

Curriculum 2022-2023 – Agricultural, Environmental and Resource economics Master program – 120 ECTS

* Odd years

**Even years

Tba = To be announced later

Advanced Studies - AGERE-302 80-110 ECTS (AGERE – Common studies, method studies and AGERE-310 or AGERE-320)

AGERE - Common studies 35 ECTS

| | ECTS | Year/Period |
|----------------------------------------------------------------------------------------------------|------|-------------|
| AGERE-001 Introduction to the Master program in Agricultural, Environmental and Resource economics | 0 | 1/I |
| AGERE-030 Master's thesis | 30 | 2/I-IV |
| AGERE-020 Master's thesis seminar | 5 | 1-2/I-IV |
| VIIKM-001 Master's Maturity Test | 0 | 2/I-IV |

Language studies (Choose at least one course)

| | ECTS | Year/Period |
|----------------------------------------------------------------|------|-------------|
| KK-ENG501 Academic Writing 1, Principle and practice (CEFR C1) | 2 | 1/I-II |
| KK-ENG502 Academic Writing 2, Process and Feedback (CEFR C1) | 2 | 1-2/III |
| KK-ENG504 Advanced English: Feedback on Writing (CEFR C1) | 1 | 1-2/I-IV |
| FINN-111 Finnish 1A | 3 | 1-2 |
| FINN-112 Finnish 1B | 2 | 1-2 |
| KK-RUO001 Swedish for beginners 1 | 3 | 1-2 |

AGERE - Entrance studies (> 5 ECTS)

| | ECTS | Year/Period |
|--------------------------------------------------------------------------------------------------------------------------------|------|-------------|
| AGERE-009 Mathematics for economists III <ul style="list-style-type: none"> Mandatory for all | 5 | 1/I |
| AGERE-012 Mathematics for economists IV <ul style="list-style-type: none"> Mandatory for ERE, voluntary for AGE | 5 | 1/II |
| AGERE-010 Microeconomics for AGERE students intermediate level, mandatory if not in BSc | 5 | 1/I |
| ECOM-G310 Microeconomics 1 or Aalto microeconomic policy course (31E99906) | 5 | 1-2/I |
| <ul style="list-style-type: none"> Mandatory for ERE, voluntary for AGE | 6 | 1/II |
| FOR-006 R-basic course | 4 | 1/I |
| AGERE-007 Applied econometrics | 5 | 1/II |

AGERE - Theories and methods \geq 15-30 ECTS

| | ECTS | Year/Period |
|----------------------------------------------------------------------------------------|------|-------------|
| AGERE-002 Cost-Benefit Analysis | 5 | 1-2/IV |
| AGERE-003 Economic valuation methods | 5 | 1-2/II |
| AGERE-004 General Equilibrium Modeling | 5 | 1-2/IV*** |
| AGERE-005 Applied Linear Programming | 5 | 1-2/III |
| AGERE-011 Socio-cultural valuation methods for Integrated Landscape Management | 5 | 1-2/I |
| AGERE-013 Qualitative methods in Agricultural, Environmental and Resource economics | 5 | 1-2/I |
| AGERE-A07 Changing theme course in Agricultural economics | 5 | I*** |
| ECOM-G311 Microeconomics 2 | 5 | 1-2/II |
| ECOM-G314 Econometrics 1 | 5 | 1-2/II |
| ECOM-413 Applied Microeconometrics I | 5 | 1-2/I**** |
| ECOM-414 Applied Microeconometrics II | 5 | 1-2/II**** |
| FOR-108 Qualitative empirical research methods, approaches and research ethics | 5 | 1-2/II |

| | | |
|-----------------------------------------------------------------|---|------------|
| FOR-103 Survey methods in marketing and social sciences | 5 | 1-2/III-IV |
| FOR-007 Statistical models: Basics in generalized linear models | 5 | 1-2/III |
| FOR-008 Statistical Prediction and Sampling | 5 | 1-2/IV** |
| FOR-009 Statistical Modelling with R | 5 | 1-2/IV* |
| EKM-122 Ecological economics | 5 | 1-2/I |

*** I-period course - Statistical analysis with R. Course will be held for the last time in the Academic year 2022-2023.

**** How to enroll courses: <https://www.helsinki.fi/desc/how-to-enroll/>

Study track studies

AGERE-310 Agricultural Economics - 30 ECTS

(Choose at least one AGE-module and other courses or modules from study track studies, 15 EC

AGERE-320 Environmental and resource economics - 45 ECTS

(Choose EREI and EREII and other courses or modules from study track studies, 15 ECTS)

| | ECTS | Year/Period |
|----------------------------------------------------------------------------------------|------|----------------------|
| AGE I Agricultural Markets and Policy | 15 | |
| AGERE-A01 Price Analysis and Market Structure of the Agrifood Supply Chain | 5 | 1/II |
| AGERE-A08 Agricultural and Food Policy Analysis | 5 | 1-2/III* |
| AGERE-A03 International Agricultural Trade and Trade Theory | 5 | 1-2/III** |
| AGE II Production Economics and Farm Management | 15 | |
| AGERE-A04 Risk Management in Agriculture | 5 | 1-2/II |
| AGERE-A05 Production and Cost Theory | 5 | 1-2/III |
| AGERE-A06 Theories and Applications in Strategic Management | 5 | 1-2/IV |
| AGE III Entrepreneurship | 15 | |
| EKM-127 Sustainable entrepreneurship | 5 | 1-2/III |
| AGERE-A09 Rural social entrepreneurship MOOC | 1-5 | 1-2/III-IV |
| SOSM-SP328 Entrepreneurship in the Social context | 5 | IV/1-2 |
| xxx-xxx Courses in entrepreneurship, marketing, co-operation studies or accounting | 5 | 1-2 |
| ERE I Environmental Economics | 15 | |
| AGERE-E01 Environmental Economics I: Theory | 5 | 1/II |
| AGERE-E02 Environmental Economics II: Mechanisms | 5 | 1/III |
| AGERE-E03 Climate and Energy | 5 | 1-2/IV* ¹ |
| ERE II Natural Resource Economics | 15 | |
| AGERE-E08 Introduction to Dynamic Optimization . | 5 | 1/III |
| AGERE-E09 Advanced Natural Resource Economics . | 5 | 2/IV |
| AGERE-E06 Economics of Aquatic Resources: Numerical Models | 5 | 1-2/I |
| ERE III Economics of climate change | 15 | |
| AGERE-E12 International environmental agreements related to marine areas and resources | 5 | 1-2/III** |
| ATM302 Climate Now | 5 | 1-2/II |
| FOR-215 Mitigation of Climate Change in Forestry | 5 | 1-2/III** |
| FOR-216 Adaptation of forestry to climate change | 5 | 1-2/III** |
| ECGS-500 Baltic sea studies (ERE IV) | | 15 or 30 |

Mandatory courses:

| | | |
|----------------------------------------------------------------------------------------|---|-----------|
| ECGS-014 Diagnosis of environmental problems in aquatic ecosystems | 5 | 1-2/I |
| ECGS-501 Management of environmental problems in aquatic ecosystems | 5 | 1-2/II |
| And choose 5 ECTS from the list: | | |
| ECGS-003 Practical application of sustainability science: learning project | 5 | 1-2/IV |
| AGERE-E12 International environmental agreements related to marine areas and resources | 5 | 1-2/III** |
| AGERE-E06 Economics of Aquatic Resources: Numerical Models | 5 | 1-2/I |
| Bayesian networks | | |
| ECGS-017 Fisheries management | 5 | 1-2/IV |

ERE V Forestry and forest policy 15

Mandatory course:

| | | |
|----------------------------------------------------|---|-----------|
| AGERE-E08 Introduction to Dynamic Optimization | 5 | 1/III |
| And choose 10 or 15 ECTS from the list: | | |
| AGERE-E09 Advanced Natural Resource Economics | 5 | 1-2/IV |
| ME-211 System analysis in forest sciences | 5 | 1-2/I |
| FOR-215 Mitigation of Climate Change in Forestry | 5 | 1-2/III** |
| FOR-216 Adaptation of forestry to climate change | 5 | 1-2/III* |
| ME-106 Industrial management and commercialization | 5 | 1-2/IV |

- ME-courses are lectured in Finnish

¹ Course can be substituted by YET-214 Climate and energy course in the Academic year 2022-2023

Other studies

Career orientation and professional skills training

| (Choose at least 5 ECTS of AGERE-027 or AGERE-028) | ECTS | Year/Period |
|------------------------------------------------------|------|-------------|
| AGERE-027 Career orientation/Internship | 5-10 | 1-2/I-IV |
| AGERE-028 Career orientation/ Career-related project | 5-10 | 1-2/I-IV |

Optional

| | | |
|--------------------------------------------------------------------------------------------------------------------|-----|------------|
| VIIKM-002 Tutoring | 2 | 1-2/I |
| VIIKM-005 Participation in Student Organization and University of Helsinki Administrative Bodies | 2-5 | 1-2/I-IV |
| AGERE-A07a Changing theme course in Agricultural economics - Economics of Food Security and Nutrition | 5 | 1-2/IV |
| AGERE-A07b Changing theme course in Agricultural economics – Sustainable financing | 5 | 1-2/II |
| AGERE-E07a Changing theme course in Environmental and resource economics - Energiapolitiikka Suomessa ² | 5 | 1-2/III-IV |
| AGERE-E07b Changing theme course in Environmental and Resource Economics | 5 | tba |
| AGERE-E07c Changing theme course in Environmental and Resource Economics | 5 | tba |

²Will be organized only in the Academic year 2022-2023 (In Finnish)

Studies which are freely chosen 0-29 ECTS

| | | |
|--------------|------------|------------|
| TOTAL | 120 | 1-2 |
|--------------|------------|------------|

Research Master track (jointly with Helsinki Graduate School of Economics)

Helsinki GSE Research Master's education equips students with the main tools of a professional economist. It represents state-of-the art scientific knowledge of the field and prepares students to operate in most demanding expert positions in government, business, and research. The advanced and technically oriented nature of the program also serves as an excellent foundation for entry into a PhD program and other research-focused roles in the society.

For more information, see <https://www.helsinki.fi/programs/research-masters-program/>"

| | |
|-----------------------------------------------------|--------------------------------------------------|
| AGERE - Common studies | 35 ECTS |
| AGERE-009 and AGERE-012 (Math III & IV) | 10 ECTS |
| Study track studies ERE / AGE | 30 ECTS / 15 ECTS |
| Research Master courses | 45 ECTS |
| -ECOM-R310 - ECOM-R315 (6 courses) | |
| -Choose 3 of the following: ECOM-R316 – ECOM – R321 | |
| Total ERE / AGE | 120 / 105 (+ internship + 10 ECTS AGERE studies) |

Agronomy degree/title <https://guide.student.helsinki.fi/fi/artikkeli/tutkinnon-rakenne-ja-laajuus> (Select Study program -> MSc in Agricultural Sciences)

If necessary, the Steering group of the Master's program in Agricultural Sciences may, upon request, comment on whether the applicant meets the equivalence requirements for the title of agronomist given in point 2).