

UUDET OPINTOJAKSOT/NEW COURSES				
Tunniste/Code	Opintojakson nimi/Name of the course	Op/ECTS	Vuosikurssi/Year	Periodi/Period
BK10A5700	Manufacturing	3	B.Sc. (Tech.) 1	1-2
BK10A5800	Engineering Mechanics 1	5	B.Sc. (Tech.) 1	1-2
BK10A5900	Materials	3	B.Sc. (Tech.) 1	1-2
BK10A6000	Engineering Mechanics 2	5	B.Sc. (Tech.) 1	3-4
BK10A6100	Technical Documentation and 3D Modeling*	3	B.Sc. (Tech.) 2	1
BK10A6200	Mechatronics*	5	B.Sc. (Tech.) 2	1-2
BK10A6300	Engineering Design*	3	B.Sc. (Tech.) 2	3-4
BK10A6400	Basics of FE-Analysis*	4	B.Sc. (Tech.) 2	3-4
BK10A6500	Engineering Mechanics 3*	7	B.Sc. (Tech.) 2	3-4
BK10A6600	Robotics**	5	B.Sc. (Tech.) 3	1-2
BK10A6700	Production Engineering**	7	B.Sc. (Tech.) 3	1-2
BK50A4600	Production Controlling Technologies and Methods	5	M.Sc. (Tech.) 1	3-4
BK50A4700	Design Communication and Visualization	5	M.Sc. (Tech.) 1	1-2
BK50A4800	Ergonomics in Design*	5	M.Sc. (Tech.) 2	3-4
BK50A4900	Sustainable Design*	5	M.Sc. (Tech.) 2	1-2
BK50A5000	Product Design and Production Process	6	M.Sc. (Tech.) 1	1-2
BK50A5100	Forming and Assembling for Metal Product Design*	5	M.Sc. (Tech.) 2	1-2
BK50A5200	Design Thinking*	4	M.Sc. (Tech.) 2	1-2
BK60A1700	Control and Design of Robot Systems	5	M.Sc. (Tech.) 1	1-2
BK80A3300	Structural and Mechanical System Design*	5	M.Sc. (Tech.) 2	1-2

*ensimmäisen kerran lukuvuonna 2020-2021/Will be organised first time in academic year 2020-2021

**ensimmäisen kerran lukuvuonna 2021-2022/Will be organised first time in academic year 2021-2022

The following courses are only for students of MSc programme in Industrial Design Engineering:

BK50A4700	Design Communication and Visualization	5 ECTS cr
BK50A4800	Ergonomics in Design	5 ECTS cr
BK50A4900	Sustainable Design	5 ECTS cr
BK50A5000	Product Design and Production Process	6 ECTS cr
BK50A5100	Forming and Assembling for Metal Product Design	5 ECTS cr
BK50A5200	Design Thinking	4 ECTS cr
BK80A3300	Structural and Mechanical System Design	5 ECTS cr

MUUTTUVAT OPINTOJAKSOT/COURSES CHANGING			
Uusi opintojakso/New course			Korvaa opintojakson/Replaces the course
Tunniste/Code	Opintojakson nimi/Name of the course	Op/ECTS	Tunniste, nimi ja op-määrä/Code, name, ECTS
BK90C2500	Manufacturing Processes for Recyclable Products	5	BK50A3600 Manufacturing Processes for Recyclable Products 5 ECTS cr
BK10A5002	Modern Packaging and Package Manufacturing	5	BK10A5001 Modern Packaging Lines, Machinery and Package Manufacturing 5 ECTS cr

POISTUVAT OPINTOJAKSOT/COURSES REMOVED			
Tunniste/Code	Opintojakson nimi/Name of the course	Op/ECTS	Korvaava opintojakso (jos päätetty)/Replaced by the course (if any)
BK10A2801	Coating and Lamination of Fibre Based Packaging Materials	5	No replacing course
BK10A3301	Kuitutuotteiden työstötekniikka	3	No replacing course
BK10A4501	Renewable Packaging Material	5	No replacing course
BK10A5101	Functional Intelligent Packages	5	No replacing course
BK50A4000	Production Processes in Modern Job Shops	5	No replacing course
BK50A4100	Manufacturing Systems and Scheduling	5	No replacing course
BK50A4200	Product Flow in Job Shops	5	No replacing course
BK50A4300	Managing Job Shops*	5	No replacing course
BK50A4401	Fabrication Laboratory*	5-10	No replacing course

*järjestetään viimeisen kerran 2019-2020/Will be organised last time in academic year 2019-2020

EI LUENNOIDA 2019-20/NOT LECTURED IN 2019-20		Luennoidaan seuraavan kerran/Next time lectured in	
Tunniste/Code	Opintojakson nimi/Name of the course		
BK10A6100	Technical Documentation and 3D Modeling	2020-2021	
BK10A6200	Mechatronics	2020-2021	
BK10A6300	Engineering Design	2020-2021	
BK10A6400	Basics of FE-Analysis	2020-2021	
BK10A6500	Engineering Mechanics 3	2020-2021	
BK10A6600	Robotics	2021-2022	
BK10A6700	Production Engineering	2021-2022	
BK50A4800	Ergonomics in Design	2020-2021	
BK50A4900	Sustainable Design	2020-2021	
BK50A5100	Forming and Assembling for Metal Product Design	2020-2021	
BK50A5200	Design Thinking	2020-2021	
BK80A3300	Structural and Mechanical System Design	2020-2021	

PERIODIMUUTOKSET/CHANGES TO TEACHING PERIODS			
Tunniste/Code	Opintojakson nimi/Name of the course	2018-19	2019-20
BK10A3401	Green Fibre Materials	4	3
BK10A5200	Industrial Applications of Robot Systems	1-4	1-2
BK10A5400	Digitised Design and Production in Welded and 3D-printed Structures	3-4	1-2
BK10A5500	Tekninen dokumentointi ja 3D-mallinnus	1-3	1-4
BK20A2500	Sustainable Welding Production	3-4	1-2
BK30A1400	Individual Project Work of Laser Technology	1-2	1-2, 3-4
BK90C2000	Hybrid Materials	2	3
BK90C2200	Sustainable Manufacturing of Advanced Materials	3	1
BK90C2400	Project course in Material Engineering	4	2

Jatko-opintojaksomuutokset/Post-graduate course changes 2019-2020

Ei uusia, poistuvia tai muuttuvia jatko-opintojaksoja/No changes to the post-graduate courses

EI LUENNOIDA 2019-20/NOT LECTURED IN 2019-20		Luennoidaan seuraavan kerran/Next time lectured in	
Tunniste/Code	Opintojakson nimi/Name of the course		
BK10AJ005	Postgraduate Research Seminar in Mechanical Engineering	2020-2021	
BK30AJ105	Postgraduate Course in Advanced Digital Photonic Manufacturing	2020-2021	
BK30AJ115	Advanced Photonic Digital Products and Production	2021-2022	
BK60AJ130	Postgraduate Course in Modelling, Simulation and Control of Mechatronic Machines	2020-2021	
BK70AJ106	Postgraduate Course in Finite Element Method	2020-2021	
BK70AJ112	Postgraduate Course in Real-Time Multibody System Dynamics	2020-2021	
BK80AJ110	Computational Methods in Fracture Mechanics	2020-2021	
BK90AJ102	Postgraduate Course in Fiber Composites	2020-2021	

PERIODIMUUTOKSET/CHANGES TO TEACHING PERIODS			
Tunniste/Code	Opintojakson nimi/Name of the course	2018-19	2019-20
BK20AJ115	Postgraduate Course in Materials Weldability and Metallurgy	3-4	1-2