

UUDET OPINTOJAKSOT/NEW COURSES				
Tunniste/Code	Opintojakson nimi/Name of the course	Op/ECTS	Vuosikurssi/Year	Periodi/Period
BK20A3000	Welding Automation	5	DI1	3-4
BK20A3100	Welding and Laser Processing of Metals	5	DI1	3-4
BK30A1600	Laser and Additive Manufacturing Systems	5	DI1	3-4
BK20A3200	Welding Quality and Economy	5	DI2	1-2
BK30A1700	Advanced Additive Manufacturing and 3D Printing	5	DI2	1-2
BK70A0900	Hardware and Software of Automated Vehicles	5	DI2	1-2
BK80A2203	Steel Structures 1	6	Tkk3	1-2
BK60A1800	Developing AI Algorithms for Brain Computer Interface Technology	5	DI2	1-2
BK50A6000	Product Design and Visualisation	10	DI1	1-4
BK50A6001	Design Thinking and Innovation in Design	5	DI1	1-2
BK50A6002	Individual Research Project I	5	DI1	3-4
BK50A6003	Individual Research Project II	5	DI2	1-2
BK50A6004	Human Centered Design	10	DI2	1-4
BK50A6005	Circular Design	5	DI2	1-2
BK10A4101	Modern management and leadership in engineering	5	DI1	intensiivi vko 9

lisätty 8/23

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	
BK10A6202	Mechatronics	5	BK10A6201 Mechatronics 5-6 op	
BK10A3400	Design of Advanced Plate and Shell Structures	5	BK80A4000 Design of Advanced Plate and Shell Structures 5 op	
BK50A6006	Product Design, Visualization and production process	5-10	BK50A6000 Product Design and Visualization 10 op (lv. 23-24: 5 tai 10 op)	

lisätty 8/23

POISTUVAT OPINTOJAKSOT/COURSES REMOVED				
Tunniste/Code	Opintojakson nimi/Name of the course	Op/ECTS	Korvaava opintojakso/Replaced by the course	
BK10A3500	Materiaalitekniikka	7	BK10A5900 Materials ja BK10A6500 Robotics	
BK10A3601	Valmistus- ja tuotantotekniikka	11	BK10A7400 Production Engineering 1, 3 op ja BK10A7500 Production Engineering 2, 7 op	
BK10A4100	Management and Leadership Skills in Mechanical Engineering	5	BK10A4101 Modern management and leadership in engineering 5 op	
BK10A5500	Tekninen dokumentointi ja 3D-mallinnus	6	BK10A6101 Technical Documentation and 3D-modelling	
BK20A2400	Materials and Welding Metallurgy	5	BK20A3100 Welding and Laser Processing of Metals	
BK20A2600	Modelling and Simulation in Welding	5	BK20A3000 Welding Automation*	
BK20A2700	Welding Digitalisation, Automation and Adaptivity	5	BK20A3000 Welding Automation*	
BK20A2800	Quality Management and Assurance in Welding Production	5	BK20A3200 Welding Quality and Economy*	
BK20A2900	Welding Work and Economy	5	BK20A3200 Welding Quality and Economy*	
BK30A0803	Digital Advanced Manufacturing with Lasers	5	BK30A1600 Laser and Additive Manufacturing Systems*	
BK30A0902	Additive Manufacturing and 3D Printing (Basics)	5	BK30A1600 Laser and Additive Manufacturing Systems*	

lisätty 8/23

BK30A1201	Laser Materials Processing	5	BK20A3100 Welding and Laser Processing of Metals
BK30A1301	Laser Based Manufacturing for Design	5	BK20A3200 Welding Quality and Economy*
BK30A1500	Additive Manufacturing and 3D Printing (Advanced)	5	BK30A1700 Advanced Additive Manufacturing and 3D Printing
BK50A5800	From creative idea to market entrepreneurial challenges	5	BK50A5300 Sustainable Materials and Machinery for Packaging
BK60A1500	Practical Laboratory Course in Motion Control and Mechatronics	5	BK70A0900 Hardware and Software of Automated Vehicles
BK65A0203	Tekninen suunnittelu	7	BK10A6300 Engineering Design ja BK10A7300 Machine elements and Principles
BK80A2202	Teräsrakenteet I	6	BK802203 Steel Structures 1
BK80A2800	FE-analyysin sovellukset konetekniikassa	5	BK10A6400 Basics of FE-Analysis
BK90C2600	Nano and Hybrid Materials	5	Ota yhteyttä opintojen ohjaajaan.
BK10A5700	Manufacturing	3	BK10A7400 Production Engineering 1, 3 op
BK10A6700	Production Engineering	7	BK10A7500 Production Engineering 2, 7 op
BK50A4700	Design Communication and Visualization	5	BK50A6006 Product Design, Visualization and production process, 5-10 op
BK50A4800	Ergonomics in Design (luennoidaan vielä kerran 23-24)	5	BK50A6004 Human Centered Design, 10 op, luennoidaan ensimmäisen kerran 24-25
BK50A4900	Sustainable Design	5	BK50A6005 Circular Design, 5 op
BK50A5001	Product Design and Production Process	5	BK50A6006 Product Design, Visualization and production process, 5-10 op
BK50A5201	Innovation in Design	5	BK50A6001 Design Thinking and Innovation in Design, 5 op
BK50A5700	Interactive design for digital consumer products	5	BK50A6004 Human Centered Design, 10 op
BK50A5900	Strategic Product Design Success Stories Workshop	5	BK50A5400 3D-Forming and Converting of Materials 5op

\* Jos opiskelijan opintosuunnitelmassa on sellaisia poistuvia opintojaksoja, joille on osoitettu tässä listassa sama korvaava opintojakso, tulee ottaa yhteyttä opintojen ohjaajaan.

lisätty 8/23

PERIODI- JA VUOSIKURSSIMUUTOKSET/CHANGES TO TEACHING PERIODS AND YEARS			
Tunniste/Code	Opintojakson nimi/Name of the course	2022-23	2023-24

OPINTOJAKSOT, joille myös englanninkielinen toteutus (HEBUT)			HUOM. Erot toteutuksen ajankohdissa
Tunniste/Code	Opintojakson nimi/Name of the course	Op/ECTS	

Jatko-opintojaksomuutokset/Post-graduate course changes			
Tunniste/Code	Opintojakson nimi/Name of the course	2022-23	2023-24