TUM Master’s Days
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Online info sessions • 18 - 22 March 2024
Details and registration: www.tum.de/masters-days
M.Sc. AgriFood Economics, Policy and Regulation

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TUM School of Management
Chair Group Agricultural Production and Resource Economics
(Prof. Johannes Sauer)

TUM Master's Days
21 March 2024
Background

Complexity of modern agri-food systems…

…characterized by numerous trade-offs between sustainability dimensions, such as those between stable and regional production of healthy and affordable food, securing farmer livelihoods, contribution to and consequences of climate change, animal welfare, and biodiversity loss,

…characterized by use of modern technology and new technology developments, such as digitalization, genetic engineering, or pesticides, paired with a certain level of technology aversion in today’s society,

…characterized by a high and increasing level of internationalization, internationally integrated markets with multicultural business partners, common agricultural policy that needs to harmonize interests across countries.
Qualification

Objective is to train sector experts, who:

… understand the complexity of modern agri-food systems and the manifold interactions between the economic, ecologic, societal, and political dimensions, with profound knowledge on economic, political, technological, and ecological principles,

… can apply their interdisciplinary knowledge acquired during the program to contribute as analysts and problem-solvers to tackling real-world agri-food-related challenges,

… have extensive scientific competencies to transfer new research findings into practice by evaluating findings and incorporate them into their decision-making,

… can effectively communicate with all relevant stakeholders in a constructive and competent way and are able to lead and contribute to multidisciplinary teams, working with people form different cultural backgrounds.
Potential working fields of graduates

**International organizations and NGOs** active in the Agri-Food sector,

such as EU agencies, FAO, World Bank, or industry associations (e.g., for analyses and advisory work in the form of policy and economic analysis, public relations and representation of interests),

**Activities in national and regional ministries and associated authorities,**

e.g., strategy development and design of public funding, public relations on rural development and agricultural and food policy issues),

**Regulatory authorities** at national and international levels,

such as EFSA (e.g., analysis and advisory activities as well as outreach activities taking into account policy requirements).
Potential working fields of graduates (II)

(International) **sustainability management and corporate social responsibility**, in the food processing or consulting industry

- e.g., strategy development and cross-cutting tasks to improve operational sustainability performance and to implement new regulatory requirements, public relations and representation in committees and associations,

**Media and communication** sector,

- e.g., analysis and documentation of social conflicts in the field of agriculture, nutrition, and natural resources,

**Research activities** in the academic sector (universities, colleges) and public research (regional and governmental research institutes),

- in various disciplines such as agricultural sciences, natural sciences, social sciences, economics, and management, but also law.
Target groups

Primary target groups of the study program are graduate students from

- agricultural sciences
- economics and management,
- political sciences.

Qualified applicants have to demonstrate a minimum level of knowledge in economics, natural sciences, and policy.

They have to demonstrate a level of fluent English skills.

The program pursues a high level of supervision, for example, in the interdisciplinary research project module. Given the limited teaching resources in the faculties, a cohort size of no more than 50 students per year is targeted.
AgriFood Economics, Policy and Regulation combines competencies from the fields of agricultural and horticultural sciences (natural sciences and technology), economics and political science and uses the expertise of three TUM schools:
# Curriculum

**Mandatory modules**: 37 CP

**Electives**: min. 53 CP

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<table>
<thead>
<tr>
<th>Semester</th>
<th>Modules</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>MGT001416 Economics of Agriculture and Technology (required)</td>
<td>6 CP</td>
</tr>
<tr>
<td></td>
<td>SOT86611 Sustainability Politics and Policy (required)</td>
<td>6 CP</td>
</tr>
<tr>
<td></td>
<td>LS10016 Environment, Agriculture and Food (required)</td>
<td>5 CP</td>
</tr>
<tr>
<td></td>
<td>LS10017 Technology for Agriculture and Food (required)</td>
<td>5 CP</td>
</tr>
<tr>
<td></td>
<td>MGT001417 Quantitative and Qualitative Methods in AgriFood Research (required)</td>
<td>5 CP</td>
</tr>
<tr>
<td></td>
<td>LS Interdisciplinary Qualification (elective)</td>
<td>3 CP</td>
</tr>
</tbody>
</table>

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- **Mobility Window**: 20 CP

- **Elective Modules**: (elective)
  - 1. (Agricultural) Economics
  - 2. Governance, Political Sciences and Sociology
  - 3. Climate Sciences, Resources and Ecology
  - 4. Technological Innovations

  In addition, up to 6 CP may be selected from the SoLS "Interdisciplinary Qualification" Catalog.

- **Master's Thesis (required)**: 30 CP

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**Key**:
- dark blue = final thesis
- blue = elective modules
- grey = required modules
- CP = credit points; K = written exam; M = oral exam; LP = learning portfolio; PRÄ = presentation; B = report; PJ = project work; W = research paper
## Electives (selection)

### 1.1 Area: (Agricultural) Economics

<table>
<thead>
<tr>
<th>No.</th>
<th>Module name</th>
<th>Type of Instruction</th>
<th>Sem.</th>
<th>SWS</th>
<th>Credits</th>
<th>Type of Examination</th>
<th>Duration of Examination (min)</th>
<th>Weight factor</th>
<th>Language of Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>WI001204</td>
<td>Economics of Water Use, Regulation and Markets</td>
<td>VI</td>
<td>SoSe</td>
<td>4</td>
<td>5</td>
<td>Written exam</td>
<td>120</td>
<td></td>
<td>English</td>
</tr>
<tr>
<td>WZ2757</td>
<td>Advanced Environmental and Natural Resource Economics</td>
<td>VO + SE</td>
<td>WiSe</td>
<td>3 + 1</td>
<td>5</td>
<td>Written exam</td>
<td>90</td>
<td></td>
<td>English</td>
</tr>
<tr>
<td>WI001281</td>
<td>The Economics of Firm Competition</td>
<td>VO + UE</td>
<td>SoSe</td>
<td>2 + 2</td>
<td>6</td>
<td>Written exam</td>
<td>90</td>
<td></td>
<td>English</td>
</tr>
<tr>
<td>WZ1561</td>
<td>Value Chain Economics</td>
<td>VI</td>
<td>SoSe</td>
<td>4</td>
<td>6</td>
<td>project work</td>
<td></td>
<td></td>
<td>English</td>
</tr>
<tr>
<td>WI000739</td>
<td>Consumer Behavior</td>
<td>VI</td>
<td>WiSe</td>
<td>4</td>
<td>6</td>
<td>Written exam</td>
<td>120</td>
<td></td>
<td>English</td>
</tr>
<tr>
<td>WI000948</td>
<td>Food Economics</td>
<td>VI</td>
<td>WiSe</td>
<td>4</td>
<td>6</td>
<td>Oral exam</td>
<td>25</td>
<td></td>
<td>English</td>
</tr>
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</table>
## Electives (selection)

### 1.2 Area: Governance, Political Sciences, Sociology

<table>
<thead>
<tr>
<th>No.</th>
<th>Module name</th>
<th>Type of Instruction</th>
<th>Sem.</th>
<th>SWS</th>
<th>Credits</th>
<th>Type of Examination</th>
<th>Duration of Examination (min)</th>
<th>Weight factor</th>
<th>Language of Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>WI000321</td>
<td>International Commodity Markets and Trade Policy</td>
<td>VI</td>
<td>WiSe</td>
<td>4</td>
<td>5</td>
<td>Written exam</td>
<td>90</td>
<td></td>
<td>English</td>
</tr>
<tr>
<td>POL65102</td>
<td>International Development, Poverty and Inequality</td>
<td>SE</td>
<td>SoSe</td>
<td>4</td>
<td>6</td>
<td>Report</td>
<td></td>
<td></td>
<td>English</td>
</tr>
<tr>
<td>SOT86511</td>
<td>European and Global Governance</td>
<td>SE + SE</td>
<td>WiSe</td>
<td>2 + 2</td>
<td>6</td>
<td>Research paper</td>
<td></td>
<td></td>
<td>English</td>
</tr>
<tr>
<td>POL62400</td>
<td>Environment and Climate Transformation</td>
<td>SE + SE</td>
<td>SoSe</td>
<td>2 + 2</td>
<td>6</td>
<td>Research paper</td>
<td></td>
<td></td>
<td>English</td>
</tr>
<tr>
<td>POL61405</td>
<td>Political Regimes and the Economy</td>
<td>SE</td>
<td>SoSe</td>
<td>4</td>
<td>6</td>
<td>Research paper</td>
<td></td>
<td></td>
<td>English</td>
</tr>
</tbody>
</table>
### Electives (selection)

**1.3 Area: Climate Sciences, Resources, Ecology**

<table>
<thead>
<tr>
<th>No.</th>
<th>Module name</th>
<th>Type of Instruction</th>
<th>Sem.</th>
<th>SWS</th>
<th>Credits</th>
<th>Type of Examination</th>
<th>Duration of Examination (min)</th>
<th>Weight factor</th>
<th>Language of Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>WZ1590</td>
<td>Climate Change</td>
<td>VO + SE</td>
<td>SoSe</td>
<td>2 + 2</td>
<td>5</td>
<td>Written exam</td>
<td>90</td>
<td></td>
<td>English</td>
</tr>
<tr>
<td>WZ1824</td>
<td>System Analysis and Introduction to Ecology</td>
<td>VO + VO</td>
<td>WiSe</td>
<td>2 + 2</td>
<td>5</td>
<td>Written exam</td>
<td>90</td>
<td></td>
<td>English</td>
</tr>
<tr>
<td>WZ2730</td>
<td>Climate Change - Science, Impacts and Adaptation, Mitigation</td>
<td>VO + SE</td>
<td>WiSe</td>
<td>2 + 2</td>
<td>5</td>
<td>Oral exam</td>
<td>30</td>
<td></td>
<td>English</td>
</tr>
<tr>
<td>WZ1344</td>
<td>Urban Agriculture</td>
<td>VO + SE</td>
<td>WiSe</td>
<td>2 + 2</td>
<td>5</td>
<td>Report</td>
<td></td>
<td></td>
<td>English</td>
</tr>
<tr>
<td>WZ2724</td>
<td>Emission Control in Land-Use and Animal Husbandry</td>
<td>VO</td>
<td>WiSe</td>
<td>3</td>
<td>5</td>
<td>Oral exam or written exam</td>
<td>20 or 90</td>
<td></td>
<td>English</td>
</tr>
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</table>


1.4 Area: Technological Innovations

<table>
<thead>
<tr>
<th>No.</th>
<th>Module name</th>
<th>Type of Instruction</th>
<th>Sem.</th>
<th>SWS</th>
<th>Credits</th>
<th>Type of Examination</th>
<th>Duration of Examination (min)</th>
<th>Weight factor</th>
<th>Language of Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>WZ1060</td>
<td>Precision Agriculture</td>
<td>VI</td>
<td>SoSe</td>
<td>4</td>
<td>5</td>
<td>Written exam</td>
<td>120</td>
<td></td>
<td>English</td>
</tr>
<tr>
<td>WZ2581</td>
<td>Plant Biotechnology</td>
<td>VO + SE</td>
<td>SoSe</td>
<td>2 + 2</td>
<td>5</td>
<td>Written exam</td>
<td>90</td>
<td></td>
<td>English</td>
</tr>
<tr>
<td>WZ1488</td>
<td>Perspectives of Genetic Engineering in Agriculture</td>
<td>VO</td>
<td>SoSe</td>
<td>4</td>
<td>5</td>
<td>Written exam</td>
<td>90</td>
<td></td>
<td>English</td>
</tr>
<tr>
<td>WZ1339</td>
<td>Robotics and Automation in</td>
<td>VO</td>
<td>WiSe</td>
<td>2</td>
<td>3</td>
<td>Written exam</td>
<td>60</td>
<td></td>
<td>English</td>
</tr>
</tbody>
</table>
Timeline and requirements for admission

Start: Winter semester 2024/25 (lectures start 14 October)

Application website open since 01.02.2024

Admission Requirements
1. Bachelor’s degree in Agricultural or Horticultural Sciences, Political Sciences, Economics or Business Administration, or a comparable degree program.
2. Adequate knowledge of the English language, students whose native language or language of instruction is not English must provide TOEFL (min. 88 points), IELTS (min. 6.5 points) or the "Cambridge Main Suite of English Examinations“
3. Passing the Aptitude Assessment.
Admission process

1. **Stage**: Final grade (max. 30 points) and online aptitude test (max. 40 points)  
   → Online test (40 min, written, English) on following topics:
      - general and interdisciplinary basic knowledge about the regional and global challenges faced in the agri-food sector (30%),
      - research methods and mathematical fundamentals (30%),
      - knowledge of the fields of agricultural economics, economic relationships, and current political discussions (40%).
   → passed with min. 52 points, failed with fewer than 46 points, in between: stage 2

2. **Stage**: Assessment Interview (online, 20-30 min) with questions concerning
   - motivation (max. 10 points)
   - ability to communicate in English (max. 10 points)
   - General and interdisciplinary basic knowledge with regard to the regional and global challenges faced in the agri-food sector + demonstration of previous subject-specific knowledge + exposition of a research project (e.g. the final thesis) from the first degree program (max. 40 points)
   → Total points: points from 1st stage + points from 2nd stage
   → Admission with 81 or more points
Q&A

My undergrad degree is not highly relevant. How can make up for this? How about Food Technology?
→ Admission according to study regulations (§36).

Can I apply for this winter semester 2024/25, even though I expect to receive my Bachelor's degree in June?
→ “Hard” transition from Bachelor’s to Master’s: transcript of 180 cp must be provided by 31st of May.

Possibility to study at other TUM campuses?
→ Based in Freising, but relevant courses also in Munich and Garching.

Fees waiver process?
→ some exceptions, see https://www.tum.de/en/studies/fees/tuition
→ for further questions, please contact the TUM Center for Study and Teaching (studium@tum.de)
Q&A (2)

When will the aptitude test take place, and is there any recommendable material?
→ Thursday, 13 June 2024 at 2 pm (https://www.ls.tum.de/en/ls/studies/application/)
→ Preparation: focus on topics formulated in the study regulations

What are the working options after graduation?
→ See working fields mentioned.

What is the quota for this program?
→ Target number of 50.
Further information

Program website:

General information on application process at TUM:
https://www.tum.de/en/studies/application/master/application-master

Contact for individual questions:
agrifood.co@ls.tum.de