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| <b>Module Name</b>   | <b>Module Code</b> |
| Quantitative Methods of Farm Planning  | AEF-agr059         |
| <b>Module Coordinator</b>  |                    |
| Prof. Dr. Uwe Latacz-Lohmann   |                    |
| <b>Organizer</b>   |                    |
| Institut für Agrarökonomie - Landwirtschaftliche Betriebslehre und Produktionsökonomie |                    |
| <b>Faculty</b>   |                    |
| Faculty of Agricultural and Nutritional Sciences                                       |                    |
| <b>Examination Office</b>  |                    |
| Prüfungsamt Agrar- und Ernährungswissenschaftliche Fakultät                            |                    |

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|---------------------------------|--|
| <b>ECTS Credits</b>             | 6  |
| <b>Evaluation</b>               | Graded                                   |
| <b>Duration</b>                 | one semester                             |
| <b>Frequency</b>                | Only takes place during winter semesters |
| <b>Workload per ECTS Credit</b> | 30 hours                                 |
| <b>Total Workload</b>           | 180 hours                                |
| <b>Contact Time</b>             | 60 hours                                 |
| <b>Independent Study</b>        | 120 hours                                |
| <b>Teaching Language</b>        | English                                  |

|  |                                       |                            |            |
|--|---------------------------------------|----------------------------|------------|
| <b>Recommended Requirements</b>  |                                       |                            |            |
| Knowledge of the theoretical and methodological foundations of farm management and production economics and their applications to planning problems in livestock and plant husbandry |                                       |                            |            |
| <b>Module Courses</b>  |                                       |                            |            |
| <b>Course Type</b>   | <b>Course Name</b>                    | <b>Compulsory/Optional</b> | <b>SWS</b> |
| Lecture  | Quantitative Methods of Farm Planning | Compulsory                 | 4          |

| <b>Examination(s)</b>   |                            |                   |                              |                  |
|---|----------------------------|-------------------|------------------------------|------------------|
| <b>Examination Name</b>   | <b>Type of Examination</b> | <b>Evaluation</b> | <b>Compulsory / Optional</b> | <b>Weighting</b> |
| Oral Exam: Quantitative Methods of Farm Planning  | Oral Examination           | Graded            | Compulsory                   | 100              |
| <b>Further Information on the Examination(s)</b>  |                            |                   |                              |                  |
| 1.+2. period in winter semester<br>1. period in summer semester<br><br>examiner: Prof. Dr. Latacz-Lohman<br>QIS: 43102 with number of Examination 43120 |                            |                   |                              |                  |

| <b>Course Content</b>   |
|---|
| Linear Programming: theoretical foundations and farm management applications; advanced models of linear programming; introduction to efficiency analysis using frontier approaches, with a particular focus on Data Envelopment Analysis and its applications in agricultural economics research.   |
| <b>Learning Outcome</b>   |
| The students know advanced methods of operations research and non-parametric efficiency analysis, can critically assess their advantages and disadvantages, and are able to apply the methods to selected problems. By reviewing a series of journal articles, the students appreciate the wide range of applications in agricultural economics research and have acquired the methodological competence to conduct their own research. |
| <b>Reading List</b>   |
| Detailed syllabus; reference to relevant textbooks and journal articles in the course of the module.  |

| <b>Use</b>  | <b>Compulsory / Optional</b> | <b>Semester</b> |
|---|------------------------------|-----------------|
| Master, 1-subject, Agricultural Sciences, Agricultural Economics, (Version 2013)  | Compulsory                   | -               |
| Master, 1-subject, Agricultural Sciences, Agricultural Economics and Agribusiness # specific field of study: Agricultural Economics, (Version 2008) | Optional                     | -               |
| Master, 1-subject, Agricultural Sciences, Agricultural Economics and Agribusiness # specific field of study: Agribusiness, (Version 2008)           | Optional                     | -               |
| Master, 1-subject, Agricultural Sciences, Agribusiness, (Version 2013)  | Optional                     | -               |
| Master, 1-subject, Agricultural Sciences, Crop Sciences, (Version 2013)   | Optional                     | -               |
| Master, 1-subject, Agricultural Sciences, Crop Sciences, (Version 2008)   | Optional                     | -               |
| Master, 1-subject, Agricultural Sciences, Animal Sciences, (Version 2013)   | Optional                     | -               |
| Master, 1-subject, Agricultural Sciences, Animal Sciences, (Version 2008)   | Optional                     | -               |
| Master, 1-subject, Agricultural Sciences, Environmental Sciences, (Version 2013)  | Optional                     | -               |
| Master, 1-subject, Agricultural Sciences, Environmental Sciences, (Version 2008)  | Optional                     | -               |
| Master, 1-subject, Nutritional and Food Science, (Version 2013)   | Optional                     | -               |
| Master, 1-subject, Nutritional and Consumer Economics, (Version 2013)   | Optional                     | -               |
| Master, 1-subject, Nutritional Sciences and Household Economics, Nutritional and Consumer Economics, (Version 2008)                                 | Optional                     | -               |
| Master, 1-subject, Nutritional Sciences and Household Economics, Nutritional Sciences, (Version 2008)   | Optional                     | -               |