills area that is part of the Jacobs Track (Methods and Skills modules; Community Impact Project module; Language modules; Big Questions modules).
- This module lays the foundation for the entire period of study at Jacobs University, but is especially useful for modules with a specific focus on written work and for the Bachelor's Thesis.
- Mandatory for a major in ISCP, IRPH and SMP.
- Mandatory elective for a major in EES.
- Elective for all other study programs.

Assessment

Type: Term paper

Length: 3.000 words
Weight: 100%

Scope: Should demonstrate a clear mastery of skills related to academic work and writing. All of the above ILOs.

7.21.1.2 Data Collection and Empirical Research Methodologies

<table>
<tr><td colspan="2">Module Name
Data Collection and Empirical Research Methodologies</td><td>Module Code
JTMS-MET-06</td><td>Level (type)
Year 1 (Methods)</td><td>CP
5</td></tr>
<tr><td colspan="5">Module Components

Number | Name | Type | CP
JTMS-06 | Data Collection and Empirical Research Methodologies | Lecture | 5</td></tr>
<tr><td>Module Coordinator

Mandi Larsen</td><td colspan="2">Program Affiliation
• Jacobs Track – Methods and Skills</td><td colspan="2">Mandatory Status

Mandatory for IRPH, ISCP and SMP
Mandatory elective for IBA</td></tr>
<tr><td colspan="2">Entry Requirements

Pre-requisites
☒ None

Co-requisites
☒ None

Knowledge, Abilities, or Skills
• none</td><td>Frequency

Annually (Spring)

Duration

1 semester</td><td colspan="2">Forms of Learning and Teaching

• Lecture (35 hours)
• Reading and self-study (30 hours)
• Questionnaire construction and data collection (35 hours)
• Preparation of research report (25 hours)

Workload

125 hours</td></tr>
<tr><td colspan="5">Recommendations for Preparation</td></tr>
<tr><td colspan="5">Content and Educational Aims

How exactly does empirical research work? This module gives an overview of the basic concepts and strategies involved in conducting empirical research in the social sciences. Students learn about basic approaches towards research, such as quantitative and qualitative, basic and applied, descriptive and explanatory research, and about core concepts of empirical research such as research ethics, generating hypotheses and hypothesis testing, measurement, and evaluation criteria such as reliability and validity. The module shows how these concepts and ideas are applied in the context of various research techniques. Students will actively apply this knowledge to the context of survey research, which is presumably the most widespread mode of gathering data in the social sciences and adjacent disciplines. Students will be familiarized with diverse aspects of sampling strategies, developing state-of-the-art questionnaires, and conducting cutting-edge survey research. Questionnaire construction for different data-gathering modalities (paper-pencil, telephone, face-to-face, online) will be discussed, as will their utilization in diverse populations (different social groups, cultures and languages). Students will carry out small empirical survey research projects putting these skills into practice.</td></tr>
<tr><td colspan="5">Intended Learning Outcomes

By the end of this module, students should be able to
• describe basic concepts involved in conducting empirical research in the social sciences;
• outline the empirical research process;
• carry out a small research project from start to finish:
• formulate an empirical research question, as well as develop relevant hypotheses;
• address issues of random probability sampling;
• recognize issues related to various modes of data collection;
• construct a social science questionnaire;
• compose a first empirical research report.</td></tr>
</table>

Indicative Literature

Fowler, F. J. (2015). Survey research methods. Thousand Oaks, CA: Sage.

Neumann, W. (2014). Social research methods: Qualitative and quantitative approaches (7th International Edition). Harlow: Pearson.

Gray, D. E. (2014). Doing research in the real world (3rd edition). London: Sage.

Picardie, C. A. & Masick, K. D. (2014). Research methods: Designing and conducting research with a real-world focus. London: Sage.

Usability and Relationship to other Modules

- The module is a mandatory / mandatory elective module of the Methods and Skills area that is part of the Jacobs Track (Methods and Skills modules; Community Impact Project module; Language modules; Big Questions modules).
- This module builds on "Academic Writing and Academic Skills", where students gain critical skills related to academic writing, as well as to understanding empirical literature.
- This module prepares IBA students with an interest in consumer or firm-level research for their Bachelor Thesis.
- This module also provides students with a first opportunity to carry out their own data collection, which will be helpful for the Bachelor Thesis.
- Mandatory for a major in IRPH, ISCP and SMP.
- Mandatory elective for major in IBA
- Elective for all other study programs.

Assessment

Type: Research report Length: 2500-3000 words

Weight: 100%

Scope: Should demonstrate: (1) knowledge of the empirical research process and its key concepts; (2) ability to carry out a small empirical research project; and (3) ability to accurately report on the research process in writing. All intended learning outcomes of the module.

7.21.1.3 Qualitative Research Methods

<table>
<tr><td colspan="2">Module Name
Qualitative Research Methods</td><td>Module Code
JTMS-MET-04</td><td>Level (type)
Year 2 (Methods)</td><td>CP
5</td></tr>
<tr><td colspan="5">Module Components

Number | Name | Type | CP
JTMS-04 | Qualitative Research Methods | Lecture | 5</td></tr>
<tr><td>Module Coordinator

Margrit Schreier</td><td colspan="2">Program Affiliation

• Jacobs Track – Methods and Skills</td><td colspan="2">Mandatory Status

Mandatory for GEM, IBA, IRPH, ISCP, SMP
Mandatory elective for EES</td></tr>
<tr><td colspan="2">Entry Requirements

Pre-requisites
☒ None

Co-requisites
☒ None

Knowledge, Abilities, or Skills
• none</td><td>Frequency

Annually (Fall)

Duration

1 semester</td><td colspan="2">Forms of Learning and Teaching

• In-class contact time (35 hours)
• Private study (90 hours)

Workload

125 hours</td></tr>
<tr><td colspan="5">Recommendations for Preparation

Patton, Michael Quinn (2015). Qualitative evaluation and research methods (4th ed.). Thousand Oaks etc.: Sage, chapter 2</td></tr>
<tr><td colspan="5">Content and Educational Aims

Qualitative researchers explore the structure of everyday life and the meaning that events, other persons and their actions hold for us. To do so, they take an in-depth look at a few selected cases, such as organizations, campaigns, or people. We will look at the rationale and constructivist and interpretivist principles underlying qualitative research and from there move on to specific designs (such as grounded theory or ethnography), design principles (such as purposive strategies for selecting cases), and research methods. The focus of the module will be on learning about and trying out methods for collecting and analyzing qualitative data. Among methods for collecting qualitative data, relevant topics include semi-structured and narrative interviews, focus groups, observation, working with documents and with visual elements. Methods for analyzing qualitative data include, for example, coding, qualitative content analysis, discourse analysis, visual analysis, semiotics or iconography.
The module has a strong hands-on component. It is held in part as a seminar and in part as a lab where students apply the methods to data from their own fields of study. During the lab sessions, students are required to participate in and report on activities involving the application and testing of selected methods. For assessment and grading, students will carry out their own small research project, in which they bring to bear different methods to a topic of their choice.</td></tr>
<tr><td colspan="5">Intended Learning Outcomes

By the end of this module, students should be able to:
• explain the principles underlying qualitative research;
• apply basic qualitative approaches and designs;
• identify and address ethical issues arising in qualitative research;
• apply strategies for purposefully selecting participants and cases;
• apply methods for collecting qualitative data;
• apply methods for analyzing qualitative data;
• know what to look for in evaluating qualitative research.</td></tr>
</table>

Indicative Literature

Dresing, T., Pehl, T., & Schmieder, C. (2015). Manual (on) transcription. Transcription conventions, software guides, and practical hints for qualitative researchers. 3rd English edition. Marburg. Available under: http://www.audiotranskription.de/english/transcription-practicalguide.htm

Flick, U. (2018) (ed.). The SAGE handbook of qualitative data collection. Los Angeles, CA: Sage.

Flick, U. (2019). Introduction to qualitative research. 6th edition. London etc.: Sage.

Patton, M.Q. (2015). Qualitative evaluation and research methods. 4th edition. Thousand Oaks etc.: Sage.

Rose, G. (2016). Visual methodologies. 4th edition. London: Sage.

Usability and Relationship to other Modules

- The module is a mandatory / mandatory elective module of the Methods and Skills area that is part of the Jacobs Track (Methods and Skills modules; Community Impact Project module; Language modules; Big Questions modules).
- Complements Method and Skills module Data Collection and Empirical Research Methodologies.
- This module prepares students for the GEM and IBA 2nd year module on organization and HRM as well as Marketing, the GEM 3rd year module on public and nonprofit management, the IBA 3rd year module on Contemporary Topics in Marketing, and the thesis.
- Mandatory for a major in GEM, IBA IRPH, ISCP, SMP.
- Mandatory elective for a major in EES.
- Elective for all other study programs.

Assessment

Type: Research project (including abstract, ethics statement, and lab report on methods implementation, findings, and evaluation)
Length: 5.000 words (for groups of three students)
Weight: 100%

Scope: All intended learning outcomes of the module.

7.21.1.4 Applied Statistics with SPSS

<table>
<tr><td colspan="3">Module Name
Applied Statistics with SPSS</td><td></td><td>JTMS-MET-02</td><td>Level (type)
Year 1
(Methods)</td><td>CP
5</td></tr>
<tr><td colspan="7">Module Components

Number | Name | Type | CP
JTMS-02 | Applied Statistics with SPSS | Lecture / Lab | 5</td></tr>
<tr><td colspan="2">Module Coordinator

Klaus Boehnke</td><td colspan="3">Program Affiliation

• Jacobs Track – Methods and Skills</td><td colspan="2">Mandatory Status

Mandatory elective for IBA, SMP, ISCP and IRPH</td></tr>
<tr><td colspan="3">Entry Requirements

Pre-requisites
☒ None

Co-requisites
☒ None

Knowledge, Abilities, or Skills
• none</td><td>Frequency

Annually
(Spring)</td><td colspan="2">Forms of Learning and Teaching

• Lecture (17.5 hours)
• Lab (17.5 hours)
• self-study (55 hours)
• Preparation of in-class presentation (35 hours)</td></tr>
<tr><td colspan="3"></td><td>Duration

1 semester</td><td colspan="2">Workload

125 hours</td></tr>
<tr><td colspan="7">Recommendations for Preparation

None</td></tr>
<tr><td colspan="7">Content and Educational Aims

The module offers insights into quantitative methods of social science research and beyond. Students are familiarized with statistical concepts of basic and intermediate complexity. They examine their potential as well as limitations. Students gain knowledge about hypothesis testing for differences in the central tendencies of variables assessed in two or more groups, about bivariate correlations and—simple and multiple—regression. Approaches to finding patterns in social science data will be introduced; alternatives for non-metric, non-normal data will be discussed. The module takes a 'cookbook approach', to statistical methods. This means that it conveys how statistical tests are performed and how results are interpreted in the social sciences and beyond, while not requiring students to delve deeply into the mathematical foundations of applied statistics. The material will be presented in more traditional lectures and highly interactive practical labs. During the practical sessions, the tools and concepts discussed during the lecture sessions are applied to data obtained via a survey amongst participants and to 'real' datasets obtained in research projects of the methods section of the Department of Psychology & Methods. By attending the module, students will receive a basic training in the statistics software SPSS and develop proficiency in using SPSS as a social science research tool.</td></tr>
<tr><td colspan="7">Intended Learning Outcomes

By the end of this module, students should be able to:
• explain the potential of using quantitative methods in the social sciences;
• express informed skepticism to the limitations of statistical reasoning in the social sciences;
• interpret, within limits, the results sections of reports of empirical social science research;
• perform simple and intermediate-level statistical analyses of social science data, using SPSS;
• show flexibility in interpreting SPSS output, generated for unknown datasets, obtained from open access sources.</td></tr>
<tr><td colspan="7">Indicative Literature

Bryman, A. & Cramer, D. (2011). Quantitative data analysis with IBM SPSS. London: Routledge.</td></tr>
</table>

Field, A. (2017). Discovering statistics using IBM SPSS Statistics. London: Sage.

George, D. & Mallery, P. (2019). IBM SPSS Statistics 26 step by step. A simple guide and reference. London: Routledge.

Hinton, P., McMurray, I., & Brownlow, C. (2014). SPSS explained. London: Routledge.

Pollock III, P.H. (2019). An IBM SPSS companion to political Analysis. London: Sage.

Usability and Relationship to other Modules

- The module is a mandatory / mandatory elective module of the Methods and Skills area that is part of the Jacobs Track (Methods and Skills modules; Community Impact Project module; Language modules; Big Questions modules).
- Mandatory elective for a major in IBA, IRPH, ISCP and SMP
- Elective for all other study programs.
- Quantitative analytical skills are used and needed in many modules of all study programs.
- This module prepares students in IBA for the analysis of data in the 2nd year modules International Strategic Management and Marketing and the 3rd year module Contemporary Topics in Marketing and the thesis

Assessment

Type: Written examination — Duration: 120 min
Weight: 100%

During the examination students use of the software SPSS as an auxiliary resource approved by the Instructor of Record.

Scope: All intended learning outcomes of the module.

7.21.1.5 Applied Statistics with R

<table>
<tr><td colspan="2">Module Name
Applied Statistics with R</td><td>Module Code
JTMS-MET-03</td><td>Level (type)
Year 1 (Methods)</td><td>CP
5</td></tr>
<tr><td colspan="5">Module Components

Number | Name | Type | CP
JTMS-03 | Applied Statistics with R | Lecture & Lab | 5</td></tr>
<tr><td>Module Coordinator

Adalbert Wilhelm</td><td colspan="2">Program Affiliation

• Jacobs Track – Methods and Skills</td><td colspan="2">Mandatory Status

Mandatory for GEM and IEM, Mandatory elective for SMP, IBA, ISCP, IRPH</td></tr>
<tr><td colspan="3" rowspan="2">Entry Requirements

Pre-requisites | Co-requisites | Knowledge, Abilities, or Skills
☒ None | ☒ None | • none</td><td>Frequency

Annually (Spring)</td><td>Forms of Learning and Teaching

• Lecture (17.5 hours)
• Lab (17.5 hours)
• Homework and self-study (90 hours)</td></tr>
<tr><td>Duration

1 semester</td><td>Workload

125 hours</td></tr>
<tr><td colspan="5">Recommendations for Preparation
Get acquainted to statistical thinking by watching online videos for introductory probability and statistics as well as paying attention whenever arguments are backed up by empirical data.</td></tr>
<tr><td colspan="5">Content and Educational Aims

We live in a world full of data and more and more decisions are taken based on a comprehensive analysis of data. A central method of data analysis is the use of models describing the relationship between a set of predictor variables and a response. This module provides a thorough introduction to quantitative data analysis covering graphical representations, numerical summary statistics, correlation, and regression models. The module also introduces the fundamental concepts of statistical inference. Students learn about the different data types, how to best visualize them and how to draw conclusions from the graphical representations. Students will learn in this module the ideas and techniques of regression models within the generalized linear model framework involving multiple predictors and co-variates. Students will learn how to become an intelligent user of statistical techniques from a prosumers perspective to assess the quality of presented statistical results and to produce high-quality analyses by themselves. By using illustrative examples from economics, engineering, and the natural and social sciences students will gain the relevant background knowledge for their specific major as well as an interdisciplinary glimpse of other research fields. The general objective of the module is to enable students to become skilled statistical modelers who are well versed in the various assumptions, limitations, and controversies of statistical models and their application. Regular exercises and practical sessions will corroborate the students' proficiency with the statistical software R.</td></tr>
<tr><td colspan="5">Intended Learning Outcomes

By the end of this module, students should be able to:
• apply basic techniques in statistical modeling and quantitative research methods
• describe fundamental statistical concepts, procedures, their assumptions and statistical fallacies
• explain the potential of using quantitative methods in all fields of applications;
• express informed skepticism of the limitations of statistical reasoning;
• interpret statistical modeling results in scientific publications;
• perform basic and intermediate-level statistical analyses of data, using R.</td></tr>
<tr><td colspan="5">Indicative Literature

Michael J. Crawley (2013). The R Book, Second Edition. Hoboken: John Wiley & Sons.

Peter Daalgard (2008). Introductory Statistics with R. Berlin: Springer.</td></tr>
</table>

John Maindonald, W. John Braun (2010). Data Analysis and Graphics Using R – an Example-Based Approach, Third Edition, Cambridge Series. In *Statistical and Probabilistic Mathematics*. Cambridge: Cambridge University Press.

Christopher Gandrud (2015). Reproducible Research with R and RStudio, Second Edition. The R Series, Chapman & Hall/CRC Press.

Randall E. Schumacker (2014). Learning Statistics Using R. Thousand Oaks: Sage.

Charles Wheelan (2013). Naked Statistics: Stripping the Dread from The Data. New York: W.W. Norton & Company.

Usability and Relationship to other Modules

- The module is a mandatory / mandatory elective module of the Methods and Skills area that is part of the Jacobs Track (Methods and Skills modules; Community Impact Project module; Language modules; Big Questions modules).
- Quantitative analytical skills are used and needed in many modules of all study programs.
- Pre-requisite for Econometrics.
- This module introduces students to R in preparation for the 2nd year mandatory method module on econometrics and 3rd year GEM module on advanced econometrics; the statistics skills prepare students for all 2nd and 3rd year GEM modules and the thesis.
- Mandatory for a major in GEM and IEM.
- Mandatory elective for a major in IBA, IRPH, ISCP and SMP
- Elective for all other study programs.

Assessment

Type: Written examination Duration: 120 min
Weight: 100%

During the examination students use the software R as an auxiliary resource approved by the Instructor of Record.

Scope: All intended learning outcomes of the module.

7.21.1 Big Questions Modules

7.21.1.1 Digitalization: Challenges and Opportunities for Business and Society

<table>
<tr><td colspan="3">Module Name
Big Questions: Digitalization: Challenges and Opportunities for Business and Society</td><td>Module Code
JTBQ-01</td><td>Level (type)
Year 3 (Jacobs Track)</td><td>CP
5</td></tr>
<tr><td colspan="6">Module Components

Number | Type | CP
JTBQ-01 | Digitalization: challenges and opportunities for business and society | Lecture/Projects | 5</td></tr>
<tr><td>Module Coordinator

Adalbert Wilhelm</td><td colspan="3">Program Affiliation

• Big Questions Area: All undergraduate study programs, except IEM</td><td colspan="2">Mandatory Status

• Mandatory elective for students of all undergraduate study programs except IEM</td></tr>
<tr><td colspan="3">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</td><td>Frequency

Annually (Fall)

Duration

1 semester</td><td colspan="2">Forms of Learning and Teaching

• Lectures (17.5 hours)
• Project work (90 hours)
• Private study (17.5 hours)

Workload
125 hours</td></tr>
<tr><td colspan="6">Recommendations for Preparation

Critically following media coverage on the module's topics in question.</td></tr>
<tr><td colspan="6">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. BQ modules intend to raise awareness of those challenges and broaden students' horizons with applied problem solving beyond the borders of their own disciplines. Knowledge and skills offered in the interdisciplinary BQ modules support students in their development to become informed and responsible citizens in a global society.
Digitalization is currently one of the major drivers of change 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. Furthermore, big data is a buzz word for the digitalization process: the massive storage and analysis of the comprehensive information of customers and citizens instill both hope and fear in 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 one end, and irrelevance and narcissism on the other. Technological research quite naturally is mostly concerned with the technical feasibility of different 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 of digitalization by observing it from various aspects, primarily a business and societal point of view. There will be fundamental exposure to the technological side of digitalization only as it is needed for assessing implications for society and business.</td></tr>
</table>

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 factual and methodological knowledge to reflect on interdisciplinary questions by comparing approaches from various disciplines;
- summarize and evaluate the current debate about big data, and the pros and cons, from both a business perspective as well as a societal perspective;
- prioritize the major threats and opportunities from 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 it in a suitable reporting format;
- overcome general teamwork problems in order to perform well-organized project work.

Indicative Literature

Howard Baldwin (2015, February). What would Orwell and Huxley think about Big Data?. Retrieved from http://www.forbes.com/sites/howardbaldwin/2015/02/22/ what-would-orwell-and-huxley-think-about-big-data/ .

Thomas H. Davenport (2014). Big data at work: dispelling the myths, uncovering the opportunities. Brighton: Harvard Business School Publishing.

Kord Davis (2012). Ethics of big data: balancing risk and innovation. Newton: O'Reilly.

Spyros Makridakis (2017). The forthcoming Artificial Intelligence (AI) revolution: Its impact on society and firms. In *Futures, Vol 90, pp 46-60.*

Eric Schmidt and Jared Cohen (2013). The New Digital Age: Reshaping the Future of People, Nations and Business. New York: Knopf Publishing Group.

Usability and Relationship to other Modules

- The module is a mandatory elective module in 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 their knowledge and competencies to class discussions and activities.

Assessment

Type: Team project Weight: 100%
Scope: All intended learning outcomes of the module

7.21.1.2 Water: The Most Precious Substance on Earth

<table>
<tr><td colspan="3">Module Name
Big Questions: Water: The Most Precious Substance on Earth</td><td>Module Code
JTBQ-02</td><td>Level (type)
Year 3 (Jacobs Track)</td><td>CP
5</td></tr>
<tr><td colspan="6">Module Components

Number | Name | Type | CP
JTBQ-02 | Water: The Most Precious Substance on Earth | Lecture/Tutorial | 5</td></tr>
<tr><td>Module Coordinator

M. Bau and D. Mosbach</td><td colspan="3">Program Affiliation

• Big Questions Area: All undergraduate study programs except IEM</td><td colspan="2">Mandatory Status

• Mandatory elective for students of all undergraduate study programs, except IEM</td></tr>
<tr><td colspan="3">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</td><td>Frequency

Annually (part I: Fall; part II: Spring)

Duration

2 semesters</td><td colspan="2">Forms of Learning and Teaching

• Lectures (17.5 hours)
• Project work (90 hours)
• Private study (17.5 hours)

Workload

125 hours</td></tr>
<tr><td colspan="6">Recommendations for Preparation

Critically following media coverage on the module's topics in question.</td></tr>
<tr><td colspan="6">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. BQ modules intend to raise awareness of those challenges and broaden students' horizons with applied problem solving beyond the borders of their own disciplines. Knowledge and skills offered in the interdisciplinary BQ modules support students in their development to become informed and responsible citizens in a global society.
Water is the basic prerequisite for life on our planet, but it has become a scarce resource and a valuable commodity. Water is of fundamental importance to the world's economy and global food supply, in addition to being a driving force behind geopolitical conflict. In this module, the profound impact of water on all aspects of human life will be addressed from very different perspectives: from the natural and environmental sciences and engineering, and from the social and cultural sciences.
Following topical lectures in the Fall semester, students will work on projects on the occasion of the World Water Day (March 22) in small teams comprised of students from various disciplines and with different cultural backgrounds. This teamwork will be accompanied by related tutorials.</td></tr>
<tr><td colspan="6">Intended Learning Outcomes

Students acquire transferable and key skills in this module.

By the end of this module, students will be able to</td></tr>
</table>

- use their disciplinary factual and methodological knowledge to reflect on interdisciplinary questions by comparing approaches from various disciplines;
- advance a knowledge-based opinion on the complex module topics: on the physio-chemical properties of water, its origin and history, on the importance of water as a resource, on physical and economic freshwater scarcity, on the risks of water pollution and the challenges faced by waste water treatment, on the concept of virtual water, on the bottled water industry, and on the cultural values and meanings of water;
- formulate coherent written and oral contributions (e.g., to panel discussions) on the topic;
- perform well-organized teamwork;
- present a self-designed project in a university-wide context.

Indicative Literature

Finney, John (2015). Water. A Very Short Introduction. Oxford: Oxford University Press.

Zetland, David (2011). The End of Abundance: Economic Solutions to Water Scarcity. California: Aguanomics Press.

United Nation (January 2016): Sustainable Development Goals. Retrieved from https://www.un.org/sustainabledevelopment/sustainable-development-goals

Usability and Relationship to other Modules

- This module is a mandatory elective module in the Big Questions area, which 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 their knowledge and competencies to class discussions and activities.

Assessment

Type: Written examination — Duration: 60 min
Weight: 50%

Type: Team project — Weight: 50%

Scope: All intended learning outcomes of the module
Completion: This module is passed with a weighted average grade of 45% or higher.

7.21.1.3 Ethics in Science and Technology

<table>
<tr><td colspan="2">Module Name
Big Questions: Ethics in Science and Technology</td><td>Module Code
JTBQ-03</td><td>Level (type)
Year 3 (Jacobs Track)</td><td>CP
5.0</td></tr>
<tr><td colspan="5">Module Components

Number | Name | Type | CP
JTBQ-03 | Ethics in Science and Technology | Lecture /Projects | 5.0</td></tr>
<tr><td>Module Coordinator

A. Lerchl</td><td colspan="2">Program Affiliation

• Big Questions Area: All undergraduate study programs, except IEM</td><td colspan="2">Mandatory Status

• Mandatory for CBT
• Mandatory elective for students of all undergraduate study programs, except IEM</td></tr>
<tr><td colspan="2">Entry Requirements

Pre-requisites

☒ None</td><td>Co-requisites

☒ None</td><td>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</td><td>Frequency

Each semester (Fall & Spring)

Duration

1 semester</td><td>Forms of Learning and Teaching

• Lectures (35 hours)
• Project work (55 hours)
• Private study (35 hours)

Workload

125 hours</td></tr>
<tr><td colspan="5">Recommendations for Preparation

Critically following media coverage of the scientific topics in question.</td></tr>
<tr><td colspan="5">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. BQ modules intend to raise awareness of those challenges and broaden students’ horizons with applied problem solving that extends beyond the borders of their own disciplines. Knowledge and skills offered in the interdisciplinary BQ modules support students in their development to become informed and responsible citizens in a global society.
Ethics is an often neglected, yet essential part of science and technology. Our decisions about right and wrong influence the way in which our inventions and developments change the world. A wide array of examples will be presented and discussed, e.g., the foundation of ethics, individual vs. population ethics, artificial life, stem cells, animal rights, abortion, pre-implantation diagnostics, legal and illegal drugs, the pharmaceutical industry, gene modification, clinical trials and research with test persons, weapons of mass destruction, data fabrication, and scientific fraud.</td></tr>
</table>

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 explain ethical principles;
- critically look at scientific results that seem too good to be true;
- apply the ethical concepts to virtually all areas of science and technology;
- discover the responsibilities of society and of the individual for ethical standards;
- understand and judge the ethical dilemmas in many areas of the daily life;
- discuss the ethics of gene modification at the level of cells and organisms;
- reflect on and evaluate clinical trials in relation to the Helsinki Declaration;
- distinguish and evaluate the ethical guidelines for studies with test persons;
- complete a self-designed project;
- overcome general teamwork problems;
- perform well-organized project work.

Indicative Literature

Not specified.

Usability and Relationship to other Modules

- Mandatory for CBT
- This module is a mandatory elective module in 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 their knowledge and competencies to class discussions and activities.

Assessment

Type: Written examination Duration: 60 min

Weight: 50%

Type: Team project Weight: 50%

Scope: All intended learning outcomes of the module
Completion: This module is passed with a weighted average grade of 45% or higher.

7.21.1.4 Global Health – Historical context and future challenges

<table>
<tr><td colspan="2">Module Name
Big Questions: Global Health – Historical context and future challenges</td><td>Module Code
JTBQ-04</td><td>Level (type)
Year 3 (Jacobs Track)</td><td>CP
5</td></tr>
<tr><td colspan="5">Module Components

Number | Name | Type | CP
JTBQ-04 | Global Health – Historical context and future challenges | Lecture | 5</td></tr>
<tr><td>Module Coordinator

A. M. Lisewski</td><td colspan="2">Program Affiliation

• Big Questions Area: All undergraduate study programs, except IEM</td><td colspan="2">Mandatory Status

• Mandatory elective for students of all undergraduate study programs, except IEM</td></tr>
<tr><td colspan="2">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</td><td>Frequency

Annually (Spring)

Duration

1 semester</td><td colspan="2">Forms of Learning and Teaching

• Lectures (35 hours)
• Private study (90 hours)

Workload

125 hours</td></tr>
<tr><td colspan="5">Recommendations for Preparation

Critically following media coverage on the module's topics in question.</td></tr>
<tr><td colspan="5">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. BQ modules intend to raise awareness of those challenges and broaden students' horizons with applied problem solving beyond the borders of their own disciplines. Knowledge and skills offered in the interdisciplinary BQ modules support students in their development to become informed and responsible citizens in a global society.
This module gives a historical, societal, technical, scientific, and medical overview of the past and future milestones and challenges of global health. Particular focus is put on future global health issues in a world that is interconnected both through mobility and communication networks. This module presents 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 the economy. Focus is given to pediatric, maternal, and adolescent health, as these are the areas most critical to the well-being of future generations. This module also provides key concepts in global health, epidemiology, and demographics, such as the connection between a society's economic level and its population's health status, measures of health status, demographic and epidemiologic transitions, and modern issues such as the growing fragmentation (at a personal level) of disease conditions and the resulting emergence of personalized medicine. Finally, attention is also given to less publicly prominent global health issues, such as re-emerging diseases, neglected tropical diseases, and complex humanitarian crises.</td></tr>
</table>

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 current global health surveillance, response systems, and institutions;
- discuss and evaluate the imminent and future challenges to public hygiene and response to disease outbreaks in the context of a global societal network.

Indicative Literature

Richard Skolnik (2015). Global Health 101 (Essential Public Health). Burlington: Jones and Bartlett Publishers, Inc.

Usability and Relationship to other Modules

- The module is a mandatory elective module in the Big Questions area, which 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 their knowledge and competencies to class discussions and activities.

Assessment

Type: Written examination — Duration: 60 min.
Scope: All intended learning outcomes of the module — Weight: 100%

7.21.1.5 Global Existential Risks

<table>
<tr><td colspan="2">Module Name
Big Questions: Global Existential Risks</td><td>Module Code
JTBQ-05</td><td>Level (type)
Year 3 (Jacobs Track)</td><td>CP
2.5</td></tr>
<tr><td colspan="5">Module Components

Number | Name | Type | CP
JTBQ-05 | Global Existential Risks | Lecture | 2.5</td></tr>
<tr><td>Module Coordinator

M. A. Lisewski</td><td colspan="2">Program Affiliation

• Big Questions Area: All undergraduate study programs except IEM</td><td colspan="2">Mandatory Status

• Mandatory elective for students of all undergraduate study programs except IEM</td></tr>
<tr><td colspan="2">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</td><td>Frequency

Annually (Spring)

Duration

1 semester</td><td colspan="2">Forms of Learning and Teaching

• Lectures (17.5 hours)
• Private study (45 hours)

Workload

62.5 hours</td></tr>
<tr><td colspan="5">Recommendations for Preparation

Critically following media coverage on the module's topics in question.</td></tr>
<tr><td colspan="5">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. BQ modules intend to raise awareness of those challenges and broaden students' horizons with applied problem solving beyond the borders of their own disciplines. Knowledge and skills offered in the interdisciplinary BQ modules support students in their development to become informed and responsible citizens in a global society.
The more we develop science and technology, the more we also learn about catastrophic and, in the worst case, even existential global dangers that put the entire human civilization at risk of collapse. These doomsday scenarios therefore directly challenge humanity's journey through time as an overall continuous and sustainable process that progressively leads to a more complex but still largely stable human society. The module presents the main known varieties of existential risks, including, for example, astrophysical, planetary, biological, and technological events or critical transitions that have the capacity to severely damage or even eradicate earth-based human civilization as we know it. Furthermore, this module offers a description of the characteristic features of these risks in comparison to more conventional risks, such as natural disasters, and a classification of global existential risks based on parameters such as range, intensity, probability of occurrence, and imminence. Finally, this module reviews several hypothetical monitoring and early warning systems as well as analysis methods that could potentially be used in strategies, if not to eliminate, then at least to better understand and ideally to minimize imminent global existential risks. This interdisciplinary module will allow students to explore this topic across diverse subject fields.</td></tr>
<tr><td colspan="5">Intended Learning Outcomes

Students acquire transferable and key skills in this module.</td></tr>
</table>

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

- use their factual and methodological knowledge to reflect on interdisciplinary questions by comparing approaches from various disciplines;
- explain the varieties of global existential risks;
- discuss approaches to minimize these risks;
- formulate coherent written and oral contributions on this topic.

Indicative Literature

Nick Bostrom, Milan M. Cirkovic (eds.) (2011). Global Catastrophic Risk.Oxford: Oxford University Press.

Murray Shanahan (2015). The Technological Singularity. Cambridge:The MIT Press.

Martin Rees (2003) Our Final Hour. New York: Basic Books.

Usability and Relationship to other Modules

- This module is a mandatory elective module in the Big Questions area, which 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 their knowledge and competencies to class discussions and activities.

Assessment

Type: Written examination — Duration: 60 min.
Scope: All intended learning outcomes of the module — Weight: 100%

7.21.1.6 Future - From Predictions and Visions to Preparations and Actions

<table>
<tr><td colspan="2">Module Name
Big Questions: Future: From Predictions and Visions to Preparations and Actions</td><td>Module Code
JTBQ-06</td><td>Level (type)
Year 3 (Jacobs Track)</td><td>CP
2.5</td></tr>
<tr><td colspan="5">Module Components
Number | Name | Type | CP
JTBQ-06 | Future: From Predictions and Visions to Preparations and Actions | Lecture | 2.5</td></tr>
<tr><td>Module Coordinator
Joachim Vogt</td><td colspan="2">Program Affiliation
• Big Questions Area: All undergraduate study programs, except IEM</td><td colspan="2">Mandatory Status
• Mandatory elective for students of all undergraduate study programs, except IEM</td></tr>
<tr><td colspan="3">Entry Requirements
Pre-requisites | Co-requisites | Knowledge, Abilities, or Skills
☒ None | ☒ None
• The ability and openness to engage in interdisciplinary issues of global relevance
• Media literacy, critical thinking, and a proficient handling of data sources</td><td>Frequency
Annually (Fall)

Duration
1 semester</td><td colspan="2">Forms of Learning and Teaching
• Lecture (17.5 hours)
• Private study (45 hours)

Workload
62.5 hours</td></tr>
<tr><td colspan="5">Recommendations for Preparation
Critically following media coverage of the module's topics in question.</td></tr>
<tr><td colspan="5">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. BQ modules intend to raise awareness of those challenges and broaden students' horizons with applied problem solving that extend beyond the borders of their own disciplines. Knowledge and skills offered in the interdisciplinary BQ modules support students in their development to become informed and responsible citizens in a global society.
This module addresses selected topics related to the future as a general concept in science, technology, culture, literature, ecology, and economy, and it consists of three parts. The first part (Future Continuous) discusses forecasting methodologies rooted in the idea that key past and present processes are understood and continue to operate such that future developments can be predicted. General concepts covered in this context include determinism, uncertainty, evolution, and risk. Mathematical aspects of forecasting are also discussed. The second part (Future Perfect) deals with human visions of the future as reflected in the arts and literature, ranging from ideas of utopian societies and technological optimism to dystopian visions in science fiction. The third part (Future Now) concentrates on important current developments—such as trends in technology, scientific breakthroughs, the evolution of the Earth system, and climate change—and concludes with opportunities and challenges for present and future generations.</td></tr>
</table>

Intended Learning Outcomes

Students acquire transferable and key skills in this module.

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

- use their factual and methodological knowledge to reflect on interdisciplinary questions by comparing approaches from various disciplines;
- distinguish and qualify important approaches to forecasting and prediction;
- summarize the history of utopias, dystopias, and the ideas presented in classical science fiction;
- characterize current developments in technology, ecology, society, and their implications for the future.

Indicative Literature

United Nations (2015, September) Millennium Development Goals. Retrieved from http://www.un.org/millenniumgoals.
United Nation (2016, January): Sustainable Development Goals. Retrieved from https://www.un.org/sustainabledevelopment/sustainable-development-goals
United Nations University. https://unu.edu.
US National Intelligence Council (2017). Global Trends. Retrieved from https://www.dni.gov/index.php/global-trends-home.
International Panel on Climate Change. Retrieved from https://www.ipcc.ch.
World Inequality Lab (2017, December). World Inequality Report 2018. Retrieved from https://wir2018.wid.world.
World Health Organization. Retrieved from http://www.who.int.
World Trade Organization. Retrieved from *https://www.wto.org*
Gapminder. Retrieved from https://www.gapminder.org.
World Bank. Retrieved from http://www.worldbank.org.

Usability and Relationship to other Modules

- This module is a mandatory elective module in the Big Questions area, which 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 their knowledge and competencies to class discussions and activities.

Assessment

Type: Written examination

Duration: 60 min
Weight: 100%

Scope: All intended learning outcomes of the module

7.21.1.7 Climate Change

<table>
<tr><td colspan="2">Module Name
Big Questions: Climate Change</td><td>Module Code
JTBQ-07</td><td>Level (type)
Year 3 (Jacobs Track)</td><td>CP
2.5</td></tr>
<tr><td colspan="5">Module Components
Number | Name | Type | CP
JTBQ-07 | Climate Change | Lecture | 2.5</td></tr>
<tr><td>Module Coordinator
L. Thomsen/
V. Unnithan</td><td colspan="2">Program Affiliation
• Big Questions Area: All undergraduate study programs, except IEM</td><td colspan="2">Mandatory Status
• Mandatory elective for students of all undergraduate study programs, except IEM</td></tr>
<tr><td colspan="3">Entry Requirements
Pre-requisites | Co-requisites | Knowledge, Abilities, or Skills
☒ None | ☒ None
• The ability and openness to engage in interdisciplinary issues of global relevance
• Media literacy, critical thinking, and a proficient handling of data sources</td><td>Frequency
Annually (Spring)

Duration
1 semester</td><td colspan="2">Forms of Learning and Teaching
• Lecture (17.5 hours)
• Private study (45 hours)

Workload
62.5 hours</td></tr>
<tr><td colspan="5">Recommendations for Preparation
Critically following media coverage of the module's topics in question.</td></tr>
<tr><td colspan="5">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. BQ modules intend to raise awareness of those challenges and broaden students' horizon with applied problem solving beyond the borders of their own disciplines. Knowledge and skills offered in the interdisciplinary BQ modules support students in their development to become informed and responsible citizens in a global society.
This module will give a brief introduction into the development of the atmosphere throughout Earth's history from the beginning of the geological record up to modern times, and will focus on geological, cosmogenic, and anthropogenic changes. Several major events in the evolution of the Earth that had a major impact on climate will be discussed, such as the evolution of an oxic atmosphere and ocean, the onset of early life, snowball Earth, and modern glaciation cycles. In the second part, the module will focus on the human impact on present climate change and global warming. Causes and consequences, including case studies and methods for studying climate change, will be presented and possibilities for climate mitigation (geo-engineering) and adapting our society to climate change (such as coastal protection and adaption of agricultural practices to more arid and hot conditions) will be discussed.</td></tr>
<tr><td colspan="5">Intended Learning Outcomes
Students acquire transferable and key skills in this module.

By the end of this module, students should be able to</td></tr>
</table>

- use their disciplinary factual and methodological knowledge to reflect on interdisciplinary questions by comparing approaches from various disciplines;
- advance a knowledge-based opinion on the complex module topics, including: impact of climate change on the natural environment over geological timescales and since the industrial revolution, and the policy framework in which environmental decisions are made internationally;
- work effectively in a team environment and undertake data interpretation;
- discuss approaches to minimize habitat destruction.

Indicative Literature

The course is based on a self-contained, detailed set of online lecture notes.

Ruddiman, William F. Earth's Climate (2001). Past and future. New York: Macmillan.

Usability and Relationship to other Modules

- This module is a mandatory elective module in the Big Questions area, which 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 their knowledge and competencies to class discussions and activities.

Assessment

Type: Written examination — Duration: 60 min.
Scope: All intended learning outcomes of the module — Weight: 100%

7.21.1.8 Extreme Natural Hazards, Disaster Risks, and Societal Impact

<table>
<tr><td colspan="3">Module Name
Big Questions: Extreme Natural Hazards, Disaster Risks, and Societal Impact</td><td>Module Code
JTBQ-08</td><td>Level (type)
Year 3 (Jacobs Track)</td><td>CP
2.5</td></tr>
<tr><td colspan="6">Module Components
Number | Name | Type | CP
JTBQ-08 | Extreme Natural Hazards: Disaster Risks, and Societal Impact | Lecture | 2.5</td></tr>
<tr><td>Module Coordinator
L. Thomsen</td><td colspan="3">Program Affiliation
• Big Questions Area: All undergraduate study programs, except IEM</td><td colspan="2">Mandatory Status
• Mandatory elective for students of all undergraduate study programs, except IEM</td></tr>
<tr><td colspan="3">Entry Requirements
Pre-requisites | Co-requisites | Knowledge, Abilities, or Skills
☒ None | ☒ None | • The ability and openness to engage in interdisciplinary issues of global relevance
• Media literacy, critical thinking, and a proficient handling of data sources</td><td>Frequency
Annually (Fall)

Duration
1 semester</td><td colspan="2">Forms of Learning and Teaching
• Lecture (17.5 hours)
• Private study (45 hours)

Workload
62.5 hours</td></tr>
<tr><td colspan="6">Recommendations for Preparation

Critically following media coverage of the module's topics in question.</td></tr>
<tr><td colspan="6">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. BQ modules intend to raise awareness of those challenges and broaden students' horizons with applied problem solving beyond the borders of their own disciplines. Knowledge and skills offered in the interdisciplinary BQ modules support students in their development to become informed and responsible citizens in a global society.
Extreme natural events increasingly dominate global headlines, and understanding their causes, risks, and impacts, as well as the costs of their mitigation, is essential to managing hazard risk and saving lives. This module presents a unique, interdisciplinary approach to disaster risk research, combining natural science and social science methodologies. It presents the risks of global hazards and natural disasters such as volcanoes, earthquakes, landslides, hurricanes, precipitation floods, and space weather, and provides real-world hazard and disaster case studies from Latin America, the Caribbean, Africa, the Middle East, Asia, and the Pacific.</td></tr>
<tr><td colspan="6">Intended Learning Outcomes

Students acquire transferable and key skills in this module.

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

• use their disciplinary factual and methodological knowledge to reflect on interdisciplinary questions by comparing approaches from various disciplines;
• advance a knowledge-based opinion on the complex module topics, including how natural processes affect and interact with our civilization, especially those that create hazards and disasters;</td></tr>
</table>

- distinguish the methods scientists use to predict and assess the risk of natural disasters;
- discuss the social implications and policy framework in which decisions are made to manage natural disasters;
- work effectively in a team environment.

Indicative Literature

The course is based on a self-contained, detailed set of online lecture notes.

Ismail-Zadeh, Alik, et al., eds (2014). Extreme natural hazards, disaster risks and societal implications. In *Special Publications of the International Union of Geodesy and Geophysics Vol. 1.* Cambridge: Cambridge University Press.

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: Written examination Duration: 60 min.
Scope: All intended learning outcomes of the module Weight: 100%

7.21.1.9 International Development Policy

<table>
<tr><td colspan="2">Module Name
Big Questions: International Development Policy</td><td>Module Code
JTBQ-09</td><td>Level (type)
Year 3 (Jacobs Track)</td><td>CP
2.5</td></tr>
<tr><td colspan="5">Module Components
Number | Name | Type | CP
JTBQ-09 | Big Questions: International Development Policy | Lecture | 2.5</td></tr>
<tr><td>Module Coordinator
C. Knoop</td><td colspan="2">Program Affiliation
• Big Questions Area: All undergraduate study programs, except IEM</td><td colspan="2">Mandatory Status
• Mandatory elective for students of all undergraduate study programs, except IEM</td></tr>
<tr><td colspan="3">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</td><td>Frequency
Annually (Fall)

Duration
1 semester</td><td>Forms of Learning and Teaching
• Lecture (17.5 hours)
• Presentations
• Private study (45 hours)

Workload
62.5 hours</td></tr>
<tr><td colspan="5">Recommendations for Preparation
Critically following media coverage of the module's topics in question.</td></tr>
<tr><td colspan="5">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. BQ modules intend to raise awareness of those challenges and broaden students' horizon with applied problem solving beyond the borders of their own disciplines. Knowledge and skills offered in the interdisciplinary BQ modules support students in their development to become informed and responsible citizens in a global society.
We live in a world where still a large number of people still live in absolute poverty without access to basic needs and services, such as food, sanitation, health care, security, and proper education. This module provides an introduction to the basic elements of international development policy, with a focus on the relevant EU policies in this field and on the Sustainable Development Goals/SDGs of the United Nations. The students will not only learn about the tools applied in modern development policies, but also about the critical aspects of monitoring and evaluating the results of development policy. Module-related oral presentations and debates will enhance the students' learning experience.</td></tr>
</table>

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 modern development policy;
- identify, explain, and evaluate the tools applied in development policy;
- formulate well-justified criticism of development policy;
- summarize and present a module-related topic in an appropriate verbal and visual form.

Indicative Literature

Francis Fukuyama (2006). The end of history and the last man. New York: Free Press.

Kingsbury, McKay, Hunt (2008). International Development.Issues and challenges. London: Palgrave.

A.Sumner, M.Tiwari (2009) After 2015: International Development Policy at a crossroad. New York: Palgrave Macmillan.

Graduate Institute of International Development, G. Carbonnier eds. (2001). International Development Policy: Energy and Development. New York:Palgrave Macmillan.

John Donald McNeil. International Development: Challenges and Controversy. Sentia Publishing,e-book.

Usability and Relationship to other Modules

- This module is a mandatory elective module in the Big Questions area, which 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 their knowledge and competencies to class discussions and activities.

Assessment

Type: Presentation — Duration: 10 minutes per student
Scope: All intended learning outcomes of the module — Weight: 100%

7.21.1.10 Global Challenges to International Peace and Security

<table>
<tr><td colspan="2">Module Name
Big Questions: Global Challenges to International Peace and Security</td><td>Module Code
JTBQ-10</td><td>Level (type)
Year 3 (Jacobs Track)</td><td>CP
5</td></tr>
<tr><td colspan="5">Module Components
Number | Name | Type | CP
JTBQ-10 | Big Questions: Global Challenges to International Peace and Security | Lecture | 5</td></tr>
<tr><td>Module Coordinator
C. Knoop</td><td colspan="2">Program Affiliation
• Big Questions Area: All undergraduate study programs except IEM</td><td colspan="2">Mandatory Status
• Mandatory elective for students of all undergraduate study programs except IEM</td></tr>
<tr><td colspan="2">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</td><td>Frequency
Annually (Spring)

Duration
1 semester</td><td colspan="2">Forms of Learning and Teaching
• Lecture (35h)
• Private study (90h)

Workload
125 hours</td></tr>
<tr><td colspan="5">Recommendations for Preparation

Critically following media coverage of the module's topics in question.</td></tr>
<tr><td colspan="5">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. BQ modules intend to raise awareness of those challenges and broaden students' horizons with applied problem solving beyond the borders of their own disciplines. Knowledge and skills offered in the interdisciplinary BQ modules support students in their development to become informed and responsible citizens in a global society.
We live in a multi-polar world where multiple crises have become the rule rather than the exception. World peace and security are challenged by various developments and factors, such as the risk of the proliferation of weapons of mass destruction, the spread of international terrorism, organized crime 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 extremely poor people living on our planet. This module provides an introduction to some of the most important threats to global peace and security. 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.</td></tr>
</table>

Intended Learning Outcomes

Students acquire transferable and key skills in this module.

By the end of this module, 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 criticisms of these tools and explain their limits;
- summarize and present a module-related topic in an appropriate verbal and visual form.

Indicative Literature

Shin-Wha Lee (2001). Emerging Threats to International Security: Environment, Refugees and Conflict. In: *Journal of International and Area Studies, Vol.8, No. 1,pp 73-90.*

John Baylis (2001). The Globalization of World Politics. Oxford: Oxford University Press.

Nathalie Tocci (2017). Framing the EU Global Strategy: A stronger Europe in a fragile World. New York: Palgrave Studies.

European Parliament Research Service/EPRS (2019). United Nations Reform. Retrieved from https://reform.un.org/.

Eric Degila and Charles K. Amegan (2019). The African Peace and Security Architecture: An African Response to Regional Peace and Security Challenges. In *The Palgrave Handbook of Global Approaches to Peace.* New York: Palgrave.

Usability and Relationship to other Modules

- The module is a mandatory elective module in the Big Questions area, which 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 their knowledge and competencies to class discussions and activities.

Assessment

Type: Presentation
Duration: 10 minutes
Scope: All intended learning outcomes of the module
Weight: 100%

7.21.1.11 Sustainable Value Creation with Biotechnology. From Science to Business

<table>
<tr><td colspan="2">Module Name
Sustainable Value Creation with Biotechnology. From Science to Business.</td><td>Module Code
JTBQ-BQ-011</td><td>Level (type)
Year 3
(Jacobs Track)</td><td>CP
2.5</td></tr>
<tr><td colspan="5">Module Components
Number | Name | Type | CP
JTBQ-011 | Sustainable Value Creation with Biotechnology. From Science to Business | Lecture - Tutorial | 2.5</td></tr>
<tr><td>Module Coordinator
Marcelo Fernandez Lahore</td><td colspan="2">Program Affiliation
• Jacobs Track - Big Questions</td><td colspan="2">Mandatory Status
• Mandatory elective for students of all undergraduate study except IEM</td></tr>
<tr><td colspan="2">Entry Requirements
Pre-requisites
☒ None
Co-requisites
☒ None
Knowledge, Abilities, or Skills
• The ability and openness to engage in interdisciplinary issues on bio-based value creation
• media literacy, critical thinking and a proficient handling of data sources</td><td>Frequency
Annually (Spring)
Duration
1 semester</td><td colspan="2">Forms of Learning and Teaching
• Lecture and Tutorial (17.5 hours)
• Private study (45 hours)
Workload
62.5 hours</td></tr>
<tr><td colspan="5">Recommendations for Preparation
https://www.ctsi.ucla.edu/researcher-resources/files/view/docs/EGBS4_Kolchinsky.pdf
https://link.springer.com/article/10.1057/jcb.2008.27
https://sustainabledevelopment.un.org/content/documents/21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf</td></tr>
</table>

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 support students in their development to become an informed and responsible citizen in a global society.
This module has a particular focus on the role that Biotechnology and Biorefining is expected to play in social, economic and environmental contexts.

To deliver such a vision the module will prepare students to extract value form Biotechnology and associated activities. This will be done in the form of business cases that will be systematically developed by students alongside the development of the module. In this way, students will develop entrepreneurial skills while understanding basic business-related activities that are not always present in a technical curriculum. Case development will also provide students with the possibility of understanding the social, economic, environmental impact that Biotechnology and Biorefining can deliver in a Bio-Based Economy. The knowledge and skills gained through this module are in direct and indirect support of the UN 2030 Agenda for Sustainable Development: "Transforming our World".

Intended Learning Outcomes

Students acquire transferable and key skills in this module.

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

1. design and develop a Business Case based on the tools provided by modern Biotechnology;
2. explain the interplay between Science, Technology and Economics / Finance;
3. use their disciplinary factual and methodological knowledge to reflect on interdisciplinary questions by comparing approaches from various disciplines;
4. work effectively in a team environment and undertake data interpretation and analysis;
5. discuss approaches to value creation in the context of Biotechnology and Sustainable Development;
6. explain the ethical implications of technological advance and implementation;
7. demonstrate presentation skills.

Indicative Literature

Springham, D., V. Moses & R.E. Cape (1999). Biotechnology – The Science and the Business. 2nd. Ed. Boca Raton: CRC Press.

Kornberg, Arthur (2002). The Golden Helix: Inside Biotech Ventures. Sausalito, CA: University Science Books.

UNESCO, Director-General. (2017). UNESCO moving forward the 2030 Agenda for Sustainable Development. Retrieved from https://unesdoc.unesco.org/ark:/48223/pf0000247785

Usability and Relationship to other Modules

- The module is a mandatory elective module in the Big Questions area, which 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 their knowledge and competencies to class discussions and activities.

Assessment

Type: Term Paper — Length:1.500 – 3.000 words, Weight: 75%

Scope: Intended learning outcomes of the module (1-6)

Type: Presentation — Duration: 10-15 min., Weight: 25%

Scope: Intended learning outcomes of the module (2-7)

Completion: This module is passed with a weighted average grade of 45% or higher.

7.21.1.12 The Future of Mobility: Autonomous, Connected, Shared, and Electric – the solution for global problems?!

<table>
<tr><td colspan="2">Module Name
Big Questions: The Future of Mobility: Autonomous, Connected, Shared, and Electric – the solution for global problems?!</td><td>Module Code
JT-BQ-012</td><td>Level (type)
Year 3 (Jacobs Track)</td><td>CP
5.0</td></tr>
<tr><td colspan="5">Module Components

Number | Type | CP</td></tr>
<tr><td>JT-BQ-12</td><td colspan="2">The Future of Mobility: Autonomous, Connected, and Shared – the solution for global problems?!</td><td>Lecture/Projects</td><td>5.0</td></tr>
<tr><td>Module Coordinator

B. Scher</td><td colspan="2">Program Affiliation

• Big Questions Area: All undergraduate study programs</td><td colspan="2">Mandatory Status

Mandatory elective for students of all undergraduate study programs</td></tr>
<tr><td colspan="2">Entry Requirements

Pre-requisites

☒ None</td><td>Co-requisites

☒ None</td><td>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</td><td>Frequency

Annually (Spring)

Duration

1 semester</td><td>Forms of Learning and Teaching

• 17.5 h Lectures
• 17.5 h Blended Learning & Online Workshops
• 72.5 h Project work
• 17.5 h Private study

Workload
125 hours</td></tr>
<tr><td colspan="5">Recommendations for Preparation

Critical following of media coverage on the module's topics in question and active observation of own travel behavior</td></tr>
<tr><td colspan="5">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.

Mobility is omnipresent in our modern world. One the one hand, moving millions of people and tons of goods from A to B in a structured and coordinated manner forms the backbone of our economy. One the other hand, we have around thousands of traffic mortalities every year, and combustion-engine traffic is still among the largest polluters globally. Hence, mobility is both: a fundamental enabler for many processes in the complex 21st century societies and one of the largest challenges we need to tackle.

Currently, we observe technological and societal advancements in the mobility sector that promise to increase the viability of our overall mobility landscape while decreasing its negative impacts. These trends are regularly summarized as the CASE-development (Connected, Autonomous, Shared, and Electric).

In economic terms, we see a large increase in investments into companies working in the CASE realm, increasing predictions of market potentials for such solutions, and an ever-more complex stakeholder landscape where organizations from areas outside the traditional mobility sector, such as IT firms, become increasingly important.
Recent technological advancements, such as deep learning and artificial intelligence, advanced digital sensors, energy storage, and new communication standards may enable new forms of mobility like highly automated or fully autonomous</td></tr>
</table>

vehicles.

These advancements coincide with large shifts in how our society understands the basic principles of how traffic functions (both individually and publicly), where we see increasing tendencies for shared, free-floating, and on-demand solutions.

Environmentally, the promise of fully connected and well-managed fleets attracts increasing attention as a possibility to reduce traffic jams and overall emissions.

Contradicting these promises, we observe regular news claiming that novel mobility solutions like ride-hailing services cause more traffic and make metropolitan areas even more congested.

In this module we intend to systematically discuss and reflect the major trends that shape how both people and goods move from A to B on land, on water, and in the air. We do so with a productive mix of lectures, guest lectures, team work sessions and digital small group discussions co-shared by the lecturer.

Thus, we jointly develop an all-embracive understanding of the economic, technological, societal, and environmental factors that contribute to or are affected by these trends, while always critically evaluating the potential value of future options within the world of mobility.

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 autonomous vehicles, connected vehicles, shared mobility, and electric engines, argue for its pros and cons, from both an economic, technological, societal and environmental perspective
- prioritize the major threads and opportunities of future mobility solutions, and argue for a more nuanced understanding of the contextual factors that may in- or decrease the value of future mobility applications
- 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 the challenges of working in a transdisciplinary team and harvest the large potential that such teams offer

Indicative Literature

Aditya Ambadipudi, Kersten Heineke, Philipp Kampshoff, and Emily Shao (2017, October). Gauging the disruptive power of robo-taxis in autonomous driving. Retrieved from https://www.mckinsey.com/industries/automotive-and-assembly/our-insights/gauging-the-disruptive-power-of-robo-taxis-in-autonomous-driving.

Erfan Aria, Johan Olstam, Christoph Schwietering (2016). Investigation of automated vehicle effects on driver's behavior and traffic performance, Swedish National Road and Transport Research Institute, Research on the impacts of connected and autonomous vehicles (CAVs) on traffic flow. London: UK Department for Transport.

Webb, Jeremy (2019). The Future of Transport: Literature Review and Overview. Economic Analysis and Policy 61, 2019: 1-6. https://www.sciencedirect.com/science/article/pii/S0313592618300638?via%3Dihub.

Yuanyuan Zhang and Yuming Zhang (2018). Associations between public transit usage and bikesharing behaviors in the United States. In *Sustainability, June 2018, Volume 10*.

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: Small Team projects	Weight: 100%
Scope: All intended learning outcomes of the module	

7.21.1.13 Gender and Multiculturalism. Debates and Trends in Contemporary Societies

<table>
<tr><td colspan="2">Module Name
Big Questions: Gender and Multiculturalism. Debates and Trends in Contemporary Societies</td><td>Module Code
JT-BQ-013</td><td>Level (type)
Year 3 (Jacobs Track)</td><td>CP
5.0</td></tr>
<tr><td colspan="5">Module Components

Number | Name | Type | CP
JT-BQ-013 | Gender and Multiculturalism: Debates and Trends in Contemporary Societies | Lecture | 5.0</td></tr>
<tr><td>Module Coordinator

J. Price</td><td colspan="2">Program Affiliation

• Big Questions Area: All undergraduate study programs</td><td colspan="2">Mandatory Status

Mandatory elective for students of all undergraduate study programs</td></tr>
<tr><td colspan="2">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</td><td>Frequency

Annually (Spring)

Duration

1 semester</td><td colspan="2">Forms of Learning and Teaching

• Lectures (35 hours)
• Private study (90 hours)

Workload

125 hours</td></tr>
<tr><td colspan="5">Recommendations for Preparation

Critical following of the media coverage on the module's topics in question.</td></tr>
<tr><td colspan="5">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.
The objective of this module is to introduce and familiarize students with the current debates, trends and analytical frameworks pertaining how gender is socially constructed in different cultural zones. Through lectures, group discussions and reflecting upon cultural cases, students will familiarize themselves with the current trends and the different sides of ongoing cultural and political debates that shape cultural practices, policies and discourses. The module will zoom-in on topics such as: cultural identity; the social construction of gender; gender fluidity and its backlash; gender and human rights; multiculturalism as a perceived threat in plural societies, among others. Students will be provided with opportunities for reflection and to ultimately develop informed opinions concerning topics that are continue to define some of the most contested cultural debates of contemporary societies.</td></tr>
</table>

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 cultural, political and legal debates concerning the social construction of gender in contemporary societies;
- reflect and develop informed opinions concerning the current debates and trends that are shaping ideas of whether multiculturalism ideals are realistic in pluralist western societies, or whether multiculturalism is a failed project;
- identify, explain and evaluate the role that societal forces, such as religion, socio-economic, political and migratory factors play in the construction of gendered structures in contemporary societies
- develop a well-informed perspective concerning the interplay of science and culture in the debates around gender fluidity.
- deconstruct and reflect on the intersectionality between populist/nationalist discourses and gender discrimination
- reflect and propose societal strategies and initiatives that attempt to answer the big questions presented in this module regarding gendered and cross-culturally-based inequalities.

Indicative Literature

Moller Okin, S. (1999). Is Multiculturalism Bad for Women? New Jersey: Princeton University Press.

Connell, R. W. (2002). Gender. Cambridge: Polity Press.

Inglehart, Ronald and Pippa Norris (2003). Rising Tide: Gender Equality and Cultural Change Around the World. New York and Cambridge: Cambridge University Press.

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: Written examination

Duration: 60 min.
Weight: 100%

Scope: All intended learning outcomes of the module

7.21.1.14 Big Questions: The Challenge of Sustainable Energy

Module Name	***Module Code***	***Level (type)***	***ECTS***
Big Questions: The Challenge of Sustainable Energy	JTBQ-14	Year 3 (Jacobs Track)	2.5

Module Components

Number		*Type*	*ECTS*
JTBQ-14	The Challenge of Sustainable Energy	Lecture	2.5

Module Coordinator	***Program Affiliation***	***Mandatory Status***
K. Smith Stegen	• Big Questions Area: All undergraduate study programs	Mandatory elective for students of all undergraduate study programs

Entry Requirements			***Frequency***	***Forms of Learning and Teaching***
Pre-requisites	*Co-requisites*	*Knowledge, Abilities, or Skills*	Annually (Fall or Spring)	• Lectures and Group Exercises
☒ None	☒ None	• Ability to read texts from a variety of disciplines	***Duration***	***Workload***
			1 semester	62.5 hours

Recommendations for Preparation

Reflect on their own behavior and habits with regard to sustainability.

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.
How can wide-scale social, economic and political change be achieved? This module examines this question in the context of encouraging "sustainability". To address global warming and environmental degradation, humans must adopt more sustainable lifestyles. Arguably, the most important change is the transition from conventional fuels to renewable sources of energy, particularly at the local, country and regional levels. The main challenge to achieving an "energy transition" stems from human behavior and not from a lack of technology or scientific expertise. This module thus examines energy transitions from the perspective of the social sciences, including political science, sociology, psychology, economics and management. To understand the drivers of and obstacles to technology transitions, students will learn the "Multi-Level Perspective". Some of the key questions explored in this module include: What is meant by sustainability? Are renewable energies "sustainable"? How can a transition to renewable energies be encouraged? What are the main social, economic, and political challenges? How can these (potentially) be overcome? The aim of the course is to provide students with the tools for reflecting on energy transitions from multiple perspectives.

Intended Learning Outcomes

Students acquire transferable and key skills in this module.

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

- articulate the history of the sustainability movement and the major debates;
- identify different types of renewable energies;
- explain the multi-level perspective (MLP), which models technology innovations and transitions;
- summarize the obstacles to energy transitions;
- compare a variety of policy mechanisms for encouraging renewable energies.

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).
- For students interested in sustainability issues, this module complements a variety of modules from different programs, such as “International Resource Politics” (IRPH/SMP), “Environmental Science” (EES), “General Earth and Environmental Sciences” (EES), and “Renewable Energies” (Physics).

Assessment

Type: Written Examination Duration: 60 min
Weight: 100%

Scope: All intended learning outcomes of the module

7.21.2 Community Impact Project

<table>
<tr><td colspan="3">Module Name
Community Impact Project</td><td>Module Code
JTCI-CI-950</td><td>Level (type)
Year 3
(Jacobs Track)</td><td>CP
5</td></tr>
<tr><td colspan="6">Module Components

Number | Name | Type | CP
JTCI-950 | Community Impact Project | Project | 5</td></tr>
<tr><td colspan="2">Module Coordinator

CIP Faculty Coordinator</td><td colspan="2">Program Affiliation

• All undergraduate study programs except IEM</td><td colspan="2">Mandatory Status

Mandatory for all undergraduate study programs except IEM</td></tr>
<tr><td colspan="3">Entry Requirements

Pre-requisites
☒ at least 15 CP from CORE modules in the major

Co-requisites
☒ None

Knowledge, Abilities, or Skills
• Basic knowledge of the main concepts and methodological instruments of the respective disciplines</td><td>Frequency

Annually (Spring)</td><td colspan="2">Forms of Learning and Teaching

• Introductory, accompanying, and final events: 10 hours
• Self-organized teamwork and/or practical work in the community: 115 hours</td></tr>
<tr><td colspan="3"></td><td>Duration

1 semester</td><td colspan="2">Workload

125 hours</td></tr>
<tr><td colspan="6">Recommendations for Preparation

Develop or join a community impact project before the 5th semester based on the introductory events during the 4th semester by using the database of projects, communicating with fellow students and faculty, and finding potential companies, organizations, or communities to target.</td></tr>
<tr><td colspan="6">Content and Educational Aims

CIPs are self-organized, major-related, and problem-centered applications of students' acquired knowledge and skills. These activities will ideally be connected to their majors so that they will challenge the students' sense of practical relevance and social responsibility within their field of their studies. Projects will tackle real issues in their direct and/or broader social environment. These projects ideally connect the campus community to other communities, companies, or organizations in a mutually beneficial way.
Students are encouraged to create their own projects and find partners (e.g., companies, schools, NGOs), but will get help from the CIP faculty coordinator team and faculty mentors to do so. They can join and collaborate in interdisciplinary groups that attack a given issue from different disciplinary perspectives.
Student activities are self-organized but can draw on the support and guidance of both faculty and the CIP faculty coordinator team.</td></tr>
<tr><td colspan="6">Intended Learning Outcomes

The Community Impact Project is designed to convey the required personal and social competencies for enabling students to finish their studies at Jacobs as socially conscious and responsible graduates (part of the Jacobs mission) and to convey social and personal abilities to the students, including a practical awareness of the societal context and relevance of their academic discipline.

By the end of this project, students should be able to
• understand the real-life issues of communities, organizations, and industries and relate them to concepts in their own discipline;</td></tr>
</table>

- enhance problem-solving skills and develop critical faculty, create solutions to problems, and communicate these solutions appropriately to their audience;
- apply media and communication skills in diverse and non-peer social contexts;
- develop an awareness of the societal relevance of their own scientific actions and a sense of social responsibility for their social surroundings;
- reflect on their own behavior critically in relation to social expectations and consequences;
- ability to work in a team and deal with diversity, develop cooperation and conflict skills, and strengthen their empathy and tolerance for ambiguity.

Indicative Literature

Not specified

Usability and Relationship to other Modules

- Students who have accomplished their CIP (6th semester) are encouraged to support their fellow students during the development phase of the next year's projects (4th semester).

Assessment

Type: Project, not numerically graded (pass/fail)
Scope: All intended learning outcomes of the module

7.21.3 Language Modules

The descriptions of the language modules are provided in a separate document, the “Language Module Handbook” that can be accessed from here: https://www.jacobs-university.de/study/learning-languages

8 Appendix

8.1 Intended Learning Outcomes Assessment-Matrix

Integrated Social and Cognitive Psychology (BSc)					Essentials of Cognitive Psychology	Essentials of Social Psychology	Neurobiology of Behavior	Judgment & Decision-Making	Health Psychology	Learning & Memory	Neuroscience Methods	Attention, Sensation, & Perception	Social Cognition	Cultural Psychology	Org. Psychology & Communication	H. Neuroscience Advanced Lab	Pathophysiology & Psychotherapy of	The Science of Happiness	Psychology of Food	Managing Demographic Change in Or	Bachelor Thesis	Internship	JT Methods/Skills	JT Big Questions	JT Community Impact	JT Language
Semester					1	2	3/4	4	4	4	3/4	3	3	4	3/4	6	6	6	6	6	6	5	1-4	5-6	5	1-4
Mandatory/mandatory elective					m	m	me	me	me	me	me	me	me	me	me	me	me	me	me	me	m	m	m	m	m	m
Credits					7.5	7.5	5	5	5	5	5	5	5	5	5	2.5	2.5	2.5	2.5	2.5	15	15	20	10	5	10
	Competencies*																									
Program Learning Outcomes	**A**	**E**	**P**	**S**																						
Display mindfulness and self-awareness and engage in reflection regarding psychological practice.		x	x	x		x			x				x	x	x		x			x						
Adhere to professional values; recognize situations that challenge adherence to those values.		x	x	x		x	x		x		x		x	x			x			x						
Explain relationships between psychology and related sciences; identify avenues to collaboration.	x	x		x			x		x		x		x	x			x		x							
Explain inherent variability and diversity of psychological functioning and implications of the latter.	x						x	x		x			x				x		x	x						
Demonstrate critical understanding of core conceptualizations of cognition and social interaction.	x				x	x	x		x	x	x	x	x		x	x		x			x					
Apply quantitative theories to design behavior modification interventions in applied settings.	x								x	x	x						x	x		x	x	x				
Reason scientifically, analyze and explain the quality and role of evidence, critically judge about arguments in psychology.	x	x			x	x	x			x	x	x	x	x			x			x	x	x		x		
Critically discuss relationship between ideographic and nomothetic approaches and implications for interventions.	x	x		x	x	x			x					x	x					x						
Develop theoretical accounts with increased explanatory power or predictive validity by combining theories from different levels.		x			x	x			x		x		x	x	x		x			x	x	x		x		
Design and conduct (experimental) studies, analyze data and discuss findings.		x				x		x	x		x	x		x		x		x	x		x		x			
Demonstrate knowledge of ethical context of psychology; design research in accordance with codes of conduct by bodies such as APA.			x	x	x	x	x			x				x	x		x	x	x	x	x					
Reflect on new technologies and innovation in psychology; make decisions regarding their legitimacy, reliability and effectiveness.		x		x			x			x	x					x					x		x			
Communicate research ideas and findings by written, oral and visual means to psychologists and professionals from other disciplines.		x	x					x	x	x	x	x		x	x			x	x	x	x	x	x	x		
Articulate own values and expectations toward learning and professional development; undertake self-directed study.		x	x		x	x			x	x			x		x		x		x		x	x			x	x
Articulate role of psychologists as change agents; demonstrate knowledge of barriers to change.		x	x						x				x	x	x					x				x		
Evaluate based on psychological evidence arguments in societal debates that pertain to diversity.			x	x									x	x	x				x	x				x		
Assessment Type																										
Oral examination																										
Written examination					x	x	x	x	x	x				x	x								x			
Project																		x			x		x		x	
Term paper, essay, review paper													x				x					x	x			
(Lab)Report										x	x	x	x	x		x										
Poster presentation																										
Presentation											x						x	x	x	x	x					
Thesis																					x					
Various																								x		x
Module achievements/bonus achievements																										

*Competencies: A-scientific/academic proficiency; E-competence for qualified employment; P-development of personality; S-competence for engagement in society

Figure 4: Intended Learning Outcomes Assessment-Matrix