



**Study
Program
Handbook**

International Foundation Year

Program Handbook 2025

constructor.university/ify

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Basic Information

Program Name:	International Foundation Year (IFY)
Type:	Pre-Degree
Level:	Level 0 (Pre-university)
Exit award:	International Foundation Year Certificate (IFYC)
Award notes:	The Program is offered in three subject areas: Technology, Science and Society at Level 0. Successful completion of the IFY program within the two different pathways Qualification and Orientation is recognized by Constructor University as an element in securing progression to several specified undergraduate degree programs. Students within the Qualification pathway are also required to pass the TestAS exam with a minimum combined standard score of 190 for progression into undergraduate degree programs.
Modes of study:	All students will be full-time students. Teaching language is English, and no German knowledge is required for the studies.
Age requirements:	All students must be at least 16 years old when entering the program.

Award	Standard entry requirements
International Foundation Year Certificate (IFYC)	CEFR B1/4.5 IELTS (or equivalent)
	Minimum academic requirement is a High School Diploma/Certificate recognized as a higher education entrance qualification in Germany. Recognition is determined following guidance of the Standing Conference of the Ministers of Education and Cultural Affairs of the Länder in the Federal Republic of Germany ("Kultusministerkonferenz", KMK) and the State of Bremen.

Program Overview

The Constructor University Educational Concept

Constructor University Bremen (CU) aims at educating students for both an academic and a professional career, putting an emphasis on four fundamental objectives: academic quality, self-development, internationality, and employability. Hence, undergraduate study programs at CU offer a comprehensive and structured approach to prepare students for graduate education as well as career success by combining disciplinary depth and interdisciplinary breadth, supplemented with skills education and extra-curricular elements.

In this context, it is CU's aim to educate talented young people from all over the world, regardless of nationality, religion, and material prerequisites, to become citizens of the world who can take responsible roles for a democratic, peaceful, and sustainable development of the societies they live in. This is achieved by implementing high levels of teaching quality as well as manageable study loads and supportive curricular conditions. Undergraduate study programs including study abroad components convey academic knowledge as well as the ability to interact positively with other individuals and groups in culturally diverse environments. The ability to succeed in the working world is a core objective both in terms of the actual disciplinary subject matter and social skills coupled to intercultural competence. Study-program-specific and specialization modules provide the necessary knowledge, interdisciplinary offerings and minor options provide breadth, while university-wide general methods modules, German language courses, and an extended internship period strengthen the employability of students. The concept of living and learning together on an international campus with many cultural and social activities supplements this education. Additionally, CU offers professional advising and counselling as part of its guidance services.

CU's educational concept is acclaimed both nationally and internationally. While the university has consistently achieved top marks over the last decade in Germany's most comprehensive and detailed university ranking by the Centre for Higher Education (CHE), it has also been listed by the renowned Times Higher Education (THE) as the top private university in Germany, and within the top 10% young universities worldwide. The THE Ranking is considered as one of the most widely observed university rankings. It is based on five major indicators: research, teaching, research impact, international orientation, and the volume of research income from industry.

Program - Specific Educational Aims

The International Foundation Year (IFY) is a pre-degree preparatory program, enabling students from all over the world to enhance their academic capabilities, develop study skills appropriate to a Higher Education environment, and acclimate themselves to living and studying in another country, where cultural context is very different from their own. Alongside language and skill development, students working towards the International Foundation Year Certificate are also able to study content modules in the subject area directly related to undergraduate programs onto which they wish to progress. They are therefore able to move into first year degree studies with increased confidence in their university study skills and subject knowledge. Students will also be exposed to the fundamentals of computer

and software literacy as an important aspect of the modern job market. The TestAS (www.testas.de) entrance exam is taken during the International Foundation Year if needed. The IFY program also includes a Career Development module which supports students with study skills and career guidance to assist them in their decision of study direction.

Qualification Aims

The IFY program aims to help students:

- develop academic reading, writing, and reasoning skills through academic English literacy;
- improve mathematical competence through intensive mathematics and statistics training;
- acquire fundamental knowledge required for their academic discipline of choice;
- train for the TestAS exam;
- develop computer literacy and coding skills;
- develop knowledge and understanding of specialized subject areas;
- recognize what is expected of them in a university environment;
- take part in some modules offered in the undergraduate programs that would best suit their interests, with the possibility of credit transfer;
- expand their academic and personal qualifications through advising and career development customized to the needs of an IFY student at CU;
- broaden socio-cultural horizons and intercultural skills through study trips, on-site visits, and involvement in the diverse international campus community.

Intended Learning Outcomes

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

- accustom themselves to an international university environment;
- choose a study direction they would like to pursue;
- apply improved academic English critical thinking, reading and writing skills in an academic context;
- use improved mathematical skills to solve applied problems;
- use digital devices to create, gather, analyze and present information;
- learn and work in an intercultural and diverse environment;
- reflect on their personal and professional development.



Program Structure

All IFY students study a combination of CORE and SUBJECT modules. CORE modules include academic English, Mathematics, Career Development and Computer and Software Literacy. Furthermore, the IFY students follow one of two pathways, depending on their academic status and personal development goals:

A | Qualification Pathway

The students who want to pursue an undergraduate program of choice at CU but are not academically qualified for direct entry are guided onto the Qualification Pathway. The IFY program offers three subject areas: Technology, Science and Society, and qualification students will be placed in the subject area corresponding to their undergraduate program of choice. The Qualification pathway includes two SUBJECT modules within one subject area (one module per semester) which prepare students with the academic knowledge needed for their direction of study. Students will also receive training sessions for the TestAS qualification exam to undergraduate education at CU. They will be guided by the academic staff to work towards the qualification requirements within their individual study direction to ensure guaranteed admission to CU's undergraduate programs. These subject areas will provide students with a route to a degree at Constructor University. Students also have the unique opportunity to take part in relevant undergraduate modules of choice to gain experience and transfer credits, these modules can be part of their major or minor curriculum.

B | Orientation Pathway

The students who would like to explore one or more subject areas to get insight for the right undergraduate study program choice as well as improve their mathematical and/or academic English skills, are guided to the Orientation Pathway. The IFY program offers three subject areas to choose from: Technology, Science and Society. The Orientation Pathway allows the selection of two SUBJECT modules from two different subject areas (one module per semester), with adequate preparation of needed academic skills alongside the opportunity to explore different subject directions. These subject areas will provide students with a route to a degree at CU guided by the academic staff to assist them in their decision of study direction. Students also have the unique opportunity to take part in undergraduate modules of choice to gain experience and transfer credits. These first-year modules could contribute as part of a major or minor.

Teaching, Learning and Assessment Strategies

The IFY program implements a range of adaptive and innovative approaches to teaching, learning and assessment. Students and their personal development are at the heart of these strategies:

A | The IFY students are provided with a highly supportive and academically challenging environment to develop their university language and study skills. The IFY program provides not only core, but also subject-specific modules related to the students' intended degree choices.

B | Students will benefit from a less formal teaching approach, involving greater interaction within classes and between students and instructors. Their confidence as independent learners is enhanced through working in discrete and small teaching class sessions where student participation is supported and encouraged, while reinforcing the studied material in parallel.

- C |** Cultural acclimation to the university's international environment is facilitated through encouragement to participate in the wider community of both CU and Bremen itself.
- D |** The IFY program aims to cater for both students who are sure of the degree subject they wish to follow and those who want to explore their academic orientation. For the first group, each subject area offers subject-focused modules over two semesters, which provides direct preparation for the chosen degree program. The second group has the opportunity of taking IFY modules from two different subject areas during the two semesters of the academic year.
- E |** Alongside subject and skill modules, students will benefit from complementary modules on computer and software literacy and coding, reflecting CU's vision of technologically adept student body.
- F |** The offered Career Development module provides the opportunity for IFY students to be introduced to and reflect on the requirements of studying in a higher education environment. The module focusses on academic and life skills of a wider purpose, which helps prepare students not only for their degree studies but also gain a jump start on their career development and professional skills and gain a unique understanding of the international job market.
- G |** Regular tutorial and study sessions provide an opportunity for students to reflect on their study progress, and for instructors to monitor this progress and provide any additional support the students might need to strengthen weaker knowledge areas.
- H |** A range of modes of assessment are applied including assignments, group and individual presentations, projects, and interim tests, to replicate the wider university experience. Midterm and final module assessments contribute to the final module grade.
- I |** Policies governing IFY modules are included in the 'Rules and Regulations' presented to the students at the beginning of the academic year during the orientation period. 'Academic Policies' and 'Entrance policies' govern the IFY program which are published and can be found on the CU website under 'Registrar Services'. Policies governing UGE modules are included the 'Academic Policies for Undergraduate Students' as well as 'Academic Integrity', which can be found on the CU website under 'Registrar Services'.

Regulations

IFY students follow a set of regulations appropriate to a Level 0 program but modelled to CU's undergraduate students. Variations are only introduced to cover the requirements of a pre-degree program, particularly around reassessment opportunities.

To progress from the IFY program directly into CU's undergraduate programs, students will need to pass all IFY modules with a minimum of 45%. Students enrolled on the Qualification Pathway will also need a cumulative standard TestAS score of 190 points, as they do not have an Abitur or equivalent qualification. The TestAS exam will be offered on campus for three rounds during the academic year. IFY students who do not achieve the required standard score of 190 in the TestAS will not be eligible for admission into CU's undergraduate programs. Constructor University does not accept a SAT certificate as a replacement to the TestAS certificate for IFY students. Additionally, the final examination of the second semester subject module within each subject area will serve as the "Entrance Examination" for Admission to CU according to the Bildungsausländerhochschulzugangsverordnung (BAHZV).

Admission Requirements

All students who obtain a high school diploma or local equivalent prior to the start of the academic year and who possess English language skills equivalent to the B1 level of the European Framework may apply for the IFY program. The application process is selective and seeks out motivated students who show both the intellectual and social potential to thrive in a diverse international study environment.

A complete IFY application consists of the following:

- Online Application Form including a Personal Motivation Statement
- Recommendation Letter from a counsellor or teacher
- Certified Copies of School Transcripts of the last 2-3 years and a Certified Copy of the High School Certificate
- Educational History Form
- Proof of English Language Proficiency (minimum score of 45 on the TOEFL iBT / 4.5 on the IELTS (UK) / 43 on the Pearson PTE Academic or 140 on the Cambridge Certificate (FCE) / 65 on the Duolingo English test)

Please note for the Fall 2025 intake: Students who require a visa for Germany should apply by June 15th since the visa process can take up to two months. The application deadline for EU students is August 1st. Applications are evaluated on a rolling basis.

More Information and Contact

International Foundation Year Team at Constructor University Bremen

Email: foundationyear@constructor.university

Meet the IFY Team

The International Foundation Year Team at Constructor University

The core team will support students throughout the academic year with both academic and co-academic concerns.

IFY Core Team



**Hanri
Landers**

Head of
International Foundation Year



**Prof. Dr. Bassem
Bassil**

Academic Development
and Deputy Head
International Foundation Year



**Romy
Skade**

Coordinator
International Foundation Year



**Weronika Maria
Kotowska**

Pre-Degree
Coordinator

The IFY Faculty will support students throughout the academic year by means of academic advising, teaching, tutoring and guidance within their specific subject field.

IFY Faculty



**Tamara
von Drathen**

IFY Faculty
Lecturer of Society & Career
Development
Academic Advisor for subject
area Society



**Holm
Hofmann**

IFY Faculty
Lecturer of Academic English
and Literacy
& German Language



**Muhammad
Khalid**

IFY Faculty
Lecturer of Technology &
Coding
Academic Advisor for subject
area Technology



**Stephanie
Rahi**

IFY Faculty
Lecturer of Mathematics
& TestAS



**Dr. Tanya
Keni**

IFY Faculty
Lecturer of Academic English



**Dr. Sadegh
Noroozi**

IFY Faculty
Lecturer of Mathematics, Excel
Literacy & Coding



**Dr. Jodi
Szarko**

IFY Faculty
Lecturer of Science &
Mathematics

Curricular Structure

Overview

The IFY program offers CORE as well as SUBJECT modules. The IFY students will follow one of two pathways according to their academic status: Qualification or Orientation Pathway.

In the Qualification Pathway, the students take all CORE and SUBJECT modules belonging to the same subject area over two semesters while training for the TestAS external exam which will be offered on campus over three rounds. In the Orientation Pathway, the students may change subject areas between semesters and take the respective CORE and SUBJECT modules. Their chosen first semester modules do not postulate any restrictions for the second semester choices unless they involve prerequisites. The subject areas in the IFY program are Technology, Science and Society. The module credit load in the IFY program ranges from 2.5 to 5 credit points (CP). A total of six core modules and two subject specific modules in each pathway can be achieved. Additionally, two undergraduate CHOICE and/or two Language/Humanities modules are available by choice and transferable to the respective first undergraduate year. The undergraduate modules descriptions can be found in the respective program handbooks on the website of Constructor University.

All these modules are delivered and assessed within each semester and are available for compensation and re-assessment in line with the regulations covering studying at Level 0.

Core Modules

Academic English I & II (5.0 credit points each)

The language learning content is skills-based and maps against IELTS level descriptors for Band 6 in Writing, Reading, Listening and Speaking. In both semesters, all students get exposure on greater fluency in English language skills and improved academic literacy. In the first semester, the module focuses on building a strong foundation of English proficiency, and in the second semester, students are introduced to the academic approach of English literacy with an emphasis on higher-level skills, including text analysis and critical thinking as well as presentation skills. All students will undergo an English proficiency Placement Test at the beginning of the semester to identify any language deficiencies. Weak students will take an additional English Literacy course in the first semester parallel to the module, which will contribute to the module grade.

Basic/Advanced Mathematics (5.0 credit points each)

These modules revise high school material in mathematics and strengthen the understanding of major topics required for successful undergraduate study. Students are placed in one of the modules: Basic Mathematics or Advanced Mathematics, delivered in Semester one of the Program, depending on their study direction. The intention is to consolidate their basic skills before tackling the subject-specific Mathematics modules in the second semester.

Pure Mathematics (5.0 credit points)

This second semester module is a follow-up for 'Advanced Mathematics' and is a mandatory module for students in the subject areas 'Science' and 'Technology'. Since developed mathematical skills are essential for students in these subject areas, 'Pure Mathematics' provides them with the needed knowledge and tools to be properly prepared for the respective undergraduate degrees at CU. The course covers the main topics in introductory algebra and calculus, and the complementary tutorials and study sessions provide extensive practice on problem solving skills.

Foundation Statistics (5.0 credit points)

This second semester module is mandatory for students continuing their studies within the subject area 'Society', particularly in the areas of business and management, logistics, and social sciences and humanities, as fundamental knowledge in statistics is essential for degrees within these areas. The module covers main topics in statistical analysis and probability, sampling, and confidence limits. The study sessions include extensive practice of applied statistical concepts and models.

Computational Thinking and Coding (2.5 credit points)

This module allows students to analyze problems by refining concepts and reflecting upon the decision-making process through engagement in computational design and thinking. Students will identify, explore, and clarify technological information and use that knowledge in various situations and challenges. Students get information about modern and in-demand programming languages in the world. The module further helps with experimental modelling and working with digital tools and includes basic concepts of Python.

Fundamentals of C and C++ (2.5 credit points)

In this module students will understand and apply fundamental programming concepts in C and C++ for their high importance as programming languages. They will learn how to write, compile, and debug simple programs in both languages by developing and managing basic projects as well as demonstrating problem-solving skills. Analysis and optimization of simple code for efficiency and performance will also be tackled. Students will also collaborate on introductory projects.

Applied Excel Literacy (2.5 credit points)

The use of Microsoft Excel is integral in different areas of Business Management and Social Sciences. Hence, this introductory module aims to expose students to the main functionalities needed of Excel within the area of data analysis and visualization. In addition, the students will apply their learned knowledge of the software to different types of examples.

Career Development (2.5 credit points)

This module is offered in the second semester and designed to support and guide students within their study direction while focusing on the potential career paths. Students have the unique opportunity for career guidance with psychometric testing to strengthen their choice in career and study direction. The module introduces the structure of successful career development already in their foundation year by meeting industry professionals, gaining valuable networking and professional skills to jump-start their career path while studying. The module further provides the study skills needed to succeed at

university while introducing them to resources which support them to flourish at Constructor University and within the global working environment.

TestAS Training I & II (2.5 credit points)

These modules are designed to prepare IFY students enrolled in the Qualification pathway for the TestAS external exam. During the IFY program students have three opportunities to take the TestAS exam on campus. The exam qualifies students within their direction of study along with core skills needed for higher education institutions in Germany. Attendance is mandatory for this module.

Modules by Subject Area

Subject Area TECHNOLOGY

Computer Systems (5.0 credit points)

This module introduces IFY students to the essential concepts of computer science and computer systems. The primary objective is to provide students with a thorough understanding of how computer systems function, encompassing both hardware and software components, as well as the fundamental principles of computing. Students will gain insights into the structure and operation of computer systems, which will serve as a critical foundation for their subsequent studies in relevant undergraduate programs.

Fundamentals of Programming with Python 3 (5.0 credit points)

This module is designed to introduce IFY students to programming through the Python 3 language. It aims to develop foundational programming skills that are essential for further academic pursuits in computer science and related disciplines. Through this module, students will learn the core principles of programming, gain practical coding experience, and build a strong basis for more advanced studies in the field. Fundamentals of Programming with Python 3 is the entrance module to undergraduate programs at CU for qualification students within the Technology subject area.

Subject Area SCIENCE

Foundation Chemistry (5.0 credit points)

Chemistry is an essential discipline for any student wanting to continue their studies in natural, physical, and biological sciences at CU. The first semester module 'Foundation Chemistry' hence provides the students within the subject area 'Science' with an overall and basic knowledge of the various fields within chemistry. Topics covered include fundamental aspects of general, analytical, inorganic, and physical chemistry. The study sessions and tutorials complement the module with extensive problem-solving practice.

Foundation Physics (5.0 credit points)

Alongside chemistry, physics is a complementary discipline in science, and a basic knowledge of relevant topics in physics is a requirement for students to start their undergraduate studies at CU within

the different scientific degrees. The second semester module 'Foundation Physics' provides the students with such knowledge, and covers areas within mechanics, material science, and optics. The study sessions and tutorials complement the module with extensive problem-solving practice. Foundation Physics is the entrance module to undergraduate programs at CU for qualification students within the Science subject area.

Subject Area SOCIETY

Foundation Business and Management (5.0 credit points)

The module introduces students to the internal and external context of business practice and management. It delves into key business aspects including strategic management, marketing, human resources, crisis management, globalization, and social responsibility. It also aims to provide students with the appropriate foundation of business theory and concepts that will enable them to be successful in their later related undergraduate studies in the fields of business and management.

Introduction to Social Sciences (5.0 credit points)

The overall aim of this module is to provide students with a general introduction to social sciences with a focus on the areas of sociology, economics, politics, and international relations. It aims to provide students with the appropriate foundation in social sciences theories and concepts as well as their applicability in relation to relevant fields of social sciences. Introduction to Social Sciences is the entrance module to undergraduate programs at CU for qualification students within the Society subject area.



Schematic Study Plan

Qualification Pathway - Choose one specific Subject Area						
Fall Semester	Technology		Science		Society	
	Academic English I	m, 5.0 CP	Academic English I	m, 5.0 CP	Academic English I	m, 5.0 CP
	Advanced Mathematics	m, 5.0 CP	Advanced Mathematics	m, 5.0 CP	Basic Mathematics	m, 5.0 CP
	Computational Thinking and Coding	m, 2.5 CP	Computational Thinking and Coding	m, 2.5 CP	Applied Excel Literacy	m, 2.5 CP
	TestAS Training I	m, 2.5 CP	TestAS Training I	m, 2.5 CP	TestAS Training I	m, 2.5 CP
	English Literacy	e, 5.0 CP	English Literacy	e, 5.0 CP	English Literacy	e, 5.0 CP
	Computer Systems	m, 5.0 CP	Foundation Chemistry	m, 5.0 CP	Foundation Business and Management	m, 5.0 CP
Spring Semester	UGE CHOICE or German Language or Humanities Module	e, 2.5 - 7.5 ECTS	UGE CHOICE or German Language or Humanities Module	e, 2.5 - 7.5 ECTS	UGE CHOICE or German Language or Humanities Module	e, 2.5 - 7.5 ECTS
	Academic English II	m, 5.0 CP	Academic English II	m, 5.0 CP	Academic English II	m, 5.0 CP
	Pure Mathematics	m, 5.0 CP	Pure Mathematics	m, 5.0 CP	Foundation Statistics	m, 5.0 CP
	Fundamentals of C and C++	m, 2.5 CP	Career Development or Fundamentals of C and C++	me, 2.5 CP	Career Development	m, 2.5 CP
	TestAS Training II	e, 0.0 CP	TestAS Training II	e, 0.0 CP	TestAS Training II	e, 0.0 CP
	Fundamentals of Programming with Python 3	m, 5.0 CP	Foundation Physics	m, 5.0 CP	Introduction to Social Sciences	m, 5.0 CP
	UGE CHOICE or German Language or Humanities Module	e, 2.5 - 7.5 ECTS	UGE CHOICE or German Language or Humanities Module	e, 2.5 - 7.5 ECTS	UGE CHOICE or German Language or Humanities Module	e, 2.5 - 7.5 ECTS
Orientation Pathway - Choose up to two Subject Areas						
Fall Semester	Technology		Science		Society	
	Academic English I	m, 5.0 CP	Academic English I	m, 5.0 CP	Academic English I	m, 5.0 CP
	Advanced Mathematics	m, 5.0 CP	Advanced Mathematics	m, 5.0 CP	Basic Mathematics	m, 5.0 CP
	Computational Thinking and Coding	m, 2.5 CP	Computational Thinking and Coding	m, 2.5 CP	Applied Excel Literacy	m, 2.5 CP
	English Literacy	e, 5.0 CP	English Literacy	e, 5.0 CP	English Literacy	e, 5.0 CP
	Computer Systems	m, 5.0 CP	Foundation Chemistry	m, 5.0 CP	Foundation Business and Management	m, 5.0 CP
	UGE German Language or Humanities Module	e, 2.5 ECTS	UGE German Language or Humanities Module	e, 2.5 ECTS	UGE German Language or Humanities Module	e, 2.5 ECTS
Spring Semester	UGE CHOICE Module	e, 7.5 ECTS	UGE CHOICE Module	e, 7.5 ECTS	UGE CHOICE Module	e, 7.5 ECTS
	Academic English II	m, 5.0 CP	Academic English II	m, 5.0 CP	Academic English II	m, 5.0 CP
	Pure Mathematics	m, 5.0 CP	Pure Mathematics	m, 5.0 CP	Foundation Statistics	m, 5.0 CP
	Fundamentals of C and C++	m, 2.5 CP	Career Development or Fundamentals of C and C++	me, 2.5 CP	Career Development	m, 2.5 CP
	Fundamentals of Programming with Python 3	m, 5.0 CP	Foundation Physics	m, 5.0 CP	Introduction to Social Sciences	m, 5.0 CP
	UGE German Language or Humanities Module	e, 2.5 ECTS	UGE German Language or Humanities Module	e, 2.5 ECTS	UGE German Language or Humanities Module	e, 2.5 ECTS
	UGE CHOICE Module	e, 7.5 ECTS	UGE CHOICE Module	e, 7.5 ECTS	UGE CHOICE Module	e, 7.5 ECTS

(Abbreviations: me = mandatory elective, m = mandatory, e = elective, CP = credit points, ECTS = European Credit Transfer and Accumulation System)

(Abbreviations: me = mandatory elective, m = mandatory, e = elective, CP = credit points, ECTS = European Credit Transfer and Accumulation System)

Module Descriptions

Core Modules (1st semester)

Module Name		Module Code	Level	CP
ACADEMIC ENGLISH I		PD-C-1001	FOUNDATION	5.0
Module Components				
Number	Name		Type	CP
PD-C-1001	Academic English I		Tutor-led Seminar style classes	5.0
Module Coordinator	Program Affiliation		Mandatory Status	
IFY Head of Academics	<ul style="list-style-type: none">International Foundation YearCORE module Semester one		Mandatory for all IFY students	
Entry Requirements	Co-requisites	Knowledge, Abilities, or Skills	Frequency	Forms of Learning and Teaching
			Duration	Workload
<p>Pre-requisites</p> <p><input checked="" type="checkbox"/> High School Diploma</p> <p><input type="checkbox"/> None</p>	<p><input type="checkbox"/></p> <p><input checked="" type="checkbox"/> None</p>	<p>English level at CEFR B1/IELTS 5.0</p> <p>Basic English language and academic study skills</p>	<p>Once a year, Fall semester</p> <p>One semester</p>	<p><ul style="list-style-type: none">Tutor-led but interactive classes (35 hours)Tutor-led Tutorials (7 hours)Directed and independent learning (83 hours)</p> <p>125 hours</p>
Recommendations for Preparation				
Students taking this module will be tested for their English level at the start of the semester. Preparation prior to arrival would include an outline list of the topics to be studied during the module and a supporting reading list.				
Content and Educational Aims				
This is the first semester mandatory CORE module for all IFY students. The aim of this module is the development of the English skills with the aim of successful continuation onto the second semester. Through this module the students are made aware of the critical importance of English competence in the context of their ongoing academic studies. Detailed topics are included in the module’s syllabus.				
Intended Learning Outcomes				
<p>By the end of this module, students will be able to</p> <ul style="list-style-type: none">Produce a well-structured written text.Show controlled use of the conventions used in academic writing.Demonstrate an understanding of a range of written texts which are of a general and academic nature.Express themselves with a degree of fluency and accuracy.Listen to specific information and for gist.Learn new vocabulary.Use reading strategies for academic texts.Participate in and contribute to group discussions.Take thorough and organized notes while listening to academic lectures.Acquire oral presentation skills.				
Usability and Relationship to other Modules				
Academic English I is a CORE module studied during the first semester by all students joining the IFY program. It prepares student with the proper English knowledge for studies in other modules as well as in their undergraduate studies.				

Assessment

Midterm Exam (listening, reading, writing)

Weight: 40%

Final Written Exam

Weight: 60%

Scope: Demonstrate achievement of relevant Learning Outcomes

A passing grade of at least 45% is needed to complete the International Foundation Year and be able to move on to degree studies at Constructor University.



Module Name ENGLISH LITERACY		Module Code PD-C-1003	Level FOUNDATION	CP 5.0
Module Components				
Number	Name		Type	CP
PD-C-1003	English Literacy		Tutor-led Seminar style classes	5.0
Module Coordinator IFY Head of Academics	Program Affiliation <ul style="list-style-type: none">International Foundation YearTraining module Semester one		Mandatory Status N/A	
Entry Requirements Pre-requisites <input checked="" type="checkbox"/> High School Diploma <input type="checkbox"/> None	Co-requisites <input checked="" type="checkbox"/> Academic English I <input type="checkbox"/>	Knowledge, Abilities, or Skills Basic English language and academic study skills	Frequency Once a year, Fall semester	Forms of Learning and Teaching <ul style="list-style-type: none">Tutor-led but interactive classes (35 hours)Tutor-led Tutorials (7 hours)Directed and independent learning (83 hours)
			Duration One semester	Workload 125 hours
Recommendations for Preparation Students taking this module need to review their English grammar and vocabulary material from high school. Preparation prior to arrival would include an outline list of the topics to be studied during the module and a supporting reading list.				
Content and Educational Aims 'English Literacy' is a parallel module to 'Academic English I'. The aim of the module is to develop the basic English language for students to be able and use the language on an academic level. It blends direct grammar instruction with carefully sequenced practice to develop speaking, writing, listening, and reading skills. Detailed topics are included in the module's syllabus.				
Intended Learning Outcomes By the end of this module, students will be able to <ul style="list-style-type: none">Construct grammatically correct sentences, demonstrating an understanding of subjects, predicates, and proper word order.Recognize and use various verb tenses consistently and correctly in writing and speaking.Correctly apply punctuation marks and capitalization rules in their writing.Ensure that subjects and verbs agree in number and person in all their written and spoken sentences.Use pronouns correctly, ensuring pronoun-antecedent agreement and appropriate case.Differentiate between and correctly use adjectives and adverbs to modify nouns and verbs respectively.Construct complex and compound sentences using appropriate coordinating and subordinating conjunctions.Distinguish between active and passive voice and use each appropriately in different contexts.Identify and correct common grammatical errors in writing.Expand their vocabulary by learning and using synonyms and antonyms and applying the principles of word formation to enhance their writing and speaking variety.				
Usability and Relationship to other Modules 'English Literacy' is intended to lead students through the challenges they face linguistically to reach the needed level to successfully complete 'Academic English I'.				
Assessment Midterm and Final Exam Scope: Topics studied as covered by the Learning Outcomes Weight: 40% Midterm Exam 60% Final Exam The module grade will contribute to the grade of the 'Academic English I' module.				
Module Name BASIC MATHEMATICS		Module Code(s) PD-C-2003	Level FOUNDATION	CP 5.0

Module Components				
Number	Name		Type	CP
PD-C-2003	Basic Mathematics		Tutor-led Seminar style classes	5.0
Module Coordinator IFY Head of Academics	Program Affiliation <ul style="list-style-type: none">International Foundation YearCORE module Semester One		Mandatory Status Mandatory prerequisite for 'Foundation Statistics'	
Entry Requirements <i>Pre-requisites</i> <input checked="" type="checkbox"/> High School Diploma <input type="checkbox"/> None	<i>Co-requisites</i> <input type="checkbox"/> <input checked="" type="checkbox"/> None	<i>Knowledge, Abilities, or Skills</i> Basic knowledge of Mathematics on the high school level	Frequency Once a year, Fall semester	Forms of Learning and Teaching <ul style="list-style-type: none">Tutor-led but interactive classes (35 hours)Tutor-led Tutorials (7 hours)Directed and independent learning (83 hours)
			Duration One semester	Workload 125 hours
Recommendations for Preparation Students should review their basic mathematical skills from high school to get prepared for the course. Course slides and book chapter are provided beforehand so that students can come prepared to class.				
Content and Educational Aims This is the first semester Mathematics CORE module for students of the 'Society' study subjects. It is also a prerequisite course for 'Foundation Statistics'. It introduces the fundamental and basic aspects of mathematical concepts required for students interested in continuing their studies within business and humanities. The module content covers main areas of introductory algebra. Detailed topics are included in the module's syllabus.				
Intended Learning Outcomes By the end of this module, students will be able to <ul style="list-style-type: none">Perform basic mathematical operations.Apply their knowledge in the most efficient way.Learn how to use mathematics to model and solve everyday problems.Understand the concepts of rational and irrational numbers.Solve linear and quadratic equations.Graph linear equations and inequalities.Know the basics of probability.Develop and factorize polynomial and rational expressions.Solve systems of linear equations.Work with roots and radicals.				
Usability and Relationship to other Modules Basic Mathematics prepares students for the following Mathematics CORE module 'Foundation Statistics', it is also providing the fundamental mathematical tools for other modules within the 'Society' subject area.				
Assessment Midterm and Final Exam Scope: Topics studied as covered by the Learning Outcomes Weight: 40% Midterm Exam 60% Final Exam A passing grade of at least 45% is needed to complete the International Foundation Year and be able to move on to degree studies at Constructor University.				

Module Name		Module Code		Level	CP
ADVANCED MATHEMATICS		PD-C-2001		FOUNDATION	5.0
Module Components					
Number	Name			Type	CP
PD-C-2001	Advanced Mathematics			Tutor-led Seminar style classes	5.0
Module Coordinator IFY Head of Academics	Program Affiliation <ul style="list-style-type: none">International Foundation YearCORE module Semester One			Mandatory Status Mandatory prerequisite for 'Pure Mathematics'	
Entry Requirements <i>Pre-requisites</i> <input checked="" type="checkbox"/> High School Diploma <input type="checkbox"/> None	Co-requisites <input type="checkbox"/> <input checked="" type="checkbox"/> None	Knowledge, Abilities, or Skills Advanced knowledge of Mathematics at a high school level	Frequency Once a year, Fall semester	Forms of Learning and Teaching <ul style="list-style-type: none">Tutor-led but interactive classes (35 hours)Tutor-led Tutorials (7 hours)Directed and independent learning (83 hours)	
			Duration One semester	Workload 125 hours	
Recommendations for Preparation Students should review their mathematical skills from high school to get prepared for the course. Course slides and book chapter are provided beforehand so that students can come prepared to class.					
Content and Educational Aims This is a first semester Mathematics CORE module for IFY students and a prerequisite course for 'Pure Mathematics'. It introduces the mathematical knowledge needed for students interested in continuing their studies within sciences, engineering, and technology. The module content covers the main areas in introductory algebra and calculus. Detailed topics are included in the module's syllabus.					
Intended Learning Outcomes By the end of this module, students will be able to <ul style="list-style-type: none">Perform advanced mathematical operations.Apply their knowledge in the most efficient way.Learn how to use mathematics to model and solve everyday problems.Solve and graph linear and quadratic equations and inequalities.Identify polynomial functions.Factor quadratic functions using different methods.Explain roots, exponentials, and logarithms.Use the unit circle approach to explain and graph trigonometric functions.Work with trigonometric equations and identities.Perform vector operations.					
Usability and Relationship to other Modules Advanced Mathematics prepares students for the following Mathematics CORE module 'Pure Mathematics', it also provides the fundamental mathematical tools for other modules within the 'Science' and 'Technology' subject areas.					
Assessment Midterm and Final Exam Scope: Topics studied as covered by the Learning Outcomes Weight: 40% Midterm Exam 60% Final Exam A passing grade of at least 45% is needed to complete the International Foundation Year and be able to move on to degree studies at Constructor University.					

Module Name		Module Code		Level	CP
COMPUTATIONAL THINKING AND CODING		PD-C-3001		FOUNDATION	2.5
Module Components					
Number	Name			Type	CP
PD-C-3001	Computational Thinking and Coding			Tutor-led Seminar style classes	2.5
Module Coordinator	Program Affiliation			Mandatory Status	
IFY Head of Academics	<ul style="list-style-type: none">International Foundation YearCORE module Semester One			Mandatory for subject area 'Technology' and 'Science'	
Entry Requirements	Pre-requisites	Co-requisites	Knowledge, Abilities, or Skills	Frequency	Forms of Learning and Teaching
				Duration	Workload
<ul style="list-style-type: none"><input checked="" type="checkbox"/> High School Diploma<input type="checkbox"/> None	<ul style="list-style-type: none"><input type="checkbox"/><input checked="" type="checkbox"/> None	Basic understanding of computer hardware and software applications	Once a year, Fall semester	<ul style="list-style-type: none">Tutor-led but interactive classes (21 hours)Tutor-led Tutorials (7 hours)Directed and independent learning (34.5 hours)	62.5 hours
Recommendations for Preparation					
Students enrolled in this module may lack prior formal instruction in the utilization of computers and software suitable for academic pursuits. Initial classes in this module will afford students the chance to showcase their proficiency and understanding of this subject matter.					
Content and Educational Aims					
This is a first-semester CORE module which equips students with essential computational tools necessary for any major and covers fundamental computing concepts and requirements, catering to students interested in furthering their studies across various subject areas. Detailed topics are included in the module's syllabus.					
Intended Learning Outcomes					
<p>By the end of this module, students will be able to</p> <ul style="list-style-type: none">Define the importance of computational thinking.Improve their ability to develop effective algorithms.Break down complex problems into smaller, manageable parts.Identify patterns and regularities in data and processes.Simplify complex systems by focusing on essential details.Design step-by-step instructions to solve problems.Understand variables, data types, and operators.Control structures: conditionals and loops.Learn a new language on a basic level.Design a new programming language on a basic level.					
Usability and Relationship to other Modules					
Computational Thinking and Coding is a CORE module studied in the first semester by students who joined the IFY program. It is a universal module which relates to all subject areas, as computational thinking and coding is now being used in all disciplines and areas.					
Assessment					
Midterm and Final Exam					
Weight: 40% Midterm Written Exam					
60% Final Written Exam					
Scope: Topics studied as covered by the Learning Outcomes					
A passing grade of at least 45% is needed to complete the International Foundation Year and be able to move on to degree studies at Constructor University.					

Module Name APPLIED EXCEL LITERACY		Module Code PD-C-3003	Level (type) FOUNDATION	CP 2.5
Module Components				
Number	Name		Type	CP
PD-C-3003	Applied Excel Literacy		Tutor-led Seminar style classes	2.5
Module Coordinator IFY Head of Academics	Program Affiliation <ul style="list-style-type: none">International Foundation YearCORE module Semester one		Mandatory Status Mandatory for subject area 'Society'	
Entry Requirements <i>Pre-requisites</i> <input checked="" type="checkbox"/> High School Diploma <input type="checkbox"/> None	Co-requisites <input type="checkbox"/> <input checked="" type="checkbox"/> None	Knowledge, Abilities, or Skills A basic background in mathematics Ability to research, evaluate and express opinions	Frequency Once a year, Fall semester	Forms of Learning and Teaching <ul style="list-style-type: none">Tutor-led but interactive classes (21 hours)Tutor-led Tutorials (7 hours)Directed and independent learning (34.5 hours)
			Duration One semester	Workload 62.5 hours
Recommendations for Preparation To help students gain a basic understanding of the subject area, a reading list to help prepare them for the topics to be studied during the module will be provided.				
Content and Educational Aims This is a first semester CORE module for students of the SOCIETY subject area. It introduces the fundamentals of the Microsoft Excel software and its applications. The module will ensure students apply the various functionalities of the software through practical examples. It further aims to provide students with adequate Excel literacy related to their undergraduate studies.				
Intended Learning Outcomes By the end of this module, students will be able to: <ul style="list-style-type: none">Understand excel interface and basic navigationCreate and manage worksheetsEnter and format dataDifferentiate between formulas and functions in ExcelPerform calculations using basic formulas and functionsEnhance numerical data in rows and columnsAnalyze information within a specific context or datasetApply basic data analysis toolsCreate and customize chartsCreate a spreadsheet to tabulate and record numeric values				
Usability and Relationship to other Modules Applied Excel Literacy provides appropriate preparation for students wishing to apply Excel in their studies within areas of Business, Industrial Engineering, and Social Sciences.				
Assessment Midterm and Final Assessment Weight: 40% Midterm Written Exam 60% Final Written Exam Scope: Topics studied as covered by the Learning Outcomes A passing grade of at least 45% is needed to complete the International Foundation Year and be able to move on to degree studies at Constructor University.				

Module Name TESTAS TRAINING I & II		Module Code PD-C-4001 PD-C-4002	Level FOUNDATION	CP 2.5
Module Components				
Number	Name		Type	CP
PD-C-4001 PD-C-4002	TestAS Training I TestAS Training II		Tutor-led Seminar style classes	2.5
Module Coordinator IFY Head of Academics	Program Affiliation <ul style="list-style-type: none">International Foundation YearCommon module for all subject areas		Mandatory Status Mandatory for IFY Qualification students	
Entry Requirements Pre-requisites <input checked="" type="checkbox"/> High School Diploma <input type="checkbox"/> None	Co-requisites <input type="checkbox"/> <input checked="" type="checkbox"/> None	Knowledge, Abilities, or Skills Basic high school skills	Frequency Twice a year, Fall/Spring semester	Forms of Learning and Teaching <ul style="list-style-type: none">Tutor-led training (21 hours)Directed and independent training (41.5 hours)
			Duration One semester	Workload 62.5 hours
Recommendations for Preparation Students should review their overall high school knowledge as a general preparation for the module.				
Content and Educational Aims This module prepares all students for the TestAS exam which is a needed component for admissions to undergraduate studies at Constructor University.				
Intended Learning Outcomes By the end of this module, students will be able to <ul style="list-style-type: none">Prepare properly for the TestAS entrance examGet informed about the different modules and subjects within the testPractice TestAS questions through training sessionsReview the main information needed for the TestAS examTrain for the core module testsTrain for the subject-specific module tests in the different areas according to subject direction				
Usability and Relationship to other Modules The TestAS Training module is essential for 'qualification' students of all subject areas in order to pass the entrance exam to undergraduate studies at Constructor University.				
Assessment The TestAS consists of two examination parts: the Core Module tests the general aptitude to study; the Subject Modules the field of study-specific aptitude. A TestAS standard score of at least 190 is needed to be able to move on to undergraduate degree studies at Constructor University.				



Core Modules (2nd semester)

Module Name		Module Code		Level	CP
ACADEMIC ENGLISH II		PD-C-1002		FOUNDATION	5.0
Module Components					
Number	Name			Type	CP
PD-C-1002	Academic English and Literacy II			Tutor-led Seminar style classes	5.0
Module Coordinator IFY Head of Academics	Program Affiliation <ul style="list-style-type: none">International Foundation YearCORE module Semester two			Mandatory Status Mandatory for all IFY students	
Entry Requirements <i>Pre-requisites</i> <input checked="" type="checkbox"/> Academic English I <input type="checkbox"/> None	Co-requisites <input type="checkbox"/> <input checked="" type="checkbox"/> None	Knowledge, Abilities, or Skills English language skills from Academic English I	Frequency Once a year, Spring semester	Forms of Learning and Teaching <ul style="list-style-type: none">Tutor-led but interactive classes (35 hours)Tutor-led Tutorials (7 hours)Directed and independent learning (83 hours)	
			Duration One semester	Workload 125 hours	
Recommendations for Preparation Preparation prior to commencing the module would include an outline list of the topics to be studied and a supporting reading list.					
Content and Educational Aims This is the second semester mandatory CORE module for all IFY students. It is designed for students to develop academic study skills to the standard required for undergraduate study. The development of writing, listening, reading, and speaking skills will include a discussion of essay structure, plagiarism, criticality for specific information, and the development of presentational skills and seminar discussions. Detailed topics are included in the module's syllabus.					
Intended Learning Outcomes By the end of this module, students will be able to <ul style="list-style-type: none">Apply reading strategies for extended academic texts.Make decisions on usefulness of content and information extraction.Write extended academic texts.Listen interactively in classes and lectures.Participate in an academic discourse as both an information provider and gatherer.Develop critical reading skills and interpret information.Synthesize information from listening and reading texts.Successfully participate in seminar discussions.Demonstrate basic research, speaking and presentational skills.Cite and refer to academic sources in written and oral form.Expand vocabulary to be applied in an academic context.					
Usability and Relationship to other Modules Academic English II is a CORE module studied during the second semester by all students joining the IFY program. It prepares student with the proper English knowledge for studies in other modules as well as in their undergraduate studies.					
Assessment Midterm Presentation and Handout Weight: 40% Final Written Exam Weight: 60% Scope: Demonstrates achievement of relevant Learning Outcomes A passing grade of at least 45% is needed to complete the International Foundation Year and be able to move on to degree studies at Constructor University.					

Module Name		Module Code	Level	CP
FOUNDATION STATISTICS		PD-C-2004	FOUNDATION	5.0
Module Components				
Number	Name		Type	CP
PD-C-2004	Foundation Statistics		Tutor-led Seminar style classes	5.0
Module Coordinator IFY Head of Academics	Program Affiliation <ul style="list-style-type: none">International Foundation YearCORE module Semester Two		Mandatory Status Mandatory for 'Society' subject area	
Entry Requirements Pre-requisites <input checked="" type="checkbox"/> Basic Mathematics <input type="checkbox"/> None	Co-requisites <input type="checkbox"/> <input checked="" type="checkbox"/> None	Knowledge, Abilities, or Skills Mathematical knowledge acquired from the prerequisite module 'Basic Mathematics'	Frequency Once a year, Spring semester	Forms of Learning and Teaching <ul style="list-style-type: none">Tutor-led but interactive classes (35 hours)Tutor-led Tutorials (7 hours)Directed and independent learning (83 hours)
			Duration One semester	Workload 125 hours
Recommendations for Preparation Students need to review the mathematical knowledge acquired from the prerequisite course 'Basic Mathematics'. Course slides and book chapters are provided beforehand so that students can come prepared to class.				
Content and Educational Aims This is the second semester Mathematics CORE module for students of the 'Society' study track. It introduces the fundamental aspects of statistical concepts for students interested in continuing their studies in the disciplines within business, economics, and social sciences. The module content covers main areas in statistical analysis, probability, and sampling methods. Detailed topics are included in the module's syllabus.				
Intended Learning Outcomes By the end of this module, students will be able to <ul style="list-style-type: none">Perform basic statistical operations.Apply their knowledge in the most efficient way through solving problems.Use statistics in applied case studies.Prepare reports for statistical projects.Analyze datasets through respective distribution tables and charts.Use discrete and continuous probability distributions.Explain the different types of sampling methods and their practicality.Use tests to evaluate the confidence levels of sampling methods.Make decisions based on statistical calculations.Prepare properly for an undergraduate program which includes statistical methods.				
Usability and Relationship to other Modules Foundation Statistics is a CORE module for all students who are interested in continuing their studies in the different areas of business, social science, and humanities. It enables the students with the fundamental needed knowledge in statistics to enhance their performance within relevant modules. Nowadays, statistics is used in almost all social and natural scientific disciplines.				
Assessment Midterm Assignment Weight: 40% Final Exam Weight: 60% Scope: Topics studied as covered by the Learning Outcomes A passing grade of at least 45% is needed to complete the International Foundation Year and be able to move on to degree studies at Constructor University.				
Module Name		Module Code	Level	CP

PURE MATHEMATICS			PD-C-2002	FOUNDATION	5.0
Module Components					
Number	Name			Type	CP
PD-C-2002	Pure Mathematics			Tutor-led Seminar style classes	5.0
Module Coordinator IFY Head of Academics	Program Affiliation <ul style="list-style-type: none">International Foundation YearCORE module Semester Two			Mandatory Status Mandatory for subject areas 'Science' and 'Technology'	
Entry Requirements Pre-requisites <input checked="" type="checkbox"/> Advanced Mathematics <input type="checkbox"/> None	Co-requisites <input type="checkbox"/> <input checked="" type="checkbox"/> None	Knowledge, Abilities, or Skills Mathematical skills gained from the prerequisite course 'Advanced Mathematics'	Frequency Once a year, Spring semester	Forms of Learning and Teaching <ul style="list-style-type: none">Tutor-led but interactive classes (35 hours)Tutor-led Tutorials (7 hours)Directed and independent learning (83 hours)	
			Duration One semester	Workload 125 hours	
Recommendations for Preparation Students should review their mathematical skills from 'Advanced Mathematics' to get prepared for the course. Course slides and book chapter are provided beforehand so that students can come prepared to class.					
Content and Educational Aims This is the second semester Mathematics CORE module for students of the 'Technology' and 'Science' study subjects. It follows the prerequisite course 'Advanced Mathematics' and develops the fundamental mathematical skills for students interested in continuing their studies within sciences, engineering, and technology. The module content covers further areas in introductory algebra and calculus. Detailed topics are included in the module's syllabus.					
Intended Learning Outcomes By the end of this module, students will be able to <ul style="list-style-type: none">Perform advanced mathematical operations.Apply their knowledge in the most efficient way.Learn how to use mathematics to model and solve everyday problems.Factor polynomial functions using synthetic division.Graph polynomial and rational functions and inequalities.Solve systems of equations using various methods.Perform matrix operations.Determine limits of various types of functions.Derive and perform derivative operations on functions.Apply differentiation to mathematical problems and models.					
Usability and Relationship to other Modules Pure Mathematics provides students with advanced mathematical tools within disciplines which require developed mathematical knowledge, it also prepares students for the first-year undergraduate modules within the areas of sciences, engineering, and technology.					
Assessment Type: Midterm and Final Exam Scope: Topics studied as covered by the Learning Outcomes Weight: 40% Midterm Exam 60% Final Exam A passing grade of at least 45% is needed to complete the International Foundation Year and be able to move on to degree studies at Constructor University.					

Module Name		Module Code	Level (type)	CP
FUNDAMENTALS OF C AND C++		PD-C-3002	FOUNDATION	2.5
Module Components				
Number	Name		Type	CP
PD-C-3002	Fundamentals of C and C++		Tutor-led Seminar style classes	2.5
Module Coordinator IFY Head of Academics	Program Affiliation <ul style="list-style-type: none">International Foundation YearCORE module Semester Two		Mandatory Status Mandatory for subject area 'Technology', mandatory elective for subject area 'Science'	
Entry Requirements Pre-requisites <input checked="" type="checkbox"/> Computational Thinking and Coding <input type="checkbox"/> None	Co-requisites <input type="checkbox"/> <input checked="" type="checkbox"/> None	Knowledge, Abilities, or Skills Basic practical skills in programming language	Frequency Once a year, Spring semester	Forms of Learning and Teaching <ul style="list-style-type: none">Tutor-led but interactive classes (21 hours)Tutor-led Tutorials (7 hours)Directed and independent learning (34.5 hours)
			Duration One semester	
Recommendations for Preparation To enhance their programming skills, students are encouraged to revisit and reinforce their computational thinking abilities, which involve problem-solving in abstract manners. In preparation for the class, students are provided with course materials and book chapters, enabling them to come to class fully prepared.				
Content and Educational Aims This is the second semester CORE module after 'Computational Thinking and Coding'. Its primary goal is to teach how computation can be used to solve problems. Additionally, it aims to instill confidence in students in their ability to write small programs to accomplish specific tasks. The module covers key aspects of programming languages C and C++. Detailed topics are listed in the module syllabus.				
Intended Learning Outcomes By the end of this module, students will be able to <ul style="list-style-type: none">Understand and apply fundamental programming concepts in C and C++.Write, compile, and debug simple programs in both languages.Use basic control structures such as loops and conditionals effectively.Implement elementary object-oriented programming principles in C++.Develop and manage basic projects, demonstrating problem-solving skills.Gain familiarity with using integrated development environments (IDEs) for C and C++.Analyze and optimize simple code for efficiency and performance.Employ fundamental data structures such as arrays and linked lists.Understand and apply basic pointers and memory management techniques.Collaborate on introductory coding projects using version control systems.				
Usability and Relationship to other Modules Fundamentals of C and C++ is a CORE module taken in the second semester by students in the IFY program. This module is broadly relevant, as part of essential skills across subject areas and disciplines in Science and Technology.				
Assessment Midterm and Final Exam Weight: 40% Midterm Written Exam 60% Final Written Exam Scope: Topics studied as covered by the Learning Outcomes A passing grade of at least 45% is needed to complete the International Foundation Year and be able to move on to degree studies at Constructor University.				

Module Name CAREER DEVELOPMENT		Module Code PD-C-3004	Leve FOUNDATION	CP 2.5
Module Components				
Number	Style		Type	CP
PD-C-3004	Career Development		Tutor-led Semi- nar style classes	2.5
Module Coordina- tor Tanya Keni	Program Affiliation ■ International Foundation Year ■ CORE module Semester Two		Mandatory Status Mandatory for subject area ‘Society’, Mandatory Elective for subject area ‘Science’ stu- dents	
Entry Require- ments <i>Pre-requisites</i> <input type="checkbox"/> High School Di- ploma <input checked="" type="checkbox"/> None	Co-requisites <input type="checkbox"/> <input checked="" type="checkbox"/> None	Knowledge, Abilities, or Skills NA	Frequency Once a year, Spring semester.	Forms of Learning and Teaching ■ Tutor-led but interactive classes (17.5 hours) / se- mester ■ Directed and independent learning (45 hours) / se- mester
			Duration One semester	Workload 62.5 hours
Recommendations for Preparation Students should read their intended undergraduate program handbook and connect with an undergraduate or post graduate student. Students will further benefit from reading the intended reading list provided in the first session as an outline for the course. Informing themselves of networking events both on campus and in the city of Bremen or sur- roundings will enable them to create valuable contacts with whom they can network throughout their studies.				
Content and Educational Aims This is the second semester CORE module for students within SCIENCE and SOCIETY. The Career Development module will embody the mission statement of Constructor University. As such, the program will focus on increasing the self-compe- tence and career skills of its IFY students in a community characterized by diversity. The program is developed and based on IFY students’ specific needs to flourish within Constructor University’s educational and social environment. Detailed topics are included in the module’s syllabus.				
Intended Learning Outcomes By the end of this module, students will be able to ■ Understand, research and gain valuable insights within a selected study direction/career path. ■ Introduction to Industry Professionals in Germany. ■ Gain professional skills such as time management and presentation skills. ■ Gain career guidance with psychometric assessment and support. ■ Develop critical and strategic thinking skills. ■ Learn how to work in a team. ■ Develop study skills needed to succeed at university.				
Usability and Relationship to other Modules The career development module provides students with the needed soft skills such as professional skills, study skills, self- awareness, career guidance and how to work within a group/team to succeed in a diverse educational environment such as Constructor University. The program explores the different career paths, encourages social networking, and demands students to take the time to do effective research to make a more informed decision on their intended undergraduate study program.				
Assessment Midterm and Final Assessment Weight: 40% Team Presentation and Report 60% Exam & Individual Poster Presentation Scope: Topics studied as covered by the Learning Outcomes A passing grade of at least 45% is needed to complete the International Foundation Year and be able to move on to degree studies at Constructor University.				



Modules by Subject Area

Subject Area TECHNOLOGY

Module Name COMPUTER SYSTEMS		Module Code PD-S-1301	Level FOUNDATION	CP 5.0
Module Components				
Number	Name		Type	CP
PD-S-1301	Computer Systems		Tutor-led Seminar style classes	5.0
Module Coordinator IFY Head of Academics	Program Affiliation <ul style="list-style-type: none">International Foundation YearSUBJECT module Semester One		Mandatory Status Mandatory for subject area 'Technology'	
Entry Requirements Pre-requisites <input checked="" type="checkbox"/> High School Diploma <input type="checkbox"/> None	Co-requisites <input type="checkbox"/> <input checked="" type="checkbox"/> None	Knowledge, Abilities, or Skills A basic understanding of Computer utilities Basic practical skills in IT	Frequency Once a year, Fall semester	Forms of Learning and Teaching <ul style="list-style-type: none">Tutor-led but interactive classes (35 hours)Tutor-led Tutorials (7 hours)Directed and independent learning (83 hours)
			Duration One semester	Workload 125 hours
Recommendations for Preparation Students are expected to have fundamental computer and software skills from their previous studies. A recommended reading list will be provided to help students refresh their background knowledge in Computer Science and familiarize themselves with the topics that will be covered throughout the semester.				
Content and Educational Aims This is the first semester mandatory SUBJECT module for students of the 'Technology' subject area. It introduces the structure and components of computer systems and provides an overview of the essential elements and functions of operating systems. The module covers the basics of both Windows and Linux operating systems and their practical usage. Detailed topics and specific content are included in the module's syllabus.				
Intended Learning Outcomes By the end of this module, students will be able to <ul style="list-style-type: none">Understand the basic components and functions of computer systems.Explain how data is represented and processed in a computer.Recognize the different types of software and their uses.Understand basic networking concepts and internet technologies.Develop simple programs and understand the basics of programming.Identify ethical issues in computing and basic security principles.Learn about the architecture and design of computer hardware.Understand the principles of database management and data storage.Familiarize themselves with various programming languages and their applications.Explore the basics of algorithm design and problem-solving techniques.				
Usability and Relationship to other Modules Computer Systems, along with the module "Fundamentals of Programming with Python 3," is designed specifically for students in the 'Technology' subject area. Together, these modules offer suitable groundwork for students who aspire to pursue technology-related degrees at Constructor University.				
Assessment Midterm and Final Exam Weight: 40% Midterm Written Exam 60% Final Written Exam Scope: Topics studied as covered by the Learning Outcomes A passing grade of at least 45% is needed to complete the International Foundation Year and be able to move on to degree studies at Constructor University.				

Module Name FUNDAMENTALS OF PROGRAMING WITH PYTHON 3		Module Code PD-S-1302	Level FOUNDATION	CP 5.0
Module Components				
Number	Name		Type	CP
PD-S-1302	Fundamentals of Programming with Python 3		Tutor-led Seminar style classes	5.0
Module Coordinator IFY Head of Academics	Program Affiliation <ul style="list-style-type: none">International Foundation YearSUBJECT module Semester Two		Mandatory Status Mandatory for subject area 'Technology'	
Entry Requirements <i>Pre-requisites</i> <input checked="" type="checkbox"/> High School Diploma <input type="checkbox"/> None	Co-requisites <input type="checkbox"/> <input checked="" type="checkbox"/> None	Knowledge, Abilities, or Skills A basic understanding of computing concepts and algorithms Basic practical skills in IT and programming	Frequency Once a year, Spring semester	Forms of Learning and Teaching <ul style="list-style-type: none">Tutor-led but interactive classes (35 hours)Tutor-led Tutorials (7 hours)Directed and independent learning (83 hours)
			Duration One semester	Workload 125 hours
Recommendations for Preparation Students should possess basic programming knowledge or have learned it during the first IFY semester. To assist in their preparation for the semester, students will be provided with a recommended reading list that covers the topics to be studied.				
Content and Educational Aims This is the second semester mandatory SUBJECT module for students of the 'Technology' subject area. It aims to equip students with essential Python 3 coding skills necessary to manipulate various types of data and perform a variety of tasks. Detailed topics ensuring comprehensive coverage of the necessary skills and knowledge are included in the module's syllabus.				
Intended Learning Outcomes By the end of this module, students will be able to <ul style="list-style-type: none">Set up the Python development environment.Write and Debug Python Programs.Utilize Python Libraries and Modules Effectively.Develop Simple Applications Using Python.Understand and manipulate data structures.Manage file input/output operations.Analyze and Interpret Data Using Python.Implement Basic Object-Oriented Programming Principles.Understand the Basics of Software Development Practices.Explore Ethical and Security Issues in Programming.				
Usability and Relationship to other Modules Fundamentals of Computing with Python 3 is a subject area-specific module in 'Technology'. Alongside other modules such as 'Computer Systems,' it offers students the necessary groundwork to excel in technology-related degree programs at Constructor University.				
Assessment Midterm and Final Exam Scope: Topics studied as covered by the Learning Outcomes Weight: 40% Midterm Written Exam 50% Final Written Exam + 10% Final Oral Exam A passing grade of at least 45% is needed to complete the International Foundation Year and be able to move on to degree studies at Constructor University. This is the entrance module for Qualification students into the relevant undergraduate programs.				

Module Name FOUNDATION CHEMISTRY			Module Code PD-S-1101	Level FOUNDATION	CP 5.0
Module Components					
Number	Name			Type	CP
PD-S-1101	Foundation Chemistry			Tutor-led Seminar style classes	5.0
Module Coordinator IFY Head of Academics	Program Affiliation <ul style="list-style-type: none">International Foundation YearSUBJECT module Semester One			Mandatory Status Mandatory for subject area 'Science'	
Entry Requirements Pre-requisites <input checked="" type="checkbox"/> High School Diploma <input type="checkbox"/> None	Co-requisites <input type="checkbox"/> <input checked="" type="checkbox"/> None	Knowledge, Abilities, or Skills A basic scientific background from high school	Frequency Once a year, Fall semester	Forms of Learning and Teaching <ul style="list-style-type: none">Tutor-led but interactive classes (35 hours)Tutor-led Tutorials (7 hours)Directed and independent learning (83 hours)	
			Duration One semester	Workload 125 hours	
Recommendations for Preparation Students should review their science material from high school to get prepared for the course. Course slides and book chapter are provided beforehand so that students can come prepared to class.					
Content and Educational Aims This is the first semester mandatory SUBJECT module for students of the 'Science' subject area. It introduces a needed overview of fundamental chemical knowledge to students interested in continuing their studies within biological and physical science disciplines. The module covers areas in introductory general, inorganic, analytical and physical chemistry. Detailed topics are included in the module's syllabus.					
Intended Learning Outcomes By the end of this module, students will be able to <ul style="list-style-type: none">Understand the general aspect of introductory chemistry.Use chemical concepts to explain processes in various scientific disciplines.Apply chemical knowledge to solve applied problems.Gain a first impression on chemical research.Recognize the different types of chemical reactions.Perform calculations involving stoichiometry and molarity.Differentiate the properties of the three main states: gas, liquid and solid.Solve problems involving oxidation states.Use equilibrium constants to perform relevant calculations.Describe acids and bases on a fundamental level.					
Usability and Relationship to other Modules Foundation Chemistry is a subject area-specific module in 'Science', and with the other module 'Foundation Physics' provides an appropriate preparation for students wishing to continue their studies in undergraduate biological and physical science degrees at Constructor University.					
Assessment Midterm and Final Assessment Weight: 40% Midterm Written Exam 60% Final Written Exam Scope: Topics studied as covered by the Learning Outcomes A passing grade of at least 45% is needed to complete the International Foundation Year and be able to move on to degree studies at Constructor University.					
Module Name FOUNDATION PHYSICS			Module Code PD-S-1102	Level FOUNDATION	CP 5.0
Module Components					

Number	Name		Type	CP
PD-S-1102	Foundation Physics		Tutor-led Seminar style classes	5.0
Module Coordinator IFY Head of Academics	Program Affiliation <ul style="list-style-type: none">International Foundation YearSUBJECT module Semester Two		Mandatory Status Mandatory for subject area 'Science'	
Entry Requirements <i>Pre-requisites</i> <input checked="" type="checkbox"/> High School Diploma <input type="checkbox"/> None	<i>Co-requisites</i> <input type="checkbox"/> <input checked="" type="checkbox"/> None	<i>Knowledge, Abilities, or Skills</i> A basic scientific background from high school	Frequency Once a year, Spring semester	Forms of Learning and Teaching <ul style="list-style-type: none">Tutor-led but interactive classes (35 hours)Tutor-led Tutorials (7 hours)Directed and independent learning (83 hours)
			Duration One semester	Workload 125 hours
Recommendations for Preparation Students should review their science material from high school to get prepared for the course. Course slides and book chapter are provided beforehand so that students can come prepared to class.				
Content and Educational Aims This is the second semester mandatory SUBJECT module for students of the 'Science' subject area. It introduces a needed overview of fundamental knowledge of physics to students interested in continuing their studies within biological and physical science disciplines. The module content covers areas in mechanics, states of matter and optics. Detailed topics are included in the module's syllabus.				
Intended Learning Outcomes By the end of this module, students will be able to <ul style="list-style-type: none">Understand the general aspect of introductory physics.Use physics to solve applied problems.Gain a first impression on research in physics.Describe motion in one and two dimensions.Work with Newton's laws of motion.Relate force to potential and kinetic energy.Calculate changes in momentum during collisions.Describe basic fluid and solid-state mechanics.Solve problems related to soundwave propagations.Describe the main concepts of light optics.				
Usability and Relationship to other Modules Foundation Physics is a subject area-specific module in 'Science', and with the other module 'Foundation Chemistry' provides an appropriate preparation for students wishing to continue their studies in undergraduate biological and physical science degrees at Constructor University.				
Assessment Midterm and Final Assessment Scope: Topics studied as covered by the Learning Outcomes Weight: 40% Midterm Written Exam 50% Final Written Exam + 10% Final Oral Exam A passing grade of at least 45% is needed to complete the International Foundation Year and be able to move on to degree studies at Constructor University. This is the entrance module for Qualification students into the relevant undergraduate programs.				

Subject Area SOCIETY

Module Name		Module Code	Level	CP
FOUNDATION BUSINESS AND MANAGEMENT		PD-S-1201	FOUNDATION	5.0
Module Components				
Number	Name		Type	CP
PD-S-1201	Foundation Business and Management		Tutor-led Seminar style classes	5.0
Module Coordinator IFY Head of Academics	Program Affiliation <ul style="list-style-type: none">International Foundation YearSUBJECT module Semester One		Mandatory Status Mandatory for 'Society' subject area	
Entry Requirements <i>Pre-requisites</i> <input checked="" type="checkbox"/> High School Diploma <input type="checkbox"/> None	Co-requisites <input type="checkbox"/> <input checked="" type="checkbox"/> None	Knowledge, Abilities, or Skills A basic background in Mathematics. Ability to research, evaluate and express opinions.	Frequency Once a year, Fall semester	Forms of Learning and Teaching <ul style="list-style-type: none">Tutor-led but interactive classes (35 hours)Tutor-led Tutorials (7 hours)Directed and independent learning (83 hours)
			Duration One semester	Workload 125 hours
Recommendations for Preparation To help students gain a basic understanding of the subject area, a reading list to help prepare them for the topics to be studied during the module will be provided.				
Content and Educational Aims This is the first semester mandatory SUBJECT module for students of the 'Society' subject area. It introduces students to the internal and external context of business practice and management. It will delve into business aspects of strategic management, introduce modern and classical business theories, and explain the role of leadership, globalization, and financial management in business. Detailed topics are included in the module syllabus.				
Intended Learning Outcomes By the end of this module, students will be able to <ul style="list-style-type: none">Understand the key business concepts and terminologies.Explain the way in which firms develop their business strategy in relation to the economy.Comprehend the interplay of objectives and priorities between business stakeholders.Differentiate between modern and classical management theories.Articulate fundamental marketing principles, theories and practices.State factors that determine the successful operations of a business.Explain the impact of globalization in business operations.Elaborate on the role of social responsibility in business and management.Comprehend financial management concepts through managerial and financial accounting.State how companies manage crises and business interruption.				
Usability and Relationship to other Modules Foundation Business and Management is a subject area-specific module in 'Society' and provides together with the 'Introduction to Social Sciences' module appropriate preparation for students wishing to study in the fields of Business, Industrial Engineering or Social Sciences at Constructor University.				
Assessment Midterm and Final Assessment Weight: 40% Midterm Written Exam + Term Paper 60% Final Written Exam Scope: Topics studied as covered by the Learning Outcomes A passing grade of at least 45% is needed to complete the International Foundation Year and be able to move on to degree studies at Constructor University.				

Module Name		Module Code		Level	CP
INTRODUCTION TO SOCIAL SCIENCES		PD-S-1202		FOUNDATION	5.0
Module Components					
Number	Name			Type	CP
PD-S-1202	Introduction to Social Sciences			Tutor-led Seminar style classes	5.0
Module Coordinator	Program Affiliation			Mandatory Status	
IFY Head of Academics	<ul style="list-style-type: none">International Foundation YearSUBJECT module Semester two			Mandatory for 'Society' subject area	
Entry Requirements	Pre-requisites	Co-requisites	Knowledge, Abilities, or Skills	Frequency	Forms of Learning and Teaching
				Duration	Workload
<input checked="" type="checkbox"/> High School Diploma <input type="checkbox"/> None	<input type="checkbox"/> <input checked="" type="checkbox"/> None	<ul style="list-style-type: none">A basic background in general knowledgeAbility to research, evaluate and express opinions	Once a year, Fall semester	<ul style="list-style-type: none">Tutor-led but interactive classes (35 hours)Tutor-led Tutorials (7 hours)Directed and independent learning (83 hours)	125 hours
Recommendations for Preparation					
To help students gain a basic understanding of the subject area, a reading list to help prepare them for the topics to be studied during the module will be provided.					
Content and Educational Aims					
This is the second semester SUBJECT module for students of the 'Society' subject area. It introduces students to the fundamental social sciences concepts in relation to the subjects of sociology, politics, economics, and international relations. The course will introduce the key theorists in the development of social sciences as well as elaborate on the role and impact of culture, technology, and the government in society. Detailed topics are included in the module syllabus.					
Intended Learning Outcomes					
By the end of this module, students will be able to					
<ul style="list-style-type: none">Understand fundamental social sciences concepts and terminologies.State the key theorists in the development of social sciences.Comprehend how sociology impacts the understanding of society.Explain the elements of culture and multiculturalism.Articulate the role of technology on society.Differentiate on the purpose of institutions in society.Correlate the interconnection of politics and society.Elaborate on the organization of economic activities.Clarify the link between international relations and society.Express the key aspects of political economies of developing countries.					
Usability and Relationship to other Modules					
Introduction to Social Sciences is a subject area-specific module in 'Society' and provides together with the module 'Foundation Business and Management' an appropriate preparation for students wishing to study in the fields of Business, Industrial Engineering or Social Sciences at Constructor University.					
Assessment					
Midterm and Final Assessment					
Weight: 40% Midterm Written Exam					
50% Final Written Exam + 10% Final Oral Exam					
Scope: Topics studied as covered by the Learning Outcomes					
A passing grade of at least 45% is needed to complete the International Foundation Year and be able to move on to degree studies at Constructor University. This is the entrance module for Qualification students into the relevant undergraduate programs.					



↑ Campus Center
Research II, III
E.ON Energy
Laboratory
Laboratory II
Alfried Krupp College
E, F
East / West Hall
South Hall
BIGSSS
Student Activities
Center
Colleges
Sports Facilities

← TheaterSpace
Cinema
College Nordmetall



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