

## Course Descriptions None 2021-2022

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

Period	Start	End	Mon	Tue	Wed	Thu	Fri
2	25-10-2021	10-12-2021	X		X		L

Level no level  
Coordinator Gabriëlle Tuijthof For more information: [gabrielle.tuijthof@maastrichtuniversity.nl](mailto:gabrielle.tuijthof@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 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)