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# Multivariate Statistics and Structural Equation Modeling Seminar

## Professor Paul A. Dion

6-10 November 2023

08:30 - 17:00 K10 (Henschelstraße 2)



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### Description

The objective for this seminar is to equip social science students to complete the statistical analysis for the research thesis portion of their degree requirement. To accomplish this the topic of the seminar is structural equation modelling (SEM), both structural models which test research hypotheses and measurement models which test the reliability and validity of the measurement of latent variables. These are used to test subjective variables. To prepare students for this course a review of regression and factor analysis begin the seminar.

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#### **Class Procedure**

The instructor will present examples of analyses, explain the rationale behind each technique and conduct an actual data-based analysis in class. Following this the students will each analysis another set of data in a hands-on approach under the close supervision of the instructor.



# You will learn...

- Applications and rationale for structural equation modelling (SEM)
- •What it does and how IT works
- SEM models using manifest variables
- SEM measurement models with latent variables: Developing reliable and valid measures of research constructs
- SEM: Models using latent and manifest variables
- Importing of the results
- Applications using IBM SPSS Amos: Powerful statistical software that allows building attitudinal and behavioral models reflecting complex relationships.



#### For whom?

• Graduate students (Master and PhD's) who are interested in conducting surveys and psychometric measurement.

#### Formalities:

• 4 SWS, 6 ECTS, Instruction language: English