Course Catalogue Engineering and ICT

EXCHANGE PROGRAMME

Process Optimization 2023-2024

University of Applied Sciences Windesheim

Course summary VOE Code: EDPPO.21 ECTS credits: 10 Level: Bachelor's degree (full-time)			
Course Title	Project Process Optimization		
Type	Compulsory		
Learning competences			
Learning outcomes	The goal is to learn how to assess the quality of a business process and, using Lean / Six Sigma, to come up with improvements in a structured way and to implement these in an existing organisation, taking into respect company strategy, management and the work floor.		
Course content	Doing research into the quality of a business process and to find improvements in a structured way.		
Planned learning activities and teaching methods	Students work in small project groups on an improvement project in a company.		
Recommended or required reading and other learning resources / tools	none specific		
Prerequisites and co-requisites	You are required to have two years of Bachelor's study experience in a relevant field and English-language skills at B2 level.		
Level	Bachelor		
Grading scale	P1 = 1 up to 10, 1 dec. P2 = Not Achieved/Achieved		
Assessment methods and criteria	**Type of assessment**	**Grade weighting**	**Criteria**
	P1 Project Process Optimization	1	Higher or equal to 5.5
	P2 Theme	0	Higher or equal to 5.5
Language of Instruction	English		
Name of lecturer	For information about the lecturers you can contact Paul Touw		
Mode of delivery	Coaching and intervision		

Course summary VOE Code: EDLQRM.21 ECTS credits: 5 Level: Bachelor's degree (full-time)	
Course Title	Lean/QRM
Type	Optional
Learning competences	
Learning outcomes	In this course you will learn to setup a process to address the constraint in the organization and increase the performance of an organization as a whole. You will learn the principles and advantages of lean and Quick Response Manufacturing in different production environments.
Course content	1. LEAN Game LEGO. What happens in the process, which techniques are applied 2. LEAN Maturity levels, Six Sigma Maturity Model, QRM Maturity Model 3. CASE Value Stream Map-current state 4. QRM fundaments 5. Guest speaker 6. CASE Value Stream Map-Future state 7. QRM- Guest speaker 8. Company visit 9. Additional subjects
Planned learning activities and teaching methods	- lectures - practical lessons - individual and group assignments - reflection and coaching

Recommended or required reading and other learning resources / tools	Recommended: “It’s about Time” Rajan Suri (ISBN: 978-1-4398-0595-4)		
Prerequisites and co-requisites	You are required to have two years of Bachelor’s study experience in a relevant field and English-language skills at B2 level.		
Level	Bachelor		
Grading scale	P1 = 1 up to 10, 1 dec.		
Assessment methods and criteria	**Type of assessment**	**Grade weighting**	**Criteria**
	P1 Lean/QRM	1	Higher or equal to 5.5
Language of Instruction	English		
Name of lecturer	For information about the lecturers you can contact Paul Touw		
Mode of delivery	Practical Skills lessons		

Course summary VOE Code: EDCA.21 ECTS credits: 5 Level: Bachelor’s degree (full-time)			
Course Title	Change Agent		
Type	Optional		
Learning competences			
Learning outcomes	Objectives: - The student analyzes and eleborates which interventions are necessary to include people in the change process - The student gains insight into his role as a Change Agent		
Course content	Theory and cases about behaviour change. Students learn how to analyse and change behaviour and learn what it means to be a change agent		
Planned learning activities and teaching methods	- lectures - practical lessons - individual and group assignments - reflection and coaching		
Recommended or required reading and other learning resources / tools	The ladder by Ben Tiggelaar (is provided in the online learning environment).		
Prerequisites and co-requisites	You are required to have two years of Bachelor’s study experience in a relevant field and English-language skills at B2 level.		
Level	Bachelor		
Grading scale	P1 = 1 up to 10, 1 dec.		
Assessment methods and criteria	**Type of assessment**	**Grade weighting**	**Criteria**
	P1 Change Agent	1	Higher or equal to 5.5
Language of Instruction	English		
Name of lecturer	For information about the lecturers you can contact Paul Touw		
Mode of delivery	Face to face		

Course summary VOE Code: EDSX.21 ECTS credits: 5 Level: Bachelor’s degree (full-time)	
Course Title	Six Sigma
Type	Optional
Learning competences	

Learning outcomes	To use the Six Sigma methodology - Design, Measure, Analyse, Improve, Control - as a tool for improving processes.		
Course content	Overview of Six Sigma Management, Six Sigma Roles, Responsibilities and Terminology, Dashboard of Six Sigma Management, Define Phase, Measure Phase, Analyse Phase, Improve Phase, Control Phase, Design of Experiments.		
Planned learning activities and teaching methods	• lectures • seminars • workshop with Design of Experiments (using Minitab)		
Recommended or required reading and other learning resources / tools	Calculator Gitlow, Levine (2012). *Six Sigma for Green Belts and Champions. Upper Saddle River, New Jersey, USA: Financial Times Press (Pearson)*		
Prerequisites and co-requisites	You are required to have two years of Bachelor's study experience in a relevant field and English-language skills at B2 level.		
Level	Bachelor		
Grading scale	P1 = 1 up to 10, 1 dec.		
Assessment methods and criteria	**Type of assessment**	**Grade weighting**	**Criteria**
	T1 Six Sigma	1	Higher or equal to 5.5
Language of Instruction	English		
Name of lecturer	For information about the lecturers you can contact Paul Touw		
Mode of delivery	Face to face		

Course summary VOE Code: EDSIM.21 ECTS credits: 5 Level: Bachelor's degree (full-time)	
Course Title	Simulation
Type	Optional
Learning competences	
Learning outcomes	**Theory** • To learn how to implement a simulation study for logistical purposes. • To recognize when simulation can be used as a tool for decision-making, especially for logistical problems in a manufacturing environment. • To be able to make simple calculations as a means of validating a simulation study. **Practical** • To acquire knowledge of simulation as a tool for decision support. • To practice to be able to use simulation while tackling logistical problems. • To learn how to work with the simulation software Enterprise Dynamics. • To learn how to interpret and analyse the results from a simulation study.
Course content	**Theory** • simulation: what, why and when? • inside simulation software • simulation studies: an overview • conceptual modelling • developing the conceptual model • data collection and analysis • model coding • experimentation: obtaining accurate results • experimentation: searching the solution space • implementation • verification, validation and confidence **Practical** • tutorial layout • Enterprise Dynamics background • first contact with Enterprise Dynamics

	• model building basics • analysing the results • playing with strategies After the introduction to Enterprise Dynamics the student will perform several case studies.		
Planned learning activities and teaching methods	• lectures • practical		
Recommended or required reading and other learning resources / tools	None		
Prerequisites and co-requisites	You are required to have two years of Bachelor's study experience in a relevant field and English-language skills at B2 level.		
Level	Bachelor		
Grading scale	1 up to 10, 1 dec.		
Assessment methods and criteria	**Type of assessment**	**Grade weighting**	**Criteria**
	P1 Simulation	1	Higher or equal to 5.5
Language of Instruction	English		
Name of lecturer	For information about the lecturers you can contact Paul Touw		
Mode of delivery	Coaching		