<table>
<thead>
<tr>
<th>Module title</th>
<th>Abbreviation</th>
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<tbody>
<tr>
<td>Econometrics 2</td>
<td>12-M-OE2-132-m01</td>
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<thead>
<tr>
<th>Module coordinator</th>
<th>Module offered by</th>
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<tbody>
<tr>
<td>holder of the Chair of Econometrics</td>
<td>Faculty of Business Management and Economics</td>
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<tr>
<th>ECTS</th>
<th>Method of grading</th>
<th>Other prerequisites</th>
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<tbody>
<tr>
<td>5</td>
<td>numerical grade</td>
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<table>
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<tr>
<th>Duration</th>
<th>Module level</th>
<th>Other prerequisites</th>
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<tbody>
<tr>
<td>1 semester</td>
<td>graduate</td>
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### Contents

**Description:**
This module deals with the basics, concepts and methods of the generalised least squares (GLS) framework. Partly as a motivation for the GLS model and partly for its own right, different specification and data problems as well as violations of model assumptions of the OLS estimator (as introduced in "Ökonometrie I" ("Econometrics I")) are discussed. This includes multicollinearity, a test for structural breaks, heteroskedasticity and autocorrelation.

Linear algebra is used as formal aid.

**Outline of syllabus:**
1. Specification analysis
2. Multicollinearity
3. Heteroskedasticity
4. Autocorrelated disruptive terms
5. Generalised least squares (GLS)

### Intended learning outcomes

Students acquire essential knowledge of the fundamentals, methods and concepts for estimating the generalised linear regression model (GLS) and can apply and interpret it. They are sensitized for specification problems, data problems and violations of the assumptions of the classical linear model (OLS) so that they are able to recognize, to assess and therefore adequately deal with these problems in theory and practice. This enables them to critically assess the use of the estimation methods in scientific work and to work independently on adequate implementation of empirical analyzes to answer selected (economic) scientific issues if available data with the above-mentioned involve problems. The competences acquired in this course serve as a prerequisite for "Econometrics III", "Microeconometrics" und "Financial Econometrics".

### Courses

**Type, number of weekly contact hours, language — if other than German**

V + Ü (no information on SWS (weekly contact hours) and course language available)

### Method of assessment

**Type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus**

a) written examination (approx. 60 minutes) or b) term paper (approx. 15 pages)

Language of assessment: German, English

### Allocation of places

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### Additional information

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### Referred to in LPO I

(examination regulations for teaching-degree programmes)

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### Module appears in

Master's degree (1 major) Business Management (2013)
Master's degree (1 major) Economics (2013)