



Course Catalogue Engineering and ICT

EXCHANGE PROGRAMME

Data-driven Innovation 2021-2022

Description of unit of study				
Course code	ICT.KS.DDI.V20		Credits: 24 ECTS credits	Target group: Fulltime Regular
Study unit Description	Data Driven Innovation			
Competences	-			
Target group	<p>Data-driven Innovation focuses on aligning Business and IT, preparing a company for the digital future, using data. Data that is already present at the company, in some cases combined with external data.</p> <p>Data-driven Innovation is a structural change in the way an organization can add value to its customers. It is a turning point in thinking about how an organization uses technology to re-establish processes. It changes the business model and therefore offers new opportunities.</p> <p>Organizations need to adapt to this change by focusing on optimizing the customer's gain, control and retention. Processes can be redesigned, just as marketing, production and sales. And that also creates needs for a new policy on security, privacy and ethics. This is more and more controlled based on data-driven insights. But it also offers new possibilities in terms of learning and prediction.</p> <p>You obtain advanced knowledge about project management, creating business solutions and doing research, while working on a project for a customer. You work with data, sometimes to recognize patterns, sometimes to forecast, sometimes to organize a datalab, or....</p> <p>There are many options, but data-driven innovation is the key.</p>			
Educational content	<p>Data-driven Innovation projects can vary considerably. In Data-driven Innovation, every project is different, which means that the learning opportunities can vary as well. It is up to the student how you choose to shape your semester.</p> <p>To help the students with their projects, a number of workshops can be attended. Some of them are obligatory (e.g., project management, planning), others are elective (scrum, game design etc.). The workshops are not graded individually, but are aimed to contribute to the success of the specific projects.</p> <p>Students enrolled in this minor will select two Professional Skills (3 ECTS credits each course) from our list of elective courses (Leadership, Financial Management, 7 Habits etc.)</p> <p>Some examples of content are: Organizing and setting up a datalab; Forecasting production based on data of the past; Machine learning; Business Process Redesign; Integration of several different systems and applications; Using data to predict the effect of climatological issues; Formulating a(n) (renewed) IT strategy and policy; Dealing with and effects of the GDPR for the organisation; IT architecture or application management.</p>			
Teaching methods	<p>Students work on a large project for 20 weeks. The project is done for actual client or in a real-life setting. The multidisciplinary student teams of 3 to 5 students work on the project for 32 hours every week (Tuesday to Friday) at school or at the client's location.</p> <p>As part of the project there are project coaching sessions, workshops contributing to your project and regular presentations in which students share their obtained knowledge and progress.</p> <p>The professional skills are scheduled on Mondays.</p> <p>Therefore students will need to be available from Monday to Friday during this semester.</p>			
Teaching aids	Only freely-accessible learning materials are being used. When specific hardware or software is needed for your project, this will be provided. Sometimes a client has specific software. Use of it, and the conditions, will be discussed with the client.			
Supervisory activity	Students are coached in their project groups on a weekly basis. Workshops will contribute to the project's needs.			
Level	Gevorderd (Advanced)			
Grading domain	1 t/m 10, 1 dec.			
Assessment	Sub assessment	Grading domain	Weight	Caesura
	Portfolio	1 t/m 10, 1 dec.	1	Higher or equal to 5.5
	Professional Attitude	Not achieved / Achieved	0	Higher or equal to 5.5
Reading list				