Metropolia UAS	Biotechnology and Chemical	1					L,								
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1st Year of study	Orientation to Field and Studies in Biotechnical,	1												Ţ	
	Chemical and Surface Engineering	30													
	Orientation to Field and Studies	5		х						х	х	Х			
	Fundamentals of Chemistry 1	5	х				х			х					
	Introductory Project and Professional Communication	5	х	х	х					х		х	х		
	Fundamentals of Chemistry 2	5	х							х					
	Fundamentals of Mathematics and Natural Sciences 1	5	х							х					
	Fundamentals of Mathematics and Natural Sciences 2	5	х							х					
	Introduction to Industrial Processes in Biotechnical,	Ť								H				_	
	Chemical and Materials Engineering	30													
	Engineering Chemistry	5	х						х						х
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		5	X			X	X	X	.,	X					X
	Food Chemistry and Nutrition	٥	Х			Х	Х	Х	Х	Х					Х
	Project Course in Biotechnology and Chemical Engineering	_				Ų	.,	.,	.,	.,					v
						Х	Х	Х	Х	Х					Х
	In total	60										_			
2nd Year of study	Properties of Biomaterials	30													
	Sensory Evaluation	5		Х	Х				Х	Х		Х	Х		
	Biochemistry and Gene Technology	5	Х							Х	Х		Х		Х
	Industrial Microbiology	5	Х		Х	х	Х	Х		х	Х		х		Х
	Statistics and Design of experiments	5	Х		Х					х	Х	Х	Х		Х
	Heat Transfer and Fluid Mechanics in Food Engineering	5	х		х	х	х	Х	Х	х			х		Х
	Food Manufacturing 1	5			Х	х	Х	Х	Х	Х	Х		Х		Х
	Biotechnical and Food Processes	30													
	Fermentation Technology	5	х		х	х	х	х	х	х			х		х
	Food Manufacturing 2	5			х	х	х	х	х	х	х		х		Х
	Food Product Development Project	5	х	х	х				х	х	х	х	х		х
	Bioprocess technology	5	Х		Х	х	х	х	Х	Х			Х		х
	Process Hygiene Project	5	x	х	х	x	Х	X		x	х	х	X		x
	Food packaging	5	l ^	ı î	x	x	X	x	х	x	x	x	x		x
	In total	60												_	•
3rd Year of study	Products, Quality and Safety	30													
ora rear or study	Bioproducts	10	v		v	v	v	v	v	v	v	v	v		v
	HSEQ	5	X		Х	X	X	X	X	Х	X	Х	Х		X
	Multidisciplinary Innovation Project	5	X	Ų	v	Х	X	Х	X	v	Х	v	v	Ų	X
	nviuliuiscidiinary innovation Project		X	X	X	.,	X	v,	X	X		Х	X	Х	X
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	Process Planning Project	10													
	Process Planning Project Plant Design and Profitability Calculations	15												Х	
	Process Planning Project Plant Design and Profitability Calculations Current Topics in Biotechnology and Food Engineering	15 5	х	х	х		х		х	х	х		Х		Х
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	Process Planning Project Plant Design and Profitability Calculations Current Topics in Biotechnology and Food Engineering Engineering Swedish Industrial Business Finnish as a Second Language: Finnish at Work	15 5 5 5	х		х				х	х		x x	x x		
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4th Year of study	Process Planning Project Plant Design and Profitability Calculations Current Topics in Biotechnology and Food Engineering Engineering Swedish Industrial Business Finnish as a Second Language: Finnish at Work Elective Study Module	15 5 5 5 5 5			x				х	x x	х		x	х	х
4th Year of study	Process Planning Project Plant Design and Profitability Calculations Current Topics in Biotechnology and Food Engineering Engineering Swedish Industrial Business Finnish as a Second Language: Finnish at Work Elective Study Module In total	15 5 5 5 5 15		х		x	x	x	x	x x	х		x	х	х
4th Year of study	Process Planning Project Plant Design and Profitability Calculations Current Topics in Biotechnology and Food Engineering Engineering Swedish Industrial Business Finnish as a Second Language: Finnish at Work Elective Study Module In total Bachelor's Thesis Bachelor's Thesis	15 5 5 5 15 60		х		x	x	x		x x x	х		х	х	x x
4th Year of study	Process Planning Project Plant Design and Profitability Calculations Current Topics in Biotechnology and Food Engineering Engineering Swedish Industrial Business Finnish as a Second Language: Finnish at Work Elective Study Module In total Bachelor's Thesis Bachelor's Thesis Work Placement	15 5 5 5 15 60 15 15 30		x		x	x	x		x x x	х	X	x	x x	x x
4th Year of study	Process Planning Project Plant Design and Profitability Calculations Current Topics in Biotechnology and Food Engineering Engineering Swedish Industrial Business Finnish as a Second Language: Finnish at Work Elective Study Module In total Bachelor's Thesis Bachelor's Thesis Work Placement Work Placement 1	15 5 5 5 15 60 15 15 30	x	x			x x			x x x	х	x	x x	x x	x x
4th Year of study	Process Planning Project Plant Design and Profitability Calculations Current Topics in Biotechnology and Food Engineering Engineering Swedish Industrial Business Finnish as a Second Language: Finnish at Work Elective Study Module In total Bachelor's Thesis Bachelor's Thesis Bachelor's Thesis Work Placement Work Placement 1 Work Placement 2	15 5 5 5 15 60 15 15 15	x	x		x	x	x		x x x	х	X	x	x x	x x
4th Year of study	Process Planning Project Plant Design and Profitability Calculations Current Topics in Biotechnology and Food Engineering Engineering Swedish Industrial Business Finnish as a Second Language: Finnish at Work Elective Study Module In total Bachelor's Thesis Bachelor's Thesis Work Placement Work Placement 1	15 5 5 5 15 60 15 15 30	x	x			x x			x x x	х	x	x x	x x	x x