

University of Pretoria Yearbook 2025

MScAgric in Agricultural Economics (Coursework) (02255101)

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| Department | Agricultural Economics, Extension and Rural Development |
| Minimum duration of study | 2 years |
| Total credits | 180 |
| NQF level | 09 |

Programme information

Also consult General Academic Regulations G30-G41.

Residence

On the recommendation of the relevant head of department, the Dean may set specific residential requirements for the MScAgric degree.

Curriculum

Subject to programme-specific requirements, the curriculum for the MScAgric degree consists of the following:

- A dissertation; and
- Further study in the major subject/s, augmented by ancillary modules prescribed by the Postgraduate Studies Committee, on the recommendation of the head of department. Such ancillary modules may be taken simultaneously with the major subject/s. Candidates in possession of the BScAgricHons degree may be exempted from additional ancillary modules.
- Please note that not all modules will be offered in any one year.

Admission requirements

- Bachelor of Science in Agriculture degree (or equivalent NQF-level 8 degree) with a major in agricultural economics
or
Bachelor of Science Honours degree (or equivalent NQF-level degree) with a major in agricultural economics
or
Relevant bachelor's degree (NQF- level 8)
or
relevant honours degree (NQF-level 8)
- A weighted average of at least 60% at final-year level

Note:

1. An admission examination may be required
2. Additional modules may be required in order to reach the desired level of competency

Other programme-specific information

Students should complete a module in research methodology as preparation for the dissertation module.

Curriculum: Year 1

Core: 60 credits

Elective: 30 credits

ADDITIONAL PROGRAMME INFORMATION

Additional to the four compulsory core modules, students must select TWO elective modules to the value of 30 credits (15 credits each) according to the area of specialisation as stipulated below.

Please note that not all electives are presented each year. The presentation of an elective module is dependent on the number of students interested in enrolling for the module.

Areas of specialisation with relevant electives:

- **Agricultural and rural development:** LEK 885 is compulsory. Please select one additional module from LEK 812, LEK 833 and LEK 884.
- **Agricultural and rural finance:** Select LEK 822 and 884.
- **Food and agribusiness management:** Select two from LEK 811, LEK 813, LEK 823 and LEK 883.
- **Food and agricultural policy:** Select two from LEK 811, LEK 812, LEK 827, LEK 833 and LEK 834 (LEK 834 must be taken simultaneously with LEK 833).
- **Resource and environmental economics:** Select two from LEK 811, LEK 826, LEK 886 and LEK 887.

Core modules

Applied econometrics 810 (LEK 810)

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|------------------------|---|
| Module credits | 15.00 |
| NQF Level | 09 |
| Prerequisites | No prerequisite. |
| Contact time | 1 practical per week, 1 lecture per week |
| Language of tuition | Module is presented in English |
| Department | Agricultural Economics Extension and Rural Develo |
| Period of presentation | Semester 1 |

Module content

Econometrics. Linear regression: assumptions of the linear regression model, OLS estimators and properties, hypothesis testing (single and multiple restrictions), forecasting, dummy variables. Violations of the linear model assumptions: multi-colinearity, heteroscedasticity, serial correlation and distributed lag models, (GLS estimators). Advanced topics: Quantitative response models (logit, tobit and probit analysis) co-integration, instrumental variables and 2-stage least squares.

Applied micro-economics 815 (LEK 815)

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|----------------|-------------------|
| Module credits | 15.00 |
| NQF Level | 09 |
| Prerequisites | No prerequisites. |

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|-------------------------------|---|
| Contact time | 2 lectures per week, 1 practical per week |
| Language of tuition | Module is presented in English |
| Department | Agricultural Economics Extension and Rural Develo |
| Period of presentation | Semester 1 |

Module content

Economic models and empirical applications in food demand and agricultural production, welfare economics, risk analysis, and industrial organisation as it relates to the agricultural and food industry.

Institutional economics 882 (LEK 882)

| | |
|-------------------------------|---|
| Module credits | 15.00 |
| NQF Level | 09 |
| Service modules | Faculty of Economic and Management Sciences |
| Prerequisites | No prerequisites. |
| Contact time | 1 lecture per week |
| Language of tuition | Module is presented in English |
| Department | Agricultural Economics Extension and Rural Develo |
| Period of presentation | Semester 1 |

Module content

Institutional and behavioural economics. This module will expose students to the principles of the New Institutional Economics paradigm and how it can be utilized to improve the analysis of agricultural economic and agricultural development problems and issues. Major themes covered are: The agricultural development challenge: stylised features; new institutional economics: distinctive features and concepts; institutions and development: A historical and macro-perspective techno-economic characteristics and agricultural systems and products in poor countries; NIE analysis of markets and markets structures; the State: Political and institutional determinants of agricultural policy; collective action; transactions costs in smallholder agriculture; case studies.

Research methodology 888 (LEK 888)

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|-------------------------------|---|
| Module credits | 15.00 |
| NQF Level | 09 |
| Prerequisites | No prerequisites. |
| Contact time | 1 lecture per week |
| Language of tuition | Module is presented in English |
| Department | Agricultural Economics Extension and Rural Develo |
| Period of presentation | Semester 1 |

Module content

Research methodology and dissertation design. Research in perspective. The research process. Formulating research problems, hypotheses and objectives. Developing a conceptual framework. Review of literature. Methods and procedures. Data collection, processing and analysis. Developing a good research proposal.

Elective modules

Production economics 811 (LEK 811)

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|-------------------------------|---|
| Module credits | 15.00 |
| NQF Level | 09 |
| Contact time | 1 practical per week, 2 lectures per week |
| Language of tuition | Module is presented in English |
| Department | Agricultural Economics Extension and Rural Develo |
| Period of presentation | Semester 2 |

Module content

This module follows on the final-year module LEK 421 and is taught at the intermediate level and now moves beyond the single input production function to analysis with multi-variable functions. Detailed exposure to production, cost and profit functions, and the duality that exists between these is a core element of the module. The focus will also be on the implications of the properties for the economic behavior of agents. At the end of this module students will have complete competence in algebraically solving for the cost minimisation and profit maximisation problems. Themes covered in the module are: Properties of production functions. Economic theory of cost. Economic Theory of Profits. Duality between the cost and production functions. Duality between the profit and production functions. Applied topics.

Agricultural policy analysis 812 (LEK 812)

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|-------------------------------|---|
| Module credits | 15.00 |
| NQF Level | 09 |
| Contact time | 2 lectures per week, 1 practical per week |
| Language of tuition | Module is presented in English |
| Department | Agricultural Economics Extension and Rural Develo |
| Period of presentation | Semester 2 |

Module content

Agricultural policy analysis. The importance and place of agricultural policy. Policy incidence. Design of agricultural policy Instruments. Public choice theory and agricultural policy. Political economy of agricultural policy. Agricultural policy distortions. The role of the media in agricultural and food policy. Seminars.

Agribusiness marketing management 813 (LEK 813)

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|-----------------------|-------|
| Module credits | 15.00 |
| NQF Level | 09 |



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| Prerequisites | No prerequisites. |
| Contact time | 2 tutorials/seminars per week, 3 lectures per week |
| Language of tuition | Module is presented in English |
| Department | Agricultural Economics Extension and Rural Develo |
| Period of presentation | Semester 2 |

Module content

Review on Economic Role of Prices and Approaches to the Study of Agricultural Market Organization and Performance. Theoretical Models of Market Structure and Performance. Households, Markets and Consumption. Market Characteristics. Demand Analysis - Single and Complete Equations. Supply Analysis. Spatial and Inter-Temporal Analysis of Agricultural Markets for Policy.

Quantitative methods for agricultural and environmental policy 814 (LEK 814)

| | |
|-------------------------------|---|
| Module credits | 15.00 |
| NQF Level | 09 |
| Service modules | Faculty of Economic and Management Sciences |
| Prerequisites | No prerequisites. |
| Contact time | 1 practical per week, 1 lecture per week |
| Language of tuition | Module is presented in English |
| Department | Agricultural Economics Extension and Rural Develo |
| Period of presentation | Semester 2 |

Module content

Quantitative models for agricultural and environmental policy. This module will introduce students to applications of discrete choice and linear regression models to agricultural and environmental economics. These include demand systems, production functions and treatment effects/impact assessment models. The second part of the class will focus on mathematical programming and numerical methods including but not limited to multisector models, Input-output and programming models and social accounting matrices for consistent production planning, growth, income distribution and trade policy analysis. Computable general equilibrium models.

Advanced agricultural finance and risk management 822 (LEK 822)

| | |
|-------------------------------|---|
| Module credits | 15.00 |
| NQF Level | 09 |
| Prerequisites | No prerequisites. |
| Contact time | 1 lecture per week |
| Language of tuition | Module is presented in English |
| Department | Agricultural Economics Extension and Rural Develo |
| Period of presentation | Semester 2 |

Module content

Nature and scope of financial management. Investment alternatives and philosophy. Investment returns and risks. Security analysis, valuation and management. Turnaround strategies under financial stress: unbundling and unlocking value. Asset allocation and portfolio management. Influence of mega forces on financial decisions. Risk in agriculture and management thereof. Stochastic efficiency measures and simulation. Dynamic decision models.

Advanced agribusiness management 823 (LEK 823)

| | |
|-------------------------------|---|
| Module credits | 15.00 |
| NQF Level | 09 |
| Prerequisites | No prerequisites |
| Contact time | 1 lecture per week |
| Language of tuition | Module is presented in English |
| Department | Agricultural Economics Extension and Rural Develo |
| Period of presentation | Semester 2 |

Module content

Strategic management process in agribusiness. Strategic direction and leadership. Corporate governance and strategy. Internal environmental analysis for agribusiness strategy. External environmental analysis for an agribusiness. Competitor analysis. Strategy formulation: long-term goals and generic strategies. Strategy formulation: grand and functional strategies. Aligning strategy with industry life cycle. Strategic analysis and choice. Strategic risks. Strategy implementation and change management. Drivers of strategy implementation. Structural drivers and instruments for strategy implementation. Continuous improvement through strategic control and evaluation. Strategic management in not-for-profit organisations. Strategic management concepts for agribusiness in the global marketplace. Scenario planning. Agribusiness case studies.

Environmental valuation and policy 826 (LEK 826)

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|-------------------------------|---|
| Module credits | 15.00 |
| NQF Level | 09 |
| Service modules | Faculty of Economic and Management Sciences |
| Prerequisites | No prerequisites. |
| Contact time | 1 lecture per week |
| Language of tuition | Module is presented in English |
| Department | Agricultural Economics Extension and Rural Develo |
| Period of presentation | Semester 2 |

Module content

Environmental valuation and policy. This module will review the basic principles of microeconomic theory needed for understanding and analysis of environmental problems, introduce market and non-market techniques of valuation of natural resources and environmental services (hedonic pricing, contingent valuation, transport cost, willingness-to-pay, cost-based techniques, etc.), public goods and environmental externalities, property rights regimes and selection of appropriate environmental policy instruments for management of environmental externalities.

Food policy 833 (LEK 833)

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|-------------------------------|---|
| Module credits | 15.00 |
| NQF Level | 09 |
| Prerequisites | Registration for at least a master's degree |
| Contact time | 1 lecture per week for 12 wks |
| Language of tuition | Module is presented in English |
| Department | Agricultural Economics Extension and Rural Develo |
| Period of presentation | Semester 2 |

Module content

The concept and interrelated causes of food insecurity (production, markets and socio-economic climate) and the global food economy. Household coping strategies and response to risk and shocks. Household dynamics (including livelihoods, purchasing behaviour and nutrition). Practical tools for programme and policy analysis and targeting. Evaluation of possible programme and policy options and their effectiveness in terms of achieving comprehensive and pro-poor growth. Sustainable Development Goal two that seeks to end hunger, achieve food security and improved nutrition and promote sustainable agriculture.

Measuring and monitoring food security 834 (LEK 834)

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|-------------------------------|---|
| Module credits | 15.00 |
| NQF Level | 09 |
| Prerequisites | Registration for at least a master's degree. Simultaneous registration for LEK 833. |
| Contact time | 3 hours of online learning per week (6 weeks), 1 practical per week (2 weeks), 1 lecture per week for 4 weeks |
| Language of tuition | Module is presented in English |
| Department | Agricultural Economics Extension and Rural Develo |
| Period of presentation | Semester 2 |

Module content

The international and African context for monitoring and evaluation of Sustainable Development Goals related to food security. Indicators, scores, indexes, measurement approaches, systems and analysis methods for multisectoral food security monitoring and evaluation. Best practice related to the identification, selection, presentation and analytical approaches to managing and analysing large datasets across multiple sectors to generate clear, concise findings for policymakers. Communicating food security information for decision makers.

Agricultural supply chain management 883 (LEK 883)

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|-------------------------------|---|
| Module credits | 15.00 |
| NQF Level | 09 |
| Service modules | Faculty of Economic and Management Sciences |
| Prerequisites | No prerequisites. |
| Contact time | 1 lecture per week |
| Language of tuition | Module is presented in English |
| Department | Agricultural Economics Extension and Rural Develo |
| Period of presentation | Semester 2 |

Module content

Agricultural supply chain analysis. Explore the evolution of supply chain management in the global food industry. Establish the different ways in which supply chain management can provide a source of competitive advantage at industry level and for individual firms. Examine the crossfunctional and multidisciplinary nature of supply chain management as it applies in the global food industry. Introduce the core elements of the theoretical literature on supply chain management and consider applications in different sectors. Provide students with practical experience in applying the principles of supply chain management to the exploitation of a marketing opportunity, using case examples from the fresh produce and meat sectors. Provide students with practical experience of undertaking a supply chain audit, with a view to establishing an appropriate business strategy for a food manufacturing company.

Advanced rural finance 884 (LEK 884)

| | |
|-------------------------------|---|
| Module credits | 15.00 |
| NQF Level | 09 |
| Prerequisites | No prerequisites. |
| Language of tuition | Module is presented in English |
| Department | Agricultural Economics Extension and Rural Develo |
| Period of presentation | Semester 1 |

Module content

Overview of rural finance: conceptual issues. Role of financial services in economic development. Relationship between financial development and economic growth. Economic theory underlying rural financial markets: market and government failure, imperfect information, transaction costs, agency theory, and pecking order theory. Supply of and demand for financial services in rural areas: theory and measurement issues. Estimating credit demand, supply and constraints. Institutions involved in the provision of rural financial services and innovations in rural finance. Assessing performance of institutions providing rural financial services.

Agricultural and rural development 885 (LEK 885)

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|-----------------------|-------|
| Module credits | 15.00 |
| NQF Level | 09 |

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|-------------------------------|---|
| Prerequisites | No prerequisites. |
| Contact time | 1 lecture per week |
| Language of tuition | Module is presented in English |
| Department | Agricultural Economics Extension and Rural Develo |
| Period of presentation | Semester 2 |

Module content

Review of theories and principles of growth and development. The role of agriculture in rural and economic development. The economic nature of smallholder agriculture. Problems and policies in agricultural and rural development: issues, options and challenges. Strategies for modernising agriculture (lessons from experience). Poverty dynamics, food and the environmental nexus. Land tenure reforms and policy.

The economics of natural resources 886 (LEK 886)

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|-------------------------------|---|
| Module credits | 15.00 |
| NQF Level | 09 |
| Service modules | Faculty of Economic and Management Sciences |
| Prerequisites | LEK 810 or equivalent |
| Contact time | 1 lecture per week |
| Language of tuition | Module is presented in English |
| Department | Agricultural Economics Extension and Rural Develo |
| Period of presentation | Semester 2 |

Module content

The economics of natural resources. This course will introduce students to the techniques of optimisation overtime, optimal allocation and management of non-renewable and renewable resources, with case studies from Africa. The influence of property rights regimes on optimal natural resource use will also be stressed. The course consists of three main sections: Methods of dynamic optimisation; Theory of exhaustible and renewable resources and growth models; and Property rights and natural resource use with case studies from Africa.

Selected topics in environmental economics 887 (LEK 887)

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|-------------------------------|---|
| Module credits | 15.00 |
| NQF Level | 09 |
| Service modules | Faculty of Economic and Management Sciences |
| Prerequisites | MIE 780 and EKT 713 or equivalents |
| Contact time | 1 lecture per week |
| Language of tuition | Module is presented in English |
| Department | Agricultural Economics Extension and Rural Develo |
| Period of presentation | Semester 2 |

Module content

Selected topics in environmental economics. This module will introduce students to various issues of special importance in environmental economics and policy with special emphasis on international dimensions. Examples of key themes to be covered include trade and the environment, trans-boundary externalities, global public goods, multi-lateral environmental agreements, international aid, economic growth and environmental change, poverty and the environment, etc. The main objective of the module is to equip students with the appropriate tools for analysing the linkages between economic development, trade and globalization, poverty, economic and environmental policy and environmental change.

Curriculum: Final year

Core: 90 credits

Core modules

Mini-dissertation: Agricultural economics 892 (LEK 892)

| | |
|------------------------|---|
| Module credits | 90.00 |
| NQF Level | 09 |
| Language of tuition | Module is presented in English |
| Department | Agricultural Economics Extension and Rural Develo |
| Period of presentation | Year |

General Academic Regulations and Student Rules

The [General Academic Regulations \(G Regulations\)](#) and [General Student Rules](#) apply to all faculties and registered students of the University, as well as all prospective students who have accepted an offer of a place at the University of Pretoria. On registering for a programme, the student bears the responsibility of ensuring that they familiarise themselves with the General Academic Regulations applicable to their registration, as well as the relevant faculty-specific and programme-specific regulations and information as stipulated in the relevant yearbook. Ignorance concerning these regulations will not be accepted as an excuse for any transgression, or basis for an exception to any of the aforementioned regulations. The G Regulations are updated annually and may be amended after the publication of this information.

Regulations, degree requirements and information

The faculty regulations, information on and requirements for the degrees published here are subject to change and may be amended after the publication of this information.

University of Pretoria Programme Qualification Mix (PQM) verification project

The higher education sector has undergone an extensive alignment to the Higher Education Qualification Sub-Framework (HEQSF) across all institutions in South Africa. In order to comply with the HEQSF, all institutions are legally required to participate in a national initiative led by regulatory bodies such as the Department of Higher Education and Training (DHET), the Council on Higher Education (CHE), and the South African Qualifications Authority (SAQA). The University of Pretoria is presently engaged in an ongoing effort to align its qualifications and programmes with the HEQSF criteria. Current and prospective students should take note that changes to UP qualification and programme names, may occur as a result of the HEQSF initiative. Students are advised to contact their faculties if they have any questions.