

Supplementary Course (EVA) at ZHAW School of Engineering

Title: Cost management in product development
Short Code: rEVA_CMPD

ECTS Credits	3
Profile	Mechanical Engineering (ME)
Responsible Institute /Centre	Institute of Product Development and Production Technologies (IPP)
Responsible lecturer and contact informtion	Frank Huber, frank.huber@zhaw.ch, +41 58 934 73 72
Type and duration of examinations	Written module final exam, 2 lessons
Start date and duration	Semester: Spring Detail: Friday, calendar week 8, 08:00
Location	Winterthur
Course type	Weekly, semester rhythm • Contact hours: 21 (hrs) Teaching in class • Guided self-study: 29 (hrs) Group work, learning tasks, case studies • Independent self-study: 40 (hrs) Literature study, preparation and follow-up of lessons, exam preparation
Language of instruction	German
Short description (max. 300 characters)	In this module, you will learn how to apply cost-oriented development and design and improve your systematic approach through target costing. In practice-oriented examples, you will train cost reduction and the application of methods and learn to identify problems of a constructive and organisational nature.
Contents and Learning Objectives	<u>Module content:</u> The module teaches important basics, methodology and organisation of cost management in product development. The students learn about and apply the target cost-oriented procedure and its relationship to the superordinate method of integrated product development. Using typical methods, you will learn to define target costs, to calculate them during development and to reduce the life cycle costs of products through various measures. <u>Learning objectives:</u> The Students • know proven types of cooperation, organisation, methods and tools to develop and design products cost-effectively.

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	• have basic business knowledge and are informed about the most important cost terms as well as types of cost calculations. • are able to define cost targets, develop products towards them and adhere to the set targets. • know the most important cost estimation methods and are able to calculate and track costs even in early development phases. • know which main variables influence costs. • are able to combine methodical with cost-effective development and thus design innovative and cost-effective products in a process.			
Prerequisites	Bachelor's degree in mechanical engineering from a Swiss university of applied sciences. Depending on the degree, a Bachelor's degree in systems or electrical engineering from a Swiss UAS may also be considered, provided basic knowledge of methodical product development in the field of mechanical, equipment or plant engineering can be demonstrated.			
Literature	Klaus Ehrlenspiel, Alfons Kiewert, Udo Lindemann, Markus Mörtl: <i>Kostengünstig Entwickeln und Konstruieren.</i> <i>Kostenmanagement bei der integrierten Produktentwicklung.</i> Springer Vieweg. 2020 - ISBN 978-3-662-62590-3 ISBN 978-3-662-62591-0 (eBook)			
Special requirements	-			
Offer for profiles	Aviation (Avi)	☐	Business Engineering (BE)	☒
	Computer Science (CS)	☐	Data Science (DS)	☐
	Electrical Engineering (EIE)	☐	Energy & Environment (EnEn)	☐
	Mechanical Engineering (ME)	☒	Mechatronics & Automation (MA)	☒
	Medical Engineering (Med)	☐	Photonics and Laser Engineering (Pho)	☐
	Information and Cyber Security (ICS)	☐	Civil Engineering (CE)	☐