

University of Oulu

Programme Structure Diagram 2020–2021

Kaivos- ja rikastustekniikan maisteriohjelman / Master's Degree Programme in Mining Engineering and Mineral Processing

(including: IMDP Mineral Resources and Sustainable Mining: Mining Engineering and Mineral Processing)

Master of Science in Technology (2 years, 120 ECTS Credits)

Code and link to the course description in Oodi	Course name	ECTS cr	Suggested timing	Suggested timing							
				1. academic year				2. academic year			
				autumn		spring		autumn		spring	
				P1	P2	P3	P4	P1	P2	P3	P4
Study option: Mining Engineering											
Compulsory and free choice courses											
				P1	P2	P3	P4	P1	P2	P3	P4
493301A	Mining geophysics	5	I	5,0							
491686S	Advanced rock mechanics	5	II		5,0						
772694S	Geometallurgy and mineral processing	5	II						5,0		
492607S	Stress wave theory and applications	5	I	5,0							
491688S	Rock dynamics and applications	5	I	5,0							
492600S	Mining engineering	10	III-IV			5,0	5,0				
492608S	Rock blasting	5	II						5,0		
492602S	Financial and project valuation of mining	5	II		5,0						
492603S	Mining project feasibility study	5	IV				5,0				
493609S	Mining, environment and society	5	III			5,0					
491602S	Professional practical training	5	I					5,0			
466107S	Free choice: Design of concrete structures	6	III-IV			x	x				
	Other free choice courses	29	I-IV		5,0	5,0	5,0	10,0	5,0		
491601S	Master's thesis	30	III-IV							15,0	15,0
491600S	Maturity test	0	IV								0,0
	ECTS Credits / Period (15 credits)			15,0	15,0	15,0	15,0	15,0	15,0	15,0	15,0
	ECTS Credits / Semester (30 credits)			30,0	30,0	30,0	30,0	30,0	30,0	30,0	30,0
	ECTS Credits / Academic year (60 credits)			60,0				60,0			
	Degree (120 credits)			X				120,0			
Study option: Mineral Processing											
Compulsory and free choice courses											
				P1	P2	P3	P4	P1	P2	P3	P4
772694S	Geometallurgy and mineral processing	5	II						5,0		
493606S	Mine geology	5	I	5,0							
772335A	Introduction to ore mineralogy	5	I-II	2,5	2,5						
477713S	Automation in mineral processing	5	IV				5,0				
493605S	Ore beneficiation technologies	5	I	5,0							
491687S	Process modeling in mineral processing	5	II		5,0				x		
493607S	Quality requirements for concentrate	5	III			5,0					
493608S	Development of beneficiation processes	10	III-IV			5,0	5,0				
492603S	Mining project feasibility study	5	IV				5,0				
493609S	Mining, environment and society	5	III			5,0					
491602S	Professional practical training	5	I					5,0			
	Free choice courses	30	I-II	2,5	7,5			10,0	10,0		
491601S	Master's thesis	30	III-IV							15,0	15,0
491600S	Maturity test	0	IV								0,0
	ECTS Credits / Period (15 credits)			15,0	15,0	15,0	15,0	15,0	15,0	15,0	15,0
	ECTS Credits / Semester (30 credits)			30,0	30,0	30,0	30,0	30,0	30,0	30,0	30,0
	ECTS Credits / Academic year (60 credits)			60,0				60,0			
	Degree (120 credits)			X				120,0			
Study option: Applied Geophysics											
Compulsory and free choice courses											
				P1	P2	P3	P4	P1	P2	P3	P4
493301A	Mining geophysics	5	I	5,0							
494601S	Electrical and EM-methods I (every second year, on 2021-22)	5	I					5,0			
494602S	Electrical and EM-methods II (every second year, on 2021-22)	5	III							x	
494603S	GIS applications	5	II		5,0						
494604S	Seismic soundings	5	IV				5,0				
494605S	Potential fields and airborne geophysics I (every second year, on 2020-21)	5	I	5,0							
494606S	Potential fields and airborne geophysics II (every second year, on 2020-21)	5	III			5,0					
493606S	Mine geology	5	I					5,0			
492603S	Mining project feasibility study	5	IV				5,0				
493609S	Mining, environment and society	5	III			5,0					
492602S	Financial and project valuation of mining	5	II		5,0						
491602S	Professional practical training	5	I					5,0			
	Free choice courses	30	I-VI	5,0	5,0	5,0	5,0		15,0		
491601S	Master's thesis	30	III-IV							15,0	15,0
491600S	Maturity test	0	IV								0,0
	ECTS Credits / Period (15 credits)			15,0	15,0	15,0	15,0	15,0	15,0	15,0	15,0
	ECTS Credits / Semester (30 credits)			30,0	30,0	30,0	30,0	30,0	30,0	30,0	30,0
	ECTS Credits / Academic year (60 credits)			60,0				60,0			
	Degree (120 credits)			X				120,0			
				2020-21				2021-22			