MASTER´S DEGREE, FOREST SCIENCES, 2026-2030, 120 cr

ADVANCED STUDIES: FOREST ECONOMICS, BUSINESS AND SOCIETY -STUDY TRACK, 73 cr

After each course is the responsible teacher's name.

	cr	study year
KK-ENG516/KK-ENG501 Academic writing (Language Center)	2	1-2
KK-ESP/KK-ITA/KK-KII/KK-RAN/KK-SAK/KK-VEN/Finnish/Swedish Language studies, according to PSP (Language Center)	3	1-2
FOR-018 Introduction to MSc programme in forest sciences (Mirja Mikkilä, Markku Larjavaara)	3	1
FOR-002 Career portfolio and internship or a special project (Juha Rikala, Mika Rekola)	5	1-2
FOR-003 Master´s thesis seminar (Petri Parvinen)	5	2
FOR-004 Master´s thesis (Angelina Korsunova-Tsaruk)	30	2
FOR-101 Responsible business management in circular and bioeconomy (Anne Toppinen)	5	1
FOR-103 Quantitative methods and data (Sami Berghäll)	5	1-2
FOR-104 International forest policy, politics and power (Maria Brockhaus)	5	1
FOR-113 Forest business economics (Mirja Mikkilä)	5	1
FOR-108 Qualitative empirical research methods, approaches and research ethics (Maria Brockhaus)	5	1-2
VIIKM-001 Master´s maturity test	0	2

ELECTIVE ADVANCED STUDIES

FOREST ECONOMIS, BUSINESS AND SOCIETY STUDY TRACK, CHOOSE 15 cr

	cr	study year
Sustainable business management and innovations:		
ENT-300 Innovation management & entrepreneurial thinking module	15	1-2
ENT-301 Innovation, sustainability & society	5	1-2
FOR-115 From ideas to solutions	5	1-2
FOR-106 Business strategy and management simulations	5	1-2
GreenTech Linkage	5	1-2
AGRI-224 LCA in the context of agriculture and forestry	5	1-2
EKM-127 Sustainable Entrepreneurship	5	1-2
Forest finance and economics:		
FOR-105 Sales management and business models	5	1-2
FOR-106 Business strategy and management simulations	5	1-2
AGERE-A05 Production and cost theory	5	1-2
AGERE-E09 Advanced natural resource economics	5	1-2

AGERE-A10 Sustainable Financing	5	1-2
FOR-114 Unpacking inequality in the global forest sector – learning from the Congo Basin	5	1-2

Policy and society:

FOR-111 Behavioural change for sustainability	5	1-2
ECGS-302 Sustainability in a diverse society	5	1-2
ENT-301 Innovation, sustainability & society	5	1-2
AGERE-A10 Sustainable Financing	5	1-2
EKM-127 Sustainable Entrepreneurship	5	1-2
FOR-114 Unpacking inequality in the global forest sector – learning from the Congo Basin	5	1-2

ELECTIVE STUDIES, FOREST ECONOMICS, BUSINESS AND SOCIETY STUDY TRACK, 32 cr

Studies according to the PSP:
For example studies abroad, language studies, forest sciences courses from forest ecology and management study track (ME-201-ME-241, FOR-211-FOR-276)
ENT-300 Innovation management and entrepreneurial thinking 15 cr
FOR-011 Tieteen popularisointi (Carita Lindstedt-Kareksela) 3-5 cr
FOR-014 Making a scientific article 1-12 cr
FOR-015 Working as a teaching assistant 1-5 cr
FOR-9000, FOR-9001 Studies with changing content 1-10 cr
FOR-271 Practical course in bioinformatics (Fred Asiegbu) 5 cr
Greentech linkage (Petri Parvinen, Jens Schmidt) 10 cr
SUST-001 Sustainability course 3 cr (if you have not completed it in the bachelor's degree)
ECGS-302 Sustainability in a diverse society 5 cr
TKT21018 Elements of AI: Tekoälyn perusteet 2 op
VIIKM-002 Tutoring 5 cr
VIIKM-003 Orientation week 1 cr
VIIKM-005 Demanding participation in administrative bodies and student organizations 2-5 cr
VIIKM-200 Study module accomplished at another university
VIIKM-201 Study module accomplished abroad
VIIKM-202 Liiketoimintaosaaminen 25-40 op
Courses taken at other universities
Unipid study module: Sustainability in development 25 cr Virtual Studies Module — UniPID

MASTER´S DEGREE ALTOGETHER 120

ADVANCED STUDIES: FOREST ECOLOGY AND MANAGEMENT STUDY TRACK 83 cr

	cr	study year
FOR-018 Introduction to MSc programme in forest sciences (Mirja Mikkilä, Markku Larjavaara)	3	1
FOR-002 Career portfolio and internship or a special project (Juha Rikala, Mika Rekola)	5	1-2
FOR-003 Master´s thesis seminar (Markku Larjavaara)	5	1-2
FOR-004 Master´s thesis (Teemu Hölttä)	30	1-2
FOR-005 Advanced literature (Teemu Hölttä)	5	1-2
FOR-017 R-basic course (Teppo Mattsson)	5	1-2
FOR-007 Tilastollisia malleja: Yleistettyjen lineaaristen mallien perusteet (Teppo Mattsson)	5	1-2
VIIKM-001 Master´s maturity essay	0	2
Module according to specialization	25	1-2

ELECTIVE STUDIES, FOREST ECOLOGY AND MANAGEMENT STUDY TRACK, 37 cr

Studies according to PSP:
For example studies abroad, language studies, courses in statistics, courses from forest economics, business and society study track (ME-101-ME-107, FOR-101-FOR-112), another module from forest ecology and management
FOR-008 Tilastollinen ennustaminen ja otanta (Teppo Mattsson) 5 cr
FOR-009 Statistical modelling with R (Teppo Mattsson) 5 cr
FOR-011 Tieteen popularisointi (Carita Lindstedt-Kareksela) 3-5 cr
FOR-014 Making a scientific article 1-12 cr
FOR-015 Working as a teaching assistant 1-5 cr
FOR-9000, FOR-9001 Studies with changing content 1-10 cr
ENT-300 Innovation management and entrepreneurial thinking 15 cr
SUST-001 Sustainability course 3 cr (if you have not completed it in the bachelor's degree)
ECGS-302 Sustainability in a diverse society 5 cr
ATM-309 Analysis of atmosphere-surface interactions and feedbacks 5 cr
Greentech linkage (Petri Parvinen, Jens Schmidt) 10 cr
TKT21018 Elements of AI: Tekoälyn perusteet 2 op
VIIKM-002 Tutoring 5 cr
VIIKM-003 Orientation week 1 cr
VIIKM-005 Demanding participation in administrative bodies and student organizations 2-5 cr
VIIKM-200 Study module accomplished at another university
VIIKM-201 Study module accomplished abroad

VIIKM-202 Liiketoimintaosaaminen 25-40 op
Courses taken at other universities
Unipid study module: Sustainability in development 25 cr Virtual Studies Module — UniPID

MASTER´S DEGREE ALTOGETHER 120

Modules in the master´s degree

FOR-100 Advanced studies in forest economics, business and society/Metsäekonomia, liiketalous ja yhteiskunta -syventävät opinnot (Angelina Korsunova-Tsaruk)
FOR-309 Advanced studies in ecosystem function and biogeochemistry/ Metsäekosysteemien toiminnan ja biogeokemian syventävät opinnot (Jussi Heinonsalo)
FOR-310 Advanced studies in production ecology, silviculture and land use management/Metsien tuotoksen, metsänhoidon ja maankäytön syventävät opinnot (Marjo Palviainen)
FOR-311 Advanced studies in Biodiversity, evolution and interactions in forests/Metsien biodiversiteetin, evoluution ja vuorovaikutusten syventävät opinnot (Fred Asiegbu, Tanja Pyhäjärvi)
FOR-314 Advanced studies in tropical forestry, agroforestry and land use (Edward Webb)
FOR-208 Advanced studies in forest resource management and geoinformatics/Metsävarojen hallinnan ja geoinformatiikan syventävät opinnot (Markus Holopainen)
FOR-209 Advanced studies in forest operations and wood supply management/Metsäteknologian ja logistiikan syventävät opinnot (Jori Uusitalo)
FOR-210 Advanced studies in wood material science/Puumateriaalitieteen syventävät opinnot (Tuula Jyske)
VIIKM-301 other studies in the master's degree (include electives 20 cr/39 cr)
FOR-315 Business oriented forest resource management/Liiketoimintakeskeinen metsävarojen hallinta (Kyle Eyvindson)

MODULES ACCORDING TO SPECIALIZATION: FOREST ECOLOGY AND MANAGEMENT STUDY TRACK 25 cr

Choose at least one of the following modules

FOR-309 Ecosystem function and biogeochemistry/Metsäekosysteemien toiminta ja biogeokemia 25 cr

Choose at least 25 cr of following	**cr**	**study year**
FOR-211 Tree ecophysiology (Albert Porcar Castell)	5	1-2
FOR-217 Forests and peatlands as modifiers of atmospheric composition (Jaana Bäck)	5	2
FOR-218 Basics of biometeorology (Teemu Hölttä)	3/5	1
FOR-223 Ecology of peatlands (Annamari Laurén)	5	(even years)
FOR-227 Methods to study forest soils (Kristiina Karhu) (prerequisite for FOR-275 ja FOR-230 courses)	5	(even years)
FOR-228 Forest ecosystem biogeochemistry (Jussi Heinonsalo)	5	1-2

FOR-230 Forest soil and root ecology (Jussi Heinonsalo)	5	(even years)
FOR-275 Soils and Climate Change (Kristiina Karhu)	5	(lectures odd years)
FOR-284 Methods in ecophysiology (Albert Porcar-Castell)	5	(even years)
AGRI-414 Pedogenesis and Soil Classification	3/5	(odd years)

FOR-310 Production ecology, silviculture and land use management/Metsien tuotos, metsänhoito ja maankäyttö 25 cr

Compulsory course 5 cr	**cr**	**study year**
FOR-221 Advanced silviculture (Marjo Palviainen)	5	1-2

Choose at least 20 cr of following	**cr**	**study year**
FOR-291 Trees, forests and people (Markku Larjavaara)	5	1-2 (odd years)
FOR-285 Climate change mitigation and adaptation in forestry (Jaana Bäck)	5	(even years)
FOR-220 Monitavoitteisen metsänhoidon menetelmät (Marjo Palviainen)	5	1-2
FOR-224 Soiden luonnonvarasuunnittelun kenttäkurssi (Kari Minkkinen)	5	(even years)
FOR-290 Turpeen käyttö Suomessa - tavoitteet ja ristiriidat (Kari Minkkinen)	3	(odd years)
FOR-226 Restoration of ecosystems: theory and practice (Kristiina Karhu, Markku Larjavaara)	5	(odd years)

FOR-311 Biodiversity, evolution and interactions in forests/Metsien biodiversiteetti, evoluutio ja vuorovaikutukset 25 cr

Choose at least 25 cr of the following	**cr**	**study year**
FOR-233 Advanced forest mycology & pathology (Fred Asiegbu)	10	1-2
FOR-232 Forest microbiology (Fred Asiegbu)	10	1-2
FOR-231 Basic biotechnology applications in forestry (Fred Asiegbu)	5	1
FOR-238 Alien species (Petri Nummi)	4	(even years)
FOR-272 Herbivory and trophic interactions in a changing world (Carita Lindstedt-Kareksela)	5	(odd years)
FOR-235 Multidisciplinary view on insect outbreaks and host-pathogen dynamics (Carita Lindstedt-Kareksela)	5	(odd years)
FOR-288 Riistaelinympäristöjen hoito ja kunnostus (Petri Nummi)	5	1-2
EEB-104 Field course in mammalian ecology	5	1-2
(Janne Sundell)	5	1-2 (odd years)
FOR-289 Riistatalouden suunnittelu (Sari Holopainen)	5	(even years)
FOR-278 Forest tree breeding and genetic resources (Tanja Pyhäjärvi)	5	(even years)
FOR-279 Forest tree genomics, evolution and adaptation (Tanja Pyhäjärvi)	5	(odd years)

FOR-271 Practical course in bioinformatics (Fred Asiegbu)	5 cr	1-2

FOR-314 Tropical forestry, agroforestry and land use/Trooppinen metsätalous, agrometsätalous ja maankäyttö 25 cr

Compulsory courses 15 cr	**cr**	**study year**
FOR-276 Sustainable forestry and agroforestry in the tropics (Edward Webb)	5	1-2(even years)
FOR-281 Tropical landscape change (Edward Webb)	5	1
FOR-292 Livelihoods, food security and resilience in the Global South (Heini Vihemäki)	5	1-2 (odd years)

Choose at least 10 cr of following	**cr**	**study year**
FOR-247 Methods and tools in tropical forestry (Edward Webb)	5	1-2
FOR-248 Field course: Tropical forests and agroforests (Edward Webb)	5	(odd years)
FOR-104 International forest policy, politics and power (Maria Brockhaus)	5	2
FOR-108 Qualitative empirical research methods, approaches and research ethic (Maria Brockhaus)	5	1-2
EEB-301 Fundamentals of conservation biology	2	1-2
GEOG-340 Introduction to conservation geography	3	1-2
GEOG-341 Geography of megatrends, environmental change and development in the Global South	5	1-2

FOR-208 Forest Resource Management and Geoinformatics/Metsävarojen hallinta ja geoinformatiikka 25 cr

Choose at least 25 cr of following	**cr**	**study year**
FOR-254 Metsävarojen inventointi- ja suunnitteluprojekti (Ilkka Korpela) (Can be completed in English)	10	1-2 (even years)
FOR-294 Novel measurement technologies and applications (Samuli Junttila)	5	1-2 (even years)
FOR-295 Methods in multiobjective forest planning (Kyle Eyvindson)	5	1-2
FOR-258 GIS-analyysi ja mallinnus (Markus Holopainen)	5	1-2 (even years)
FOR-260 Advanced 3D remote sensing of forests (Markus Holopainen, Samuli Junttila)	5	1 (odd years)
FOR-263 Operations research in forest resource management (Kyle Eyvindson)	5	1-2 (even years)
FOR-283 Open GIS (Markus Holopainen)	5	1-2 (online course)
STE-121 Remote sensing of environment (Samuli Junttila)	5	1-2 (xx years)
STE-122 GeoAI in management of natural resources	5	1-2 (xx years)

STE-123 Natural resources, big data analysis and management	5	1-2 (xx years)

Recommended courses in Forest resource management and geoinformatics:
FOR-007 Tilastollisia malleja: Yleistettyjen lineaaristen mallien perusteet (Teppo Mattsson) 5 cr
FOR-008 Tilastollinen ennustaminen ja otanta (Teppo Mattsson) 5 cr
FOR-009 Statistical modelling with R (Teppo Mattsson) 5 cr

FOR-209 Forest operations and wood supply management /Metsäteknologia ja logistiikka 25 cr

Compulsory courses 15 cr	**cr**	**study year**
FOR-265 Terramechanics and trafficability prediction (Jori Uusitalo)	5	1-2 (even years)
FOR-266 Wood supply chain management (Jori Uusitalo)	5	1-2 (odd years)
FOR-280 Precision harvesting (Jori Uusitalo)	5	1-2 (odd years)

Choose two of the following	**cr**	**study year**
FOR-263 Operations research in forest resource management (Kyle Eyvindson)	5	1-2 (even years)
AGRI-104 Measurement technology	5	1-2 (even years)
STE-113 Simulation of production systems	5	1-2 (xx years)
STE-131 Management science – quantitative analyses to decision making	5	1-2 (xx years)

FOR-210 Wood material science/ Puumateriaalitiede 25 cr

Compulsory courses 20 cr	cr	study year
FOR-267 Wood science (Tuula Jyske)	5	1-2
FOR-287 Innovations and foresight: future camp of wood based materials (Tuula Jyske)	5	1-2
FOR-269 Wood as building and furniture material (Tuula Jyske)	5	1-2
FOR-270 Novel wood-based materials (Tuula Jyske)	5	1 (even years)

Choose at least 5 cr of following	**cr**	**study year**
FOR-296 Rakennetun ympäristön kestävyysmurros (Tuula Jyske)	5	1-2
FOR-101 Responsible business management in circular and bioeconomy (Anne Toppinen)	5	1-2
FOR-106 Business strategy and management simulations (Mika Rekola, Juuso Töyli)	5	1-2
AGERE-A10 Sustainable financing	5	1

FOR-315 Business oriented forest resource management/Liiketoimintakeskeinen metsävarojen hallinta 25 cr

Choose at least 25 cr of following	**cr**	**study year**
Forest economics		
FOR-106 – Business strategy and management simulations	5	1-2
FOR-113 – Forest business economics	5	1-2
Forest management		
FOR-263 – Operations research in forest resources management	5	1-2 (even years)
FOR-283 – Open GIS	5	1-2
FOR-266 Wood procurement supply chain and information management	5	1-2 (odd years)
FOR-295 Methods in multiobjective forest planning	5	1-2
FOR-270 Novel wood-based materials	5	1-2

MODULES OFFERED FOR OTHER DEGREE PROGRAMMES

FOR-301 Module in Geoinformatics/Geoinformatiikan opintokokonaisuus (Markus Holopainen)
FOR-303 Module in Peatland Ecology and Management/Soiden ekologian ja käytön opintokokonaisuus (Kari Minkkinen)
FOR-304 Module in Forest Soil Sciences/Metsämaatieteen opintokokonaisuus (Jussi Heinonsalo)
FOR-308 Module in management and restoration of forest and peatland ecosystems/ Metsä- ja suoekosysteemien hoidon ja ennallistamisen opintokokonaisuus (Marjo Palviainen)

FOR-301 Module in Geoinformatics/ Geoinformatiikan opintokokonaisuus 25 cr

Choose at least 25 cr of following	**cr**	**timing**
ME-203 Geoinformatiikka 1/ME-204 Geoinfomatics 1	5	web course
ME-232 Kaukokartoitus 1 / ME-246 Remote sensing 1 in English, online course	5	
ME-230 Geoinformatiikka 2	5	
FOR-283 Open GIS	5	(web course)
FOR-258 GIS-analyysi ja mallinnus	5	(even years)
FOR-260 Advanced 3D remote sensing of forests	5	(odd years)
FOR-294 Novel measurement technologies and applications	5	(even years)
STE-121 Remote sensing of environment	5	(even years)
STE-122 Geospatial Artificial Intelligence (GeoAI) in Management of Natural Resources	5	(even years)
STE-123 Natural Resources Big Data Analysis and Management	5	(odd years)

FOR-303 Module in Peatland Ecology and Management/Soiden ekologian ja käytön opintokokonaisuus 25 cr

Choose at least 25 cr of the following	**cr**	**timing**
ME-201 Metsämaiden ominaisuudet, prosessit ja kasvupaikkaluokittelu	5	
ME-013B Metsätieteiden kenttäkurssi: metsä- ja suoekologia ja metsänhoito	5	
ME-249 Metsähydrologia	5	
ME-247 Ojitusalueemetsien hyödyntäminen: mahdollisuudet ja ongelmat	5	(odd years)
FOR-223 Ecology of Peatlands	5	(even years)
FOR-224 Soiden luonnonvarasuunnittelun kenttäkurssi	5	(odd years)
FOR-225 Turpeen käyttö Suomessa - tavoitteet ja ristiriidat	3	(even years)

FOR-304 Module in Forest Soil Sciences/ Metsämaatieteen opintokokonaisuus 25 cr

Choose at least 25 cr of the following	**cr**	**timing**
ME-201 Metsämaiden ominaisuudet, prosessit ja kasvupaikkaluokittelu	5	
ME-013B Metsätieteiden kenttäkurssi: metsä- ja suoekologia ja metsänhoito	5	
FOR-227 Methods to study forest soils	5	
FOR-228 Forest ecosystem biogeochemistry	5	
FOR-230 Forest Soil and root ecology	5	(even years)
AGRI-414 Pedogenesis and soil classification	3	
or other courses according to PSP		

FOR-308 Module in management and Restoration of Forest and Peatland Ecosystems/ Metsä- ja suoekosysteemien hoidon ja ennallistamisen opintokokonaisuus 25 cr

Choose at least 25 cr of the following	**cr**	**timing**
FOR-220 Monitavoitteisen metsänhoidon menetelmät	5	
FOR-221 Advanced silviculture	5	
FOR-223 Ecology of peatlands	5	(even years)
FOR-224 Soiden luonnonvarasuunnittelun kenttäkurssi	5	(even years)
FOR-290 Turpeen käyttö Suomessa - tavoitteet ja ristiriidat	3	(even years)
FOR-226 Restoration of ecosystems: Theory and practice	5	(odd years)
ME-244 Bioenergia	5	(odd years)

MODULE OFFERED FOR ALL FACULTY'S DEGREE PROGRAMMES

ENT-300 Innovation management and entrepreneurial thinking/Innovaatioiden johtaminen ja yrittäjyysajattelu (Angelina Korsunova-Tsaruk) 15 op

Compulsory course 5 cr	**cr**	**study year**
ENT-301 Innovation, sustainability and society	5	1

Choose at least 10 cr of the following	**cr**	**study year**
FOR-101 Responsible Business management in circular bioeconomy	5	1-2
FOR-105 Sales management and business models	5	1-2
FOR-106 Business strategy and management simulations	5	1-2
FOR-115 From ideas to solutions	5	1-2
FOR-287 Innovation & Foresight	5	1-2
EKM-103 Managing innovations in agrifood value chains for sustainability	5	1-2
EKM-127 Sustainable entrepreneurship	5	1-2
AGERE-E15 Climate and energy policy	5	1-2
AGERE-E14 Economics and governance of marine resources	5	1-2
MMB-502 Microbial biotechnology	5	1-2
AGRI-296 Urban horticulture	5	1-2 (even)
NUTR-221 Nutrition & society	5	1-2
FOOD-607 Food Solutions Master Class	15	1-2
FOOD-609 Future Food Packaging Studio	5	1-2
Participation to UH incubators	5-8	1-2
Any MOOC from EISP package	5	1-2