**Syllabus of an educational component of a degree programme**

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| Name of unit conducting a component | ***Doctoral School of Social Sciences*** |
| Name of an educational component | **Introduction to Structural Equation** |
| Language of education | English |
| Goals of education | The main goal of this course is to equip participants with relevant knowledge, skills and awareness of using the structural equation modelling in solving the research questions in social science perspective. First, the assumptions and requirements of this method will be presented and later it will be practiced with use of adequate statistical programs. |
| Learning outcomes of an educational component | The educational component aims to equip students in:  Knowledge:   * To know what is the SEM and it could be applied for the scientific research * To know how to design the SEM and how to evaluate the results of this analysis * To know how to interpret the results of analysis * To know how to publish results of such analysis   Skills:   * To be able to apply adequate techniques to SEM analysis * To be able to do analysis and interpret results of SEM * To be able to assess the quality of models and   Competences:   * To develop ability of organizing the analysis of SEM * To be open for constructive feedback about using SEM and provide the comments about SEM in social science research * To be able to collaborate in preparing the analysis * To be able to prepare the own analysis in given time * To be able to apply the ethical aspects in the research |
| Verification methods and assessment criteria of learning outcomes obtained by students | * Individual homework * Analysis * Discussion about the SEM analysis |
| Type of an educational component (obligatory/optional) | Optional |
| Year of study | Any |
| Semester | Summer |
| Name and surname of the coordinator of a component and/or person/s conducting a component | **dr hab. Jolanta Perek-Białas, prof. UJ** |
| Name and surname of person/s conducting an examination or granting credit in the case when this sposóis other person than conducting a component | **dr hab. Jolanta Perek-Białas, prof. UJ+ visitors/invited lectures** |
| Manner of completion | Successful pass depends on active participation in the course, individual homeworks, analysis and discussion about analysis |
| Preliminary and additional requirements | - |
| Type and number of hours of courses requiring  direct participation of academic staff and students, if in a given component such courses are included | 15 hours |
| Number of ECTS credits assigned to a component | 2 ECTS |
| Balance of ECTS credits |  |
| Applied teaching methods | Workshop, Seminar, Discussion, Case study, Project |
| Form and conditions of passing a component, including conditions of allowing to take an examination, as well as form and conditions of passing each type of courses included in a given component | Final discussion at the end of course (10%)  Active participation in course, including homework (40%)  Analysis (50%)  To pass there is a need to achieve at least 60% of the total score. |
| Content of an educational module (with division into forms of courses completion) | 1. Introduction to SEM – idea and application  2. Data requirements, sample size and assumptions of analysis  3. Explanatory Factor Analysis/Confirmatory Factor Analysis  4. Building the SEM model – what is needed and why?  5. Testing hypothesis with use of SEM  6. Analysis of SEM – evaluation of models  7. Analysis of SEM – interpretation of models, visualization. |
| List of basic as well as supplementary literature, knowledge of which is required in order to pass a given component | * Hooper, D., Coughlan, J., & Mullen, M. R. (2008). Structural equation modelling: Guidelines for determining model fit. *Electronic journal of business research methods*, *6*(1), 53-60. * Muthén, B. (1984). A general structural equation model with dichotomous, ordered categorical, and continuous latent variable indicators. *Psychometrika*, *49*(1), 115-132. * Chou, C. P., & Bentler, P. M. (1995). Estimates and tests in structural equation modeling. * McIntosh, C. N. (2007). Rethinking fit assessment in structural equation modelling: A commentary and elaboration on Barrett (2007). *Personality and Individual Differences*, *42*(5), 859-867. * Streiner, D. L. (2006). Building a better model: an introduction to structural equation modelling. *The Canadian Journal of Psychiatry*, *51*(5), 317-324. * Additional literature will be given at the beginning of the course |