CONSTRUCTOR UNIVERSITY

Study Program Handbook

International Relations: Politics and History

Bachelor of Arts

Subject-specific Examination Regulations for International Relations: Politics and History (Fachspezifische Prüfungsordnung)

The subject-specific examination regulations for International Relations: Politics and History 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 Arts (BA) degree with a scope of 180 ECTS (for specifics see Chapter 4 of this handbook).

Version	Valid as of	Decision	Details
Fall 2025- V1.1		Feb 02, 2026	Implementation of Examination Concept according to policies.
		Dec 11, 2025	Non-substantial Minor Change: Introduction of the new GER module "Introduction to German Culture & Society"
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		Apr 26, 2023	Substantial change approved by the Academic Senate
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1 Program Overview

1.1 Concept

1.1.1 The Constructor University Educational Concept

Constructor University aims to educate students for both an academic and a professional career by emphasizing three core objectives: academic excellence, personal development, and employability to succeed in the working world. Constructor University offers an excellent research driven education experience across disciplines 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. Through a multi-disciplinary, holistic approach and exposure to cutting-edge technologies and challenges, Constructor University develops and enables the academic excellence, intellectual competences, societal engagement, professional and scientific skills of tomorrows leaders for a sustainable and peaceful future.

In this context, it is Constructor 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 Constructor 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, optional German language and Humanities modules, 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, Constructor University offers professional advising and counseling.

Constructor 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 one of the most widely observed university rankings, the Times Higher Education (THE) ranking. More details on the current ranking positions can be found at https://constructor.university/more/about-us.

1.1.2 Program Concept

The problems and threats facing the world today are complex. Navigating the international political arena and creating sustainable solutions require a nuanced and multi-faceted approach. Thus, the International Relations: Politics and History (IRPH) program teaches students concepts and methods from a number of fields including political science, history, law, and philosophy. The aim of this program is twofold: first, to equip students with the theoretical knowledge and analytical skills they need to explore the historical emergence of and remedies for pressing global challenges; and second, to prepare students so they can succeed either in the job market or at graduate school.

The highly interdisciplinary and international approach of the IRPH program epitomizes the spirit of Constructor University. We have designed IRPH for students who appreciate an educational experience that transcends traditional teaching methods and have an interest in understanding all aspects of international affairs right from the origins of an issue up to its potential solutions. The program is motivated by the understanding that historical perspectives, theoretical analysis and empirical research are all required to comprehend international relations and current events in their full context.

In the first year, we introduce our students to both politics and history. In the fall semester, students learn the several theories of international relations, regional integration, and theories of cooperation and collective security. With an eye to developing our students' intellectual abilities in a holistic fashion, we focus on the original texts of renowned scholars and top thinkers. To foster a first-hand intuitive understanding of the theoretical concepts introduced in the readings and lectures, students engage in crisis simulations and cooperation exercises. Since presentation skills are necessary in almost all professional settings, students learn to make presentations in their first semester and have the opportunity to participate in practice sessions. The spring semester module focuses on the historical developments in Europe over the past two and a half centuries, including revolutions and wars, social and cultural change, intellectual and political movements, and the influence of these developments on the rest of the world. In addition to texts from scholars, students work with primary sources to explore this history. Throughout their first year, students receive methodological training that includes honing their academic writing skills, learning statistical analysis, and identifying ways to interpret and construct arguments.

In their second year CORE modules, IRPH students can focus on topics such as international political economy, globalization, international resource politics, diplomacy, foreign policy, nationalism, imperialism, migration, cybersecurity, digital transformation, and international security, among many others. Students seeking a stronger focus on history may opt for modules covering the tumultuous formation of the modern state system or global history of the 19th and 20th centuries. Their methodological training also continues throughout the second year, enabling students to interpret cutting-edge scholarship and conduct their own research.

In their second- and third-year modules, IRPH students have ample opportunities to advance their presentation, research, and writing skills. In their final year, they sharpen their profiles further by selecting specialization courses and undertaking their own independent research for their theses, which may utilize quantitative or qualitative methods.

Throughout their three years at Constructor University, IRPH students continually refine their intellectual, academic, and professional skills. As a result, our graduates are well-rounded critical thinkers who are able to synthesize and present complex information and arguments in a variety of formats including presentations, debates, policy briefs, and research papers.

Upon graduating, about 60% of our students enter prestigious graduate schools such as the University of Oxford, the University of Cambridge, the London School of Economics, Harvard University, Johns Hopkins University, Georgetown University, and Sciences Po. About 40% of our graduates opt to directly enter the job market and typically secure positions in international relations, public policy, or development work as well as in the business sector, consulting, and other areas. The success of our students attests to the excellence of the IRPH program, which is also confirmed by the program's outstanding rankings from the Centre for Higher Education.

1.2 Specific Advantages of International Relations: Politics and History at Constructor University

IRPH embraces a global perspective on international relations, devoting attention to different world regions and their particularities, connections, and interdependencies.

In addition to international relations, the program offers a well-rounded array of subjects such as history, international law, foreign policy and diplomacy, political economy, and philosophy, and is thus comparable to other top programs in the US, UK, and the rest of the world. The program also pays ample attention to the many ways in which the latest technological developments (such as the ongoing digital transformation and the rise of artificial intelligence) shape and are shaped by the international system.

Our international faculty members come from top-flight PhD programs and enrich the classroom environment with insights gained from professional experience in IRPH-related fields. They provide a mixture of lectures and seminars and utilize interactive and experiential teaching techniques such as crisis and diplomacy simulations, cooperation games, debates, and excursions. Our instructors' teaching quality is demonstrated by several of them having received the university's "Teacher of the Year Award" in recent years.

IRPH is also characterized by its very diverse and international student body, which means that classroom discussions resemble mini-United Nations meetings. This unique experience allows students to hear first-hand about different world regions and perspectives and to learn from each other.

Despite the diversity of its faculty and students, IRPH sees itself as a community. Faculty are supportive of students encouraging them to actively engage in learning processes and to acquire not only subject-specific knowledge but also the skills needed to produce innovative research outcomes. One result of such encouragement is that IRPH has a very strong record of its students' bachelor's theses being converted into published articles.

Peer support is just as important as faculty encouragement. The IRPH program offers a Mentoring Program under which new first-year students are assigned mentors from the advanced cohorts who offer support and advice from the student perspective. During their time at Constructor University, students form a caring, close-knit community from which enduring friendships emerge.

IRPH is also closely connected to other programs at Constructor University, including Global Economics and Management, as well as Data Science. These relationships enable exchanges and specializations that transcend traditional disciplinary boundaries. This becomes particularly helpful in future careers which often demand the ability to understand and communicate with people from a variety of fields and backgrounds.

1.3 Program-Specific Educational Aims

1.3.1 Qualification Aims

The interdisciplinary IRPH program awards a BA. It introduces students to theories of International Relations and fosters an understanding of political concepts and historical developments and their impacts. The program strives to hone students' critical thinking and writing skills, provides opportunities for collaborative problem solving, and equips students with a methodological foundation for formulating well-supported arguments and undertaking independent research. IRPH

also includes practical training such as how to conduct political analysis, engage in negotiations, and formulate advisory policy briefs. Students gain an in-depth understanding of the interrelationships among political, historical, legal, technological and economic processes and graduate in possession of an educational portfolio that they can use to enter the job market or top-flight graduate programs.

1.3.2 Intended Learning Outcomes

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

1. explain the core theories of international relations, international cooperation, collective security, regional integration, as well as key historical processes and the latest technological developments and their impacts on the modern and contemporary eras;
2. describe political concepts and ideas as well as important institutions constituting the international system;
3. critically assess academic and non-academic texts from the fields of political science and philosophy, international relations, law, and history;
4. analyze complex issues and current events with the aim of advancing solutions for pressing global problems;
5. construct well-supported, cogent arguments in professional and academic formats, such as presentations, debates, discussions, and research papers;
6. develop proposals for addressing international problems in a respectful manner as part of a diverse team with potentially different viewpoints;
7. apply qualitative and quantitative methodological tools to international and political issues to draw scientifically founded conclusions;
8. design research questions and independent research projects in which relevant information is collected, organized, synthesized, assessed, and interpreted;
9. employ practical negotiation and analytical skills, especially with regard to diplomacy and political analysis;
10. analyze the interrelationships among international political, legal, technological and economic processes;
11. engage ethically with academic, professional, and wider communities to contribute to a sustainable future;
12. develop individual strategies for learning, and for personal and professional advancement, while considering critical feedback.

1.4 Career Options and Support

The IRPH program provides students with a foundation for a variety of careers. By equipping them with an in-depth understanding of international relations and history, from both empirical and theoretical perspectives, they gain the knowledge and the analytical tools they need for fields like politics and diplomacy, public policy and administration, communications and journalism. Our students have secured internships and jobs in both governmental and non-governmental organizations, including the European Parliament, the United Nations, the World Bank, Doctors Without Borders, the German Development Agency (GIZ), Amnesty International, the Nobel Institute, Forbes, as well as a variety of government ministries, diplomatic missions, think tanks, and foundations.

Since our students gain highly transferable and sought-after abilities such as critical thinking, research, analysis, writing, and presentation skills, they are also able to attain positions in the business and

management sectors. Our students have thus moved into management consulting, banking and finance, and logistics and project management. Specific employers of IRPH graduates include PriceWaterhouseCoopers, KPMG, CapGemini, Accenture, Citigroup, Google, EON, DHL Express and Daimler.

Our students also receive academic training that enables them to continue on to graduate/postgraduate research, and IRPH has a solid track record of placing students at top-flight graduate schools around the world. To name a few, our graduates have gained acceptance to the University of Oxford, University of Cambridge, the London School of Economics, King's College, Imperial College London, the University of Edinburgh, Harvard University, Columbia University, UC Berkeley, John Hopkins University, Georgetown University, Duke University, WHU School of Management, Cass Business School, ETH Zurich, the College of Europe, the Graduate Institute of Geneva, and Sciences Po.

The Career Service Center (CSC) helps students in their career development. It provides students with high-quality training and coaching in CV creation, cover letter formulation, interview preparation, effective presenting, business etiquette, and employer research as well as in many other aspects, thus helping students identify and follow up on rewarding careers after graduating from Constructor University. Furthermore, the Alumni Office helps students establish a long-lasting and global network which is useful when exploring job options in academia, industry, and elsewhere.

1.5 Admission Requirements

Admission to Constructor University is selective and based on a candidate's school and/or university achievements, recommendations, self-presentation, and performance on standardized tests. Students admitted to Constructor 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 (optional)
- Official or certified copies of high school/university transcripts
- Educational History Form
- Standardized test results (SAT/ACT) if applicable
- Motivation statement
- ZeeMee electronic resume (optional)
- Language proficiency test results (TOEFL Score: 90, IELTS: Level 6.5 or equivalent)

Formal admission requirements are subject to higher education law and are outlined in the Admission and Enrollment Policy of Constructor University.

For more detailed information about the admission visit: https://constructor.university/admission-aid/application-information-undergraduate.

1.6 More Information and Contact

For more information on the study program please contact the study program chair:

Dr. Marco Verweij

Professor of Political Science

Email: mverweij@constructor.university

or visit our program website: https://constructor.university/programs/undergraduate-education/international-relations-politics-history.

For more information on Student Services please visit:

https://constructor.university/student-life/student-services.

2 The Curricular Structure

2.1 General

The curricular structure provides multiple elements for enhancing employability, interdisciplinarity, and internationality. The unique Constructor 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 opportunities 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 Constructor 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 Constructor University can be found on the website https://constructor.university/student-life/student-services/university-policies).

2.2 The Constructor University 4C Model

Constructor 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 undergraduate programs involve 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 4C Model. It groups the disciplinary content of the study program into three overarching themes, CHOICE-CORE-CAREER according to the year of study, while the university-wide CONSTRUCTOR Track is dedicated to multidisciplinary content dedicated to methods as well as intellectual skills and is integrated across all three years of study. The default module size is 5 CP, with smaller 2.5 CP modules being possible as justified exceptions, e.g., if the learning goals are more suitable for 2.5 CP and the overall student workload is balanced.

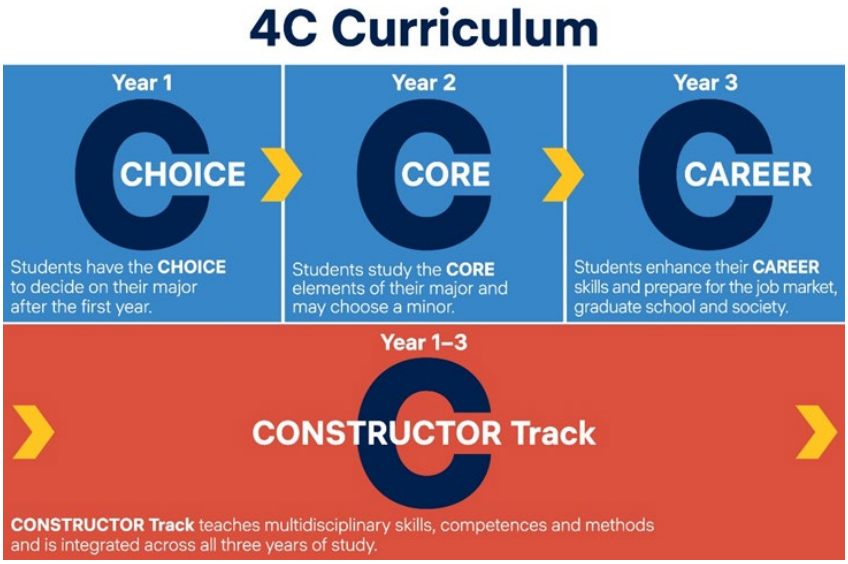

Figure 1: The Constructor University 4C-Model

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 15-45 CP will belong to their intended major. A unique feature of our curriculum structure allows students to select their major freely upon entering Constructor University. The team of Academic Advising Services offers curriculum counseling to all Bachelor students independently of their major, while Academic Advisors, in their capacity as contact persons from the faculty, support students individually in deciding on their major study program.

The following CHOICE modules (15 CP) are mandatory for students who want to pursue IRPH as a major:

- CHOICE Module: Introduction to International Relations (m, 7.5 CP)
- CHOICE Module: Introduction to Modern European History (m, 7.5 CP)

In accordance with the program's dual primary focus on politics and history, the two first-year modules in IRPH introduce students to international relations and history respectively. The "Introduction to International Relations" module covers the core theories of international relations and theories of cooperation and collective security, which students learn by reading texts of renowned scholars as well as by engaging in interactive exercises. The "Introduction to Modern European History" module examines the political, socio-economic, and cultural developments in Europe over the past two and a half centuries, by studying current scholarship and interpreting primary sources. Both modules provide methodological training to students, developing their argumentation and academic writing skills.

The remaining CHOICE modules (30 CP) can be selected in the first year of study according to interest and/or with the aim of allowing 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

IRPH students can still change to another major at the beginning of their second year of study, provided they have taken the corresponding mandatory CHOICE modules in their first year of study. All students must participate in an entry advising session with their Academic Advisors to learn about their major change options and consult their Academic Advisor during the first year of studies prior to changing their major.

IRPH students who wish to retain the option to change their major are strongly recommended to register for the CHOICE modules from among 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)

- Integrated Social and Cognitive Psychology (ISCP)
  CHOICE Module: Essentials of Cognitive Psychology (7.5 CP)
  CHOICE Module: Essentials of Social Psychology (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 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 Organic 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 (7.5 CP)

- Earth Sciences and Sustainable Management of Environmental Resources (ESSMER)
  CHOICE Module: Fundamentals of Earth Sciences (7.5 CP)
  CHOICE Module: Environmental Systems and Global Change (7.5 CP)
  CHOICE Module: Microeconomics (7.5 CP)
  CHOICE Module: Macroeconomics (7.5 CP)

- Mathematics, Modeling and Data Analytics (MMDA)
  CHOICE Module: Analysis (7.5 CP)
  CHOICE Module: Linear Algebra (7.5 CP)
  CHOICE Module: Mathematic Modeling (7.5 CP)

- Software, Data and Technology (SDT)
  CHOICE Module: Programming in C and C++ (m, 7.5 CP)
  CHOICE Module: Mathematical Foundations of Computer Science (m, 7.5 CP)
  CHOICE Module: Core Algorithms and Data Structures (m, 7.5 CP)
  CHOICE Module: Development in JVM Languages (m, 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: Mathematical Foundations of Computer Science (7.5 CP)
  CHOICE Module: Digital Systems and Computer Architecture (7.5 CP)

2.2.2 Year 2 – CORE

In their second year, students take modules with a total of 45 CP from in-depth discipline-specific CORE modules. Building on the introductory CHOICE modules and applying the methods and skills students have already acquired (see 2.3.1), these modules extend students' critical understanding of the key theories, principles, and methods in their major.

To pursue IRPH as a major, students take the following mandatory modules (15 CP):

- CORE Module: International Political Economy (m, 5 CP)
- CORE Module: Advanced International Relations Theory (m, 5 CP)
- CORE Module: History of Globalization (m, 5 CP)

At least 15 CP from the following mandatory elective CORE modules need to be acquired:

- CORE Module: Empires and Nation States (me, 5 CP)
- CORE Module: Political Philosophy (me, 5 CP)
- CORE Module: Foreign Policy, Diplomacy and Data Science (me, 5 CP)
- CORE Module: Digital Transformations beyond the West (me, 5 CP)
- CORE Module: Decision Science for Politics (me, 5 CP)
- CORE Module: Cybersecurity Governance (me, 5 CP)

The remaining 15 CP can be selected according to interest and/or 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.

In the "International Political Economy" module, students focus on the relationship between economics and international relations since the 1970s, with particular emphasis on the rise of China and East Asia. The "Advanced International Relations Theory" module examines the past 60 years of theorizing about world politics and develops students' debating skills. The "History of Globalization" module explores the historical roots and emergence of globalization and studies the interconnectedness of social, economic, political, and cultural spheres, especially during the modern era. The "Empires and Nation States" module introduces students to the historical events, ideas, and processes that have shaped modern politics and societies. In the "Political Philosophy" module, students use philosophical tools such as conceptual analysis, formal and informal logic, and thought experiments to study the implications and tensions of our most important political ideas, especially as they interact with contemporary society. In the "Foreign Policy, Diplomacy and Data Science" module, students are introduced to foreign policy concepts and acquire practical skills –including data science techniques – that diplomats, foreign policy and (international) civil servants employ in their professions. In the "Digital Transformations beyond the West" module, participants focus on the ongoing digital transformations in Asia, and examine whether and how state actors as well as 'Big Tech' companies strive to gain influence over their own and other societies through dominance of information and production networks. In "Decision Science for Politics", students examine political decision-making from a variety of perspectives, including psychology, economics, and political science. Students will learn core theories as well as several key decision-making tools. In "Cybersecurity Governance", students consider which threats to cybersecurity have emerged, analyze the global governance efforts that have been made to tackle these threats, and reflect on how these efforts could be organized differently.

2.2.2.1 Minor Option

IRPH students can take CORE modules (or, depending on the minor, 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 the Bachelor's degree. The educational aims of offering a minor are to broaden the students' knowledge and skills, support critical reflection on statements in complex contexts, foster an interdisciplinary approach to problem solving, and develop an individual academic and professional profile in line with their strengths and interests. This extra qualification will be highlighted on students' final transcript.

Students are supported in the realization of the minor option by the Academic Advising Coordinator and by the Study Program Chair of the minor study program. In addition, it is mandatory that students consult their Academic Advisor when choosing a minor.

As a rule, this requires IRPH students to:

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

The requirements for each specific minor are described in the handbook of the study program offering the minor (chapter 3.2) and are marked in the Study and Examination Plans of the respective programs. 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 for 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 IRPH students to take Specialization modules in their discipline, but also focuses on the responsibility of students beyond their discipline (see Constructor Track).

The fifth semester opens a mobility window for a diverse range of study abroad options. Finally, the sixth 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 Constructor University's employability approach, students are required to engage in a mandatory two-month internship (15 CP) that will usually be completed during the summer between the second and third years of study. This allows students 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 personal role in employment and society, and develop a professional orientation. The internship can also establish valuable contacts for a student's Bachelor's thesis project, for the selection of a Master's program, graduate school, or for 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 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 their business plans.

For further information, please contact Student Career Support (https://constructor.university/student-life/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 fifth and sixth semester. The default Specialization Module size is 5 CP, with smaller 2.5 CP modules being possible as justified exceptions.

To pursue IRPH as a major, at least 10 of the 15 CP need to be taken from the following major-specific Specialization Modules:

- IRPH Specialization: International Law (5 CP)
- IRPH Specialization: Everyday Life under Dictatorships (5 CP)
- IRPH Specialization: International Resource Politics (5 CP)
- IRPH Specialization: China: Politics, Economy and Society (5 CP)

In the "International Law" module, students are introduced to public international law and how it governs the international conduct of state and non-state actors. In the "Everyday Life under Dictatorships" module, students examine scholarly approaches toward and debates about the history of everyday life in totalitarian regimes with a focus on twentieth-century European dictatorships such as Fascist Italy, Nazi Germany, the Soviet Union under Stalin, and the GDR (East Germany). The "International Resource Politics" module explores the intersection of politics, economics and resources – particularly energy – and examines the geopolitical jostling and conflicts over resources that have occurred from the late 19th century up to the present. The "China: Politics, Economy, and Society" module deals with topical themes such as the transformation of the Chinese party-state, technological innovation, China 'going global' and other socio-political and economic challenges pertaining to China.

A maximum of 5 CP can be taken from major-related modules instead of major-specific Specialization Modules:

- GEM CORE Module: Comparing Economic Systems (7.5 CP)
- GEM CORE Module: Development Economics (7.5 CP)
- GEM Specialization: Managing Public Nonprofit Organization (5 CP)
- IBA CORE Module: Applied Project Management (7.5 CP)

Students may also select 15 CP entirely from their major-specific Specialization Modules.

2.2.3.3 Study Abroad

Students have the opportunity to study abroad for a semester to extend their knowledge and competences, to broaden their horizons, and to 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 fifth semester), modules related to the major with a workload to the equivalent of 22.5 CP have to be completed. Modules recognized as study abroad CP need to be pre-approved according to Constructor University

study abroad procedures. The university participates in several exchange programs that allow students to directly enroll at prestigious partner institutions worldwide. Constructor 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.

IRPH students who intend to study abroad in their fifth semester are required to select their modules at an appropriate study-abroad partner institution such that they can be used to substitute between 10 and 15 CP of major-specific Specialization modules and 5 to 15 CP of modules that are equivalent to the non-disciplinary "New Skills" modules (see Constructor Track). In their sixth 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 "New Skills" modules to reach the required credit points in this area.

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 Constructor University faculty member: the Bachelor Thesis (12 CP) and a Seminar (3 CP). The title of their thesis will appear on a student's transcript.

Within this module, students apply the knowledge skills, and methods they have acquired in their major discipline to become acquainted with actual research activities, 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.

In their Bachelor Thesis, students demonstrate mastery of the contents and methods of their major-specific research field. Furthermore, students demonstrate the ability to analyze and solve a well-defined problem with scientific approaches, critical reflection on the status quo in the scientific literature, and the original development of their own ideas. With the permission of a Constructor University Faculty Supervisor, the Bachelor Thesis may also be interdisciplinary in approach. In the Seminar, students present and discuss their ongoing work and developing 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 Constructor Track

The CONSTRUCTOR Track is another important feature of Constructor University's educational model. The Constructor Track runs orthogonal to the disciplinary CHOICE, CORE, and CAREER modules across all study years and is an integral part of all undergraduate study programs. It provides an intellectual tool kit for lifelong learning and encourages the use of diverse methodologies to approach cross-disciplinary problems. The CONSTRUCTOR track contains Methods, New Skills and German Language and Humanities 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 program equip students with transferable academic skills. They convey and practice specific methods that are indispensable for each student's 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.

The following Methods and Skills modules (15 CP) are mandatory to pursue IRPH as a major:

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

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

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

2.3.2 New Skills Modules

This part of the curriculum constitutes the intellectual and conceptual tool kit, and is designed to cultivate and nurture the capacity for a particular set of intellectual dispositions – curiosity, imagination, critical thought, transferability – as well as a range of individual and societal capacities – self-reflection, argumentation and communication – and to introduce students to the normative aspects of inquiry and research – including the norms governing sourcing, sharing, withholding materials and research results as well as others governing the responsibilities of expertise as well as the professional point of view.

All students are required to take the following modules in their second year:

- New Skills Module: Logic (2.5 CP)
- New Skills Module: Causation and Correlation (2.5 CP)

These modules will be offered with two different perspectives of which the students can choose. The module perspectives are independent modules which examine the topic from different point of views. Please see the module description for more details.

In the third year, students take three 5 CP modules that build upon previous modules in the track and are partially constituted by modules that are more closely linked to each student's disciplinary field of study. The following module is mandatory for all students:

- New Skills Module: Argumentation, Data Visualization and Communication (5 CP)

This module will also be offered with two different perspectives of which the students can choose.

In their fifth semester, students may choose between:

- New Skills Module: Linear Model/Matrices (5 CP) and
- New Skills Module: Complex Problem Solving (5 CP).

The sixth semester also contains the choice between two modules, namely:

- New Skills Module: Agency, Leadership and Accountability (5 CP) and
- New Skills Module: Community Impact Project (5 CP).

Students who study abroad during the fifth semester and are not substituting the mandatory "Argumentation, Data Visualization and Communication" module, are required to take this module during their sixth semester. Students who remain on campus are free to take the Argumentation, Data Visualization and Communication module in person in either the fifth or sixth semester as they prefer.

2.3.3 German Language and Humanities Modules

German language abilities foster students' intercultural awareness and enhance their employability in their host country. They are also beneficial for securing mandatory internships (between the 2nd and 3rd year) in German companies and academic institutions. Constructor University supports its students in acquiring basic as well as advanced German skills in the first year of the Constructor Track. Non-native speakers of German are encouraged to take 2 German modules (2.5 CP each), but are not obliged to do so. Native speakers and other students not taking advantage of this offering take alternative modules in Humanities in each of the first two semesters:

- Humanities Module: Introduction into Philosophical Ethics (2.5 CP)
- Humanities Module: Introduction to the Philosophy of Science (2.5 CP)
- Humanities Module: Introduction to Visual Culture (2.5 CP)

3 IRPH as a Minor

International Relations: Politics and History (IRPH) is one of the most popular minor choices at Constructor University. A minor in IRPH is appropriate for students who have a strong interest in understanding the multi-faceted problems and threats challenging the world today. Students minoring in IRPH acquire highly transferable skills such as argumentation and academic writing and the ability to cogently summarize and critically analyze complex information. Thus, IRPH is a valuable complement to many other programs. It is a highly interdisciplinary program that employs concepts and methods from fields such as political science, history, law, and philosophy. The overall aim is to equip students so they can explore the historical emergence of, and remedies for, pressing global ills (for example, conflicts, climate change, and human rights abuses).

3.1 Qualification Aims

The IRPH program taken as a minor introduces students to the core theories of International Relations and fosters an understanding of political concepts and historical developments and their impacts. The program strives to hone these students' critical thinking and writing skills and provides opportunities for collaborative problem solving. The program endeavors to equip students minoring in IRPH with an in-depth understanding of the interrelationships among political, historical, legal, and economic processes.

3.1.1 Intended Learning Outcomes

With a minor in IRPH, students will be able to

- explain theories of international relations, international cooperation, collective security, regional integration, historical processes and technological transformations, and their impact on modern and contemporary life;
- describe political concepts and ideas as well as key institutions of the international system;
- critically assess academic and non-academic texts from the fields of political science and philosophy, international relations, and history;
- analyze complex issues and current events with the aim of advancing solutions to pressing global problems;
- construct well-supported and cogent arguments in professional and academic formats such as presentations, debates, discussions, and research papers;
- develop proposals for addressing international problems in a respectful manner as part of a diverse team with potentially different viewpoints;
- analyze the interrelationships among international political, legal, and economic processes.

3.2 Module Requirements

A minor in IRPH requires 30 CP. How to obtain a minor in IRPH is marked in the Study and Examination Plan in Section 6. Doing so entails completing the following CHOICE and CORE modules:

- CHOICE Module: Introduction to International Relations Theory (7.5 CP)
- CHOICE Module: Introduction to Modern European History (7.5 CP)
- CORE Module: International Political Economy (5 CP)

- CORE Module: Advanced International Relations Theory (5 CP)
- CORE Module: History of Globalization (5 CP)

3.3 Degree

After successful completion, the minor in IRPH will be listed on the final transcript under PROGRAM OF STUDY and BA/BSc – [name of the major] as "(Minor: International Relations: Politics and History)."

4 IRPH Undergraduate Program Regulations

4.1 Scope of these Regulations

The regulations in this handbook apply to all students who entered the International Relations: Politics and History undergraduate program at Constructor University in Fall 2025. In case of conflict between the regulations in this handbook and the general policies for Master Studies, the latter apply (see https://constructor.university/student-life/student-services/university-policies).

In exceptional cases, certain necessary deviations from the regulations of this study handbook might occur during the course of study (e.g., change of the semester sequence, assessment type, or the teaching mode of courses).

Updates to Study Program Handbooks are based on the policies approved by the Academic Senate on substantial and nonsubstantial changes to study programs. Students are integrated in the decision-making process through their respective committee representatives. All students affected by the changes will be properly informed.

In general, Constructor University therefore reserves the right to change or modify the regulations of the program handbook also after its publication at any time and in its sole discretion.

4.2 Examination Concept

According to the Policies for Bachelor and Master studies, modules generally carry at least five ECTS. Each program ensures appropriate examination frequency and organization, justified in an examination concept and regularly reviewed with student involvement.

Constructor University's examination concept follows the principle of Constructive Alignment (Biggs 1996), ensuring that learning outcomes, activities, and assessments are consistently aligned: students learn what is intended, and assessments both measure and shape learning. Where one assessment cannot cover all Intended Learning Outcomes (ILOs) complementary forms could be used (e.g., written exams plus lab reports). Module descriptions map ILOs to assessments.

In specific contexts, such as asynchronous online modules or courses emphasizing student engagement, Module Achievements or other types of formative assessments may support competence-oriented assessment.

Student feedback, embedded in the Quality Assurance System (QAS), systematically monitors workload, competence orientation, and alignment of ILOs and assessments. Student surveys and feedback are regulated in the Policy for student surveys and evaluations.

4.3 Degree

Upon the successful completion of the study program, students are awarded a Bachelor of Arts degree in International Relations: Politics and History.

4.4 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.

4.5 Information and Contact

For more information, please contact the study program chair:

Prof. Dr. Marco Verweij

Professor of Political Science

Email: mverweij@constructor.university

Telephone: +49 421 200-3303

or visit our program website:

International Relations: Politics and History | Constructor University

4.6 Schematic Study Plan for IRPH

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

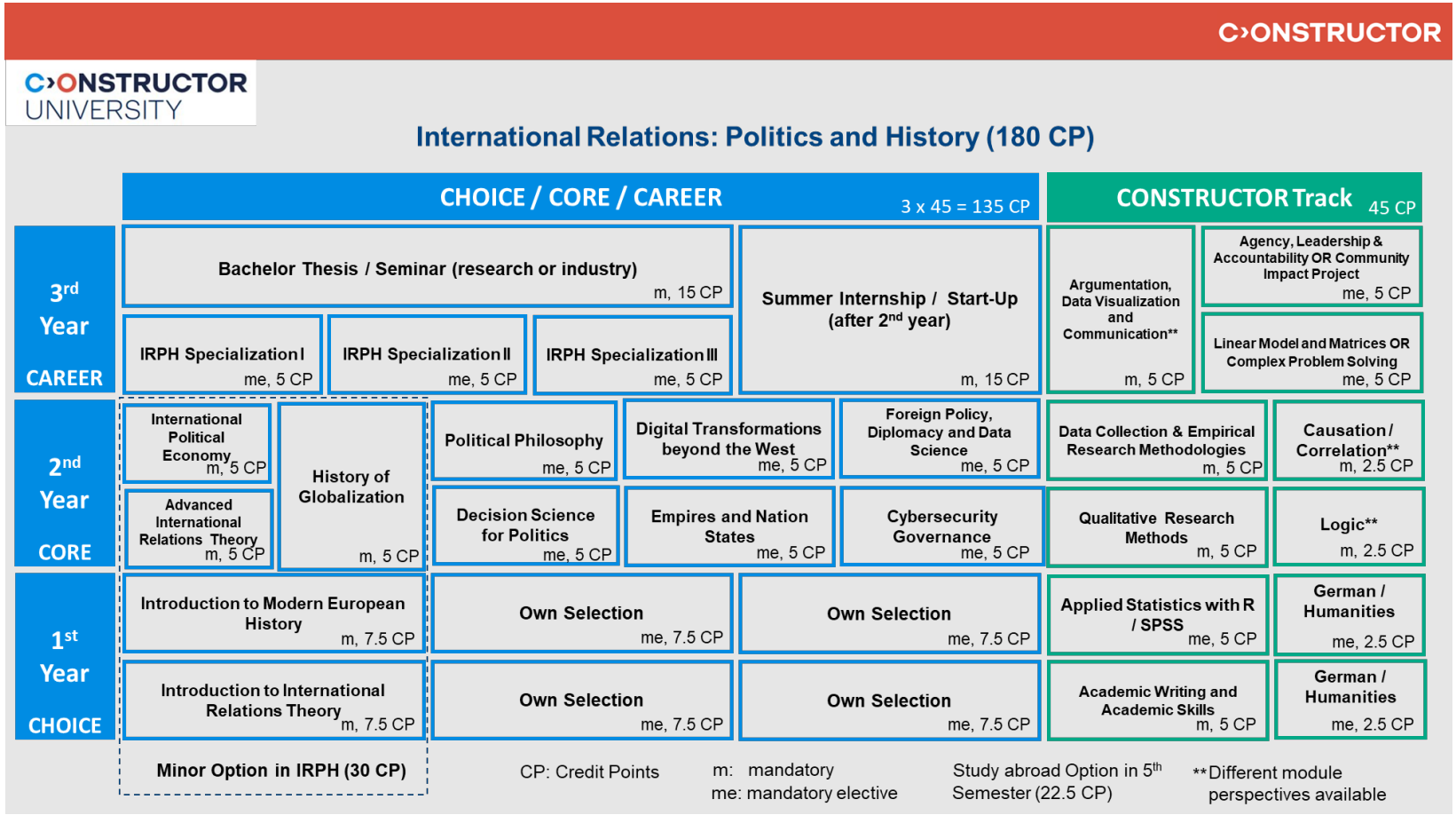

Figure 2: Schematic Study Plan for IRPH

4.7 Study and Examination Plan

International Relations: Politics and History (IRPH) BA

Matriculation Fall 2025

	Program-Specific Modules	Type	Assessment	Period	Status[1]	Sem.	CP
Year 1 - CHOICE							**45**
Take the mandatory CHOICE modules listed below, this is a requirement for the IRPH program.							
	Unit: Introduction to International Relations (Default minor)						**15**
CH-330	**Module: Introduction to International Relations Theory**				**m**	**1**	**7.5**
CH-330-A	International Relations Theory I	Lecture	Written examination	Examination period			5
CH-330-B	Tutorial: Argument & Scholarship	Tutorial					2.5
CH-331	**Module: Introduction to Modern European History**				**m**	**2**	**7.5**
CH-331-A	Modern European History	Lecture	Written examination	Examination period			5
CH-331-B	Tutorial: Writing & Political Thought	Tutorial					2.5
	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]							
CO-660	**Module: International Political Economy**				**m**	**4**	**5**
CO-660-A	International Political Economy	Lecture	Term paper	Examination period			
CO-661	**Module: Advanced International Relations Theory**				**m**	**3**	**5**
CO-661-A	Advanced International Relations Theory	Lecture	Written examination	Examination period			
CO-662	**Module: Empires and Nation States**				**me**	**3**	**5**
CO-662-A	Empires and Nation States	Seminar	Written examination	Examination period			
CO-663	**Module: History of Globalization**				**m**	**3/4**	**5**
CO-663-A	History of Globalization	Seminar	Term paper	Examination period			
CO-667	**Module: Foreign Policy, Diplomacy and Data Science**				**me**	**4**	**5**
CO-667-A	Foreign Policy, Diplomacy and Data Science	Lecture	Term paper	End of Semester			
CO-668	**Module: Digital Transformations beyond the West**				**me**	**4**	**5**
CO-668-A	Digital Transformations beyond the West	Seminar	Term paper	Examination period			
CO-669	**Module: Cybersecurity Governance**				**me**	**3**	**5**
CO-669-A	Cybersecurity Governance	Seminar	Written examination	Examination period			
CO-670	**Module: Political Philosophy**				**me**	**4**	**5**
CO-670-A	Political Philosophy	Seminar	Written examination	Examination period			
CO-671	**Module: Decision Science for Politics**				**me**	**3**	**5**
CO-671-A	Decision Science for Politics	Seminar	Portfolio	During semester / Examination period			

	Constructor Track Modules (General Education)	Type	Assessment	Period	Status[1]	Sem.	CP
							15
	Unit: Methods						**10**
CTMS-MET-01	**Module: Academic Writing and Academic Skills**				**m**	**1**	**5**
CTMS-01	Academic Writing and Academic Skills	Lecture / Tutorial	Term paper	Examination period			
Take one of the two listed mandatory elective methods modules:							
CTMS-MET-02	**Module: Applied Statistics with SPSS**				**me**	**2**	**5**
CTMS-M02	Applied Statistics with SPSS	Lecture / Lab	Written examination	Examination period			
CTMS-MET-03	**Module: Applied Statistics with R**				**me**	**2**	**5**
CTMS-03	Applied Statistics with R	Lecture / Lab	Written examination	Examination period			
	Unit: German Language and Humanities (choose one module for each semester)				**m**		**5**
German is default language and open to Non-German speakers (on campus and online).[4]							
One German Language course can be replaced by Introduction to German Culture & Society							
CTLA-	**Module: Language 1**				**me**	**1**	**2.5**
CTLA-	Language 1	Seminar	Various	Various			
CTLA-	**Module: Language 2**				**me**	**2**	**2.5**
CTLA-	Language 2	Seminar	Various	Various			
CTLA-GER-28	**Module: Introduction to German Culture & Society**				**me**	**4**	**2.5**
CTLA-1028	Introduction to German Culture & Society	Lecture	Presentation & Written examination	During Semester & Examination period			
CTHU-HUM-001	**Humanities Module: Introduction to Philosophical Ethics**				**me**	**2**	**2.5**
CTHU-001	Introduction into Philosophical Ethics	Lecture	Written examination	Examination period			
CTHU-HUM-002	**Humanities Module: Introduction to the Philosophy of Science**				**me**	**1**	**2.5**
CTHU-002	Introduction to the Philosophy of Science	Lecture	Written examination	Examination period			
CTHU-HUM-003	**Introduction to Visual Culture**				**me**	**2**	**2.5**
CTHU-003	Introduction to Visual Culture	Lecture	Written examination	Examination period			
							15
	Unit: Methods						**10**
CTMS-MET-04	**Module: Qualitative Research Methods**				**m**	**3**	5
CTMS-04	Qualitative Research Methods	Seminar	Portfolio	During semester			
CTMS-MET-06	**Module: Data Collection and Empirical Research Methodologies**				**m**	**4**	**5**
CTMS-06	Data Collection and Empirical Research Methodologies	Lecture	Term Paper	Examination period			
	Unit: New Skills						**5**
Choose one of the two modules							
CTNS-NSK- 01	**Module: Logic (perspective I)**				**me**	**3**	**2.5**
CTNS-01	Logic (perspective I)	Lecture (online)	Written examination	Examination period			
CTNS-NSK-02	**Module: Logic (perspective II)**				**me**	**3**	**2.5**
CTNS-02	Logic (perspective II)	Lecture (online)	Written examination	Examination period			
Choose one of the two modules							
CTNS-NSK-03	**Module: Causation and Correlation (perspective I)**				**me**	**4**	**2.5**
CTNS-03	Causation and Correlation (perspective I)	Lecture (online)	Written examination	Examination period			
CTNS-NSK-04	**Module: Causation and Correlation (perspective II)**				**me**	**4**	**2.5**
CTNS-04	Causation and Correlation (perspective II)	Lecture (online)	Written examination	Examination period			

Year 3 - CAREER							**45**
CA-INT-900	**Module: Internship / Start-up and Career Skills**				**m**	**4/5**	**15**
CA-INT-900-0	Internship	Internship	Project Report	During the 6th semester			
CA-IRPH-800	**Module: Thesis / Seminar IRPH**				**m**	**6**	**15**
CA-IRPH-800-T	Thesis IRPH	Thesis	Thesis	15th of May			12
CA-IRPH-800-S	Thesis Seminar IRPH	Seminar	Presentation	During the Semester			3
	Unit: Specialization IRPH				**m**		**15**
Take a total of 15 CP of specialization modules							
CA-S-IRPH-804	International Law	Seminar	Term paper	End of semester	me	5	5
CA-IRPH-804	International Resource Politics	Seminar	Term paper	End of semester	me	6	5
CA-S-IRPH-803	Everyday Life under Dictatorships	Seminar	Term paper	Examination period	me	6	5
CA-S-IRPH-802	China: Politics, Economy and Society	Seminar	Term paper	End of semester	me	6	5
CA-S-xxx	**Specialization electives (see IRPH study program handbook)**		**Various**	**Various**	**me**	**5/6**	**5**

							15
	Unit: New Skills						**10**
Choose one of the two modules							
CTNS-NSK-05	**Module: Linear Model and Matrices**				**me**	**5**	**5**
CTNS-05	Linear Model and Matrices	Lecture	Written examination	Examination period			
CTNS-NSK-06	**Module: Complex Problem Solving**				**me**	**5**	**5**
CTNS-06	Complex Problem Solving	Lecture (online)	Written examination	Examination period			
Choose one of the two modules							
CTNS-NSK-07	**Module: Argumentation, Data Visualization and Communication (perspective I)**				**me**	**5/6**	**5**
CTNS-07	Argumentation, Data Visualization and Communication (perspective I)	Lecture (online)	Written examination	Examination period		**5**	
CTNS-NSK-08	**Module: Argumentation, Data Visualization and Communication (perspective II)**				**me**	**5/6**	**5**
CTNS-08	Argumentation, Data Visualization and Communication (perspective II)	Lecture (online)	Written examination	Examination period		**6**	
Choose one of the two modules							
CTNS-NSK-09	**Module: Agency, Leadership, and Accountability**				**me**	**6**	**5**
CTNS-09	Agency, Leadership, and Accountability	Lecture (online)	Written examination	Examination period			
CTNS-CIP-10	**Module: Community Impact Project**				**me**	**5/6**	**5**
CTNS-10	Community Impact Project	Project	Project Assessment	Examination period			
Total CP							**45**	**180**

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

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

[3] For details please see the IRPH study program handbook.

[4] German native speakers have alternatives to the language courses (in the field of Humanities).

Figure 2: Schematic Study Plan for IRPH

5 Module Descriptions

5.1.1 Introduction to International Relations Theory

Module Name	Introduction to International Relations Theory
Module Code	2025-CH-330
Module ECTS	7.5
Program Owner	2025-IRPH-BA (International Relations: Politics and History)
Module Coordinator	Prof. Dr. Karen Smith Stegen

Study Semester		
Program	**Semester**	**Status**
2025-IRPH-BA International Relations: Politics and History	1	Mandatory
2025-IRPH-BA International Relations: Politics and History	1	Mandatory Elective

Student Workload	
Lecture	35
Seminar	17.5
Independent Study	135
Total Hours	**187.5**

Module Components	**Number**	**Type**	**CP**
International Relations Theory I	CH-330-A	Lecture	5
Tutorial: Argument & Scholarship	CH-330-B	Seminar	2.5

Module Description

This module introduces students to the field of political science and explores one of its main subfields, international relations (IR), in detail. Students will also gain basic knowledge of how to construct academic arguments and analyze academic scholarship. In "International Relations Theory I," students will learn key political concepts and several core theories of international relations, as well as theories of cooperation, and collective security. To bring the theories to life, students will play diplomacy and cooperation games. With an eye on practical issues as well, they will study how states attempt to cooperate with each other, particularly to address significant global issues. In the past century, states have created numerous international organizations and students will examine the effectiveness of and controversies surrounding several of the more prominent organizations, including the United Nations (UN), the North Atlantic Treaty Organization (NATO), and the World Trade Organization (WTO). As this is a first-semester module, students will be taught presentation skills and will be offered the opportunity to employ them in the course of their study. Moreover, students will be apprised of the

non-academic attributes (such as integrity, ethics, teamwork, resilience, organizational skills) that both graduate schools and employers seek. The reading materials for the module will primarily comprise academic articles. In the "Tutorial," students will be taught to interpret high-level scholarship in political science, develop academic arguments, and structure academic papers.

Recommended Knowledge

- Knowledge of current events in international politics

- To prepare for this course, students should be aware of recent significant developments in international politics and must endeavor to study them by relying on respectable news outlets

Usability and Relationship to other Modules

- The presentation skills acquired in this module will be used in further modules, particularly the CORE and specialization ones.

- The skills learned in the tutorial will be used and refined in further modules, such as the second semester History Module.

- The theories introduced in this module provide the building blocks for further study in IRPH.

- The work in the tutorial dovetails with the Academic Writing and Academic Skills module.

Intended Learning Outcomes

No	Competence	ILO
1	Describe	Describe several core theories of International Relations as well as theories of cooperation, and collective security
2	Explain	Explain how international cooperation can be achieved and how major challenges can be overcome
3	Differentiate	Differentiate among several prominent international organizations, including the UN, NATO, and WTO
4	Demonstrate	Demonstrate presentation skills
5	Enumerate	Enumerate non-academic attributes that are important for graduate schools and programs
6	Compare	Compare different ways of developing academic arguments
7	Describe	Describe how academic papers can be structured

Indicative Literature

- Abbott, K. & Snidal, D. (1998). Why States Act through Formal International Organizations. In The Journal of Conflict Resolution, 42(1), pp.3-32
- Cathy Birkenstein and Gerald Graff (2018). They Say, I Say: The Moves That Matter in Academic Writing. New York: Norton & Company
- John Arthur and Steven Salet eds. (2008). Morality and Moral Controversies: Readings in Moral, Social, and Political Philosophy. New York: Routledge
- Keohane, R. & Nye, J. (2012). Interdependence in World Politics. In Power and Interdependence (pp.3-18). Longman, Addison: Wesley Publishing Co. Walt, S

- Morgenthau, H. (2003). The Future of Diplomacy. In Robert J. Art and Robert Jervis (Eds.), International Politics: Enduring Concepts and Contemporary Issues (pp. 116-125). Longman: Addison: Wesley Publishing Co.
- Oye, K. (2003). The Conditions for Cooperation in World Politics. In Robert J. Art and Robert Jervis (Eds.) International Politics: Enduring Concepts and Contemporary Issues (pp.81-94). Longman, Addison: Wesley Publishing Co. Walt, S
- Pease, K. (2016). Mainstream Theories. In International Organizations (pp.43-75). London & New York: Routledge
- Sterling-Folker, J. (2010). Neoliberalism In Dunne et al. (Eds.) International Relations Theories
- Walt, S. (2003). Alliances: Balancing and Bandwagoning. In Robert J. Art and Robert Jervis (Eds.) International Politics: Enduring Concepts and Contemporary Issues (pp.108-115). Longman: Addison: Wesley Publishing Co
- Waltz, K. N. (1986). Anarchic Orders and Balances of Power. In Robert O. Keohane (Eds.), Neorealism and Its Critics, (pp. 98-115). New York: Columbia University Press, 1986

Entry Requirements

Prerequisites	None
Co-requisites	None
Additional Remarks	None

Assessment and Completion

Module Component	Examination Type	Duration or Length	Weight (%)	Minimum for Pass	ILOs
International Relations Theory I	Written Examination	120 min	100	45%	all
Tutorial: Argument & Scholarship					

Module Achievement

5.1.2 Introduction to Modern European History

Module Name	Introduction to Modern European History
Module Code	2025-CH-331
Module ECTS	7.5
Program Owner	2025-IRPH-BA (International Relations: Politics and History)
Module Coordinator	Dr. Julia Timpe

Study Semester		
Program	**Semester**	**Status**
2025-IRPH-BA International Relations: Politics and History	2	Mandatory
2025-IRPH-BA International Relations: Politics and History	2	Mandatory Elective

Student Workload	
Lecture	35
Seminar	17.5
Independent Study	135
Total Hours	**187.5**

Module Components	**Number**	**Type**	**CP**
Modern European History	CH-331-A	Lecture	5
Tutorial: Writing & Political Thought	CH-331-B	Seminar	2.5

Module Description

This module introduces students to the study of history in general and explores the history of Europe in the modern era, that is since the French Revolution of 1789 in detail. Students will be familiarized with basic writing skills and will learn how to interpret source texts and craft arguments

In “Modern European History,” students gain knowledge about the political, social, economic, and cultural history of Europe in the aforementioned period and examine the emergence of political ideologies such as nationalism, liberalism, socialism, and fascism that continue to shape our world today. The lecture will provide them with an overview of the major historical developments in nineteenth and twentieth-century European history and introduce them to methods used by historians to examine and analyze these historical sources. Reading materials for the course will comprise textbook chapters, academic articles, and primary sources. The tutorial will introduce students to developments in political philosophy that shaped nineteenth-century ideologies such as liberalism and communism, complementing the examination of the historical relevance and contexts in the lecture. Students will also practice analyzing and developing arguments as well as writing short response papers etc., to enhance their abilities to deploy such arguments in structured academic writing. This module will support students in developing their abilities to organize, summarize, and analyze complex information in both written and verbal forms.

Recommended Knowledge

Sufficient English reading

Usability and Relationship to other Modules

The knowledge acquired in this module provides the building blocks for further study in IRPH, especially for "Empires and Nation States," "Advanced International Relations Theory," and "History of Globalization" (CORE modules)

Intended Learning Outcomes

No	Competence	ILO
1	Name	Name events and actors that are important in the history of Modern Europe
2	Summarize	Summarize major historical developments in Europe since 1789
3	Describe	Describe the main content of political ideologies such as liberalism and communism and how they emerged
4	Analyze	Analyze primary sources in connection to their historical context
5	Explain	Explain factors contributing to political and social change in Europe in the period between 1789 and 1989
6	Identify	Identify different academic and theoretical approaches
7	Discuss	Discuss complex ideas and concepts in a critical and constructive manner
8	Construct	Construct written pieces that convey academic arguments concisely and persuasively

Indicative Literature

- Doris L. Bergen (2016). War and Genocide: A Concise History of the Holocaust, 3rd edn., Maryland and London: Rowman and Littelfield
- Isaiah Berlin (1969). Two Concepts of Liberty
- John Arthur and Steven Salet eds. (2008). Morality and Moral Controversies: Readings in Moral, Social, and Political Philosophy. New York: Routledge
- Karl Marx and Friedrich Engels (1848). The Communist Manifesto
- Lynn Hunt, et al.. (2016). The Making of the West: Peoples and Cultures – Volume 2: Since 1500, 5th edn. Boston and New York: Bedford/St. Martin's (Macmillan)
- Michael Rowe (2013). The French Revolution, Napoleon and Nationalism in Europe. In The Oxford History of Nationalism, ed. by John Breuilly, Oxford: OUP 2013, pp. 127–148
- Robert O. Paxton and Julie Hessler (2012). Europe in the Twentieth Century, 5th edn., Boston: Wadsworth
- T. C. Blanning (2006). The Oxford History of Modern Europe, Oxford: Oxford UP
- Tony Judt (2010). Postwar: A History of Europe Since 1945. London: Vintage

Entry Requirements

Prerequisites	None

Co-requisites	None
Additional Remarks	None

Assessment and Completion

Module Component	Examination Type	Duration or Length	Weight (%)	Minimum for Pass	ILOs
Modern European History	Written Examination	120 min	100	45%	all
Tutorial: Writing & Political Thought					

Module Achievement

5.1.3 International Political Economy

Module Name	International Political Economy
Module Code	2025-CO-660
Module ECTS	5
Program Owner	2025-IRPH-BA (International Relations: Politics and History)
Module Coordinator	Prof. Dr. Tobias ten Brink

Study Semester		
Program	**Semester**	**Status**
2025-IRPH-BA International Relations: Politics and History	4	Mandatory

Student Workload	
Lecture	35
Independent Study	90
Total Hours	**125**

Module Components	**Number**	**Type**	**CP**
International Political Economy	CO-660-A	Lecture	5

Module Description

In this module, students will focus on the relationship between economics and international relations since the 1970s. This module examines how domestic policies and politics interact with and are influenced by international economic issues and governance. In the lecture, first, key theories and concepts of International Political Economy (IPE) are discussed. Second, the roles and ideas of and interactions among the main agents—such as state actors, market actors, international organizations, and NGOs—are explored. Third, key IPE issue areas, including trade, financial relations, and poverty and development are explicated.

This module provides students with theoretical insights, principles, and themes of IPE, and offers an opportunity to improve their writing skills. Students will also learn to construct well-supported arguments and to develop critical thinking skills. Upon the completion of the module, students will be able to think across disciplinary boundaries and beyond the West to understand the complexity of contemporary political and economic processes.

Recommended Knowledge

- Sufficient writing skills

- Willingness to engage in class debate

- Students should read Robert O'Brien and Marc Williams, Marc: Global Political Economy: Evolution and Dynamics, Houndmills 2016

Usability and Relationship to other Modules

This module builds upon "Introduction to International Relations Theory" (CHOICE module). It connects to the following modules: "Digital Transformations beyond the West" and "Empires and Nation States" (CORE module). It also prepares students for the "BA thesis" Module

Intended Learning Outcomes

No	Competence	ILO
1	Develop	Develop a nuanced understanding of IPE theories and themes, and of the history of the international political economy since the 1970s
2	Analyze	Analyze critically the interplay among economic and political structures, institutions, and actors.
3	Apply	Apply different theoretical perspectives of IPE to empirical cases, with a focus on East Asia
4	Design	Design an independent research paper

Indicative Literature

- Cohn, Theodore (2014). Global Political Economy, Routledge, London
- Holcombe, Charles (2011). A History of East Asia. From the Origins of Civilization to the Twenty-First Century, Cambridge: Cambridge University Press
- Katzenstein, Peter J. and Stephen C. Nelson (2013). Reading the right signals and reading the signals right: IPE and the financial crisis of 2008. In: Review of International Political Economy 20(5): 1101-1131
- Krasner, Stephen (1976). State Power and the Structure of International Trade. In World Politics 28:3
- O'Brien, Robert/Williams, Marc (2016). Global Political Economy: Evolution and Dynamics, London: Palgrave Macmillan
- Stephen, Matthew D. (2017). Emerging Powers and Emerging Trends in Global Governance. In Global Governance 23, 483-502

Entry Requirements

Prerequisites	2025-CH-331 Introduction to Modern European History 2025-CH-330 Introduction to International Relations Theory
Co-requisites	None
Additional Remarks	None

Assessment and Completion

Module Component	Examination Type	Duration or Length	Weight (%)	Minimum for Pass	ILOs
International Political Economy	Term Paper	400 words	100	45%	All

Module Achievement

5.1.4 Advanced International Relations Theory

Module Name	Advanced International Relations Theory
Module Code	2025-CO-661
Module ECTS	5
Program Owner	2025-IRPH-BA (International Relations: Politics and History)
Module Coordinator	Prof. Dr. Marco Verweij

Study Semester		
Program	**Semester**	**Status**
2025-IRPH-BA International Relations: Politics and History	3	Mandatory

Student Workload	
Lecture	35
Independent Study	90
Total Hours	**125**

Module Components	**Number**	**Type**	**CP**
Advanced International Relations Theory	CO-661-A	Lecture	5

Module Description

In this module, students are familiarized with the past sixty (or so) years of theories of world politics. It builds on the knowledge that the students acquire in the "International Relations Theory I" module, in which they focus on several core international relations theories. In this advanced module, students learn to analyze, apply, and criticize a wider range of approaches in international relations. In the first half of the module, the participants will focus on the theoretical approaches that made up the "Third Great Debate" in the study of international relations (which took place roughly from the 1960s to the 1980s). In the second part, they will analyze, compare, and evaluate the theoretical frameworks of the "Fourth Great Debate" (which has been raging from the 1990s up to now). Attention will also be given to the historical contexts in which paradigm shifts have taken place in the study of world politics. Thus, this module also connects in part with the "Introduction to Modern European History" module.

Each week, an interactive lecture sets out the main assumptions, features, applications, and policy implications of a particular theoretical contribution to either the Third or Fourth Great Debate. To strengthen their analytical and critical skills, in the final exam students have to answer three wide-ranging questions on IR theories in the form of a short essay. As a consequence, students taking this module also benefit from having participated in two CHOICE tutorials ("Argument & Scholarship" and "Writing & Political Thought"). All the required readings in this module consist of primary academic literature (mostly in the form of articles from leading international relations journals).

Recommended Knowledge

- Basic understanding of the International Relations theories taught in the "International Relations Theory I" module

- Ability to read primary political science literature

- Sufficient English writing skills

- Willingness to engage in class debate

- For the first half of the course, students would benefit from reading: Robert D. McKinlay and Richard Little, Global Problems and World Order (London: Frances Pinter, 1986). For the second half of the course, students can consult: Tim Dunne, Milja Kurki and Steve Smith (eds), International Relations Theories: Discipline and Diversity (Oxford: Oxford University Press, 2016).

Usability and Relationship to other Modules

- This module builds upon the following modules: "Introduction to International Relations Theory" and (to a lesser extent) "Introduction to Modern European History."

- As this module provides a broad overview of international relations theories, it supports all other CORE and Specialization modules.

Intended Learning Outcomes

No	Competence	ILO
1	Apply	Apply, analyze, and evaluate the theoretical approaches of the 'Third' and 'Fourth Great Debates' in the study of world politics
2	Appraise	Appraise primary academic literature
3	Engage	Engage constructively in class debates.
4	Express	Express coherently their views in the form of short essays

Indicative Literature

- Immanuel Wallerstein (1974) Dependence in an Interdependent World: The Limited Possibilities of Transformation within the Capitalist World Economy. In African Studies Review (Vol. 17, No. 1), pp. 1-26
- J. Ann Tickner (2002). Feminist Perspectives on 9/11. In International Studies Perspectives (Vol. 3, 2002), pp. 333-350
- Marco Verweij, Mary Douglas, Richard J. Ellis, Christoph Engel, Frank Hendriks, Susanne Lohmann, Steven Ney, Steve Rayner and Michael Thompson (2006). Clumsy Solutions for a Complex World: The Case of Climate Change. Public Administration (Vol. 84, No. 4), pp. 817-843
- Nina Tannenwald (1999). The Nuclear Taboo: The United States and the Normative Basis of Nuclear Non-Use. In International Organization (Vol. 53, No. 3), pp. 433-68
- Sir Norman Angell (1914). The Great Illusion: A Study of the Relation of Military Power in Nations to Their Economic and Social Advantage. London: Heinemann, selected pages

- Stephen D. Krasner (1992). Realism, Imperialism and Democracy: A Response to Gilbert. In Political Theory (Vol. 20, No. 1), pp. 38-52

Entry Requirements

Prerequisites	2025-CH-331 Introduction to Modern European History 2025-CH-330 Introduction to International Relations Theory
Co-requisites	None
Additional Remarks	None

Assessment and Completion

Module Component	Examination Type	Duration or Length	Weight (%)	Minimum for Pass	ILOs
Advanced International Relations Theory	Written Examination	180 min	100	45%	All

Module Achievement

5.1.5 History of Globalization

Module Name	History of Globalization
Module Code	2025-CO-663
Module ECTS	5
Program Owner	2025-IRPH-BA (International Relations: Politics and History)
Module Coordinator	Dr. Julia Timpe

Study Semester		
Program	**Semester**	**Status**
2025-IRPH-BA International Relations: Politics and History	3	Mandatory
2025-IRPH-BA International Relations: Politics and History	4	Mandatory

Student Workload	
Seminar	35
Independent Study	90
Total Hours	**125**

Module Components	**Number**	**Type**	**CP**
History of Globalization	CO-663-A	Seminar	5

Module Description

Today's world is marked by the far-reaching international interconnectedness of the social, economic, political, and cultural spheres. This process of progressive international integration is often referred to as "globalization." This module will explore the historical roots and emergence of this development by reading and discussing scholarship dealing with issues from the field of the history of globalization. The module will first introduce students to debates on different starting points and chronologies of the history of globalization. Students will then look at developments during the nineteenth century and explore aspects such as trade, transportation, communication, and migration and their role in the emergence and acceleration of globalization. The module will also deal with globalization in the twentieth century, once again by focusing on these aspects, namely trade, transportation, communication, and migration. For both time periods, these aspects will be explored by an examination and discussion on related historical case studies. In addition to introducing students to the history of globalization, the module also aims to train students on writing academic papers. The module will be taught across two subsequent semesters, with the Spring component building on the previous Fall component. In both components, students will be trained to identify a research topic related to the module's content that they will then pursue, to organize and conduct the necessary research, structure, and write an argumentative essay, which will be final assessment for this module.

Recommended Knowledge

- Basic understanding of Modern (European) History

- Sufficient English writing skills

- Willingness to engage in class debate

- Students should read Jürgen Osterhammel and Niels P. Peterson, Globalization: A Short History

or Peter N. Stearns, Globalization in World History.

Usability and Relationship to other Modules

This module's content builds on the content of "Introduction to Modern European History" (CHOICE module). It is part of the students' preparation for writing their BA thesis

Intended Learning Outcomes

No	Competence	ILO
1	Describe	Describe historical processes leading to the emergence of globalization
2	Explain	Explain factors, innovations, and continuities during the nineteenth and twentieth centuries which have led to today's interconnected world
3	Evaluate	Evaluate academic scholarship
4	Prepare	Prepare a research paper on a topic related to the history of globalization

Indicative Literature

- C. A. Bayly (2004). The Birth of the Modern World. Malden: Blackwell Publishing
- Daniel R. Headrick (1988). The Tentacles of Progress: Technology Transfer in the Age of Imperialism. New York/Oxford: Oxford University Press.
- Jürgen Osterhammel and Niels P. Petersson (2009). Globalization: A Short History, trans. Dona Geyer, Princeton: Princeton University Press
- Peter N. Stearns (2017). Globalization in World History, 2nd edition. New York/ London: Routledge
- Robin Cohen (1997). Global Diasporas: An Introduction. London: Routledge
- Sven Beckert (2004). Empire of Cotton: A Global History. New York: Borzoi

Entry Requirements

Prerequisites	None
Co-requisites	None
Additional Remarks	None

Assessment and Completion

Module Component	Examination Type	Duration or Length	Weight (%)	Minimum for Pass	ILOs
History of Globalization	Term Paper	4.500-5.000 words	100	45%	All

Module Achievement

5.1.6 Empires and Nation States

Module Name	Empires and Nation States
Module Code	2025-CO-662
Module ECTS	5
Program Owner	2025-IRPH-BA (International Relations: Politics and History)
Module Coordinator	Dr. Julia Timpe

Study Semester		
Program	**Semester**	**Status**
2025-IRPH-BA International Relations: Politics and History	3	Mandatory Elective

Student Workload	
Seminar	35
Independent Study	90
Total Hours	**125**

Module Components	**Number**	**Type**	**CP**
Empires and Nation States	CO-662-A	Seminar	5

Module Description

This module will introduce students to the politics and ideologies of the so-called "long nineteenth century," by providing them a close insight into events, ideas, and processes that came to shape modern politics and societies and that continue to define our institutions, political landscapes, and ideologies today. The module will explore historical developments in the period between the French Revolution and the beginning of the First World War, with a special focus on the history of politics and international relations and on European processes of nation-building and empire-building as well as their repercussions in Europe and other parts of the world.

The module follows a three-part-structure. In the first part, students will explore the beginning of the "long nineteenth century" and the causes, course, and immediate consequences of the French Revolution. The second part of the module will build from this point onward and will deal with the history of nineteenth-century nationalism and nation-building. The last part of the module will look at the history of European imperialism at the end of the nineteenth century and its repercussions for international relations. The module aims to train students' skills in reading and reviewing scholarly literature as well as analyzing primary sources, including those in written and visual forms.

Recommended Knowledge

Basic understanding of Modern (European) History

Willingness to engage in class debate

Students should read Eric Hobsbawm, The Age of Empire: 1875-1914; John Merriman, History of Europe: From the Renaissance to the Present, ch. 12- 22, or Trevor R. Getz, The Long Nineteenth Century, 1750-1914: Crucible of Modernity

Usability and Relationship to other Modules

This module's content builds on the content of "Introduction to Modern European History" (CHOICE module) and furthers the academic skills that the students gained in both IRPH CHOICE modules

Intended Learning Outcomes

No	Competence	ILO
1	Describe	Describe the contours of international relations during the "long nineteenth century
2	Summarize	Summarize the effects of the French Revolution on modern history
3	Explain	Explain the content of and connections among nationalism, nation building, and imperialism in the nineteenth century
4	Discuss	Discuss visual and written primary sources
5	Critique	Critique academic scholarship related to historical issues

Indicative Literature

- Eric Hobsbawm (1996). The Age of Revolution: 1789–1848, London: Vintage
- John Hutchinson and Anthony Smith, eds. (1994). Nationalism. Oxford: Oxford University Press
- Jürgen Osterhammel (2015). The Transformation of the World: A Global History of the Nineteenth Century, trans. Patrick Camiller. Princeton: Princeton University Press
- Robert Gildea (2003). Barricades and Borders Europe 1800–1914, 3rd edn. Oxford and New York: OUP
- T.C. W. Blanning, ed. (2000). The Nineteenth Century. Europe 1789 – 1914, 3rd edition, Oxford: Oxford University Press

Entry Requirements

Prerequisites	2025-CH-331 Introduction to Modern European History 2025-CH-330 Introduction to International Relations Theory
Co-requisites	None
Additional Remarks	None

Assessment and Completion

Module Component	Examination Type	Duration or Length	Weight (%)	Minimum for Pass	ILOs
Empires and Nation States	Written Examination	120 min	100	45%	All

Module Achievement

5.1.7 Foreign Policy, Diplomacy and Data Science

Module Name	Foreign Policy, Diplomacy and Data Science
Module Code	2025-CO-667
Module ECTS	5
Program Owner	2025-IRPH-BA (International Relations: Politics and History)
Module Coordinator	Prof. Dr. Claas Knoop

Study Semester		
Program	**Semester**	**Status**
2025-IRPH-BA International Relations: Politics and History	4	Mandatory Elective

Student Workload	
Lecture	35
Independent Study	90
Total Hours	**125**

Module Components	**Number**	**Type**	**CP**
Foreign Policy, Diplomacy and Data Science	CO-667-A	Lecture	5

Module Description

In this module, students will explore conceptual tools and learn to apply the practical skills that diplomats, foreign policy experts, and (international) civil servants employ in their professions. These include skills that can be drawn from data science. The module is divided into three sections. First, students will look into the theoretical frameworks, structures, and processes that shape diplomacy and foreign policy of nations and international organizations in the 21st century. In the second section, students will delve into the complex roles of non-state actors in diplomacy and foreign policy, such as parliaments, media, and NGOs. In the last section, students will study the daily routines, opportunities, and challenges involved in working in the field of diplomacy and foreign policy. This section will also focus on the work of embassies and permanent representations, and pay attention to data science tools. The latter may for instance include the use of machine learning methods in data analysis and the development of new scenarios in international negotiations. As topics in this course may be relevant for the future careers of students in an international professional environment, students will be taught to prepare applications for foreign services and international organizations, such as the UN and the European Union.

Recommended Knowledge

- Familiarity with mainstream IR Theories (Neorealism and Neoliberalism)

- Writing Skills

- Students should read Henry Kissinger, World Order (Penguin, 2014) and Hent Kalmo and Skinner Quentin (eds.) Sovereignty in Fragments: The Past, Present and Future of a Contested Concept (Cambridge, 2010).

Usability and Relationship to other Modules

The module builds on both IRPH CHOICE modules and is also connected to "Empires and Nation States" (CORE module).

Intended Learning Outcomes

No	Competence	ILO
1	Discuss	Discuss the tools (including data science methods) and the role of diplomacy in international relations in the 21st century
2	Identify	Identify the role of non-state-actors in diplomacy and foreign policy
3	Summarize	Summarize the tasks and roles of Foreign Services, Embassies and Permanent Representations in International Relations
4	Explain	Explain the process of negotiating, particularly in an international context
5	Understand	Understand how to implement diplomatic instructions by carrying out a demarche
6	Write	Write diplomatic correspondence, including verbal notes
7	Prepare	Prepare for a professional career in the field of Diplomacy and Foreign Policy

Indicative Literature

- Amy Web (2019). The Big Nine. New York: Hachette Book Group
- Henry Kissinger (1994). Diplomacy. New York: Simon & Schuster
- Henry Kissinger (2014). World Order. London: Penguin Press
- Roger Fisher, William Ury & Bruce Palton (1992). Getting to Yes; Negotiating an Agreement without Giving in. London: Random Century Ltd.
- Timothy Snyder (2018). The Road to Unfreedom. New York

Entry Requirements

Prerequisites	None
Co-requisites	None
Additional Remarks	None

Assessment and Completion

Module Component	Examination Type	Duration or Length	Weight (%)	Minimum for Pass	ILOs

Foreign Policy, Diplomacy and Data Science	Term Paper	3000 words	100	45%	All

Module Achievement

5.1.8 Political Philosophy

Module Name	Political Philosophy
Module Code	2025-CO-670
Module ECTS	5
Program Owner	2025-IRPH-BA (International Relations: Politics and History)
Module Coordinator	Dr. Eoin Ryan

Study Semester		
Program	**Semester**	**Status**
2025-IRPH-BA International Relations: Politics and History	4	Mandatory Elective

Student Workload	
Seminar	35
Independent Study	90
Total Hours	**125**

Module Components	**Number**	**Type**	**CP**
Political Philosophy	CO-670-A	Seminar	5

Module Description

In this module, students will explore central problems and key concepts in political philosophy. The module will introduce students to key concerns in contemporary political philosophy that are grounded in their reading and analysis of central texts from the traditions of Modern Philosophy.

The first part of the module focuses on the genesis of modern political philosophy and science in Europe, particularly on the historical and intellectual development of the conceptual framework at the base of the political systems in the modern era. By reading select classical works, students will reflect on key concepts such as power, the state, representation, and democracy. Students will also be familiarized with the problems of conceptual history, and the practice of reading philosophical texts closely.

The second part of the module focuses on prominent discourse and key debates in the political philosophy of the twentieth and twenty-first centuries. Students will learn how classical political concerns have been addressed in light of twentieth-century philosophical (and historical) developments. Students will use philosophical tools such as conceptual analysis, formal and informal logic, and thought experiments to study the implications and tensions of our most important political ideas, especially as they interact with contemporary society.

Students will deepen their understanding of the evolution and complexity of and interrelations among political ideas that are often deemed transparent in other academic, professional, and public debates, thus giving them the background to examine controversial ideas and discussions from more varied critical perspectives. By engaging with issues in political philosophy at an advanced level, students will

enhance their analytical thinking skills, their communication and intercultural skills in speaking, presenting, arguing and debating, as well as their independent research and academic writing skills. This will have a beneficial impact on the achievement of their academic, personal, and career goals because of their relevance and transferability in higher studies at the master's levels or in their professional careers.

Recommended Knowledge

- Basic knowledge of modern political theory

- Willingness to engage in class debate

- Basic presentation and writing skills

- Basic academic research skills

- Students are advised to read the following:

Jonathan Wolff, An Introduction to Political Philosophy, 3rd edn., Oxford and New York: 2016, Oxford University Press.

Usability and Relationship to other Modules

This module builds on the IRPH CHOICE modules and connects with the contents discussed in IRPH, specifically "Advanced International Relations Theory" and "International Law". It also complements the IRPH Thesis Module

Intended Learning Outcomes

No	Competence	ILO
1	Distinguish	Distinguish among the various concepts and ideas in political philosophy;
2	Explain	Explain the grounding of several aspects of international relations in political philosophy
3	Analyze	Analyze fundamental political concepts critically
4	Articulate	Articulate well-supported philosophical arguments
5	Justify	Justify complex thoughts in a cogent manner
6	Apply	Apply methodological tools of close reading and intellectual history to understand political and philosophical texts
7	Dissect	Dissect contemporary political problems using philosophical and logical tools

Indicative Literature

- Further Readings from Marx, Catherine MacKinnon, Kwame Ture, Hannah Arendt
- J. S. Mill. On Liberty
- John Locke. Second Treatise on Government

- Michel Foucault, Discipline and Punishment
- Niccolo Machiavelli. The Prince

Entry Requirements

Prerequisites	2025-CH-331 Introduction to Modern European History 2025-CH-330 Introduction to International Relations Theory
Co-requisites	None
Additional Remarks	None

Assessment and Completion

Module Component	Examination Type	Duration or Length	Weight (%)	Minimum for Pass	ILOs
Political Philosophy	Written Examination	120 Minutes	100	45%	All

Module Achievement

5.1.9 Digital Transformations beyond the West

Module Name	Digital Transformations beyond the West
Module Code	2025-CO-668
Module ECTS	5
Program Owner	2025-IRPH-BA (International Relations: Politics and History)
Module Coordinator	Prof. Dr. Tobias ten Brink

Study Semester		
Program	**Semester**	**Status**
2025-IRPH-BA International Relations: Politics and History	4	Mandatory Elective

Student Workload	
Seminar	35
Independent Study	90
Total Hours	**125**

Module Components	**Number**	**Type**	**CP**
Digital Transformations beyond the West	CO-668-A	Seminar	5

Module Description

In this module, participants discover processes of digital transformation in the non-Western world. The focus is on Asia, a new center of digitalization and digital politics. First, the effects of digitalization for Asian societies and the roles of key actors such as governments, “Big Tech” companies, regional organizations, and NGOs, are explored. This will help students to better understand related changes from industrial to information societies. Second, changes in governance will be explored. The module will analyze efforts by both authoritarian and democratic governments in Asia to subject both digital applications and the physical and technical infrastructures of the Internet to their sovereign access. By studying the changing political economy of the Internet, students will examine whether and how governmental actors and “Big Tech” companies use their position to gain influence over (other) societies through their dominance of information and digital networks. In addition to introducing contemporary digital transformations beyond the West, the module trains students on writing academic end-of-term papers. During the semester, both topic and structure of the paper will be discussed in detail. Also, students will write an outline to prepare the paper.

Recommended Knowledge

- Basic understanding of theories and concepts of International Relations

- Sufficient writing skills

- Willingness to engage in class debate

- Students should read Chander, A. et al. (2022) Asia's Digital Future, Special Issue, East Asia Quartely Forum, 2.

Usability and Relationship to other Modules

This module builds upon "Introduction to International Relations Theory" (CHOICE module), and connects to the following modules: "International Political Economy" and "Cybersecurity Governance" (CORE modules). It also prepares students for the "BA Thesis" module.

Intended Learning Outcomes

No	Competence	ILO
1	Develop	Develop a nuanced understanding of contemporary transformations in Asia
2	Analyze	Analyze critically and comparatively the complex interactions between politics and economics in the digital era.
3	Apply	Apply different concepts in non-Western contexts
4	Design	Design a research paper on a topic related to empirical issues discussed in class

Indicative Literature

- Aho, B. & Duffield, R. (2020). Beyond surveillance capitalism: Privacy, regulation and big data in Europe and China. Economy and Society 49:2
- Brass, I. & Hornsby, D. J. (2019). Digital Technological Innovation and the International Political Economy. In: Shaw et al. (eds) The Palgrave Handbook of Contemporary International Political Economy. Palgrave Macmillan
- Gao, X. (2020). State-Led Digital Governance in Contemporary China. In: Naito et al. (eds) State Capacity Building in Contemporary China. Springer
- Kassenova, N. & Duprey, B. (2021). Digital Silk Road in Central Asia: Present and Future. Davis Center for Russian and Eurasian Studies, Harvard University
- Steinberg, M., Mukherjee, R., & Punathambekar, A. (2022). Media power in digital Asia: Super apps and megacorps. Media, Culture & Society, 01634437221127805
- Wan, M. (2020). The Political Economy of East Asia: Wealth and Power. Edward Elgar

Entry Requirements

Prerequisites	2025-CH-331 Introduction to Modern European History 2025-CH-330 Introduction to International Relations Theory
Co-requisites	None

Additional Remarks	None

Assessment and Completion

Module Component	Examination Type	Duration or Length	Weight (%)	Minimum for Pass	ILOs
Digital Transformations beyond the West	Term Paper	3000-4000 words	100	45%	All

Module Achievement

5.1.10 Cybersecurity Governance

Module Name	Cybersecurity Governance
Module Code	2025-CO-669
Module ECTS	5
Program Owner	2025-IRPH-BA (International Relations: Politics and History)
Module Coordinator	Prof. Dr. Marco Verweij

Study Semester		
Program	**Semester**	**Status**
2025-IRPH-BA International Relations: Politics and History	3	Mandatory Elective

Student Workload	
Seminar	35
Independent Study	90
Total Hours	**125**

Module Components	**Number**	**Type**	**CP**
Cybersecurity Governance	CO-669-A	Seminar	5

Module Description

In the past twenty years, the global governance of cybersecurity has relied on post-World War II instruments, coupled with more recently established forums that accommodate the 'multi-stakeholder' model of Internet governance. Despite the effectiveness of the Computer Security Incident Response Teams, international governance efforts have struggled to reconcile the regulation of the interdependent features of digital technologies with the Westphalian organisation of the state system. International political coordination remains stuck in an analogue mode – and is increasingly out of sync with the demands placed upon it through running a global economy on digital platforms. In this module, we will consider which threats to cybersecurity have emerged, analyze the global governance efforts that have thus far been made to tackle these threats, and consider how these efforts could be organized differently. This will include analysis of how other 'wicked' global issues have been addressed, as well as an overview of decision-making processes less common to the practice of international relations.

With the help of student research and presentations, we will first identify which threats to cybersecurity have emerged and may yet emerge, and outline the global efforts with which governments have sought to address cybercrime, cyberwarfare and cyberterrorism. Thereafter, we will discuss the difference between 'wicked' and 'tame' problems, and explore which types of (international) governance solutions appear more appropriate for each of these categories. We will do so by familiarising ourselves with a range of decision-making processes, as well as by analysing global governance of other pressing issues (such as climate change, plastic pollution of the oceans, and the efforts to stem the COVID-19 pandemic). Finally, we will seek to bring these concepts and insights

together in a consideration and discussion of future efforts to ensure cybersecurity and reap the benefits of cyberspace.

Recommended Knowledge

- Basic understanding of theories and concepts in the study of international relations

- Willingness to engage in debate and research

-Useful introductions include: van Puyveld, D. & Brantly, A. 2019. Cybersecurity: Politics, governance and conflict in cyberspace. Cambridge: Polity Press; & Choucri, N. 2012. Cyberpolitics in international relations. Cambridge, MA: The MIT Press.

Usability and Relationship to other Modules

- This module connects to "Digital Transformations beyond the West", "Foreign Policy, Diplomacy and Data Science", "International Law", and "International Resource Politics".

- This module builds on the Introduction to International Relations Theory-(CHOICE) module

Intended Learning Outcomes

No	Competence	ILO
1	Outline	Outline the major threats to cybersecurity and the recent intergovernmental efforts to address these
2	Distinguish	Distinguish between 'tame' and 'wicked' policy problems
3	Set out	Set out which international governance tools may be more effective in addressing these two types of problems.
4	Think	Think creatively about how a variety of ways in which global governance can help tackle cybersecurity problems, understand the ethical trade-offs involved, and present their ideas orally and in writing.

Indicative Literature

- Broeders, D. & van den Berg, B. (Eds.) 2020. Governing cyberspace: Behavior, power and diplomacy. Lanham, MD: Rowman & Littlefield.
- Carr, M. & Lesniewska, F. 2020. The Internet of Things, cybersecurity and wicked problems: Learning from climate change. International Relations 34(3): 391-412
- Choucri, N. & Clark, D. D. 2019. International relations in the cyber age: The co-evolution dilemma. Cambridge, MA: The MIT Press.
- Choucri, N., Fairman, L. & Agarwal, G. 2022. CyberIR@MIT: Knowledge for science, policy practice. Research paper 2022-9. Cambridge, MA: Department of Political Science, MIT.

Entry Requirements

Prerequisites	2025-CH-330

	Introduction to International Relations Theory
Co-requisites	None
Additional Remarks	None

Assessment and Completion

Module Component	Examination Type	Duration or Length	Weight (%)	Minimum for Pass	ILOs
Cybersecurity Governance	Written Examination	180 minutes	100	45%	1-4

Module Achievement

5.1.11 Decision Science for Politics

Module Name	Decision Science for Politics
Module Code	2025-CO-671
Module ECTS	5
Program Owner	2025-IRPH-BA (International Relations: Politics and History)
Module Coordinator	Prof. Dr. Karen Smith Stegen

Study Semester		
Program	**Semester**	**Status**
2025-IRPH-BA International Relations: Politics and History	3	Mandatory Elective

Student Workload	
Crisis Simulation Event	15
Seminar	20
Independent Study	90
Total Hours	**125**

Module Components	**Number**	**Type**	**CP**
Decision Science for Politics	CO-671-A	Seminar	5

Module Description

The "Decision Science for Politics" module explores political decision making from a variety of perspectives, including psychology, economics, and political science, and is split into two elements: classroom instruction and a crisis simulation role play event, which includes a debriefing. During the first part of the semester, students learn several theories of decision making and essential core concepts, such as cognitive biases and groupthink. Students then use these theories and concepts to analyze (in)famous historical case studies of political decision making, such as entering or exiting wars, and formally present their findings in class. Through interactive in-class exercises, students learn decision-making tools, including Strengths-Weaknesses-Opportunities-Threats (SWOT) matrix analysis and the Delphi method, and explore how Artificial Intelligence technologies could enhance decision making and scenario building. Towards the latter part of the semester, students employ these tools in a crisis simulation event and write a final report in which they reflect upon their experiences and critique the event's decision-making processes.

Recommended Knowledge

- Basic understanding of theories and concepts of International Relations

- Willingness to participate in interactive exercises

- Students should read Hafner-Burton, E. M., Haggard, S., Lake, D. A., & Victor, D. G. (2017). The behavioral revolution and international relations. International Organization, 71(S1), 1-31.

Usability and Relationship to other Modules

This module builds upon "Introduction to International Relations Theory" (CHOICE module), and connects to the following modules: "Cybersecurity Governance" and "Foreign Policy, Diplomacy and Data Science" (CORE modules) and prepares students for "International Resource Politics" (Specialization Course) and for the "BA Thesis" module.

Intended Learning Outcomes

No	Competence	ILO
1	Explain	Explain the core theories and concepts of decision science
2	Employ	Employ SWOT matrix analyses, Delphi Method and Artificial Intelligence tools
3	Analyze	Analyze how Artificial Intelligence could affect political decision making
4	Generate	Generate a range of outcome scenarios.
5	Critique	Critique decision-making processes using the module's theories and concepts

Indicative Literature

- Caputo, A. (2013). A literature review of cognitive biases in negotiation processes. International Journal of Conflict Management, 24 (4): 374-398.
- Fearon, J.D. (1995). Rationalist explanations of war. International Organization 49, 3, pp. 379-414.
- Janis, I.L. (1982). Groupthink. 2nd Edition. Houghton Mifflin Company.
- Kahneman, D. and Tversky, A. (1979). Prospect Theory. An analysis of decision under risk. Econometrica 47:263-91.
- Levy, J. (2023). Foreign Policy Decision-Making: The Psychological Dimension. Chapter 10 in The Oxford Handbook of Political Psychology. pp. 349-373.
- Mellers, B., Stone, E., Atanasov, P., Rohrbaugh, N., Metz, S. E., Ungar, L., Bishop, M. M., Horowitz, M., Merkle, E., & Tetlock, P. (2015). The psychology of intelligence analysis: Drivers of prediction accuracy in world politics. Journal of Experimental Psychology: Applied, 21(1), 1–14.
- Stanzel, V. and Voelsen, D. (2022). "Diplomacy and Artificial Intelligence: Reflections on Practical Assistance for Diplomatic Negotiatoins". SWP Research Paper, Stiftung Wissenschaft und Politik, Berlin. doi:10.18449/2022RP01.

Entry Requirements

Prerequisites	2025-CH-331 Introduction to Modern European History 2025-CH-330 Introduction to International Relations Theory

Co-requisites	None
Additional Remarks	None

Assessment and Completion

Module Component	Examination Type	Duration or Length	Weight (%)	Minimum for Pass	ILOs
Decision Science for Politics	Portfolio Assessment	Presentation (33.3%), Crisis Simulation (33.3%), Project Report (33.3%)	100	45%	All

Module Achievement

5.1.12 International Law

Module Name	International Law
Module Code	2025-CA-S-IRPH-804
Module ECTS	5
Program Owner	2025-IRPH-BA (International Relations: Politics and History)
Module Coordinator	Prof. Dr. Manfred Hinz

Study Semester		
Program	**Semester**	**Status**
2025-IRPH-BA International Relations: Politics and History	6	Mandatory Elective

Student Workload	
Lecture	35
Independent Study	90
Total Hours	**125**

Module Components	**Number**	**Type**	**CP**
International Law	CA-S-IRPH-804	Seminar	5

Module Description

The "International Law" module introduces students to public international law, which governs the international conduct of states and, increasingly, also of non-state actors. Over the past century, public international law has undergone significant changes: until the twentieth century, it was the law between states, but now also encompasses the rights and duties of individuals as well as transnational businesses and organizations. Before the Second World War, public international law was the realm of the dominant western powers, but this changed with the access of former colonies to statehood and their membership in the international family od states.

The following are the main questions the module will address in its three parts:

1) How was international law created and how has it changed up to today? Who are the actors in the international legal order? To whom does international law apply?

2) What are the central principles of international law?

Evaluating selected areas of international and debating selected cases of current international conflicts, the question is to what extent international law assists in regulating international relations and resolving conflicts.

Recommended Knowledge

- Understanding of theories of international relations

- Engagement in class debates

-Gaeta, P.; Viñuaales, E.; Zappalà (2020): Cassese's international law. 3rd ed. Oxford: Oxford University Press

Usability and Relationship to other Modules

The module builds on the modules on theories of international relations (CHOICE and CORE) and is complementary to the module on the „History of Globalization" (CORE).

Intended Learning Outcomes

No	Competence	ILO
1	Demonstrate	Demonstrate knowledge of the principles of international law
2	Understand	Understand the working of international law including its limits
3	Criticize	Criticize developments in international law, including court judgments relevant to the development of international law.
4	Evaluate	Evaluate international conflicts by applying international law and considering relevant political positions

Indicative Literature

- A. Orford; F. Hoffmann; M. Clark (2016): eds., The theory of international law, Oxford: Oxford University Press; Dugard, J.; du Plessis, M.; Maluwa, T.; Tladi, D. (2018): Dugard's international law. A South African perspective. 5th ed. Claremont: Juta

Entry Requirements

Prerequisites	None
Co-requisites	None
Additional Remarks	None

Assessment and Completion

Module Component	Examination Type	Duration or Length	Weight (%)	Minimum for Pass	ILOs
International Law	Term Paper	3000 words	100	45%	All

Module Achievement

5.1.13 International Resource Politics

Module Name	International Resource Politics
Module Code	2025-CA-IRPH-804
Module ECTS	5
Program Owner	2025-IRPH-BA (International Relations: Politics and History)
Module Coordinator	Prof. Dr. Karen Smith Stegen

Study Semester		
Program	**Semester**	**Status**
2025-IRPH-BA International Relations: Politics and History	6	Mandatory Elective

Student Workload	
Seminar	30
Interactive Learning	5
Independent Study	90
Total Hours	**125**

Module Components	**Number**	**Type**	**CP**
International Resource Politics	CA-IRPH-804	Seminar	5

Module Description

In this module, students explore the intersection of politics, economics, and resources—particularly energy. In the first half, students will examine the geopolitical jostling that has occurred from the late 19th century up to present times as states seek to secure resources. Students will learn how resources affect state behavior and international politics. They will also become familiar with various forms of energy (e.g., hydrocarbon and renewable energy) and will delve into the traditional topics associated with energy security and geopolitics such as resource nationalization, the formation of OPEC and the IEA, “energy weapons,” peak oil theory, resource wars and curse, Dutch disease, and pipeline routing. In the second half of the module, students will learn about the recent rise in energy terrorism and explore emerging geopolitical issues including China’s Belt-and-Road Initiative (the new Silk Road) and the wrangling over ownership of Arctic resources. They will also assess the political implications of the transition to renewable forms of energy and of increased dependence on critical materials or rare earths by asking the question: “Are political and energy security concerns likely to remain the same, increase, or lessen?” As the topics of this course are of interest to employers in both the private and public sectors, students will be taught to conduct political risk analyses and to convert their insights into advisory briefing memos and policy papers.

Recommended Knowledge

- Analytical Skills

- Writing Skills

- Students should read “The Blood of Victory: World War I”, in: The Prize, The Epic Quest for Oil, Money and Power, Simon & Schuster Ltd, pp. 167-183, by Daniel Yergin (1991).

Usability and Relationship to other Modules

The concepts in this module dovetail with the content of “History” (CHOICE module), “Understanding International Political Economy,” and “Advanced International Relations Theory” (CORE modules)

Intended Learning Outcomes

No	Competence	ILO
1	Explain	Explain how the drive to secure energy and resources influences state behavior and international politics
2	Summarize	Summarize the traditional and emerging topics in the field of geopolitics
3	Conduct	Conduct political risk analyses for employers (such as banks, insurance companies, and energy and resource concerns)
4	Write	Write briefing memos and policy papers with recommendations for employers

Indicative Literature

- Correlje, Aad and van der Linde. Coby (2006). Energy Supply Security and Geopolitics: A European Perspective. In Energy Policy 34, pp. 532-543.
- Klare, Michael T. (2002). Wealth, Resources, and Power: The Changing Parameters of Global Security, Chapter 1 . In: Resource Wars: The New Landscape of Global Conflict. New York: Holt Paperbacks.
- Smith Stegen, Karen (2011). Deconstructing the ‘Energy Weapon’: Russia’s Threat to Europe as a Case Study. In Energy Policy, Vol. 39, No.10, pp. 6505-6513.
- Smith Stegen, Karen (2018). Redrawing the Geopolitical Map: International Relations and Renewable Energies, Chapter 3. In Daniel Scholten (ed.), The Geopolitics of Renewables, Berlin: Springer.
- Tammy Nemeth (2014). A Brief History of Transatlantic Energy Relations: The pursuit of balance and stability through interdependence, Chapter 2. In J. Deni and K. Smith Stegen (eds.), Transatlantic Energy Relations: Convergence or Divergence. Abingdon: Routledge
- Yergin, Daniel (1991). Various chapters from The Prize, The Epic Quest for Oil, Money and Power. New York: Simon & Schuster Ltd, pp.167-183.

Entry Requirements

Prerequisites	None
Co-requisites	None
Additional Remarks	None

Assessment and Completion

Module Component	Examination Type	Duration or Length	Weight (%)	Minimum for Pass	ILOs
International Resource Politics	Term Paper	3000 words	100	45%	All

Module Achievement

5.1.14 Everyday Life under Dictatorships

Module Name	Everyday Life under Dictatorships
Module Code	2025-CA-S-IRPH-803
Module ECTS	5
Program Owner	2025-IRPH-BA (International Relations: Politics and History)
Module Coordinator	Dr. Julia Timpe

Study Semester		
Program	**Semester**	**Status**
2025-IRPH-BA International Relations: Politics and History	5	Mandatory Elective

Student Workload	
Seminar	35
Independent Study	90
Total Hours	**125**

Module Components	**Number**	**Type**	**CP**
Everyday Life under Dictatorships	CA-IRPH-803	Seminar	5

Module Description

This module will introduce students to scholarly approaches toward and debates on the history of everyday life with a focus on the study of life under dictatorships. The main questions to be examined in this module, which uses a sample of European twentieth-century dictatorships such as Fascist Italy, Nazi Germany, Stalinist Russia, and Socialist Eastern Germany as case studies include the following: What was daily life like under twentieth-century dictatorial regimes? How did the ideology and politics of a regime affect the lives of “ordinary people” living under it? How did dictatorship affect the daily lives of all those who were persecuted by each such regime? What forms of oppression and acts of resistance took place on a more-or-less daily basis? How much support did these regimes have? What adaptations to their demands, rules, and structures can we discern among their populations? Students will explore these questions by engaging with a wide range of historical studies that deal with themes such as education and propaganda, consumption and housing, work conditions, cultural life, and the everyday experiences of women and minorities under these regimes. The module aims to intensify students’ exposure to the scholarly work of historians and to train them in critiquing academic scholarship, interpreting historical sources, and designing an independent research project on topics related to the themes of the module.

Recommended Knowledge

- Familiarity with 20th century history

- Writing Skills

- Students should read Stephen J. Lee, European Dictatorships 1918-1945

Usability and Relationship to other Modules

The concepts and content in this module build on the contents and methods of introduced in the first year CHOICE module "Introduction to Modern European History" and furthermore relates to approaches and applied in the CORE module "Empires and Nation States." The module applies and hones the academic skills acquired in "History of Globalization" and "International Law" (CORE modules). It thus contributes to the students' preparations for writing their BA thesis

Intended Learning Outcomes

No	Competence	ILO
1	Describe	Describe the history of twentieth-century European dictatorships
2	Explain	Explain different approaches and methods in the field of "everyday history" in relation to the study of dictatorial regimes
3	Compare	Compare (potentially divergent) scholarly interpretations of historical developments
4	Evaluate	Evaluate historical source material
5	Compose	Compose a brief research paper on a topic related to issues discussed in class

Indicative Literature

- Fitzpatrick, Sheila (1999). Everyday Stalinism: Ordinary Life in Extraordinary Times: Soviet Russia in the 1930s. New York/Oxford; Oxford University Press.
- Gellately, Robert (2002). Backing Hitler: Consent and Coercion in Nazi Germany. Oxford: Oxford University Press.
- Hellbeck, Jochen (2006). Revolution on my Mind: Writing a Diary under Stalin. Cambridge: Harvard University Press
- Lee, Stephen J (1987). European Dictatorships 1918-1945. London/New York: Routledge.
- Lüdtke, Alf, ed. (1995). The History of Everyday Life. Reconstructing Historical Experiences and Ways of Life. Princeton: Princeton University Press
- Peukert, Detlev (1987). Inside Nazi Germany: Conformity, Opposition and Racism in Everyday Life. New Haven: Yale UP

Entry Requirements

Prerequisites	2025-CH-331 Introduction to Modern European History
Co-requisites	None
Additional Remarks	None

Assessment and Completion

Module Component	Examination Type	Duration or Length	Weight (%)	Minimum for Pass	ILOs
Everyday Life under Dictatorships	Term Paper	5000 words	100	45%	All

Module Achievement

5.1.15 China: Politics, Economy and Society

Module Name	China: Politics, Economy and Society
Module Code	2025-CA-S-IRPH-802
Module ECTS	5
Program Owner	2025-IRPH-BA (International Relations: Politics and History)
Module Coordinator	Prof. Dr. Tobias ten Brink

Study Semester		
Program	**Semester**	**Status**
2025-IRPH-BA International Relations: Politics and History	6	Mandatory Elective

Student Workload	
Seminar	35
Independent Study	90
Total Hours	**125**

Module Components	**Number**	**Type**	**CP**
China: Politics, Economy and Society	CA-S-IRPH-802	Seminar	5

Module Description

This module will introduce students to in-depth analyses of contemporary Chinese politics, economy, and society. It deals with topical themes such as the transformation of the Chinese party-state, technological and social innovation, China "going global," and other socio-political and economic challenges. The module introduces students to empirical research on China by scholars in the field.

This module provides students with theories and themes of contemporary China studies. It fosters competence in oral and written communication skills, and equips students with a foundation for utilizing and critically applying theories that were originally developed in the West in non-Western contexts. It is specifically designed for students who are interested in pursuing an academic career as they also will learn how to prepare and conduct empirical fieldwork.

Recommended Knowledge

- Familiarity with East Asia

- Writing skills

- Students should read Tony Saich (2015): Governance and Politics of China, Palgrave Macmillan and David Shambaugh (2016): China's Future. Polity Press.

Usability and Relationship to other Modules

The module builds on the content of “History of Globalization” and “Understanding International Political Economy” (CORE modules).

Intended Learning Outcomes

No	Competence	ILO
1	Develop	Develop a nuanced understanding of China studies
2	Analyze	Analyze critically and comparatively the complex interactions between politics and economics in contemporary China
3	Apply	Apply different theories and concepts in non-Western contexts
4	Design	Design a research paper on a topic related to empirical issues discussed in class

Indicative Literature

- Fu, X. (2015): China's Path to Innovation. Cambridge: Cambridge University Press
- Ngok, K./Chan, C.K. (Eds.) (2016): China’s Social Policy: Transformation and Challenges. New York: Routledge
- Shambaugh, D. (2016): China's Future. Cambridge: Polity Press
- Ten Brink, T. (2019): China's Capitalism. A Paradoxical Route to Economic Prosperity. Philadelphia: University of Pennsylvania Press.

Entry Requirements

Prerequisites	2025-CO-660 International Political Economy
Co-requisites	None
Additional Remarks	None

Assessment and Completion

Module Component	Examination Type	Duration or Length	Weight (%)	Minimum for Pass	ILOs
China: Politics, Economy and Society	Term Paper	3000 words	100	45%	All

Module Achievement

5.1.16 Comparing Economic Systems

Module Name	Comparing Economic Systems
Module Code	2025-CO-622
Module ECTS	7.5
Program Owner	2025-GEM-BA (Global Economics and Management)
Module Coordinator	Prof. Dr. Tobias ten Brink

Study Semester		
Program	**Semester**	**Status**
2025-GEM-BA Global Economics and Management	3	Mandatory Elective
2025-IRPH-BA International Relations: Politics and History	3	Mandatory Elective
2025-Minor-Gem-BA Minor in Gem	3	Mandatory Elective

Student Workload	
Seminar	35
Tutorial	17.5
Independent Study	135
Total Hours	**187.5**

Module Components	**Number**	**Type**	**CP**
Comparing Economic Systems	CO-622-A	Seminar	5
Comparing Economic Systems - Tutorial	CO-622-B	Tutorial	2.5

Module Description

In the last two decades Germany has been called the “Sick Man of Europe” and a “European Powerhouse”. These are only two examples of the lively debate about the different performances levels of national economies. Since the demise of centrally planned economies the focus of such discussions has largely been on “Varieties of Capitalism”, a comparative analysis of liberal and coordinated market economies in the OECD world. This module introduces key theories of comparative political economy and the many significant differences apparent in the evolution of capitalist systems. The module helps students to understand the interplay between economic, political, and socio-cultural aspects in shaping the governmental and non-governmental institutions of a modern economy. Case studies provide insights into a wide variety of economic actors and institutions across time and space. In the seminar, textbook readings and other academic readings ensure the transmission of the knowledge students need in order to write a successful end-of-term paper. In the accompanying tutorial, students have the opportunity: (i) to review the material taught in the seminar, and (ii) to develop and discuss paper topics and outlines.

This module aims at transmitting fundamental knowledge on economic systems from a comparative social science perspective. Understanding the underlying institutions of economic systems constitutes an important basis for undergraduate studies in the fields of economics and management. With its interest in the diversity of capitalisms and related institutions, this module helps students appreciate public and economic affairs from the perspective of political economy and promotes their capacity to anticipate the consequences of economic and managerial decisions, including their own. This module also promotes the students' capacity to write a scientific paper.

Usability and Relationship to other Modules

- This module builds on the knowledge acquired in the first-year modules "Microeconomics" and "Macroeconomics" and expands students' understandings of these two disciplines by focusing on classical and contemporary work underlying the assumptions of economic systems and their diversity in forms across the globe as well as their political dimension. This module benefits from the contents taught in its accompanying module "International Economics" as the combination of the two modules places the study of the tenets of capitalism into the perspective of international trade, and vice versa. This module provides knowledge required for the third-year module "Managing Public and Nonprofit Organizations".

Recommended Knowledge

- Writing skills

- Basic knowledge in micro- and macroeconomics

- Students prepare best for this module by reading Clift, Ben (2014): Comparative Political Economy. States, Markets and Global Capitalism, Palgrave.

Intended Learning Outcomes

No	Competence	ILO
1	Explain	Explain and compare among the key topics and themes in the field of comparative political economy.
2	Analyze	Analyze the interplay of economic, political and socio-cultural institutions and actors and how these shape the development of modern economies.
3	Apply	Apply theoretical perspectives of comparative political economy to empirical cases, including to non-Western countries.
4	Construct	Construct well-supported arguments by designing an independent research paper.

Indicative Literature

- Clift, B.(2014). Comparative political economy. States, markets and global capitalism, Palgrave.
- Fulcher, J. (2004). Capitalism: A very short introduction. Oxford University Press.
- Hall, P. A., Soskice, D. (eds.) (2001). Varieties of capitalism: The institutional foundations of comparative advantage. Oxford University Press.

- Nölke, A., ten Brink, T., Claar, S., May, C. (2020). State-permeated capitalism in large emerging economies. Routledge.

Entry Requirements

Prerequisites	2025-CH-310 Microeconomics 2025-CH-311 Macroeconomics
Co-requisites	None
Additional Remarks	None

Assessment and Completion

Module Component	Examination Type	Duration or Length	Weight (%)	Minimum for Pass	ILOs
Comparing Economic Systems	Term Paper	2,500 - 4,000 words	100	45%	1-4
Comparing Economic Systems - Tutorial					1-4

Module Achievement

5.1.17 Public Economics and Policy

Module Name	Public Economics and Policy
Module Code	2025-CO-624
Module ECTS	7.5
Program Owner	2025-GEM-BA (Global Economics and Management)
Module Coordinator	Prof. Dr. Fabian Dehos

Study Semester		
Program	**Semester**	**Status**
2025-GEM-BA Global Economics and Management	4	Mandatory Elective
2025-IRPH-BA International Relations: Politics and History	4	Mandatory Elective
2025-Minor-Gem-BA Minor in Gem	4	Mandatory Elective

Student Workload	
Seminar	35
Tutorial	17.5
Independent Study	135
Total Hours	**187.5**

Module Components	**Number**	**Type**	**CP**
Public Economics and Policy	CO-624-A	Seminar	5
Public Economics and Policy - Tutorial	CO-624-B	Tutorial	2.5

Module Description

This module combines knowledge from first-year courses and integrates insights from the social sciences, employing microeconomic tools to examine the impact of public policy on the allocation of resources and the distribution of income in the economy. The primary focus of this module is on the role of the government in ensuring a functioning market economy, with an emphasis on equity and efficiency. The course addresses market failures as a basis for public intervention, evaluates how government policies can enhance market outcomes, and examines normative concepts that justify political action.

Textbook-based lectures ensure the transmission of the necessary knowledge during the seminar. In the accompanying interactive tutorials, students can practice and review the material covered in the seminar through supplementary questions, while also developing their ability to apply key concepts and theories.

The module aims at transmitting fundamental knowledge of the role of the government from an economic perspective, offering a comprehensive overview on the interplay between economic theory,

government action, and real-world challenges. The insights gained from this course can be applied to and extended across several fields of economics, including development economics, urban economics, fiscal policy, labor economics, and health economics. Understanding the underlying mechanisms and concepts constitutes an important basis for undergraduate studies in the fields of economics, offering them a wide range of applications that align with their diverse career aspirations.

Recommended Knowledge

- Basic knowledge in micro- and macroeconomics

- Logical and causality-based reasoning

- The 3rd Chapter "Public policy for fairness and efficiency" of the open-access book CORE Team. (2019). Economy, society, and public policy, provides a good starting point introducing how two primary objectives of public policy, efficiency and fairness, interact.

Usability and Relationship to other Modules

- One of two default 2nd-year Core modules for a minor in GEM (a minor in GEM is feasible only with the modules "Public Economics and Policy" and "Environment and Resources").

- This module builds on the knowledge acquired in the first-year modules "Microeconomics" and "Macroeconomics" and expands students' understanding of these two disciplines by focusing on the role of the government. The course complements the module "Environmental and Resource Economics" by additional microeconomic tools and encourages students to engage with socially relevant issues, such as inequality, which can also be explored in greater depth in a future bachelor thesis.

Intended Learning Outcomes

No	Competence	ILO
1	Explain	Explain the role of government in the economy.
2	Describe	Describe how the objectives of efficiency and fairness interact.
3	Explain	Explain how normative concepts can justify political action.
4	Assess	Assess critically the effects of public policies on inequality and social welfare.
5	Describe	Describe how government interventions can address market failures analytically derive the impact of government policies (subsidies and taxes) on consumer decisions.
6	Recognize	Recognize the interdisciplinary nature of the module, with the ability to transfer key concepts and theories to a range of related fields of economics.

Indicative Literature

- Acocella, N. (1998). The foundations of economic policy: values and techniques. Cambridge University Press.
- CORE Team. (2019). Economy, society, and public policy. Oxford University Press.

- Gruber, J. (2022). Public finance and public policy (7th ed.). Macmillan Learning.
- Selected chapters form: Mankiw, N. Gregory. 2023. Principles of Economics. 10th ed. Boston: Cengage Learning.

Entry Requirements

Prerequisites	2025-CH-310 Microeconomics 2025-CH-311 Macroeconomics
Co-requisites	None
Additional Remarks	None

Assessment and Completion

Module Component	Examination Type	Duration or Length	Weight (%)	Minimum for Pass	ILOs
Public Economics and Policy	Written Examination	120 Minutes	100	45%	1-6
Public Economics and Policy - Tutorial					1-6

Module Achievement

5.1.18 Managing Public and Nonprofit Organizations

Module Name	Managing Public and Nonprofit Organizations
Module Code	2025-CA-S-GEM-802
Module ECTS	5
Program Owner	2025-GEM-BA (Global Economics and Management)
Module Coordinator	Prof. Dr. Andreas Seebeck

Study Semester		
Program	**Semester**	**Status**
2025-GEM-BA Global Economics and Management	6	Mandatory Elective
2025-IBA-BA International Business Administration	6	Mandatory Elective
2025-IRPH-BA International Relations: Politics and History	6	Mandatory Elective

Student Workload	
Seminar	35
Independent Study	90
Total Hours	**125**

Module Components	**Number**	**Type**	**CP**
Managing Public and Nonprofit Organizations	CA-GEM-802	Seminar	5

Module Description

This module transmits state-of-the-art knowledge on management theories of organizations in the public and nonprofit sectors. Specifically, the module helps students distinguishing sectoral differences more clearly, as well as the challenges that arise at the interplay of sectors, for example when business firms contract with government, or when governments outsource service provision to nonprofit organizations in the face of policy problems than cannot be solved by markets or governments alone. A particular focus is therefore put on (i) contrasting topics of organization, strategic management and marketing, and their applicability to nonprofit and public organizations (e.g., income generation, purpose, public service motivation, or decision-making), and on (ii) deciphering the cross-sectoral implications of institutional change in society and markets.

With its didactic focus on presenting and communication skills as conveyors of knowledge, this module provides our students with a solid preparation to their future professional responsibilities. Finally, understanding dynamics in cross-sector settings further enables students to become responsible managers with an eye for the consequences of their decisions for the broader organizational fields they will work in.

Recommended Knowledge

- Students should read the paper "If apples were oranges: the public/nonprofit/business nexus in Peter Drucker's work" by Guy and Hitchcock, published in 2000 in the Journal of Management History (vol. 6, issue 1).

Usability and Relationship to other Modules

- This module builds on models and topics from the first–year modules "Introduction to International Business" and "Introduction to Finance and Accounting" and all second-year GEM modules. The purpose is to widen the application scope of the general management theories and concepts taught in the program and to stimulate interest in career paths that reach beyond the corporate world and business sector.

Intended Learning Outcomes

No	Competence	ILO
1	Differentiate	Differentiate among the interests and main challenges of the three sectors at play in societies and markets.
2	Label	Label and discuss the fundamental distinctive dimensions of public and nonprofit organizations.
3	Articulate	Articulate the managerial challenges of managing public organizations and nonprofits compared to private firms.
4	Infer	Infer solutions to cross-sector problems in real case situations.
5	Explain	Explain the notion of institutional change from the perspectives of economics, management and organization theory.
6	Practice	Practice field research and present the results as a way to plan for and communicate solutions to problems typical of public or nonprofit organizations.

Indicative Literature

- Anheier, H. K. (2014). Nonprofit organizations. Theory, management, policy. London: Routledge.
- Rainey, H. G. (2014). Understanding and managing public organizations, fifth ed. San Francisco: Jossey Bass.

Entry Requirements

Prerequisites	2025-CH-300 Introduction to International Business 2025-CH-301 Introduction to Finance and Accounting
Co-requisites	None

Additional Remarks	None

Assessment and Completion

Module Component	Examination Type	Duration or Length	Weight (%)	Minimum for Pass	ILOs
Managing Public and Nonprofit Organizations	Presentation	30 minutes	100	45%	1-6

Module Achievement

5.1.19 Applied Project Management

Module Name	Applied Project Management
Module Code	2025-CO-600
Module ECTS	7.5
Program Owner	2025-IBA-BA (International Business Administration)
Module Coordinator	Prof. Dr. Lennart Ante

Study Semester		
Program	**Semester**	**Status**
2025-IBA-BA International Business Administration	3	Mandatory Elective
2025-IEM-BSc Industrial Engineering & Management	3	Mandatory Elective
2025-IRPH-BA International Relations: Politics and History	3	Mandatory Elective
2025-Minor-EIM-BSc Minor EIM	3	Mandatory

Student Workload	
Lecture	35
Seminar	17.5
Independent Study	135
Total Hours	**187.5**

Module Components	**Number**	**Type**	**CP**
Applied Project Management	CO-600-A	Lecture	5
Applied Project Management - Seminar	CO-600-B	Seminar	2.5

Module Description

Well-run projects depend entirely on the foundation laid in the initial planning stages, the care and precision of project organization, and excellent teamwork. The module Applied Project Management (APM) offers a detailed look at the characteristics of projects and a hands-on team simulation of the project planning and management process.

The APM module explains various project phases, including major and detailed tasks. It will deal with task assignment and resource allocation, budgeting, tracking, and scheduling techniques as well as with project leadership and team processes. The course will give students hands-on experience with project management, as students have to run a project on their own in teams over the semester.

The lecture component of this module covers the theoretical basics and offers practical examples. The seminar component of this module serves as an exercise based on examples and case studies, which are also carried out over the course hours in homework.

Recommended Knowledge

Before the first session, students should read: Luecke, R. (2004) : Managing Projects Large and Small - The Fundamental Skills for Delivering on Budget and on Time, Harvard Business School Press

Intended Learning Outcomes

No	Competence	ILO
1	Identify	Identify and memorize the key skills to manage projects, including internationally accepted standards and procedures for running and controlling projects.
2	Apply	Apply project management skills to set up, organize, manage and control (real) projects.
3	Analyze	Analyze project performance.
4	Develop	Develop strong analytical and presentation skills.

Indicative Literature

- Bittner, E., Gregorc, W. (ed.) (2010). Experiencing Project Management: Projects, Challenges and Lessons Learned. Hoboken: John Wiley & Sons.
- Larson, E. W., Gray, C. F. (2015). A guide to the project management body of knowledge: PMBOK (®) guide. In: Project Management Institute.
- Larson, E.W.; Gray, C. (2017). Project management: the managerial process, 7th edition. New York: McGraw-Hill Education.
- Luecke, R (2004). Managing projects large and small: the fundamental skills for delivering on budget and on time. Harvard: Harvard Business Press.
- Marks, T. (2012). 20:20 Project Management: How to deliver on time, on budget and on spec. London: Kogan Page Publishers.
- Moriis, P.W.G., Pinto, J. K, Söderland, Jonas (Hg.) (2012). The Oxford handbook of project management. Oxford: Oxford University Press.
- Pries, K. H.; Quigley, J.M (2010). Scrum project management. Boca Raton: CRC press.

Entry Requirements

Prerequisites	2025-CH-300 Introduction to International Business 2025-CH-301 Introduction to Finance and Accounting
Co-requisites	None

Additional Remarks	None

Assessment and Completion

Module Component	Examination Type	Duration or Length	Weight (%)	Minimum for Pass	ILOs
Applied Project Management	Presentation	45 minutes	100	45%	1-4
Applied Project Management - Seminar					

Module Achievement

5.1.20 Internship / Startup and Career Skills

Module Name	Internship / Startup and Career Skills
Module Code	2025-CA-INT-900
Module ECTS	15
Program Owner	Career (Career Module for UG programs)
Module Coordinator	Dr. Tanja Woebs Clémentine Senicourt

Study Semester		
Program	**Semester**	**Status**
2025-BCCB-BSc Biochemistry and Cell Biology	5	Mandatory
2025-CBT-BSc Chemistry and Biotechnology	5	Mandatory
2025-CS-BSc Computer Science	5	Mandatory
2025-ECE-BSc Electrical and Computer Engineering	5	Mandatory
2025-ESSMER-BSc Earth Sciences and Sustainable Management of Environmental Resources	5	Mandatory
2025-F-ACS-BSc Applied Computer Science	5	Mandatory
2025-IBA-BA International Business Administration	5	Mandatory
2025-IRPH-BA International Relations: Politics and History	5	Mandatory
2025-ISCP-BA Integrated Social and Cognitive Psychology	5	Mandatory
2025-MCCB-BSc Medicinal Chemistry and Chemical Biology	5	Mandatory
2025-MDDA-BSc Management, Decisions and Data Analytics	5	Mandatory
2025-MMDA-BSc Mathematics, Modeling, and Data Analytics	5	Mandatory
2025-PHDS-BSc Physics and Data Science	5	Mandatory
2025-BCCB-BSc Biochemistry and Cell Biology	6	Mandatory
2025-CBT-BSc Chemistry and Biotechnology	6	Mandatory
2025-CS-BSc Computer Science	6	Mandatory
2025-ECE-BSc	6	Mandatory

Electrical and Computer Engineering		
2025-ESSMER-BSc Earth Sciences and Sustainable Management of Environmental Resources	6	Mandatory
2025-GEM-BA Global Economics and Management	6	Mandatory
2025-IBA-BA International Business Administration	6	Mandatory
2025-IRPH-BA International Relations: Politics and History	6	Mandatory
2025-ISCP-BA Integrated Social and Cognitive Psychology	6	Mandatory
2025-MCCB-BSc Medicinal Chemistry and Chemical Biology	6	Mandatory
2025-MMDA-BSc Mathematics, Modeling, and Data Analytics	6	Mandatory
2025-PHDS-BSc Physics and Data Science	6	Mandatory
2025-RIS-BSc Robotics and Intelligent Systems	6	Mandatory
2025-S-ACS-BSc Applied Computer Science	6	Mandatory
2025-SDT-BSc Software, Data and Technology	6	Mandatory

Student Workload	
Internship	308
Internship Event	2
Independent Study	32
Interactive Learning	33
Total Hours	**375**

Module Components	**Number**	**Type**	**CP**
Internship	CA-INT-900-0	Internship	15

Module Description

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.

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 SCS, 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 Student Career Support.

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 Service Center (e.g. the annual Constructor 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.

Recommended Knowledge

- Information provided on CSC

- Major specific knowledge and skills

- Please see the section “Knowledge Center” at JobTeaser Career Center for information on Career Skills seminar and workshop offers and for online tutorials on the job market preparation and the application process. For more information, please see https://constructor.university/student-life/career-services

- Participating in the internship events of earlier classes

Usability and Relationship to other Modules

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.

Intended Learning Outcomes

No	Competence	ILO
1	Describe	Describe the scope and the functions of the employment market and personal career development.
2	Apply	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.
3	Manage	Manage their own career orientation processes independently 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.).
4	Apply	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.
5	Justify	Justify professional decisions based on theoretical knowledge and academic methods.
6	Reflect	Reflect on their professional conduct in the context of the expectations of and consequences for employers and their society.
7	Reflect	Reflect on and set their own targets for the further development of their knowledge, skills, interests, and values.
8	Establish	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.
9	Discuss	Discuss observations and reflections in a professional network.

Indicative Literature

Entry Requirements

Prerequisites	2025-CA-INT-900 Internship / Startup and Career Skills At least 15 CP from CORE modules in the major
Co-requisites	None
Additional Remarks	None

Assessment and Completion

Module Component	Examination Type	Duration or Length	Weight (%)	Minimum for Pass	ILOs
Internship	Project Report	3500 words	100	Pass/Fail	1-9

Module Achievement

5.1.21 Bachelor Thesis and Seminar IRPH

Module Name	Bachelor Thesis and Seminar IRPH
Module Code	2025-CA-IRPH-800
Module ECTS	15
Program Owner	2025-IRPH-BA (International Relations: Politics and History)
Module Coordinator	Study Program Chair

Study Semester		
Program	**Semester**	**Status**
2025-IRPH-BA International Relations: Politics and History	6	Mandatory

Student Workload	
Independent Study/Laboratory Work	350
Seminar	25
Total Hours	**375**

Module Components	**Number**	**Type**	**CP**
Thesis IRPH	CA-IRPH-800-T	Thesis	12
Thesis Seminar IRPH	CA-IRPH-800-S	Seminar	3

Module Description

This module is a mandatory graduation requirement for all undergraduate students to demonstrate their ability to deal with a problem from their respective major subject independently by means of academic/scientific methods within a set period. Although supervised, the module requires students to be able to work independently and regularly and set their own goals in exchange for the opportunity to explore a topic that excites and interests them personally and which a faculty member is interested to supervise. Within this module, students apply their acquired knowledge about the major discipline, skills, and methods to conduct 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 the results.

This module consists of two components, an independent thesis and an accompanying seminar. The thesis component must be supervised by a Constructor 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 conclusions. The seminar provides students with the opportunity to present, discuss and justify their and other students' approaches, methods and results at various stages of their research to practice these skills to improve their academic writing, receive and reflect on formative feedback, thereby growing personally and professionally.

Recommended Knowledge

- 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

- Identify an area or a topic of interest and discuss this with your prospective supervisor in good time.

- 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.

Usability and Relationship to other Modules

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

Intended Learning Outcomes

No	Competence	ILO
1	Plan	Plan and organize advanced learning processes independently.
2	Design	Design and implement appropriate research methods taking full account of the range of alternative techniques and approaches
3	Collect	Collect, assess and interpret relevant information
4	Draw	Draw scientifically founded conclusions that consider social, scientific and ethical insights
5	Apply	Apply their knowledge and understanding to a context of their choice
6	Develop	Develop, formulate and advance solutions to problems and arguments in their subject area, and defend these through argument
7	Discuss	Discuss information, ideas, problems and solutions with specialists and non-specialists

Indicative Literature

Entry Requirements

Prerequisites	None
Co-requisites	None
Additional Remarks	None

Assessment and Completion

Module Component	Examination Type	Duration or Length	Weight (%)	Minimum for Pass	ILOs
Thesis IRPH	Thesis	6000-8000	80	45%	1-6
Thesis Seminar IRPH	Presentation	15-30 min	20	45%	6-7

Module Achievement

6 Constructor Track Modules

6.1 Methods Modules

6.1.1 Academic Writing and Academic Skills

Module Name	Academic Writing and Academic Skills
Module Code	2025-CTMS-MET-01
Module ECTS	5
Program Owner	2025-CT (CONSTRUCTOR Track Area)
Module Coordinator	Dr. Mandi Larsen

Study Semester		
Program	**Semester**	**Status**
2025-IRPH-BA International Relations: Politics and History	1	Mandatory
2025-ISCP-BA Integrated Social and Cognitive Psychology	1	Mandatory

Student Workload	
Lecture	20
Tutorial	15
Literature Analysis	35
Preparation Of Term Paper	35
Interactive Learning	10
Exercises and Project	10
Total Hours	**125**

Module Components	**Number**	**Type**	**CP**
Academic Writing and Academic Skills	CTMS-01	Lecture/Tutorial	5

Module Description

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.

Usability and Relationship to other Modules

This module lays the foundation for the entire period of study at Constructor University, but is especially useful for modules with a specific focus on written work and for the Bachelor's Thesis.

Intended Learning Outcomes

No	Competence	ILO
1	Recognize	Recognize the difference between academic and non-academic sources
2	Conduct	Conduct an academic literature review
3	Synthesize	Successfully synthesize various academic sources to create a coherent argument
4	Apply	Accurately apply citation and referencing rules
5	Write	Write a clearly structured and organized academic paper

Indicative Literature

- Bailey, S. (2006). Academic writing: A handbook for international students. New York, NY: Routledge.
- Spatt, B. (2016). Writing from sources. Boston, MA: Bedford/St. Martin's.

Entry Requirements

Prerequisites	None
Co-requisites	None
Additional Remarks	None

Assessment and Completion

Module Component	Examination Type	Duration or Length	Weight (%)	Minimum for Pass	ILOs
Academic Writing and Academic Skills	Term Paper	3000 words	100	45%	Should demonstrate a clear mastery of skills related to academic work

					and writing. All of the above ILOs.

Module Achievement

6.1.2 Applied Statistics with R

Module Name	Applied Statistics with R
Module Code	2025-CTMS-MET-03
Module ECTS	5
Program Owner	2025-CT (CONSTRUCTOR Track Area)
Module Coordinator	Prof. Dr. Adalbert F.X. Wilhelm

Study Semester		
Program	**Semester**	**Status**
2025-ESSMER-BSc Earth Sciences and Sustainable Management of Environmental Resources	2	Mandatory
2025-GEM-BA Global Economics and Management	2	Mandatory
2025-IBA-BA International Business Administration	2	Mandatory Elective
2025-IBA-Online-BA International Business Administration (Online)	2	Mandatory
2025-IEM-BSc Industrial Engineering & Management	2	Mandatory
2025-IEM-Online-BSc Industrial Engineering & Management (Online)	2	Mandatory
2025-IRPH-BA International Relations: Politics and History	2	Mandatory Elective
2025-ISCP-BA Integrated Social and Cognitive Psychology	2	Mandatory
2025-MDDA-BSc Management, Decisions and Data Analytics	2	Mandatory

Student Workload	
Assessment Preparation	10
Lecture	17.5
Independent Study	80
Laboratory	17.5
Total Hours	**125**

Module Components	**Number**	**Type**	**CP**
Applied Statistics with R	CTMS-03	Lecture and Laboratory	5

Module Description

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.

Recommended Knowledge

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

Usability and Relationship to other 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 module on advanced econometrics

Intended Learning Outcomes

No	Competence	ILO
1	Apply	Apply basic techniques in statistical modeling and quantitative research methods.
2	Describe	Describe fundamental statistical concepts, procedures, their assumptions and statistical fallacies.
3	Explain	Explain the potential of using quantitative methods in all fields of applications.
4	Express	Express informed skepticism of the limitations of statistical reasoning.
5	Interpret	Interpret statistical modeling results in scientific publications.
6	Perform	Perform basic and intermediate-level statistical analyses of data, using R.

Indicative Literature

- Charles Wheelan (2013). Naked Statistics: Stripping the Dread from The Data. New York: W.W. Norton & Company.
- Christopher Gandrud (2015). Reproducible Research with R and RStudio, Second Edition. The R Series, Chapman & Hall/CRC Press.
- 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.
- Michael J. Crawley (2013). The R Book, Second Edition. Hoboken: John Wiley & Sons.
- Peter Daalgard (2008). Introductory Statistics with R. Berlin: Springer.
- Randall E. Schumacker (2014). Learning Statistics Using R. Thousand Oaks: Sage.

Entry Requirements

Prerequisites	None
Co-requisites	None
Additional Remarks	None

Assessment and Completion

Module Component	Examination Type	Duration or Length	Weight (%)	Minimum for Pass	ILOs
Applied Statistics with R	Written Examination	120 Minutes	100	45%	All

Module Achievement

6.1.3 Applied Statistics with SPSS

Module Name	Applied Statistics with SPSS
Module Code	2025-CTMS-MET-02
Module ECTS	5
Program Owner	2025-CT (CONSTRUCTOR Track Area)
Module Coordinator	Prof. Dr. Klaus Boehnke

Study Semester		
Program	**Semester**	**Status**
2025-IBA-BA International Business Administration	2	Mandatory Elective
2025-IRPH-BA International Relations: Politics and History	2	Mandatory Elective

Student Workload	
Lecture	17.5
Laboratory	17.5
Independent Study	55
Presentation	35
Total Hours	**125**

Module Components	**Number**	**Type**	**CP**
Applied Statistics with SPSS	CTMS-02	Lecture and Laboratory	5

Module Description

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.

Usability and Relationship to other Modules

- 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

Intended Learning Outcomes

No	Competence	ILO
1	Explain	Explain the potential of using quantitative methods in the social sciences.
2	Express	Express informed skepticism to the limitations of statistical reasoning in the social sciences.
3	Interpret	Interpret, within limits, the results sections of reports of empirical social science research.
4	Perform	Perform simple and intermediate-level statistical analyses of social science data, using SPSS.
5	Interpret	Show flexibility in interpreting SPSS output, generated for unknown datasets, obtained from open access sources.

Indicative Literature

- Bryman, A. & Cramer, D. (2011). Quantitative data analysis with IBM SPSS. London: Routledge.
- 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.

Entry Requirements

Prerequisites	None
Co-requisites	None
Additional Remarks	None

Assessment and Completion

Module Component	Examination Type	Duration or Length	Weight (%)	Minimum for Pass	ILOs
Applied Statistics with SPSS	Written Examination	120 min; During the examinat	100	45%	All

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

Module Achievement

6.1.4 Qualitative Research Methods

Module Name	Qualitative Research Methods
Module Code	2025-CTMS-MET-04
Module ECTS	5
Program Owner	2025-CT (CONSTRUCTOR Track Area)
Module Coordinator	Dr. Irina Chiaburu

Study Semester		
Program	**Semester**	**Status**
2025-GEM-BA Global Economics and Management	3	Mandatory
2025-IBA-BA International Business Administration	3	Mandatory
2025-IBA-Online-BA International Business Administration (Online)	3	Mandatory
2025-IRPH-BA International Relations: Politics and History	3	Mandatory
2025-ISCP-BA Integrated Social and Cognitive Psychology	3	Mandatory

Student Workload	
Independent Study	90
Class Attendance	35
Total Hours	**125**

Module Components	**Number**	**Type**	**CP**
Qualitative Research Methods	CTMS-04	Seminar	5

Module Description

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 a seminar, which incorporates a hands-on component, enabling students to not only

learn about different methods, but also apply them to various concrete research scenarios. 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.

The portfolio assessment for this module consists of six homework assignments, each dealing with one of the phases of the qualitative research process: preparation for the study, case selection and research design, data collection, data analysis, evaluation of the research, and reflection on the research process.

Recommended Knowledge

Patton, Michael Quinn: Qualitative evaluation and research methods (4th ed.), Thousand Oaks etc.: Sage, chapter 2, 2015

Usability and Relationship to other 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.

Intended Learning Outcomes

No	Competence	ILO
1	Explain	Explain the principles underlying qualitative research.
2	Apply	Apply basic qualitative approaches and designs.
3	Identify	Identify and address ethical issues arising in qualitative research.
4	Apply	Apply strategies for purposefully selecting participants and cases.
5	Apply	Apply methods for collecting qualitative data.
6	Apply	Apply methods for analyzing qualitative data.
7	Know	Know what to look for in evaluating qualitative research.

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.

Entry Requirements

Prerequisites	None

Co-requisites	None
Additional Remarks	None

Assessment and Completion

Module Component	Examination Type	Duration or Length	Weight (%)	Minimum for Pass	ILOs
Qualitative Research Methods	Portfolio Assessment	6 Homework assignments and reflection	100	45%	All

Module Achievement

6.1.5 Data Collection and Empirical Research Methodologies

Module Name	Data Collection and Empirical Research Methodologies
Module Code	2025-CTMS-MET-06
Module ECTS	5
Program Owner	2025-CT (CONSTRUCTOR Track Area)
Module Coordinator	Dr. Mandi Larsen

Study Semester		
Program	**Semester**	**Status**
2025-IBA-BA International Business Administration	2	Mandatory Elective
2025-IRPH-BA International Relations: Politics and History	4	Mandatory
2025-ISCP-BA Integrated Social and Cognitive Psychology	4	Mandatory

Student Workload	
Lecture	35
Independent Study and Additional Readings	30
Questionnaire construction and data collection	35
Preparation of research report	25
Total Hours	**125**

Module Components	**Number**	**Type**	**CP**
Data Collection and Empirical Research Methodologies	CTMS-06	Lecture	5

Module Description

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.

Usability and Relationship to other 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.

Intended Learning Outcomes

No	Competence	ILO
1	Describe	Describe basic concepts involved in conducting empirical research in the social sciences.
2	Outline	Outline the empirical research process.
3	Carry out	Carry out a small research project from start to finish.
4	Formulate	Formulate an empirical research question, as well as develop relevant hypotheses.
5	Address	Address issues of random probability sampling.
6	Recognize	Recognize issues related to various modes of data collection.
7	Construct	Construct a social science questionnaire.
8	Compose	Compose a first empirical research report.

Indicative Literature

- Fowler, F. J. (2015). Survey research methods. Thousand Oaks, CA: Sage.
- Gray, D. E. (2014). Doing research in the real world (3rd edition). London: Sage.
- Neumann, W. (2014). Social research methods: Qualitative and quantitative approaches (7th International Edition). Har- low: Pearson.
- Picardie, C. A. & Masick, K. D. (2014). Research methods: Designing and conducting research with a real-world focus. London: Sage.

Entry Requirements

Prerequisites	None
Co-requisites	None
Additional Remarks	None

Assessment and Completion

Module Component	Examination Type	Duration or Length	Weight (%)	Minimum for Pass	ILOs
Data Collection and Empirical Research Methodologies	Term Paper	2500-3000 words	100	45%	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.

Module Achievement

6.2 New Skills Modules

6.2.1 Logic (perspective I)

Module Name	Logic (perspective I)
Module Code	2025-CTNS-NSK-01
Module ECTS	2.5
Program Owner	2025-CT (CONSTRUCTOR Track Area)
Module Coordinator	Prof. Dr. Jules Coleman

Study Semester		
Program	**Semester**	**Status**
2025-BCCB-BSc Biochemistry and Cell Biology	3	Mandatory Elective
2025-CBT-BSc Chemistry and Biotechnology	3	Mandatory Elective
2025-CS-BSc Computer Science	3	Mandatory Elective
2025-ECE-BSc Electrical and Computer Engineering	3	Mandatory Elective
2025-ESSMER-BSc Earth Sciences and Sustainable Management of Environmental Resources	3	Mandatory Elective
2025-F-ACS-BSc Applied Computer Science	3	Mandatory Elective
2025-GEM-BA Global Economics and Management	3	Mandatory Elective
2025-IBA-BA International Business Administration	3	Mandatory Elective
2025-IEM-BSc Industrial Engineering & Management	3	Mandatory Elective
2025-IEM-Online-BSc Industrial Engineering & Management (Online)	3	Mandatory Elective
2025-IRPH-BA International Relations: Politics and History	3	Mandatory Elective
2025-ISCP-BA Integrated Social and Cognitive Psychology	3	Mandatory Elective
2025-MCCB-BSc Medicinal Chemistry and Chemical Biology	3	Mandatory Elective
2025-MDDA-BSc Management, Decisions and Data Analytics	3	Mandatory Elective
2025-MMDA-BSc Mathematics, Modeling, and Data Analytics	3	Mandatory Elective
2025-PHDS-BSc Physics and Data Science	3	Mandatory Elective

2025-RIS-BSc Robotics and Intelligent Systems	3	Mandatory Elective
2025-SDT-BSc Software, Data and Technology	3	Mandatory Elective
2025-IRPH-BA International Relations: Politics and History	4	Mandatory Elective
2025-ISCP-BA Integrated Social and Cognitive Psychology	4	Mandatory Elective
2025-S-ACS-BSc Applied Computer Science	4	Mandatory Elective

Student Workload	
Independent Study	45
Online Lecture	17.5
Total Hours	**62.5**

Module Components	**Number**	**Type**	**CP**
Logic (perspective I)	CTNS-01	Lecture (Online)	2.5

Module Description

Suppose a friend asks you to help solve a complicated problem? Where do you begin? Arguably, the first and most difficult task you face is to figure out what the heart of the problem actually is. In doing that you will look for structural similarities between the problem posed and other problems that arise in different fields that others may have addressed successfully. Those similarities may point you to a pathway for resolving the problem you have been asked to solve. But it is not enough to look for structural similarities. Sometimes relying on similarities may even be misleading. Once you've settled tentatively on what you take to be the heart of the matter, you will naturally look for materials, whether evidence or arguments, that you believe is relevant to its potential solution. But the evidence you investigate of course depends on your formulation of the problem, and your formulation of the problem likely depends on the tools you have available - including potential sources of evidence and argumentation. You cannot ignore this interactivity, but you can't allow yourself to be hamstrung entirely by it. But there is more. The problem itself may be too big to be manageable all at once, so you will have to explore whether it can be broken into manageable parts and if the information you have bears on all or only some of those parts. And later you will face the problem of whether the solutions to the particular sub problems can be put together coherently to solve the entire problem taken as a whole.

What you are doing is what we call engaging in computational thinking. There are several elements of computational thinking illustrated above. These include: Decomposition (breaking the larger problem down into smaller ones); Pattern recognition (identifying structural similarities); Abstraction (ignoring irrelevant particulars of the problem): and Creating Algorithms), problem-solving formulas.

But even more basic to what you are doing is the process of drawing inferences from the material you have. After all, how else are you going to create a problem-solving formula, if you draw incorrect

inferences about what information has shown and what, if anything follows logically from it. What you must do is apply the rules of logic to the information to draw inferences that are warranted.

We distinguish between informal and formal systems of logic, both of which are designed to indicate fallacies as well as warranted inferences. If I argue for a conclusion by appealing to my physical ability to coerce you, I prove nothing about the truth of what I claim. If anything, by doing so I display my lack of confidence in my argument. Or if the best I can do is berate you for your skepticism, I have done little more than offer an ad hominem instead of an argument. Our focus will be on formal systems of logic, since they are at the heart of both scientific argumentation and computer developed algorithms. There are in fact many different kinds of logic and all figure to varying degrees in scientific inquiry. There are inductive types of logic, which purport to formalize the relationship between premises that if true offer evidence on behalf of a conclusion and the conclusion and are represented as claims about the extent to which the conclusion is confirmed by the premises. There are deductive types of logic, which introduce a different relationship between premise and conclusion. These variations of logic consist in rules that if followed entail that if the premises are true then the conclusion too must be true.

There are also modal types of logic which are applied specifically to the concepts of necessity and possibility, and thus to the relationship among sentences that include either or both those terms. And there is also what are called deontic logic, a modification of logic that purport to show that there are rules of inference that allow us to infer what we ought to do from facts about the circumstances in which we find ourselves. In the natural and social sciences most of the emphasis has been placed on inductive logic, whereas in math it is placed on deductive logic, and in modern physics there is an increasing interest in the concepts of possibility and necessity and thus in modal logic. The humanities, especially normative discussions in philosophy and literature are the province of deontic logic.

This module will also take students through the central aspects of computational thinking, as it is related to logic; it will introduce the central concepts in each, their relationship to one another and begin to provide the conceptual apparatus and practical skills for scientific inquiry and research.

This 2.5 CP module supports Academic Excellence by providing essential contextual knowledge that underpins the program's qualification aims, while appropriately limiting academic depth relative to the core technical competencies of the field

Intended Learning Outcomes

No	Competence	ILO
1	Apply	Apply the various principles of logic and expand them to computational thinking.
2	Understand	Understand the way in which logical processes in humans and in computers are similar and different at the same time.
3	Apply	Apply the basic rules of first-order deductive logic and employ them rules in the context of creating a scientific or social scientific study and argument.
4	Employ	Employ those rules in the context of creating a scientific or social scientific study and argument.

Indicative Literature

- Frege, Gottlob (1879), Begriffsschrift, eine der arithmetischen nachgebildete Formelsprache des reinen Denkens [Translation: A Formal Language for Pure Thought Modeled on that of Arithmetic],Halle an der Salle: Verlag von Louis Nebert.
- Gödel, Kurt (1986), Russels mathematische Logik. In: Alfred North Whitehead, Bertrand Russell: Principia Mathematica. Vorwort, S. V–XXXIV. Suhrkamp.
- Kubica, Jeremy. Computational fairy tales. Jeremy Kubica, 2012.
- Leeds, Stephen. "George Boolos and Richard Jeffrey. Computability and logic. Cambridge University Press, New York and London1974, x+ 262 pp." The Journal of Symbolic Logic 42.4 (1977): 585-586.
- McCarthy, Timothy. "Richard Jeffrey. Formal logic: Its scope and limits. of XXXVIII 646. McGraw-Hill Book Company, New York etc. 1981, xvi+ 198 pp." The Journal of Symbolic Logic 49.4 (1984): 1408-1409.

Entry Requirements

Prerequisites	None
Co-requisites	None
Additional Remarks	None

Assessment and Completion

Module Component	Examination Type	Duration or Length	Weight (%)	Minimum for Pass	ILOs
Logic (perspective I)	Written Examination	60 Minutes	100	45%	All

Module Achievement

6.2.2 Logic (perspective II)

Module Name	Logic (perspective II)
Module Code	2025-CTNS-NSK-02
Module ECTS	2.5
Program Owner	2025-CT (CONSTRUCTOR Track Area)
Module Coordinator	Prof. Dr. Jules Coleman

Study Semester		
Program	**Semester**	**Status**
2025-BCCB-BSc Biochemistry and Cell Biology	3	Mandatory Elective
2025-CBT-BSc Chemistry and Biotechnology	3	Mandatory Elective
2025-CS-BSc Computer Science	3	Mandatory Elective
2025-ECE-BSc Electrical and Computer Engineering	3	Mandatory Elective
2025-ESSMER-BSc Earth Sciences and Sustainable Management of Environmental Resources	3	Mandatory Elective
2025-F-ACS-BSc Applied Computer Science	3	Mandatory Elective
2025-GEM-BA Global Economics and Management	3	Mandatory Elective
2025-IBA-BA International Business Administration	3	Mandatory Elective
2025-IBA-Online-BA International Business Administration (Online)	3	Mandatory Elective
2025-IEM-BSc Industrial Engineering & Management	3	Mandatory Elective
2025-IEM-Online-BSc Industrial Engineering & Management (Online)	3	Mandatory Elective
2025-IRPH-BA International Relations: Politics and History	3	Mandatory Elective
2025-ISCP-BA Integrated Social and Cognitive Psychology	3	Mandatory Elective
2025-MCCB-BSc Medicinal Chemistry and Chemical Biology	3	Mandatory Elective
2025-MDDA-BSc Management, Decisions and Data Analytics	3	Mandatory Elective
2025-MMDA-BSc Mathematics, Modeling, and Data Analytics	3	Mandatory Elective
2025-PHDS-BSc Physics and Data Science	3	Mandatory Elective

2025-RIS-BSc Robotics and Intelligent Systems	3	Mandatory Elective
2025-SDT-BSc Software, Data and Technology	3	Mandatory Elective
2025-IRPH-BA International Relations: Politics and History	4	Mandatory Elective
2025-ISCP-BA Integrated Social and Cognitive Psychology	4	Mandatory Elective
2025-S-ACS-BSc Applied Computer Science	4	Mandatory Elective

Student Workload	
Independent Study	45
Online Lecture	17.5
Total Hours	**62.5**

Module Components	**Number**	**Type**	**CP**
Logic (perspective II)	CTNS-02	Lecture (Online)	2.5

Module Description

The focus of this module is on formal systems of logic, since they are at the heart of both scientific argumentation and computer developed algorithms. There are in fact many kinds of logic and all figure to varying degrees in scientific inquiry. There are inductive types of logic, which purport to formalize the relationship between premises that if true offer evidence on behalf of a conclusion and the conclusion and are represented as claims about the extent to which the conclusion is confirmed by the premises. There are deductive types of logic, which introduce a different relationship between premise and conclusion. These variations of logic consist in rules that if followed entail that if the premises are true then the conclusion too must be true.

This module introduces logics that go beyond traditional deductive propositional logic and predicate logic and as such it is aimed at students who are already familiar with basics of traditional formal logic. The aim of the module is to provide an overview of alternative logics and to develop a sensitivity that there are many different logics that can provide effective tools for solving problems in specific application domains.

The module first reviews the principles of a traditional logic and then introduces many-valued logics that distinguish more than two truth values, for example true, false, and unknown. Fuzzy logic extends traditional logic by replacing truth values with real numbers in the range 0 to 1 that are expressing how strong the believe into a proposition is. Modal logics introduce modal operators expressing whether a proposition is necessary or possible. Temporal logics deal with propositions that are qualified by time. One can view temporal logics as a form of modal logics where propositions are qualified by time constraints. Interval temporal logic provides a way to reason about time intervals in which propositions are true.

The module will also investigate the application of logic frameworks to specific classes of problems. For example, a special subset of predicate logic, based on so-called Horn clauses, forms the basis of logic programming languages such as Prolog. Description logics, which are usually decidable logics, are used to model relationships and they have applications in the semantic web, which enables search engines to reason about resources present on the Internet.

This 2.5 CP module supports Academic Excellence by providing essential contextual knowledge that underpins the program's qualification aims, while appropriately limiting academic depth relative to the core technical competencies of the field

Intended Learning Outcomes

No	Competence	ILO
1	Apply	Apply the various principles of logic.
2	Explain	Explain practical relevance of non-standard logic.
3	Describe	Describe how many-valued logic extends basic predicate logic.
4	Apply	Apply basic rules of fuzzy logic to calculate partial truth values.
5	Sketch	Sketch basic rules of temporal logic.
6	Implement	Implement predicates in a logic programming language.
7	Prove	Prove some simple non-standard logic theorems.

Indicative Literature

- Baader, Franz. "The Description Logic Handbook: Theory Implementation and Applications", Cambridge University Press, 2nd edition, May 2010.
- Bergmann, Merry. "An Introduction to Many-Valued and Fuzzy Logic: Semantics, Algebras, and Derivation Systems", Cambridge University Press, April 2008.
- Fisher, Michael. "An Introduction to Practical Formal Methods Using Temporal Logic", Wiley, Juli 2011.
- Sterling, Leon S., Ehud Y. Shapiro, Ehud Y. "The Art of Prolog", 2nd edition, MIT Press, March 1994.

Entry Requirements

Prerequisites	None
Co-requisites	None
Additional Remarks	None

Assessment and Completion

Module Component	Examination Type	Duration or Length	Weight (%)	Minimum for Pass	ILOs
Logic (perspective II)	Written Examination	60 Minutes	100	45%	All

Module Achievement

6.2.3 Causation and Correlation (perspective I)

Module Name	Causation and Correlation (perspective I)
Module Code	2025-CTNS-NSK-03
Module ECTS	2.5
Program Owner	2025-CT (CONSTRUCTOR Track Area)
Module Coordinator	Prof. Dr. Jules Coleman

Study Semester		
Program	**Semester**	**Status**
2025-ISCP-BA Integrated Social and Cognitive Psychology	3	Mandatory Elective
2025-S-ACS-BSc Applied Computer Science	3	Mandatory Elective
2025-BCCB-BSc Biochemistry and Cell Biology	4	Mandatory Elective
2025-CBT-BSc Chemistry and Biotechnology	4	Mandatory Elective
2025-CS-BSc Computer Science	4	Mandatory Elective
2025-ECE-BSc Electrical and Computer Engineering	4	Mandatory Elective
2025-ESSMER-BSc Earth Sciences and Sustainable Management of Environmental Resources	4	Mandatory Elective
2025-F-ACS-BSc Applied Computer Science	4	Mandatory Elective
2025-GEM-BA Global Economics and Management	4	Mandatory Elective
2025-IBA-BA International Business Administration	4	Mandatory Elective
2025-IBA-Online-BA International Business Administration (Online)	4	Mandatory Elective
2025-IEM-BSc Industrial Engineering & Management	4	Mandatory Elective
2025-IEM-Online-BSc Industrial Engineering & Management (Online)	4	Mandatory Elective
2025-IRPH-BA International Relations: Politics and History	4	Mandatory Elective
2025-ISCP-BA Integrated Social and Cognitive Psychology	4	Mandatory Elective
2025-MCCB-BSc Medicinal Chemistry and Chemical Biology	4	Mandatory Elective
2025-MDDA-BSc Management, Decisions and Data Analytics	4	Mandatory Elective

2025-MMDA-BSc Mathematics, Modeling, and Data Analytics	4	Mandatory Elective
2025-PHDS-BSc Physics and Data Science	4	Mandatory Elective
2025-RIS-BSc Robotics and Intelligent Systems	4	Mandatory Elective
2025-SDT-BSc Software, Data and Technology	4	Mandatory Elective

Student Workload	
Independent Study	45
Online Lecture	17.5
Total Hours	**62.5**

Module Components	**Number**	**Type**	**CP**
Causation and Correlation	CTNS-03	Lecture (Online)	2.5

Module Description

In many ways, life is a journey. And also, as in other journeys, our success or failure depends not only on our personal traits and character, our physical and mental health, but also on the accuracy of our map. We need to know what the world we are navigating is actually like, the how, why and the what of what makes it work the way it does. The natural sciences provide the most important tool we have developed to learn how the world works and why it works the way it does. The social sciences provide the most advanced tools we have to learn how we and other human beings, similar in most ways, different in many others, act and react and what makes them do what they do. In order for our maps to be useful, they must be accurate and correctly reflect the way the natural and social worlds work and why they work as they do.

The natural sciences and social sciences are blessed with enormous amounts of data. In this way, history and the present are gifts to us. To understand how and why the world works the way it does requires that we are able to offer an explanation of it. The data supports a number of possible explanations of it. How are we to choose among potential explanations? Explanations, if sound, will enable us to make reliable predictions about what the future will be like, and also to identify many possibilities that may unfold in the future. But there are differences not just in the degree of confidence we have in our predictions, but in whether some of them are necessary future states or whether all of them are merely possibilities? Thus, there are three related activities at the core of scientific inquiry: understanding where we are now and how we got here (historical); knowing what to expect going forward (prediction); and exploring how we can change the paths we are on (creativity).

At the heart of these activities are certain fundamental concepts, all of which are related to the scientific quest to uncover immutable and unchanging laws of nature. Laws of nature are thought to reflect a causal nexus between a previous event and a future one. There are also true statements that reflect universal or nearly universal connections between events past and present that are not laws of nature because the relationship they express is that of a correlation between events. A working thermostat accurately allows us to determine or even to predict the temperature in the room in which

it is located, but it does not explain why the room has the temperature it has. What then is the core difference between causal relationships and correlations? At the same time, we all recognize that given where we are now there are many possible futures for each of us, and even had our lives gone just the slightest bit differently than they have, our present state could well have been very different than it is. The relationship between possible pathways between events that have not materialized but could have is expressed through the idea of counterfactual.

Creating accurate roadmaps, forming expectations we can rely on, making the world a more verdant and attractive place requires us to understand the concepts of causation, correlation, counterfactual explanation, prediction, necessity, possibility, law of nature and universal generalization. This course is designed precisely to provide the conceptual tools and intellectual skills to implement those concepts in our future readings and research and ultimately in our experimental investigations, and to employ those tools in various disciplines.

This 2.5 CP module supports Academic Excellence by providing essential contextual knowledge that underpins the program's qualification aims, while appropriately limiting academic depth relative to the core technical competencies of the field

Intended Learning Outcomes

No	Competence	ILO
1	Formulate	Formulate testable hypotheses that are designed to reveal causal connections and those designed to reveal interesting, important and useful correlations.
2	Distinguish	Distinguish scientifically interesting correlations from unimportant ones.
3	Apply	Apply critical thinking skills to evaluate information.
4	Understand	Understand when and why inquiry into unrealized possibility is important and relevant.

Indicative Literature

- Goodman, Nelson. Fact, fiction, and forecast. Harvard University Press, 1983.
- Quine Willard, Van Orman, and Joseph Silbert Ullian. The web of belief. Vol 2. New York: Random house, 1978.
- Thomas S. Kuhn: The Structure of Scientific Revolutions. Nelson, fourth edition, 2012.

Entry Requirements

Prerequisites	None
Co-requisites	None
Additional Remarks	None

Assessment and Completion

Module Component	Examination Type	Duration or Length	Weight (%)	Minimum for Pass	ILOs
Causation and Correlation	Written Examination	60 Minutes	100	45%	1-4

Module Achievement

6.2.4 Causation and Correlation (perspective II)

Module Name	Causation and Correlation (perspective II)
Module Code	2025-CTNS-NSK-04
Module ECTS	2.5
Program Owner	2025-CT (CONSTRUCTOR Track Area)
Module Coordinator	Dr. Eoin Ryan Dr. Irina Chiaburu Prof. Dr. Keivan Mallahi Karai

Study Semester		
Program	**Semester**	**Status**
2025-ISCP-BA Integrated Social and Cognitive Psychology	3	Mandatory Elective
2025-S-ACS-BSc Applied Computer Science	3	Mandatory Elective
2025-BCCB-BSc Biochemistry and Cell Biology	4	Mandatory Elective
2025-CBT-BSc Chemistry and Biotechnology	4	Mandatory Elective
2025-CS-BSc Computer Science	4	Mandatory Elective
2025-ECE-BSc Electrical and Computer Engineering	4	Mandatory Elective
2025-ESSMER-BSc Earth Sciences and Sustainable Management of Environmental Resources	4	Mandatory Elective
2025-F-ACS-BSc Applied Computer Science	4	Mandatory Elective
2025-GEM-BA Global Economics and Management	4	Mandatory Elective
2025-IBA-BA International Business Administration	4	Mandatory Elective
2025-IBA-Online-BA International Business Administration (Online)	4	Mandatory Elective
2025-IEM-BSc Industrial Engineering & Management	4	Mandatory Elective
2025-IEM-Online-BSc Industrial Engineering & Management (Online)	4	Mandatory Elective
2025-IRPH-BA International Relations: Politics and History	4	Mandatory Elective
2025-ISCP-BA Integrated Social and Cognitive Psychology	4	Mandatory Elective
2025-MCCB-BSc Medicinal Chemistry and Chemical Biology	4	Mandatory Elective

2025-MDDA-BSc Management, Decisions and Data Analytics	4	Mandatory Elective
2025-MMDA-BSc Mathematics, Modeling, and Data Analytics	4	Mandatory Elective
2025-PHDS-BSc Physics and Data Science	4	Mandatory Elective
2025-RIS-BSc Robotics and Intelligent Systems	4	Mandatory Elective
2025-SDT-BSc Software, Data and Technology	4	Mandatory Elective
2025-MMDA-BSc Mathematics, Modeling, and Data Analytics	5	Mandatory Elective

Student Workload	
Independent Study	45
Online Lecture	17.5
Total Hours	**62.5**

Module Components	**Number**	**Type**	**CP**
Causation and Correlation (perspective II)	CTNS-04	Lecture (Online)	2.5

Module Description

Causality or causation is a surprisingly difficult concept to understand. David Hume famously noted that causality is a concept that our science and philosophy cannot do without, but it is equally a concept that our science and philosophy cannot describe. Since Hume, the problem of cause has not gone away, and sometimes seems to get even worse (e.g., quantum mechanics confusing previous notions of causality). Yet, ways of doing science that lessen our need to explicitly use causality have become very effective (e.g., huge developments in statistics). Nevertheless, it still seems that the concept of causality is at the core of explaining how the world works, across fields as diverse as physics, medicine, logistics, the law, sociology, and history - and ordinary daily life - through all of which, explanations and predictions in terms of cause and effect remain intuitively central.

Causality remains a thorny problem but, in recent decades, significant progress has occurred, particularly in work by or inspired by Judea Pearl. This work incorporates many 20th century developments, including statistical methods - but with a reemphasis on finding the why, or the cause, behind statistical correlations -, progress in understanding the logic, semantics and metaphysics of conditionals and counterfactuals, developments based on insights from the likes of philosopher Hans Reichenbach or biological statistician Sewall Wright into causal precedence and path analysis, and much more. The result is a new toolkit to identify causes and build causal explanations. Yet even as we get better at identifying causes, this raises new (or old) questions about causality, including metaphysical questions about the nature of causes (and effects, events, objects, etc), but also questions about what we really use causality for (understanding the world as it is or just to glean predictive control of specific outcomes), about how causality is used differently in different fields and

activities (is cause in physics the same as that in history?), and about how other crucial concepts relate to our concept of cause (space and time seem to be related to causality, but so do concepts of legal and moral responsibility).

This course will introduce students to the mathematical formalism derived from Pearl's work, based on directed acyclic graphs and probability theory. Building upon previous work by Reichenbach and Wright, Pearl defines a "a calculus of interventions" of "do-calculus" for talking about interventions and their relation to causation and counterfactuals. This model has been applied in various areas ranging from econometrics to statistics, where acquiring knowledge about causality is of great importance.

At the same time, the course will not forget some of the metaphysical and epistemological issues around cause, so that students can better critically evaluate putative causal explanations in their full context. Abstractly, such issues involve some of the same philosophical questions Hume already asked, but more practically, it is important to see how metaphysical and epistemological debates surrounding the notion of cause affect scientific practice, and equally if not more importantly, how scientific practice pushes the limits of theory. This course will look at various ways in which empirical data can be transformed into explanations and theories, including the variance approach to causality (characteristic of the positivistic quantitative paradigm), and the process theory of causality (associated with qualitative methodology). Examples and case studies will be relevant for students of the social sciences but also students of the natural/physical world as well.

This 2.5 CP module supports Academic Excellence by providing essential contextual knowledge that underpins the program's qualification aims, while appropriately limiting academic depth relative to the core technical competencies of the field

Recommended Knowledge

Basic probability theory

Intended Learning Outcomes

No	Competence	ILO
1	Have	Have a clear understanding of the history of causal thinking.
2	Form	Form a critical understanding of the key debates and controversies surrounding the idea of causality.
3	Recognize	Recognize and apply probabilistic causal models.
4	Explain	Explain how understanding of causality differs among different disciplines.
5	Demonstrate	Demonstrate how theoretical thinking about causality has shaped scientific practices.

Indicative Literature

- llari, Phyllis McKay and Federica Russo. Causality: Philosophical Theory Meets Scientific Practice. Oxford University Press 2014.
- Paul, L. A. and Ned Hall. Causation: A User's Guide. Oxford University Press 2013.

- Pearl, Judea, Glymour Madelyn and Jewell, Nicolas. Causal Inference in Statistics: A Primer. Wiley 2016.
- Pearl, Judea. Causality: Models, Reasoning and Inference. Cambridge University Press 2009.

Entry Requirements

Prerequisites	None
Co-requisites	None
Additional Remarks	None

Assessment and Completion

Module Component	Examination Type	Duration or Length	Weight (%)	Minimum for Pass	ILOs
Causation and Correlation (perspective II)	Written Examination	60 Minutes	100	45%	1-5

Module Achievement

6.2.5 Linear Model and Matrices

Module Name	Linear Model and Matrices
Module Code	2025-CTNS-NSK-05
Module ECTS	5
Program Owner	2025-CT (CONSTRUCTOR Track Area)
Module Coordinator	Prof. Dr. Marc-Thorsten Hütt

Study Semester		
Program	**Semester**	**Status**
2025-BCCB-BSc Biochemistry and Cell Biology	5	Mandatory Elective
2025-CBT-BSc Chemistry and Biotechnology	5	Mandatory Elective
2025-CS-BSc Computer Science	5	Mandatory Elective
2025-ECE-BSc Electrical and Computer Engineering	5	Mandatory Elective
2025-ESSMER-BSc Earth Sciences and Sustainable Management of Environmental Resources	5	Mandatory Elective
2025-GEM-BA Global Economics and Management	5	Mandatory Elective
2025-IBA-BA International Business Administration	5	Mandatory Elective
2025-IBA-Online-BA International Business Administration (Online)	5	Mandatory Elective
2025-IRPH-BA International Relations: Politics and History	5	Mandatory Elective
2025-ISCP-BA Integrated Social and Cognitive Psychology	5	Mandatory Elective
2025-MCCB-BSc Medicinal Chemistry and Chemical Biology	5	Mandatory Elective
2025-MDDA-BSc Management, Decisions and Data Analytics	5	Mandatory Elective
2025-MMDA-BSc Mathematics, Modeling, and Data Analytics	5	Mandatory Elective
2025-PHDS-BSc Physics and Data Science	5	Mandatory Elective
2025-RIS-BSc Robotics and Intelligent Systems	5	Mandatory Elective
2025-SDT-BSc Software, Data and Technology	5	Mandatory Elective
2025-ISCP-BA Integrated Social and Cognitive Psychology	6	Mandatory Elective

Student Workload	
Independent Study	90
Online Lecture	35
Total Hours	**125**

Module Components	Number	Type	CP
Linear model and matrices	CTNS-05	Seminar (Online)	5

Module Description

There are no universal 'right skills'. But the notion of linear models and the avenue to matrices and their properties can be useful in diverse disciplines to implement a quantitative, computational approach. Some of the most popular data and systems analysis strategies are built upon this framework. Examples include principal component analysis (PCA), the optimization techniques used in Operations Research (OR), the assessment of stable and unstable states in nonlinear dynamical systems, as well as aspects of machine learning.

Here we introduce the toolbox of linear models and matrix-based methods embedded in a wide range of transdisciplinary applications (part 1). We describe its foundation in linear algebra (part 2) and the range of tools and methods derived from this conceptual framework (part 3). At the end of the course, we outline applications to graph theory and machine learning (part 4). Matrices can be useful representations of networks and of system of linear equations. They are also the core object of linear stability analysis, an approach used in nonlinear dynamics. Throughout the course, examples from neuroscience, social sciences, medicine, biology, physics, chemistry, and other fields are used to illustrate these methods.

A strong emphasis of the course is on the sensible usage of linear approaches in a nonlinear world. We will critically reflect the advantages as well as the disadvantages and limitations of this method. Guiding questions are: How appropriate is a linear approximation of a nonlinear system? What do you really learn from PCA? How reliable are the optimal states obtained via linear programming (LP) techniques?

This debate is embedded in a broader context: How does the choice of a mathematical technique confine your view on the system at hand? How, on the other hand, does it increase your capabilities of analyzing the system (due to software available for this technique, the ability to compare with findings from other fields built upon the same technique and the volume of knowledge about this technique)?

In the end, students will have a clearer understanding of linear models and matrix approaches in their own discipline, but they will also see the full transdisciplinarity of this topic. They will make better decisions in their choice of data analysis methods and become mindful of the challenges when going from linear to nonlinear thinking.

Intended Learning Outcomes

No	Competence	ILO

1	Apply	Apply the concept of linear modeling in their own discipline.
2	Distinguish	Distinguish between linear and nonlinear interpretation strategies and understand the range of applicability of linear models.
3	Make	Make use of data analysis / data interpretation strategies from other disciplines, which are derived from linear algebra.
4	Know	Be aware of the ties that linear models have to machine learning and network theory,
5	Note	Note that these four ILOs can be loosely associated with the four parts of the course indicated above.

Indicative Literature

- Part 1: material from Linear Algebra for Everyone, Gilbert Strang, Wellesley-Cambridge Press, 2020.
- Part 2: material from Introduction to Linear Algebra (5th Edition), Gilbert Strang, Cambridge University Press, 2021.
- Part 3: Mainzer, Klaus. "Introduction: from linear to nonlinear thinking." Thinking in Complexity: The Computational Dynamics of Matter, Mind and Mankind (2007): 1-16.; material from Mathematics of Big Data: Spreadsheets, Databases, Matrices, and Graphs, Jeremy Kepner, Hayden Jananthan, The MIT Press, 2018.; material from Introduction to Linear Algebra (5th Edition), Gilbert Strang, Cambridge University Press, 2021.
- Part 4: material from Linear Algebra and Learning from Data, Gilbert Strang, Wellesley-Cambridge Press, 2019.

Entry Requirements

Prerequisites	2025-CTNS-NSK-01 Logic (perspective I) 2025-CTNS-NSK-03 Causation and Correlation (perspective I) 2025-CTNS-NSK-04 Causation and Correlation (perspective II) 2025-CTNS-NSK-02 Logic (perspective II)
Co-requisites	None
Additional Remarks	None

Assessment and Completion

Module Component	Examination Type	Duration or Length	Weight (%)	Minimum for Pass	ILOs
Linear model and matrices	Written Examination	120 Minutes	100	45%	1-4

Module Achievement

6.2.6 Complex Problem Solving

Module Name	Complex Problem Solving
Module Code	2025-CTNS-NSK-06
Module ECTS	5
Program Owner	2025-CT (CONSTRUCTOR Track Area)
Module Coordinator	Prof. Dr. Marco Verweij

Study Semester		
Program	**Semester**	**Status**
2025-BCCB-BSc Biochemistry and Cell Biology	5	Mandatory Elective
2025-CBT-BSc Chemistry and Biotechnology	5	Mandatory Elective
2025-CS-BSc Computer Science	5	Mandatory Elective
2025-ECE-BSc Electrical and Computer Engineering	5	Mandatory Elective
2025-ESSMER-BSc Earth Sciences and Sustainable Management of Environmental Resources	5	Mandatory Elective
2025-GEM-BA Global Economics and Management	5	Mandatory Elective
2025-IBA-BA International Business Administration	5	Mandatory Elective
2025-IBA-Online-BA International Business Administration (Online)	5	Mandatory Elective
2025-IRPH-BA International Relations: Politics and History	5	Mandatory Elective
2025-ISCP-BA Integrated Social and Cognitive Psychology	5	Mandatory Elective
2025-MCCB-BSc Medicinal Chemistry and Chemical Biology	5	Mandatory Elective
2025-MDDA-BSc Management, Decisions and Data Analytics	5	Mandatory Elective
2025-MMDA-BSc Mathematics, Modeling, and Data Analytics	5	Mandatory Elective
2025-PHDS-BSc Physics and Data Science	5	Mandatory Elective
2025-RIS-BSc Robotics and Intelligent Systems	5	Mandatory Elective
2025-SDT-BSc Software, Data and Technology	5	Mandatory Elective
2025-ISCP-BA Integrated Social and Cognitive Psychology	6	Mandatory Elective

Student Workload	
Independent Study	90
Online Lecture	35
Total Hours	**125**

Module Components	Number	Type	CP
Complex Problem Solving	CTNS-06	Lecture (Online)	5

Module Description

Complex problems are, by definition, non-linear and/or emergent. Some fifty years ago, scholars such as Herbert Simon began to argue that societies around the world had developed an impressive array of tools with which to solve simple and even complicated problems, but still needed to develop methods with which to address the rapidly increasing number of complex issues. Since then, a variety of such methods has emerged. These include 'serious games' developed in computer science, 'multisector systems analysis' applied in civil and environmental engineering, 'robust decision-making' proposed by the RAND Corporation, 'design thinking' developed in engineering and business studies, 'structured problem-solving' used by McKinsey & Co., 'real-time technology assessment' advocated in science and technology studies, and 'deliberative decision-making' emanating from political science.

In this course, students first learn to distinguish between simple, complicated and complex problems. They also become familiar with the ways in which a particular issue can sometimes shift from one category into another. In addition, the participants learn to apply several tools for resolving complex problems. Finally, the students are introduced to the various ways in which natural and social scientists can help stakeholders resolve complex problems. Throughout the course examples and applications will be used. When possible, guest lectures will be offered by experts on a particular tool for tackling complex issues. For the written, take-home exam, students will have to select a specific complex problem, analyse it and come up with a recommendation - in addition to answering several questions about the material learned.

Recommended Knowledge

- Being able to read primary academic literature

- Willingness to engage in teamwork

- Camillus, J. (2008). Strategy as a wicked problem. Harvard Business Review 86: 99-106;

- Rogers, P. J. (2008). Using programme theory to evaluate complicated and complex aspects of interventions. Evaluation, 14, 29–48.

Intended Learning Outcomes

No	Competence	ILO
1	Identify	Identify a complex problem.

2	Develop	Develop an acceptable recommendation for resolving complex problems.
3	Understand	Understand the roles that natural and social scientists can play in helping stakeholders resolve complex problems.

Indicative Literature

- Camillus, J. (2008). Strategy as a wicked problem. Harvard Business Review 86: 99-106; Rogers, P. J. (2008). Using programme theory to evaluate complicated and complex aspects of interventions. Evaluation, 14, 29–48.
- Chia, A. (2019). Distilling the essence of the McKinsey way: The problem-solving cycle. Management Teaching Review 4(4): 350-377.
- Den Haan, J., van der Voort, M.C., Baart, F., Berends, K.D., van den Berg, M.C., Straatsma, M.W., Geenen, A.J.P., & Hulscher, S.J.M.H. (2020). The virtual river game: Gaming using models to collaboratively explore river management complexity, Environmental Modelling & Software 134, 104855.
- Folke, C., Carpenter, S., Elmqvist, T., Gunderson, L., Holling, C.S., & Walker, B. (2002). Resilience and sustainable development: Building adaptive capacity in a world of transformations. AMBIO: A Journal of the Human Environment 31(5): 437-440.
- Ostrom, E. (2010). Beyond markets and states: Polycentric governance of complex economic systems. American Economic Review 100(3): 641-72.
- Pielke, R. Jr. (2007). The honest broker: Making sense of science in policy and politics. Cambridge: Cambridge University Press.
- Project Management Institute (2021). A guide to the project management body of knowledge (PMBOK® guide).
- Schon, D. A., & Rein, M. (1994). Frame reflection: Toward the resolution of intractable policy controversies. New York: Basic Books.
- Simon, H. A. (1973). The structure of ill structured problems. Artificial Intelligence 4(3-4): 181-201.
- Verweij, M. & Thompson, M. (Eds.) (2006). Clumsy solutions for a complex world. London: Palgrave Macmillan.

Entry Requirements

Prerequisites	2025-CTNS-NSK-01 Logic (perspective I) 2025-CTNS-NSK-03 Causation and Correlation (perspective I) 2025-CTNS-NSK-04 Causation and Correlation (perspective II)

	2025-CTNS-NSK-02 Logic (perspective II)
Co-requisites	None
Additional Remarks	None

Assessment and Completion

Module Component	Examination Type	Duration or Length	Weight (%)	Minimum for Pass	ILOs
Complex Problem Solving	Written Examination	120 Minutes	100	45%	1-3

Module Achievement

6.2.7 Argumentation, Data Visualization and Communication (perspective I)

Module Name	Argumentation, Data Visualization and Communication (perspective I)
Module Code	2025-CTNS-NSK-07
Module ECTS	5
Program Owner	2025-CT (CONSTRUCTOR Track Area)
Module Coordinator	Prof. Dr. Arvid Kappas Prof. Dr. Jules Coleman

Study Semester		
Program	**Semester**	**Status**
2025-BCCB-BSc Biochemistry and Cell Biology	5	Mandatory Elective
2025-CBT-BSc Chemistry and Biotechnology	5	Mandatory Elective
2025-CS-BSc Computer Science	5	Mandatory Elective
2025-ECE-BSc Electrical and Computer Engineering	5	Mandatory Elective
2025-ESSMER-BSc Earth Sciences and Sustainable Management of Environmental Resources	5	Mandatory Elective
2025-F-ACS-BSc Applied Computer Science	5	Mandatory Elective
2025-GEM-BA Global Economics and Management	5	Mandatory Elective
2025-IBA-BA International Business Administration	5	Mandatory Elective
2025-IBA-Online-BA International Business Administration (Online)	5	Mandatory Elective
2025-IRPH-BA International Relations: Politics and History	5	Mandatory Elective
2025-ISCP-BA Integrated Social and Cognitive Psychology	5	Mandatory Elective
2025-MCCB-BSc Medicinal Chemistry and Chemical Biology	5	Mandatory Elective
2025-MDDA-BSc Management, Decisions and Data Analytics	5	Mandatory Elective
2025-MMDA-BSc Mathematics, Modeling, and Data Analytics	5	Mandatory Elective
2025-PHDS-BSc Physics and Data Science	5	Mandatory Elective
2025-RIS-BSc Robotics and Intelligent Systems	5	Mandatory Elective

2025-S-ACS-BSc Applied Computer Science	5	Mandatory Elective
2025-SDT-BSc Software, Data and Technology	5	Mandatory Elective
2025-IRPH-BA International Relations: Politics and History	6	Mandatory Elective

Student Workload	
Independent Study	90
Online Lecture	35
Total Hours	**125**

Module Components	**Number**	**Type**	**CP**
Argumentation, Data Visualization and Communication (perspective I)	CTNS-07	Lecture (Online)	5

Module Description

One must be careful not to confuse argumentation with being argumentative. The latter is an unattractive personal attribute, whereas the former is a requirement of publicly holding a belief, asserting the truth of a proposition, the plausibility of a hypothesis, or a judgment of the value of a person or an asset. It is an essential component of public discourse. Public discourse is governed by norms and one of those norms is that those who assert the truth of a proposition or the validity of an argument or the responsibility of another for wrongdoing open themselves up to good faith requests to defend their claims. In its most general meaning, argumentation is the requirement that one offer evidence in support of the claims they make, as well as in defense of the judgments and assessments they reach. There are different modalities of argumentation associated with different contexts and disciplines. Legal arguments have a structure of their own as do assessments of medical conditions and moral character. In each case, there are differences in the kind of evidence that is thought relevant and, more importantly, in the standards of assessment for whether a case has been successfully made. Different modalities of argumentation require can call for different modes of reasoning. We not only offer reasons in defense of or in support of beliefs we have, judgments we make and hypotheses we offer, but we reason from evidence we collect to conclusions that are warranted by them.

Reasoning can be informal and sometimes even appear unstructured. When we recognize some reasoning as unstructured yet appropriate what we usually have in mind is that it is not linear. Most reasoning we are familiar with is linear in character. From A we infer B, and from A and B we infer C, which all together support our commitment to D. The same form of reasoning applies whether the evidence for A, B or C is direct or circumstantial. What changes in these cases is perhaps the weight we give to the evidence and thus the confidence we have in drawing inferences from it.

Especially in cases where reasoning can be supported by quantitative data, wherever quantitative data can be obtained either directly or by linear or nonlinear models, the visualization of the corresponding data can become key in both, reasoning and argumentation. A graphical representation can reduce the complexity of argumentation and is considered a must in effective scientific communication. Consequently, the course will also focus on smart and compelling ways for data visualization - in ways

that go beyond what is typically taught in statistics or mathematics lectures. These tools are constantly developing, as a reflection of new software and changes in state of the presentation art. Which graph or bar chart to use best for which data, the use of colors to underline messages and arguments, but also the pitfalls when presenting data in a poor or even misleading manner. This will also help in readily identifying intentional mis-representation of data by others, the simplest to recognize being truncating the ordinate of a graph in order to exaggerate trends. This frequently leads to false arguments, which can then be readily countered.

There are other modalities of reasoning that are not linear however. Instead they are coherentist. We argue for the plausibility of a claim sometimes by showing that it fits in with a set of other claims for which we have independent support. The fit is itself the reason that is supposed to provide confidence or grounds for believing the contested claim.

Other times, the nature of reasoning involves establishing not just the fit but the mutual support individual items in the evidentiary set provide for one another. This is the familiar idea of a web of interconnected, mutually supportive beliefs. In some cases, the support is in all instances strong; in others it is uniformly weak, but the set is very large; in other cases, the support provided each bit of evidence for the other is mixed: sometimes strong, sometimes weak, and so on.

There are three fundamental ideas that we want to extract from this segment of the course. These are (1) that argumentation is itself a requirement of being a researcher who claims to have made findings of one sort or another; (2) that there are different forms of appropriate argumentation for different domains and circumstances; and (3) that there are different forms of reasoning on behalf of various claims or from various bits of evidence to conclusions: whether those conclusions are value judgments, political beliefs, or scientific conclusions. Our goal is to familiarize you with all three of these deep ideas and to help you gain facility with each.

Intended Learning Outcomes

No	Competence	ILO
1	Distinguish	Distinguish among different modalities of argument, e.g. legal arguments, vs. scientific ones.
2	Construct	Construct arguments using tools of data visualization.
3	Communicate	Communicate conclusions and arguments concisely, clearly and convincingly.

Indicative Literature

- Cairo, A (2012). The Functional Art: An introduction to information graphics and visualization. New Ridders.
- Knaflic, C.N. (2015). Storytelling with data: A data visualization guide for business professionals. John Wiley & Sons.
- Tufte, E.R. (1985). The visual display of quantitative information. The Journal for Healthcare Quality (JHQ), 7(3), 15.

Entry Requirements

Prerequisites	2025-CTNS-NSK-01

	Logic (perspective I) 2025-CTNS-NSK-03 Causation and Correlation (perspective I) 2025-CTNS-NSK-04 Causation and Correlation (perspective II) 2025-CTNS-NSK-02 Logic (perspective II)
Co-requisites	None
Additional Remarks	None

Assessment and Completion

Module Component	Examination Type	Duration or Length	Weight (%)	Minimum for Pass	ILOs
Argumentation, Data Visualization and Communication (perspective I)	Written Examination	120 Minutes	100	45%	1-3

Module Achievement

6.2.8 Argumentation, Data Visualization and Communication (perspective II)

Module Name	Argumentation, Data Visualization and Communication (perspective II)
Module Code	2025-CTNS-NSK-08
Module ECTS	5
Program Owner	2025-CT (CONSTRUCTOR Track Area)
Module Coordinator	Prof. Dr. Arvid Kappas Prof. Dr. Jules Coleman

Study Semester		
Program	**Semester**	**Status**
2025-IRPH-BA International Relations: Politics and History	5	Mandatory Elective
2025-BCCB-BSc Biochemistry and Cell Biology	6	Mandatory Elective
2025-CBT-BSc Chemistry and Biotechnology	6	Mandatory Elective
2025-CS-BSc Computer Science	6	Mandatory Elective
2025-ECE-BSc Electrical and Computer Engineering	6	Mandatory Elective
2025-ESSMER-BSc Earth Sciences and Sustainable Management of Environmental Resources	6	Mandatory Elective
2025-F-ACS-BSc Applied Computer Science	6	Mandatory Elective
2025-GEM-BA Global Economics and Management	6	Mandatory Elective
2025-IBA-BA International Business Administration	6	Mandatory Elective
2025-IBA-Online-BA International Business Administration (Online)	6	Mandatory Elective
2025-IRPH-BA International Relations: Politics and History	6	Mandatory Elective
2025-ISCP-BA Integrated Social and Cognitive Psychology	6	Mandatory Elective
2025-MCCB-BSc Medicinal Chemistry and Chemical Biology	6	Mandatory Elective
2025-MDDA-BSc Management, Decisions and Data Analytics	6	Mandatory Elective
2025-MMDA-BSc Mathematics, Modeling, and Data Analytics	6	Mandatory Elective
2025-PHDS-BSc Physics and Data Science	6	Mandatory Elective

2025-RIS-BSc Robotics and Intelligent Systems	6	Mandatory Elective
2025-S-ACS-BSc Applied Computer Science	6	Mandatory Elective
2025-SDT-BSc Software, Data and Technology	6	Mandatory Elective

Student Workload	
Independent Study	80
Online Lecture	35
Tutorial	10
Total Hours	**125**

Module Components	**Number**	**Type**	**CP**
Argumentation, Data Visualization and Communication (perspective II)	CTNS-08	Lecture (Online)	5

Module Description

Humans are a social species, and interaction is crucial throughout the entire life span. While much of human communication involves language, there is a complex multichannel system of nonverbal communication that enriches linguistic content, provides context, and is also involved in structuring dynamic interaction. Interactants achieve goals by encoding information that is interpreted in the light of current context in transactions with others. This complexity implies also that there are frequent misunderstandings as a sender's intention is not fulfilled. Students in this course will learn to understand the structure of communication processes in a variety of formal and informal contexts. They will learn what constitutes challenges to achieving successful communication and to how to communicate effectively, taking the context and specific requirements for a target audience into consideration. These aspects will be discussed also in the scientific context, as well as business, and special cases, such as legal context - particularly with view to argumentation theory.

Communication is a truly transdisciplinary concept that involves knowledge from diverse fields such as biology, psychology, neuroscience, linguistics, sociology, philosophy, communication and information science. Students will learn what these different disciplines contribute to an understanding of communication and how theories from these fields can be applied in the real world. In the context of scientific communication, there will also be a focus on visual communication of data in different disciplines. Good practice examples will be contrasted with typical errors to facilitate successful communication also with view to the Bachelor's thesis.

Recommended Knowledge

- Ability and openness to engage in interactions

- Media literacy, critical thinking and a proficient handling of data sources

- Own research in academic literature

Intended Learning Outcomes

No	Competence	ILO
1	Analyze	Analyze communication processes in formal and informal contexts.
2	Identify	Identify challenges and failures in communication.
3	Design	Design communications to achieve specified goals to specific target groups.
4	Understand	Understand the principles of argumentation theory.
5	Use	Use data visualization in scientific communications.

Indicative Literature

- Douglas Walton: Argumentation Theory – A Very Short Introduction. In: Simari, G., Rahwan, I. (eds) Argumentation in Artificial Intelligence. Springer, Boston, MA, 2009.
- Joseph A. DeVito: The Interpersonal Communication Book (Global edition, 16th edition), 2022.
- Steven L. Franconeri, Lace M. Padilla, Priti Shah, Jeffrey M. Zacks, and Jessica Hullman: The Science of Visual Data Communication: What Works Psychological Science in the Public Interest, 22(3), 110–161, 2022.

Entry Requirements

Prerequisites	2025-CTNS-NSK-01 Logic (perspective I) 2025-CTNS-NSK-02 Logic (perspective II) 2025-CTNS-NSK-03 Causation and Correlation (perspective I) 2025-CTNS-NSK-04 Causation and Correlation (perspective II)
Co-requisites	None
Additional Remarks	None

Assessment and Completion

Module Component	Examination Type	Duration or Length	Weight (%)	Minimum for Pass	ILOs
Argumentation, Data Visualization and	Presentation	Digital submissi	100	45%	1-5

Communication (perspective II)		on (Asynchronous)			

Module Achievement

Asynchronous presentation on a topic relating to the major of the student, including a reflection including concept outlining the rationale for how arguments are selected and presented based on a particular target group for a particular purpose. The presentation shall be multimedial and include the presentation of data. The module achievement ensures sufficient knowledge about key concepts of effective communication including a reflection on the presentation itself.

6.2.9 Agency, Leadership, and Accountability

Module Name	Agency, Leadership, and Accountability
Module Code	2025-CTNS-NSK-09
Module ECTS	5
Program Owner	2025-CT (CONSTRUCTOR Track Area)
Module Coordinator	Prof. Dr. Jules Coleman

Study Semester		
Program	**Semester**	**Status**
2025-S-ACS-BSc Applied Computer Science	5	Mandatory
2025-BCCB-BSc Biochemistry and Cell Biology	6	Mandatory Elective
2025-CBT-BSc Chemistry and Biotechnology	6	Mandatory Elective
2025-CS-BSc Computer Science	6	Mandatory Elective
2025-ECE-BSc Electrical and Computer Engineering	6	Mandatory Elective
2025-ESSMER-BSc Earth Sciences and Sustainable Management of Environmental Resources	6	Mandatory Elective
2025-F-ACS-BSc Applied Computer Science	6	Mandatory Elective
2025-GEM-BA Global Economics and Management	6	Mandatory Elective
2025-IBA-BA International Business Administration	6	Mandatory Elective
2025-IBA-Online-BA International Business Administration (Online)	6	Mandatory Elective
2025-IRPH-BA International Relations: Politics and History	6	Mandatory Elective
2025-ISCP-BA Integrated Social and Cognitive Psychology	6	Mandatory Elective
2025-MCCB-BSc Medicinal Chemistry and Chemical Biology	6	Mandatory Elective
2025-MDDA-BSc Management, Decisions and Data Analytics	6	Mandatory Elective
2025-MMDA-BSc Mathematics, Modeling, and Data Analytics	6	Mandatory Elective
2025-PHDS-BSc Physics and Data Science	6	Mandatory Elective
2025-RIS-BSc Robotics and Intelligent Systems	6	Mandatory Elective

2025-SDT-BSc Software, Data and Technology	6	Mandatory Elective

Student Workload	
Independent Study	90
Online Lecture	35
Total Hours	**125**

Module Components	**Number**	**Type**	**CP**
Agency, Leadership, and Accountability	CTNS-09	Lecture (Online)	5

Module Description

Each of us is judged by the actions we undertake and held to account for the consequences of them. Sometimes we may be lucky and our bad acts don't have harmful effects on others. Other times we may be unlucky and reasonable decisions can lead to unexpected or unforeseen adverse consequences for others. We are therefore held accountable both for choices and for outcomes. In either case, accountability expresses the judgment that we bear responsibility for what we do and what happens as a result. But our responsibility and our accountability in these cases is closely connected to the idea that we have agency.

Agency presumes that we are the source of the choices we make and the actions that result from those choices. For some, this may entail the idea that we have free will. But there is scientific world view that holds that all actions are determined by the causes that explain them, which is the idea that if we knew the causes of your decisions in advance, we would know the decision you would make even before you made it. If that is so, how can your choice be free? And if it is not free, how can you be responsible for it? And if you cannot be responsible, how can we justifiably hold you to account for it?

These questions express the centuries old questions about the relationship between free will and a determinist world view: for some, the conflict between a scientific world view and a moral world view.

But we do not always act as individuals. In society we organize ourselves into groups: e.g. tightly organized social groups, loosely organized market economies, political societies, companies, and more. These groups have structure. Some individuals are given the responsibility of leading the group and of exercising authority. But one can exercise authority over others in a group merely by giving orders and threatening punishment for non-compliance.

Exercising authority is not the same thing as being a leader? For one can lead by example or by encouraging others to exercise personal judgment and authority. What then is the essence of leadership?

The module has several educational goals. The first is for students to understand the difference between actions that we undertake for which we can reasonably held accountable and things that we do but which we are not responsible for. For example, a twitch is an example of the latter, but so too may be a car accident we cause as a result of a heart attack we had no way of anticipating or controlling. This suggests the importance of control to responsibility. At the heart of personal agency

is the idea of control. The second goal is for students to understand what having control means. Some think that the scientific view is that the world is deterministic, and if it is then we cannot have any personal control over what happens, including what we do. Others think that the quantum scientific view entails a degree of indeterminacy and that free will and control are possible, but only in the sense of being unpredictable or random. But then random outcomes are not ones we control either. So, we will devote most attention to trying to understand the relationships between control, causation and predictability.

But we do not only exercise agency in isolation. Sometimes we act as part of groups and organizations. The law often recognizes ways in which groups and organizations can have rights, but is there a way in which we can understand how groups have responsibility for outcomes that they should be accountable for. We need to figure out then whether there is a notion of group agency that does not simply boil down to the sum of individual actions. We will explore the ways in which individual actions lead to collective agency.

Finally we will explore the ways in which occupying a leadership role can make one accountable for the actions of others over which one has authority.

Intended Learning Outcomes

No	Competence	ILO
1	Understand	Understand and reflect how the social and moral world views that rely on agency and responsibility are compatible, if they are, with current scientific world views.
2	Understand	Understand how science is an economic sector, populated by large powerful organizations that set norms, fund research agendas.
3	Identify	Identify the difference between being a leader of others or of a group - whether a research group or a lab or a company - and being in charge of the group.
4	Learn	Learn to be a leader of others and groups. Understand that when one graduates one will enter not just a field of work but a heavily structured set of institutions and that one's agency and responsibility for what happens, what work gets done, its quality and value, will be affected accordingly.

Indicative Literature

- Feinberg, Joel. "Doing & deserving; essays in the theory of responsibility." (1970).
- Hull, David L. "Science as a Process." Science as a Process. University of Chicago Press, 2010.

Entry Requirements

Prerequisites	None
Co-requisites	None
Additional Remarks	None

Assessment and Completion

Module Component	Examination Type	Duration or Length	Weight (%)	Minimum for Pass	ILOs
Agency, Leadership, and Accountability	Written Examination	120 Minutes	100	45%	1-4

Module Achievement

6.2.10 Community Impact Project

Module Name	Community Impact Project
Module Code	2025-CTNS-CIP-10
Module ECTS	5
Program Owner	2025-CT (CONSTRUCTOR Track Area)
Module Coordinator	CIP Faculty Coordinator

Study Semester		
Program	**Semester**	**Status**
2025-BCCB-BSc Biochemistry and Cell Biology	5	Mandatory Elective
2025-CBT-BSc Chemistry and Biotechnology	5	Mandatory Elective
2025-ECE-BSc Electrical and Computer Engineering	5	Mandatory Elective
2025-ESSMER-BSc Earth Sciences and Sustainable Management of Environmental Resources	5	Mandatory Elective
2025-IBA-BA International Business Administration	5	Mandatory Elective
2025-ISCP-BA Integrated Social and Cognitive Psychology	5	Mandatory Elective
2025-MCCB-BSc Medicinal Chemistry and Chemical Biology	5	Mandatory Elective
2025-MMDA-BSc Mathematics, Modeling, and Data Analytics	5	Mandatory Elective
2025-BCCB-BSc Biochemistry and Cell Biology	6	Mandatory Elective
2025-CBT-BSc Chemistry and Biotechnology	6	Mandatory Elective
2025-CS-BSc Computer Science	6	Mandatory Elective
2025-ECE-BSc Electrical and Computer Engineering	6	Mandatory Elective
2025-ESSMER-BSc Earth Sciences and Sustainable Management of Environmental Resources	6	Mandatory Elective
2025-GEM-BA Global Economics and Management	6	Mandatory Elective
2025-IBA-BA International Business Administration	6	Mandatory Elective
2025-IRPH-BA International Relations: Politics and History	6	Mandatory Elective

2025-ISCP-BA Integrated Social and Cognitive Psychology	6	Mandatory Elective
2025-MCCB-BSc Medicinal Chemistry and Chemical Biology	6	Mandatory Elective
2025-MDDA-BSc Management, Decisions and Data Analytics	6	Mandatory Elective
2025-MMDA-BSc Mathematics, Modeling, and Data Analytics	6	Mandatory Elective

Student Workload	
Introductory, Accompanying, and Final Events	10
Self-Organized Teamwork	115
Total Hours	**125**

Module Components	**Number**	**Type**	**CP**
Community Impact Project	CTNS-10	Project	5

Module Description

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 the 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.

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).

Recommended Knowledge

- Basic knowledge of the main concepts and methodological instruments of the respective disciplines.

- Develop or join a community impact project before the 5th or 6th 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.

Intended Learning Outcomes

No	Competence	ILO
1	Understand	Understand the real-life issues of communities, organizations, and industries and relate them to concepts in their own discipline.
2	Enhance	Enhance problem-solving skills and develop critical faculty, create solutions to problems, and communicate these solutions appropriately to their audience.
3	Apply	Apply media and communication skills in diverse and non-peer social contexts.
4	Develop	Develop an awareness of the societal relevance of their own scientific actions and a sense of social responsibility for their social surroundings.
5	Reflect	Reflect on their own behavior critically in relation to social expectations and consequences.
6	Work	Work in a team and deal with diversity, develop cooperation and conflict skills, and strengthen their empathy and tolerance for ambiguity.
		The Community Impact Project is designed to convey the required personal and social competencies for enabling students to finish their studies at Constructor University as socially conscious and responsible graduates (part of the Constructor University's 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.

Indicative Literature

Entry Requirements

Prerequisites	None
Co-requisites	None
Additional Remarks	None

Assessment and Completion

Module Component	Examination Type	Duration or Length	Weight (%)	Minimum for Pass	ILOs
Community Impact Project	Project Assessment		100	Pass/Fail	All

Module Achievement

6.3 Languages and Humanities

6.3.1 Languages

he descriptions of the language modules are provided in a separate document, the "Language Module Handbook" that can be accessed from the Constructor University's Language & Community Center internet sites https://constructor.university/student-life/language-community-center/learning-languages.

6.3.2 Humanities

6.3.3 Introduction to the Philosophy of Science

Module Name	Introduction to the Philosophy of Science
Module Code	2025-CTHU-HUM-002
Module ECTS	2.5
Program Owner	2025-CT (CONSTRUCTOR Track Area)
Module Coordinator	Dr. Eoin Ryan

Study Semester		
Program	**Semester**	**Status**
2025-BCCB-BSc Biochemistry and Cell Biology	1	Mandatory Elective
2025-CBT-BSc Chemistry and Biotechnology	1	Mandatory Elective
2025-CS-BSc Computer Science	1	Mandatory Elective
2025-ECE-BSc Electrical and Computer Engineering	1	Mandatory Elective
2025-ESSMER-BSc Earth Sciences and Sustainable Management of Environmental Resources	1	Mandatory Elective
2025-GEM-BA Global Economics and Management	1	Mandatory Elective
2025-IBA-BA International Business Administration	1	Mandatory Elective
2025-IBA-Online-BA International Business Administration (Online)	1	Mandatory Elective
2025-IEM-Online-BSc Industrial Engineering & Management (Online)	1	Mandatory Elective
2025-IRPH-BA International Relations: Politics and History	1	Mandatory Elective

2025-ISCP-BA Integrated Social and Cognitive Psychology	1	Mandatory Elective
2025-MCCB-BSc Medicinal Chemistry and Chemical Biology	1	Mandatory Elective
2025-MMDA-BSc Mathematics, Modeling, and Data Analytics	1	Mandatory Elective
2025-PHDS-BSc Physics and Data Science	1	Mandatory Elective
2025-RIS-BSc Robotics and Intelligent Systems	1	Mandatory Elective
2025-SDT-BSc Software, Data and Technology	1	Mandatory Elective
2025-BCCB-BSc Biochemistry and Cell Biology	2	Mandatory Elective
2025-CBT-BSc Chemistry and Biotechnology	2	Mandatory Elective
2025-CS-BSc Computer Science	2	Mandatory Elective
2025-ECE-BSc Electrical and Computer Engineering	2	Mandatory Elective
2025-ESSMER-BSc Earth Sciences and Sustainable Management of Environmental Resources	2	Mandatory Elective
2025-IBA-BA International Business Administration	2	Mandatory Elective
2025-IBA-Online-BA International Business Administration (Online)	2	Mandatory Elective
2025-IEM-BSc Industrial Engineering & Management	2	Mandatory Elective
2025-IEM-Online-BSc Industrial Engineering & Management (Online)	2	Mandatory Elective
2025-IRPH-BA International Relations: Politics and History	2	Mandatory Elective
2025-ISCP-BA Integrated Social and Cognitive Psychology	2	Mandatory Elective
2025-MCCB-BSc Medicinal Chemistry and Chemical Biology	2	Mandatory Elective
2025-MMDA-BSc Mathematics, Modeling, and Data Analytics	2	Mandatory Elective
2025-PHDS-BSc Physics and Data Science	2	Mandatory Elective
2025-RIS-BSc Robotics and Intelligent Systems	2	Mandatory Elective
2025-SDT-BSc Software, Data and Technology	2	Mandatory Elective

Student Workload	
Independent Study	45
Online Lecture	17.5
Total Hours	**62.5**

Module Components	Number	Type	CP
Introduction to the Philosophy of Science	CTHU-002	Lecture (Online)	2.5

Module Description

This humanities module will introduce students to some of the central ideas in philosophy of science. Topics will include distinguishing science from pseudo-science, types of inference and the problem of induction, the pros and cons of realism and anti-realism, the role of explanation, the nature of scientific change, the difference between natural and social sciences, scientism and the values of science, as well as some examples from philosophy of the special sciences (e.g., physics, biology).

The course aims to give students an understanding of how science produces knowledge, and some of the various contexts and issues which mean this process is never entirely transparent, neutral, or unproblematic. Students will gain a critical understanding of science as a human practice and technology; this will enable them both to better understand the importance and success of science, but also how to properly critique science when appropriate.

This 2.5 CP module is part of a portfolio of several 2.5 CP modules designed to allow students to have a wider choice of electives. To compensate for the smaller size of this module, the assessment is of smaller scope.

Intended Learning Outcomes

No	Competence	ILO
1	Understand	Understand key ideas from the philosophy of science.
2	Discuss	Discuss different types of inference and rational processes.
3	Describe	Describe differences between how the natural sciences, social sciences and humanities discover knowledge.
4	Identify	Identify ways in which science can be more and less value-laden.
5	Illustrate	Illustrate some important conceptual leaps in the history of science.

Indicative Literature

- James Ladyman, Understanding Philosophy of Science (2002).
- Paul Song, Philosophy of Science: Perspectives from Scientists (2022).
- Peter Godfrey-Smith Theory and Reality (2021)

Entry Requirements

Prerequisites	None

Co-requisites	None
Additional Remarks	None

Assessment and Completion

Module Component	Examination Type	Duration or Length	Weight (%)	Minimum for Pass	ILOs
Introduction to the Philosophy of Science	Written Examination	60 Minutes	100	45%	1-5

Module Achievement

6.3.4 Introduction to Visual Culture

Module Name	Introduction to Visual Culture
Module Code	2025-CTHU-HUM-003
Module ECTS	2.5
Program Owner	2025-CT (CONSTRUCTOR Track Area)
Module Coordinator	Dr. Irina Chiaburu

Study Semester		
Program	**Semester**	**Status**
2025-BCCB-BSc Biochemistry and Cell Biology	1	Mandatory Elective
2025-CBT-BSc Chemistry and Biotechnology	1	Mandatory Elective
2025-CS-BSc Computer Science	1	Mandatory Elective
2025-ECE-BSc Electrical and Computer Engineering	1	Mandatory Elective
2025-ESSMER-BSc Earth Sciences and Sustainable Management of Environmental Resources	1	Mandatory Elective
2025-IBA-BA International Business Administration	1	Mandatory Elective
2025-IEM-Online-BSc Industrial Engineering & Management (Online)	1	Mandatory Elective
2025-IRPH-BA International Relations: Politics and History	1	Mandatory Elective
2025-ISCP-BA Integrated Social and Cognitive Psychology	1	Mandatory Elective
2025-MMDA-BSc Mathematics, Modeling, and Data Analytics	1	Mandatory Elective
2025-PHDS-BSc Physics and Data Science	1	Mandatory Elective
2025-RIS-BSc Robotics and Intelligent Systems	1	Mandatory Elective
2025-SDT-BSc Software, Data and Technology	1	Mandatory Elective
2025-BCCB-BSc Biochemistry and Cell Biology	2	Mandatory Elective
2025-CBT-BSc Chemistry and Biotechnology	2	Mandatory Elective
2025-CS-BSc Computer Science	2	Mandatory Elective
2025-ECE-BSc Electrical and Computer Engineering	2	Mandatory Elective

2025-ESSMER-BSc Earth Sciences and Sustainable Management of Environmental Resources	2	Mandatory Elective
2025-GEM-BA Global Economics and Management	2	Mandatory Elective
2025-IBA-BA International Business Administration	2	Mandatory Elective
2025-IBA-Online-BA International Business Administration (Online)	2	Mandatory Elective
2025-IEM-BSc Industrial Engineering & Management	2	Mandatory Elective
2025-IEM-Online-BSc Industrial Engineering & Management (Online)	2	Mandatory Elective
2025-IRPH-BA International Relations: Politics and History	2	Mandatory Elective
2025-ISCP-BA Integrated Social and Cognitive Psychology	2	Mandatory Elective
2025-MCCB-BSc Medicinal Chemistry and Chemical Biology	2	Mandatory Elective
2025-MMDA-BSc Mathematics, Modeling, and Data Analytics	2	Mandatory Elective
2025-PHDS-BSc Physics and Data Science	2	Mandatory Elective
2025-RIS-BSc Robotics and Intelligent Systems	2	Mandatory Elective
2025-SDT-BSc Software, Data and Technology	2	Mandatory Elective

Student Workload	
Independent Study	45
Online Lecture	17.5
Total Hours	**62.5**

Module Components	**Number**	**Type**	**CP**
Introduction to Visual Culture	CTHU-003	Lecture (Online)	2.5

Module Description

Of the five senses, the sense of sight has for a long time occupied the central position in human cultures. As John Berger has suggested this could be because we can see and recognize the world around us before we learn how to speak. Images have been with us since the earliest days of the human history. In fact, the earliest records of human history are images found on cave walls across the world. We use images to capture abstract ideas, to catalogue and organize the world, to represent the world, to capture specific moments, to trace time and change, to tell stories, to express feelings, to

better understand, to provide evidence and more. At the same time, images exert their power on us, seducing us into believing in their 'innocence', that is into forgetting that as representations they are also interpretations, i.e., a particular version of the world.

The purpose of this course is to explore multiple ways in which images and the visual in general mediate and structure human experiences and practices from more specialized discourses, e.g., scientific discourses, to more informal and personal day-to-day practices, such as self-fashioning in cyberspace. We will look at how social and historical contexts affect how we see, as well as what is visible and what is not. We will explore the centrality of the visual to the intellectual activity, from early genres of scientific drawing to visualizations of big data. We will examine whether one can speak of visual culture of protest, look at the relationship between looking and subjectivity and, most importantly, ponder the relationship between the visual and the real.

This 2.5 CP module is part of a portfolio of several 2.5 CP modules designed to allow students to have a wider choice of electives. To compensate for the smaller size of this module, the assessment is of smaller scope.

Intended Learning Outcomes

No	Competence	ILO
1	Understand	Understand a range of key concepts pertaining to visual culture, art theory and cultural analysis.
2	Understand	Understand the role visuality plays in development and maintenance of political, social, and intellectual discourses.
3	Think	Think critically about images and their contexts.
4	Reflect	Reflect critically on the connection between seeing and knowing.

Indicative Literature

- Berger, J., Blomberg, S., Fox, C., Dibb, M., & Hollis, R. (1973). Ways of seeing.
- Foucault, M. (2002). The order of things: an archaeology of the human sciences (Ser. Routledge classics). Routledge.
- Hunt, L. (2004). Politics, culture, and class in the French revolution: twentieth anniversary edition, with a new preface (Ser. Studies on the history of society and culture, 1). University of California Press.
- Miller, V. (2020). Understanding digital culture (Second). SAGE.
- Thomas, N. (1994). Colonialism's culture: anthropology, travel and government. Polity Press.

Entry Requirements

Prerequisites	None
Co-requisites	None
Additional Remarks	None

Assessment and Completion

Module Component	Examination Type	Duration or Length	Weight (%)	Minimum for Pass	ILOs
Introduction to Visual Culture	Written Examination	60 Minutes	100	45%	1-4

Module Achievement

6.3.5 Introduction to Philosophical Ethics

Module Name	Introduction to Philosophical Ethics
Module Code	2025-CTHU-HUM-001
Module ECTS	2.5
Program Owner	2025-CT (CONSTRUCTOR Track Area)
Module Coordinator	Dr. Eoin Ryan

Study Semester		
Program	**Semester**	**Status**
2025-BCCB-BSc Biochemistry and Cell Biology	1	Mandatory Elective
2025-CBT-BSc Chemistry and Biotechnology	1	Mandatory Elective
2025-CS-BSc Computer Science	1	Mandatory Elective
2025-ECE-BSc Electrical and Computer Engineering	1	Mandatory Elective
2025-ESSMER-BSc Earth Sciences and Sustainable Management of Environmental Resources	1	Mandatory Elective
2025-IBA-BA International Business Administration	1	Mandatory Elective
2025-IBA-Online-BA International Business Administration (Online)	1	Mandatory Elective
2025-IEM-BSc Industrial Engineering & Management	1	Mandatory Elective
2025-IEM-Online-BSc Industrial Engineering & Management (Online)	1	Mandatory Elective
2025-IRPH-BA International Relations: Politics and History	1	Mandatory Elective
2025-ISCP-BA Integrated Social and Cognitive Psychology	1	Mandatory Elective
2025-MCCB-BSc Medicinal Chemistry and Chemical Biology	1	Mandatory Elective
2025-MMDA-BSc Mathematics, Modeling, and Data Analytics	1	Mandatory Elective
2025-PHDS-BSc Physics and Data Science	1	Mandatory Elective
2025-RIS-BSc Robotics and Intelligent Systems	1	Mandatory Elective
2025-SDT-BSc Software, Data and Technology	1	Mandatory Elective

2025-BCCB-BSc Biochemistry and Cell Biology	2	Mandatory Elective
2025-CBT-BSc Chemistry and Biotechnology	2	Mandatory Elective
2025-CS-BSc Computer Science	2	Mandatory Elective
2025-ECE-BSc Electrical and Computer Engineering	2	Mandatory Elective
2025-ESSMER-BSc Earth Sciences and Sustainable Management of Environmental Resources	2	Mandatory Elective
2025-GEM-BA Global Economics and Management	2	Mandatory Elective
2025-IBA-BA International Business Administration	2	Mandatory Elective
2025-IBA-Online-BA International Business Administration (Online)	2	Mandatory Elective
2025-IEM-Online-BSc Industrial Engineering & Management (Online)	2	Mandatory Elective
2025-IRPH-BA International Relations: Politics and History	2	Mandatory Elective
2025-ISCP-BA Integrated Social and Cognitive Psychology	2	Mandatory Elective
2025-MCCB-BSc Medicinal Chemistry and Chemical Biology	2	Mandatory Elective
2025-MMDA-BSc Mathematics, Modeling, and Data Analytics	2	Mandatory Elective
2025-PHDS-BSc Physics and Data Science	2	Mandatory Elective
2025-RIS-BSc Robotics and Intelligent Systems	2	Mandatory Elective
2025-SDT-BSc Software, Data and Technology	2	Mandatory Elective

Student Workload	
Independent Study	45
Online Lecture	17.5
Total Hours	**62.5**

Module Components	**Number**	**Type**	**CP**
Introduction to Philosophical Ethics	CTHU-001	Lecture (Online)	2.5

Module Description

The nature of morality - how to lead a life that is good for yourself, and how to be good towards others - has been a central debate in philosophy since the time of Socrates, and it is a topic that continues to be vigorously discussed. This course will introduce students to some of the key aspects of philosophical ethics, including leading normative theories of ethics (e.g. consequentialism or utilitarianism, deontology, virtue ethics, natural law ethics, egoism) as well as some important questions from metaethics (are useful and generalizable ethical claims even possible; what do ethical speech and ethical judgements actually do or explain) and moral psychology (how do abstract ethical principles do when realized by human psychologies). The course will describe ideas that are key factors in ethics (free will, happiness, responsibility, good, evil, religion, rights) and indicate various routes to progress in understanding ethics, as well as some of their difficulties.

This 2.5 CP module is part of a portfolio of several 2.5 CP modules designed to allow students to have a wider choice of electives. To compensate for the smaller size of this module, the assessment is of smaller scope.

Intended Learning Outcomes

No	Competence	ILO
1	Describe	Describe normative ethical theories such as consequentialism, deontology and virtue ethics.
2	Discuss	Discuss some metaethical concerns.
3	Analyze	Analyze ethical language.
4	Highlight	Highlight complexities and contradictions in typical ethical commitments.
5	Indicate	Indicate common parameters for ethical discussions at individual and social levels.
6	Analyze	Analyze notions such as objectivity, subjectivity, universality, pluralism, value.

Indicative Literature

- Mark van Roojen Metaethicas: A Contemporary Introduction (2015).
- Russ Shafer-Landay A Concise Introduction to Ethics (2019).
- Simon Blackburn Being Good (2009).

Entry Requirements

Prerequisites	None
Co-requisites	None
Additional Remarks	None

Assessment and Completion

Module Component	Examination Type	Duration or Length	Weight (%)	Minimum for Pass	ILOs
Introduction to Philosophical Ethics	Written Examination	60 Minutes	100	45%	1-6

Module Achievement

7 Appendix

7.1 Intended Learning Outcomes Matrix

Program: IRPH					CH IR Theory I	CH Tutorial Argument and Scholarship	CH Modern European History	CH Writing and Political Thought	CO International Political Economy	CO History of Globalization	CO IR Theory II	CO Empires and Nation States	CO Political Philosophy	CO Digital Transformations beyond the West	CO Foreign Policy, Diplomacy and Data Science	CO Decision Science for Politics	CO Cybersecurity Governance	Summer Internship	CA Spec. International Law	CA Spec: China: Politics, Economy and Society	CA Spec. Everyday Life under Dictatorships	CA Spec.: International Resource Politics	CA Spec. [from another study program]	Bachelor Thesis	CT Methods	CT New Skills	CT Language / Humanities
					CHOICE Modules: Intro to Intl. Relations & Intro to Mod.				.									Internship | 15 Credits	**CAREER Modules:** Specialization Modules | 20 Credits									
Semester					1	1	2	2	4	3-4	3	3	4	4	4	3	3	4/5	6	6	6	5	6	6	1-4	3-6	1-2
Mandatory (M)/Mandatory Electives (ME)					M	M	M	M	M	M	M	ME	ME	ME	ME	ME	ME	M	ME	ME	ME	ME	ME	M	M	ME	ME
Credits					5	2.5	5	2.5	5	5	5	5	5	5	5	5	5	15	5	5	5	5	5	12	20	20	5
	Competencies*																										
Program Learning Outcomes	**A**	**E**	**P**	**S**																							
Explain theories of IR, cooperation, security and historical processes and the latest technological developments and their impacts on the modern and contemporary era	x				x		x		x	x	x	x	x	x	x		x			x	x						
Distinguish political concepts & ideas as well as important institutions of the international system	x				x		x	x	x	x	x	x	x		x		x		x		x						
Critically assess texts from political science, philosophy, IR, law and history	x	x		x	x	x	x	x	x	x	x	x	x						x	x	x			x			
Analyze complex issues + current events	x	x		x	x			x	x	x	x	x	x	x	x	x	x		x	x	x	x		x			
Construct well-supported arguments (presentations, debates, discussions, and research papers)	x	x	x		x	x			x	x	x		x	x	x	x	x		x	x	x	x		x			
Develop proposals for addressing international problems in a respectful manner as part of a diverse team with potentially different viewpoints		x	x	x	x									x		x	x	x	x			x				x	
Apply qualitative and quantitative methodological tools to draw conclusions	x	x					x			x		x	x		x	x		x		x	x			x	x		
Design research questions and independent research projects	x		x	x					x	x			x			x			x	x	x			x	x		
Employ negotiation and analytical skills (with diplomacy and political analysis)		x												x	x	x						x					
Analyze the interrelationships of international political, legal, technological and economic processes	x	x	x	x			x		x	x	x	x	x	x	x		x		x	x	x	x		x			
Engage to contribute to a sustainable future				x							x					x	x		x							x	
Develop individual strategies for personal and professional advancement			x															x	x					x		x	x
*Competencies: A-scientific/academic proficiency; E-competence for qualified employment; P-development of personality; S-competence for engagement in society																											
Assessment Type																											
Written Examination					x	x	x	x			x	x	x												x	x	x
Term Paper									x	x				x	x				x	x	x	x	x		x		
Essay																											x
Project Report																		x									
Poster Presentation																											
Laboratory Report																											
Program Code																											
Oral Examinations																											x
Presentations																							x	x		x	
Practical Assessments																										x	
Project Assessments																											
Portfolio Assessments																x	x								x		
Bachelor Thesis																								x			
Module Achievements																											x