## Advanced Research Methods in Psychology

**E-411-RATO**

<table>
<thead>
<tr>
<th>Year</th>
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<tbody>
<tr>
<td>Semester</td>
<td>Spring</td>
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<tr>
<td>Type of course</td>
<td>Core</td>
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<tr>
<td>Prerequisites</td>
<td>E-114-RATO</td>
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<tr>
<td>Schedule</td>
<td>4 hours per week for 12 weeks; 6 ECTS</td>
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<tr>
<td>Lecturer</td>
<td>Þorlákur Karlsson</td>
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### Content

The course examines advanced data analytic methods common in psychological research, including within-subjects, between-groups, and mixed-model factorial designs in complex ANOVA, ANCOVA, and MANOVA; multiple regression; concepts and computation of statistical power; and advanced applications of SPSS.

### Learning outcome - On completing the course, each student should be able to:

- Know the multivariate statistical methods regression analysis, analysis of variance, and factor analysis when they are described and be able to explain them to others.
- Choose the correct multivariate statistical method, that is, regression analysis, analysis of variance, and factor analysis or state that none is applicable for processing research results.
- Use these three statistical methods with the support of software (for example, SPSS) to process research results.
- Interpret the results of processing by statistical software (for example, SPSS) where the three methods are used.
- Write about, explain, and evaluate results from the statistical methods in a report.
- Evaluate whether the premises of each method hold in specific research data.
- Compare the methods so that others can understand how they are different and how they are alike.

### Course assessment

Assignments and final exam. Grades are given on a 0 – 10 point scale. The minimum grade to pass the course is 5.0. The student needs to get a minimum grade of 5.0 in the final exam and a minimum average grade of 5.0 for all course assessment.

### Reading material


### Teaching and learning activities

Lectures, in class exercise and discussions.

### Language of instruction

Icelandic