Academic Guide Exchange 2023-2024

Faculty of IT & Design

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THE HAGUE
UNIVERSITY OF
APPLIED SCIENCES

Academic Guide Exchange 2023-2024

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Inhoud

About the Faculty of IT & Design

About the Faculty of IT & Design ICT and digital developments form an important part of our society. Computers are used in every area of everyday life and that starts as soon as you wake up in the morning: you read all your messages on your mobile phone and check what you have to do that day. And when travelling with public transport, you check in using your chipcard. The future of our society is intertwined with the development of ICT technologies and digital design. The Hague University of Applied sciences offers a wide range of opportunities to follow courses which eventually contribute to a bright future. Whether at school or at work, practically everything has become computerised.

In this leaflet you will find information about a variety of courses taught in English at the Faculty of IT & Design. The Faculty offers courses in English in the following fields of interest.

Communication & Multimedia Design (CMD)

CMD is a comprehensive, topical and interesting degree programme in the field of design that offers a unique combination of interaction design, visual design, ICT, media and communication. We focus on the process of Look & Listen, Create Concepts, Design Details and Realise and train our students to become interaction designers. An interaction designer designs an interface that ensures optimum interaction between people and systems.

User Experience Design (UXD)

Whether it's a smart fridge that replenishes itself online, or a watch that tracks our activity, the user experience of digital technology has become a reality for every professional designer. You might already have some ideas of how to improve your daily life with the use of technology, but what UXD teaches you is to funnel your creativity by putting the end users of your product at the forefront of the designing process.

HBO-ICT

What did you do when you woke up? WhatsApp, put a photo on Snapchat? Later you probably did a payment with your bank card and checked the news on you smart-phone? All this is possible thanks to life changing ICT. HBO-ICT combines creativity and functionality to make you develop this fast changing sector. The bachelor programme consists of 5 specialisations: Software Engineering, Business and Management, Information Security Management, Network and Systems Engineering and Information and Media Studies.

The Faculty ITD has three campuses: The Hague, Delft and Zoetermeer. Each location has its own character. The main campus in The Hague is the largest and characterized by a vibrant and international atmosphere. The campus in Zoetermeer is located in the Dutch Innovation Factory: a place where education, research and companies meet and closely collaborate. The campus in Delft is located, together with our technical faculty, on the premises of TU Delft. Please note on which campus your course takes place; if your minor is in Delft or Zoetermeer and you opt for housing in the Hague, additional travel expenses may be applicable.

Courses

Find below an overview of all courses offered in English at the Faculty of IT & Design

Courses	ECTS	Fall Semester 1 Term 1	Fall Semester 1 Term 2	Spring Semester 2 Term 3	Spring Semester 2 Term 4
European Project Semester	30	x		x	
User Experience Design	30	x			
Game Development	30	x		x	
Photography in Focus/Basic Video Production	30	x			
Becoming the next successful online startup	30	x		x	
Software reversing and exploitation	30			x	

You will be placed on the course of your preference based on available places. When this course is full, we will make you another offer.

European Project Semester

Interdisciplinary

Climate change, poverty or security, the problems we are facing today are complex. Strong disciplinary knowledge does not suffice to solve these problems; we need professionals who are prepared to look at problems from different perspectives and who have learnt to collaborate with professionals from other disciplines. The European Project Semester (EPS) is crafted to prepare students with all the necessary skills to face the challenges of today's fast changing world.

Students work in international and interdisciplinary Scrum teams of 4–8 students on their projects. Students learn to learn and to take responsibility for their learning and their project work and they develop their intercultural competences, their communication skills and their interpersonal skills.

Students work in an interdisciplinary and international student team on a project provided by an external partner: company, research group or other organisation. Students will apply their disciplinary knowledge and skills and learn from students from other disciplines.

European Project Semester	
Credits	*30 ECTS*
Code	ITD-HMVT23-K70
Entry requirements	Passed the first two years of a bachelor programme
Semester	Fall and Spring semester
Method	Workshops and project work
Lecturer(s)	Anneke Wieman, a.wieman@hhs.nl +31 6 86808911; Molood Aleebrahimdehkordi, m.aleebrahimdehkordi@hhs.nl +31 6 28837905
Learning outcomes	In this minor, you will learn the following: • To evaluate your knowledge on different cultures in an international group of students • To express yourself well in business English during oral presentations • To write a structured research report in English • To demonstrate a critical and investigative attitude, including: - to be able to formulate relevant research questions - to be able to apply relevant search strategies - to select and apply relevant theories • To clearly describe research results in a research report • To be able to bridge cultural differences in order to carry out a project successfully • To apply your own disciplinary knowledge to the project and to respect and value the input of people from other disciplines • To combine relevant disciplinary knowledge from different group members (including your own) to develop an innovative solution for a company's problem. • To demonstrate your progress in three selected 21st century skills

	• To apply Scrum appropriately to develop the final solution
Recommended or required reading/tools	Bring your own laptop. Other tools and literature will be provided.
Assessment methods	Group assessment (45%), individual portfolio (15%), group assignments (40%)
Level	Undergraduate: fourth year
Location	The Hague
Course content	Technical know-how will be provided by experts from companies involved and the nature of it is based on the type of project. In each group attention will be paid to - Intercultural communication (15%) - Research (10%) - English (15%) - Project (60%: Scrum, collaboration, personal development and content depending on the type of project)

Game Development

Have you always dreamed of developing your own game? Did you ever wonder how the game you played was built? Or are you intrigued with items like concept art and storytelling? In this minor, you will be part of a (bigger) multidisciplinary team developing your own game. You will gain experience in collaborating with people from different disciplines and are encouraged to enrich your way of thinking in the game development domain.

You are free (within certain constraints) to come up with a proposal and a so-called game design document (GGD), for a game. This proposal will be assessed on complexity and feasibility. Your project team consists of members from different disciplines: engineers, designers, artists. It is important that everybody has the possibility to develop themselves.

For the development of your game the Unity game engine is used, but for the technical disciplines some parts will be disabled for implementing your own versions of engine components, such as the physics engine, the scripting engine or addition of AI.

During the development of the game you will be rewarded with achievements by accomplishing milestones (continuous assessment of knowledge and skills). At the end of the minor, the project will be presented at a conference where all interested people and companies involved are invited.

This minor could interest students from different programs within The Hague University. By offering you to apply for different roles (profiles) the course is especially suitable for HBO-ICT and CMD. Also, students of other programs can join, but are maybe limited to the role they can choose (see admission requirements).

Game Development	
Credits	30 ECTS
Code	ITD-HMVT23-K85
Entry Requirements	There are no formal requirements, however students may be limited in their choices if they don't have a technical background.
Semester	Sem 1 (term 1&2) & Sem 2 (term 3&4)
Method	The course uses different didactical approaches. The project, in which you create your own game (as a group) is the most dominant part. Next to that we offer a theoretical basis in the form of lectures and workshops. Other approaches that are used are: student feedback sessions (guided by lecturers) and presentation sessions (in which students present their (intermediate) results). The total of the study load is 30 credits. The grade is calculated with a weighted average between the project part and the track part (lectures, self-study, company visit).
Lecture(s)	Mathijs Koning, gamedevelopment@hhs.nl
Learning outcomes	In this minor, you will work in a group consisting of eight students, which requires some group management skills. Additionally, every student chooses classes to focus on a specific role(s) they will fulfill within the group. It is mandatory to attend at least four different classes, but all classes are scheduled in a way you could attend all of them.

	Below you'll find the different roles and some examples of their responsibilities. **Game Producer** Responsible for managing the group, organizing the EXPO, possible product owner. **Game Designer** Design the experience the game tries to achieve for its players through its core mechanics. Main contributor to the Game Design Document (GDD). **Level Designer** Create beautiful levels, tell a story in each level and invent puzzles. **Sound Designer** Make the game feel alive and keep your players' heads banging by designing sound effects and background music. **Storyteller** Use the game to engage the player in an intriguing story. **Concept Artist** Convey your ideas for use in video games before it is put into the final product. Combine traditional techniques with modern day technology and learn about different stages in the design stadium like sketching, inking and rendering. **Game Programmer** Code the game mechanics and the main gameplay loop, communicate with the engine code, unit test mechanics. **Artificial Intelligence Programmer** Code the A.I. your players battle against without making the game an impossible challenge. **Graphics Programmer** Optimize code to achieve high frame rates and create custom tools, rewrite some core engine mechanics, make the game look good with custom shaders and effects. **Physics Programmer** Write the core utilities of the game and (under its hood) in the engine using a lot of your Math & Physics skills. **3D modelling** Create 3D models using meshes and textures and everything in between. The roles the student chooses have influence on the classes/lessons to follow. You must choose at least four classes. BUT we do plan all classes in such a way that the schedule makes it possible to attend all classes, even those that are not mandatory for your chosen classes/roles.
Recommended or required reading/tools	The lecturers provide materials through the Brightspace course of the minor. There are no mandatory resources/literature students are expected to buy. It is, however, important to note that using a 3D Game Engine or 3D modeling software can be

	resource-heavy, so we recommend having a decent laptop available that can run this kind of software.
Assessment methods	There will be no written tests in this game development course! But there are assignments to make per class. **Individual portfolio of achievements** 50% or your grade will be determined by the number of achievements you'll earn during the course. You will be granted achievements by attending lessons and by finishing individual assignments. There are even bonus achievements that are hidden so you don't know beforehand how to get them! Silver achievements are granted by attending all lectures of a track. Each track offers two gold achievements in the form of individual assignments. Each track also offers two platinum achievements, which are individual assignments of a higher skill level that have more impact on your final grade. In order to complete the WHOLE semester, you need at least eight Gold achievements (to get a 6 as a grade). If you also get eight Platinum achievements, then your final grade for the achievements is a 10. **Making a game** The other 50% of the grade will be determined by your group project and your individual contribution to that project. The project will be graded by the lecturers of the minor: each of them focusing on their own area of expertise.
Level	Undergraduate
Location	Zoetermeer
Course content	See Learning Outcomes.

Becoming the next successful online start-up (interdisciplinary)

Everyone can be an entrepreneur, as long as you have long-lasting idea and??? will to transfer your idea into a success! This course is the ultimate experience for students who want to find out whether they fit the role of entrepreneur, and whether they have the ability to start a successful (profitable) online start-up.
In this course you will realise your idea. It is not 'just a school assignment'. You will speak with real life customers or businesses, you will figure out what their problems are and you will build a website, app, tool or product which actually solves the problem of that customer or company. Sounds simple, doesn't it? Well, in reality it is hard work. But it is fun too.
Online Start-Up is a real 'hands-on' course and a great chance to work on your innovative idea. You can work on it by yourself, or in a small team. You will be supported by teachers, as well as company speakers that give you the insights on what they have learned and experienced in their companies.

Course Content

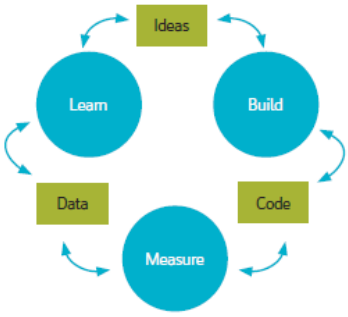
In 'Becoming the Next Successful Online Start-Up' we will guide you through the early phases of entrepreneurship. Therefore we will use the Lean Start-Up – Methodology by Eric Ries.

Lean Start-Up by Eric Ries

Where traditional companies mainly focus on creating an extensive business plan, Lean Start-Up thinks of building your own company in a completely different way. The main idea of Lean Start-Up is that you improve your idea or product continuously.
This thought is executed by a Build-Measure-Learn strategy. Only within weeks you will create your first minimal viable product (MVP) and start measuring whether this product actually adds value from the perspective of your primary target group.

Basics of entrepreneurship

Besides transferring your idea into an online product, this course teaches you several necessary basics of entrepreneurship,
such as:
Founders shares: who owns and earns what within your company-team?
Customer Segments: what is your main target group and what are their pains and problems?
Business Model Canvas: we'll use the BMC-model to give you a solid basis as entrepreneur
Competitors: what is your position in the market, compared to other parties?
Pitching: what makes your pitch successful in gaining investor capital

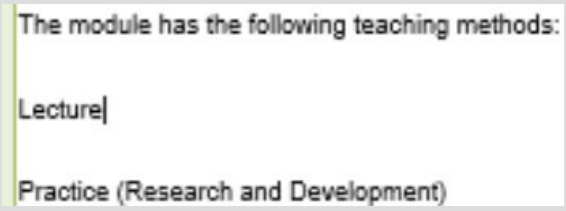


Learning Goals

This course is an extensive introduction in the many aspects of entrepreneurship. If you already have a business idea, the course gives you a chance to discover if your primary idea is life worthy. If you are 'just' interested in the concept of entrepreneurship, this course forms an excellent experience of 'feeling like an entrepreneur' for ten weeks.

Entry Requirements

This is a hands-on course. One of the goals is to make a success of your idea. You have to contact customers and arrange appointments with companies. If you are not sincerely willing to invest time and effort in this, this might not be the right course for you.

Becoming the next succesfull online start-up (interdisciplinary)	
Credits	30 ECTS
Code	ITD-HMVT23-K68
Entry Requirements	Students need to have an idea for an online/software concept, such as a website, app or cloud-application. Furthermore, students must be willing to invest real time and effort in transforming their idea into a success. In addition, students must have experience with any one of the following subjects: designing software applications or interfaces, business IT management, software development, user experience design or any related business subjects, mostly focused on information technology.
Semester	Sem 1 (term 1&2) & Sem 2 (term 3&4)
Method	
Lecture(s)	Anil Manraj
Learning outcomes	• Starting a successful online start-up requires a different approach than starting a traditional company. Instead of creating an extensive business plan, you learn how to build your company by continuously improving your concept based on the Build – Measure - Learn strategy. How? • Analysing: Students will analyse the market, their team and their idea. They will make assumptions about their target group Research Skills: Students continuously measure whether an idea actually adds value from the perspective of the primary target group. • Managing the Project: Students will build a team and divide the roles and the work within the team with Lean Start up. • Pitching: Students will have to convince a jury of their own idea with a pitch in English. • Co-creation: Students need to work in smalls teams where effort and investments must be divided equally. • Build-Measure-Learn: Students will validate their assumptions and learn from feedback to make a pivot and change their original plan.

<table>
<tr><td></td><td>MVP: Students will be transforming an idea into a concrete (online) product (MVP) with market potential with the help of Lean Start up and Business Model Canvas
Product- or service development: Students from multidisciplinary teams will develop their idea into a real IT related product or service.</td></tr>
<tr><td>Recommended or required reading/tools</td><td>Book: Eric Ries, The lean startup (recommended purchase)</td></tr>
<tr><td>Assessment methods</td><td>Requirements: Students must pass all weekly assignments as part of their portfolio (minimum 5.5 per product)<table><tr><th>.Testform</th><th>Percentage</th><th>Week</th><th>Retry</th></tr><tr><td>Portfolio</td><td>75%</td><td>wk 1 t/m 18</td><td>Same term, wk 10</td></tr><tr><td>Assessment (oral exam)</td><td>25%</td><td>wk 19</td><td>Same term, wk 10</td></tr></table></td></tr>
<tr><td>Level</td><td>Undergraduate. Completed the first two years of major</td></tr>
<tr><td>Location</td><td>Zoetermeer</td></tr>
<tr><td>Course content</td><td>Developing a brand new IT-related startup isn’t as easy as it seems: do you really understand the problems and needs that your potential customers are experiencing? Do you know what they currently do to solve these problems and/or needs? Are you sure that the solution in mind solves them and that you can build a viable business around them? Throughout the program, students refine their startup’s hypothesized business model based on instructor, peer, and customer feedback and experience common challenges faced by startup-entrepreneurs as they build a their new company in a step-by-step approach. In interactive live lectures and with strongly involved startup coaches, students will learn how to develop a business model to test their assumptions about product offerings and market demand. This includes the development of their first (functional) prototype.

This minor program is ideal for IT students who have a new startup idea in mind prior to joining the class.</td></tr>
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Software Reversing and Exploitation

Given the increased dependency on software in our lives and the ever-present misuse of security vulnerabilities in software by cyber attacks, this course's aims to provide a deep dive into the field of reverse engineering software to find and exploit security vulnerabilities. Students will review key research papers from the history of binary analysis and (automated) vulnerability discovery, up to the current state-of-the-art. The instructors of this course have a strong belief in learning by using a hands-on approach. Students will be provided with technical challenges to solve via online Capture the Flag education, during which students will evaluate tools and techniques actively used in the field. Students will also be provided with the opportunity to spend time on an individual learning track preparing for, or enroll in, a relevant (certification) program: OSCP/OSCE or pwn.college.

Software reversing and exploitation	
Credits	30 ECTS
Code	ITD-MINOR23-K94
Entry Requirements	This course is for students who are near the end of their bachelor education. Background knowledge in reading and writing software is preferred and students should expect a steep learning curve in analysing C code and Assembly language at the beginning of the course.
Semester	Sem 2 (term 3&4)
Method	Hybrid lectures, lab assignments and personal project.
Lecture(s)	Mike Gilhespy (m.d.gilhespy@hhs.nl)
Learning outcomes	Given the increased dependency on software in our lives and the ever-present misuse of security vulnerabilities in software by cyber attacks, this course's aims to provide a deep dive into the field of reverse engineering software to find and exploit security vulnerabilities. The main focus of this course will be on binary analysis under both the Windows and Linux operating systems. Students will be trained on viewing security issues from an attacker's perspective to better understand what needs to be fixed and how.
Recommended or required reading/tools	Bring your own laptop (minimun 8GB RAM).
Assessment methods	(1) Presentation, participation and lab assignments minimum pass rate: satisfactory (2) Portfolio on write-ups (50%), minimum pass rate: 4.5 (3) Portfolio on learning track or project (50%), minimum pass rate: 4.5 Minimum pass rate course: 5.5 Assessment (1) will be throughout the course, based on the planning of the presentations. Assessment (2) and (3) will be at the end of the course.
Level	Undergraduate: fourth year
Location	Zoetermeer
Course content	In order to properly fix security vulnerabilities in applications, a good understanding is required on how the application's software works internally and how software interacts with its computer operating system. Students will be provided a deep dive into the theoretical background and will review key research papers from the history of binary analysis and (automated) vulnerability discovery, up to the current state-of-the-art. The instructors of this course have a strong belief in learning by using a hands-on approach. Students will be provided with technical challenges to solve via online Capture the Flag education, during which Students will evaluate tools and techniques actively used in the field. Students will also be provided with the opportunity to either choose to spend time on an individual learning track preparing for, or enroll in, a relevant

	(certification) program: OSCP/OSCE or pwn.college. They may also choose to spend time on a group project to work together in answering a course related research question. This course will be assessed via presentations and portfolio assignments in which students are required to provide write-ups on their approach and explain why related theory is important for their learning.

Photography in Focus/Basic Video Production

This minor offers an introduction to the world of visual communication, specifically the creation and processing of images; both still and moving.
Learning 'to see' is key. The aim of this minor is that this leads to the production of meaningful images; images that shape the ideas of the maker. To achieve this, knowledge of photographic and film technique is necessary. This (basic) technique is discussed extensively in the minor. In addition to this practical knowledge, the minor focuses on photography from a historical and theoretical perspective.
After completing the minor, the student can independently communicate a message or short story effectively by means of images, supported by audio.

Photography	
Credits	30 ECTS
Code	ITD-MINOR23-K96E
Entry Requirements	First year of bachelor's degree The student requires certain hardware and software and must be able to work independently.
Semester	Semester 1
Method	Work forms: (Based on Blended Learning principles) Classroom instruction, group work, workshops, online consultation and homework assignments. Weekly 2 lectures and 1 workshop in the schedule.
Lecturer(s)	Leon Schröder (L.C.Schroder@hhs.nl)
Learning Outcomes	The following 4 competences are central to this minor. • Creative ability: the student develops the ability to produce solutions from various perspectives in the creation of still and moving images. • Capacity for critical reflection: the student can evaluate their own work and that of others.

	• Organizational ability: the student is able to organize internal and external factors for an effective and inspiring work and research process • Communicative ability: the student is able to present and justify their own work and development. These competences are practised in the various components and phases of the minor and are translated into the following learning objectives: • The student can translate an idea into a photographic image. • The student can effectively use different photographic (basic) techniques. • The student is aware of historical developments in photography and can analyze and comment on them. • The student can show their vision on contemporary expressions of photography or visual arts. • The student is able to execute image editing programs at a basic level; Apply Photoshop, InDesign, Lightroom and Premiere Pro in their work process. • The student can reflect orally and in writing on their development process. • The student is able to recognize different narrative forms. • The student can edit both image and sound in an editing program. • The student recognizes and uses different interview techniques. • The student knows the basic principles of visual language and knows how to apply these correctly in their own photo/video production. • The student can independently design and shape a video project. They choose the appropriate story form and techniques. • The student is able to complete assignments in time that meet the set substantive and formal criteria (photo book and video clips with a specified minimum size and format).
Recommended or required reading/tools	**Laptop, SSD and software:** The student must have a powerful laptop with a properly working version of Adobe CC (at least Lightroom Classic, Photoshop, InDesign and Premiere Pro). Furthermore, the laptop must have at least 100GB of free space and an external SSD of 500GB. **Camera:** a digital SLR or system camera that can make Full HD video recordings, preferably with an external microphone. **Tripod:** A sturdy tripod that reaches at least chest height.
Assessment methods	The student has completed the minor and is entitled to 30 credits if both parts of the minor have been completed satisfactorily. The assessment is divided into: **A. Photography** - 1. Practice (37,5% - minimum requirement 5.5) In week 8 it will be determined whether the student has passed or failed the digital elaboration of the practical assignments. If the assessment is satisfactory, the student can participate in the oral assessment in week 10. During this assessment, the student presents the assignments in a photo book. The mark is

	determined after the assessment by the practical teacher in consultation with the theory teacher. - 2. Theory (12,5%) The theory mark is determined on the basis of the average of the theory test (week 5) and the photo analysis during the assessment. Planning review Photography: Theory test: week 5 (Resit in week 20). Assessment: week 10 (Resit in week 20). **B. Videography** (50%) This part of the minor has three formative tests and an assessment. The student provides a final product for the assessment. The final mark is determined after the assessment, on the condition that all partial tests have been handed in and passed. Planning review Videography: Delivery partial tests weeks 13, 14 and 16. Assessment: week 20 (Resit in week +10)
Level	Undergraduate
Location	The Hague
Course content	This minor consists of two parts: Photography and Videography. **Photography** This part of the minor is built around five practical and three theoretical assignments. On the basis of these assignments, the student investigates possibilities from a specific photographic angle. In 'Texture and Rhythm' the focus is on the interaction between light, depth of field and camera angle. 'Styling' is about designing an advertisement or film still. The assignment 'Light' explores how to create shapes and compositions with light and the human body. In 'Time' refers to making a series of images that have an action or change as a starting point. Finally, with 'Fascination', the student can design his own project. In the classes, the photographic technique, which is necessary to make the assignments, is discussed. In addition to this transfer of practical knowledge, progress in the execution of the assignments is made visible in a digital portfolio on Google Drive. Finally, the student presents all the practical assignments in the form of a photo book. The 'theory' lectures provide the student with the basic knowledge to get started with the assignments. The student learns to recognize and describe different genres, such as documentary photography and advertising photography, and develops an understanding of the historical development of photography. **Videography** This part of the minor focuses primarily on making video. Theory lessons support the creation of the videos. In theory classes, a variety of narrative forms in documentaries and interviews and

	the various story structures (chronological, use of flashbacks) are discussed. Attention is also paid to a number of important technical aspects such as light, frequencies, audio formats, codecs, resolution and frame rates, quit claims and copyright on images and music.

International Semester UXD: User Experience Design

This international 20-week semester covers the foundations of user experience design (UXD) and consists of several courses. The semester allows a maximum of six exchange students (in order of registration). Please find below an overview of courses in the semester.

International Semester UXD	
Credits	30 ECTS
Code	The semester consists of the modules listed under “Course content”.
Entry requirements	**English level B2 or higher (mandatory), C1 recommended**
Semester	Fall semester

Method	Mixed methods, varies per course.
Lecturer(s)	Contact person: Ruud Brok (r.j.f.brok@hhs.nl)
Learning outcomes	The student: - Understands different facets of UXD and is able to explain and assess the user experience of a digital product using UX terminology. - Is able to conduct a creative design process using the design thinking methodology. - Demonstrates curiosity, creativity, and bravery in design work and communication. - Is able to reflect on the impact of design on the intended user(s). - Demonstrates self-expressivity and professional attitude. There are more detailed learning outcomes per course module, which will be published in the corresponding study guides.
Recommended or required reading/tools	Bring your own laptop. It is required to obtain the license for Adobe Creative Cloud. Required books: - Hanington, B., Martin, B., *Universal Methods of Design, Expanded and Revised: 125 Ways to Research Complex Problems, Develop Innovative Ideas, and Design Effective Solutions (Rockport Universal*. ISBN: 978-1631597480. Other tools and literature will be provided.
Assessment methods	UXD-RD-22: assignment week 8 UXD-SC-1-17: assignment week 7, assessment week 8 UXD-IUX-1-16: assignment week 8 UXD-DC-20: assignment week 7 UXD-PC-20: assignment week 10, assessment week 10 UXD-BTP-22: assignment week 18, assessment week 19 UXD-P1-1-16: assessment week 18 UXD-OP-20: assignment week 18
Level	Undergraduate: first year
Location	The Hague
Course content	**UXD-RD-22 Research for Design (3 ECTS)** UX designers are investigative designers. To have your curiosity effectively spark your inspiration and to make founded choices in your design processes you need to build an understanding of research and to develop your research skills. On this course, you learn basics of ethnographic observation and interview methods that aim at gaining empathy towards the people you are designing for. **UXD-SC-1-17 Professional Skills (3 ECTS)** The course focuses on fundamental professional skills, such as intercultural sensitivity, communication, and working in groups. You will construct an intercultural portfolio. Under this course, you will also participate in a community-building field trip. **UXD-IUX-1-16 Introduction to User Experience (3 ECTS)** You will gain insight into what User Experience is and what factors to take into account when creating a great User Experience. When defining User Experience, people tend to talk about three aspects: what experience is, the quality of the experience and the design of experience. We find it important to define and teach all three. On this course, you will create a frame of reference on UX and its terminology and make a product review video. **UXD-DC-20 Design and Creativity (3 ECTS)**

Creativity is a crucial ingredient of design. On this course, you learn about your own creativity and you are trained to further develop your creativity. Sketching is an important skill to enhance creativity and to cooperate with others in design processes. On this course you familiarize yourself with design skills such as exploring solution spaces and generating ideas in visual ways. You learn about design processes (iteration, diverge/converge), and you practice various related skills for ideation. You will try out different creative techniques and you will experiment with different visual techniques.

UXD-PC-20 Programming Class (3 ECTS)
On this course, you will learn the fundamentals of programming and making digital prototypes. After an introductory assignment in prototyping, a 1-week intensive bootcamp focuses on stimulating creativity and validating solutions with programming. The aim is to teach knowledge and understanding of the logic and structure required in programming. It does not aim to teach programming for any single production environment or specific object (e.g. front or backend development, smartphone), but to more broadly look at the creative potential of code.

UXD-BTP-22 Building and Testing Prototypes (5 ECTS)
Prototyping is a fundamental element in digital design. In this course, you learn to apply different prototyping methods and tools to make your design come to life so that people can experience the design before it is implemented. An important part of the process is also to use the right methods of testing and evaluation in order to learn how to improve the design.

UXD-P1-1-16 Project Bespoke Design (6 ECTS)
As with a lot of concepts used in a rapidly developing field there isn’t a set definition of what 'bespoke' means within the UX industry. But ongoing development of technologies in three- dimensional scanning, rapid prototyping and advanced manufacturing will have a major impact on the potential ability to fulfil the individual consumer's needs directly and instantly. In this project, we will use bespoke design in the sense of fitting the needs, personality & lifestyle and context of a user, and using empathy to really understand what this user wants and needs. Designing for one particular user will give you an understanding of how people experience things and how technology can play a role in people’s daily lives. In the project, you will go through all the stages of a design thinking process to arrive at a meaningful and engaging design.

UXD-OP-20 Online Presence (4 ECTS)
On this course, you will get introduced to HTML/CSS, the essential elements of web development. You will also work on your (online) representation as a future design professional in order to obtain an internship or a design job during or after this study. You will be stimulated to have a curious, creative, experimental and playful attitude, and learn what you can gain if you engage others in or with your projects.