Course Descriptions None 2022-2023

Course Title	Process and Product Engineering
Course Code	BENC2002
ECTS Credits	5,0
Assessment	Whole/Half Grades

Period

Period	Start	End	Mon	Tue	Wed	Thu	Fri
2	31-10-2022	16-12-2022	X		X		L

Level	no level
Coordinator	Carla Koopman For more information:c.koopman@maastrichtuniversity.nl
Language of instruction	English
Goals	* Reproduce knowledge on production, manufacturing and assembly processes * Identify and connect different disciplines that are required to choose the optimal production processes * Perform calculations to solve basic problems of production and related business processes * Apply the new knowledge to formulate a strategy to engineer production processes * Demonstrate understanding of scalability and forthcoming globalization of production and manufacturing * Quickly acquire new knowledge of state-of-the-art process and product engineering methods
Description	PLEASE NOTE THAT THE INFORMATION ABOUT THE TEACHING AND ASSESSMENT METHOD(S) USED IN THIS COURSE IS WITH RESERVATION. A RE-EMERGENCE OF THE CORONAVIRUS AND NEW COUNTERMEASURES BY THE DUTCH GOVERNMENT MIGHT FORCE COORDINATORS TO CHANGE THE TEACHING AND ASSESSMENT METHODS USED. THE MOST UP-TO-DATE INFORMATION ABOUT THE TEACHING/ASSESSMENT METHOD(S) WILL BE AVAILABLE IN THE COURSE SYLLABUS. The emphasis of this course will be on manufacturing of products, which require raw materials (process engineering) that are fed into manufacturing, assembly and quality control process (production engineering). Products can be manufactured in many different ways and careful selection is needed to offer than for a suitable price and quality. You as future business engineer are faced with this cross-functional environment that comprises engineering, manufacturing, production control, quality assurance and business in which an optimum solution needs to be set to achieve continuous added value of products. This requires thorough understanding of product design cycles, manufacturing processes, rapid time to productivity, selection strategies for component and product design and scalability. In this course, you will be introduced to a wide range of manufacturing processes including: casting, forming, shaping, additive manufacturing, machining, micromachining, joining, and surface treatment. To make the understanding more tangible, actual products are introduced at various Technology Readiness Levels (TRL).
Literature	Kalpakjian S, Schmid SR (2014). Manufacturing Engineering and Technology. Pearson, Hoboken, NJ, USA, 7th edition, ISBN 13: 978-981-06-9406-7
Prerequisites	BENC1003 Fundamentals of Engineering
Keywords	
Teaching methods	PBL / Lecture / Assignment / Groupwork
Assessment methods	Written Exam
Evaluation in previous academic year	For the complete evaluation of this course please click http://iwio-sbe.maastrichtuniversity.nl/rapporten.asp?referrer=codeUM

This course belongs to the following programme / specialisation

Bachelor Business Engineering	Year 2 Compulsory Course(s)