# Module description

## Module title
Quantitative Methods 1 A

## Abbreviation
06-PSSc-Quanti1A-152-m01

## Module coordinator
holder of the Chair of Quantitative Methods in the Social Sciences

## Module offered by

<table>
<thead>
<tr>
<th>ECTS</th>
<th>Method of grading</th>
<th>Only after succ. compl. of module(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>numerical grade</td>
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## Duration
1 semester  
Module level: graduate  
Other prerequisites: May not be combined with 06-PSSc-Quanti1B.

## Contents
Repetition of multiple linear regression as a basis for further advanced data analysis procedures. Selected topics of advanced quantitative data analysis, especially advanced analysis methods and/or modern research design (e.g. Factorial Surveys). Problems of causal inference and identification of causal effects. Particular advanced regression methods such as multi-level analysis, panel data analysis, etc. are treated in depth. Hands-on application with statistical software (e.g. Stata or R).

## Intended learning outcomes
Students acquire the competence to use modern statistical software to test theoretically derived hypotheses with advanced analytical methods lege artis and to apply advanced research designs. They are able to present the findings to a scientific audience in written and oral form on the basis of complex procedures and are able to answer critical questions (e.g. on problems of model specification, bias or the identification of causal effects). They have the competence to read and understand articles from leading international journals. Students know a selected method of data analysis in its depth (e.g. multi-level analysis or panel data analysis) and are able to apply it by using statistical software.

## Courses
<table>
<thead>
<tr>
<th>Type</th>
<th>Number of weekly contact hours</th>
<th>Language</th>
<th>Other language</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>(2)</td>
<td>German and/or English and potentially other language</td>
<td></td>
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## Method of assessment
<table>
<thead>
<tr>
<th>Type</th>
<th>Scope</th>
<th>Language</th>
<th>Information on whether module is creditable for bonus</th>
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<tbody>
<tr>
<td>a)</td>
<td>written examination (approx. 90 minutes, numerical grade), b) oral examination of one candidate each (approx. 30 minutes, numerical grade), c) term paper (approx. 25 pages, numerical grade), d) presentation (approx. 30 minutes, numerical grade) and term paper (approx. 25 pages, numerical grade), weighted 1:4, e) portfolio (approx. 50 hours total, numerical grade), f) research report (approx. 15 pages, numerical grade)</td>
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Language of assessment: German and/or English and potentially other language

## Allocation of places
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## Additional information
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## Referred to in LPO I
( examination regulations for teaching-degree programmes)

## Module appears in
- Master's degree (2 majors) Political and Social Sciences (2015)
- Master's degree (1 major) Political and Social Sciences (2015)
- Master's degree (1 major) Chinese Politics and Society (2019)
- Master's degree (1 major) Political and Social Sciences (2020)
- Master's degree (1 major) Social Science Sustainability Studies (2021)