**Table 5.2.** Specification of subjects

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| **Study program:** Advanced Data Analytics in Business | | | | |
| **Name of the subject: Applied Econometrics** | | | | |
| **Teacher(s):** Žarko Popović, Jelena J. Stanković | | | | |
| **Assistant(s):** Ivana Marjanović | | | | |
| **Status of the subject:** Core subject | | | | |
| **Number of ECTS credits: 8** | | | | |
| **Conditions:** completed course Programming for business applications 2 | | | | |
| **Subject goal**  Acquiring knowledge of econometric methods and models which used in business and economics and acquiring skills needed for independent empirical research in this field of science. | | | | |
| **Outcome of the subject**  Students will be able to:   * apply econometric modeling in micro and macroeconomics; * conduct independent econometric research; * use of appropriate programming language on empirical data; * interpret the results of implemented models. | | | | |
| **Subject content**  *Theory*  Classical econometric analysis: classical linear regression model - assumptions, estimation methods, testing of deviations from the assumptions of the classical linear regression model and model stability tests.  Econometric analysis of panel data: fixed and random effects models - assumptions and evaluation methods, tests and model selection, testing of deviations from the assumptions, methods of instrumental variables, dynamic panel models.  Econometric analysis of models with discrete dependent variable: binary choice models, probit and logit, marginal effects, specification tests and multiple-choice models.  *Practical learning*  Application of econometric methods and models on empirical data in the computer centre where students would learning to obtain adequate conclusions useing the programming language R. | | | | |
| **Literature**   1. Asteriou, D., Hall, S. G. (2015) *Applied econometrics*. Macmillan International Higher Education. 2. Wooldridge, J. M. (2015). *Introductory econometrics: A modern approach*. Cengage learning. 3. Croissant, Y., Millo, G. (2019) *Panel data econometrics with R*. John Wiley and Sons, Incorporated. 4. Heiss, F. (2020). *Using R for Introductory Econometrics* (2nd edition). Independently published. | | | | |
| **Number of active teaching classes** | **Theoretical teaching:** 30 | | **Practical teaching:** 45 | |
| **Method of carrying out the teaching**  Interactive lectures, presentation, dialouge, individual work | | | | |
| **Evaluation of knowledge (maximum number of points 100)** | | | | |
| **Pre-exam obligations** | points | **Final exam** | | points |
| Activity during lectures | 10 | Written exam | | 50 |
| Practical teaching | 10 | Oral exam | | 0 |
| Colloquium | 20 | Project presentation | | 0 |
| Seminar(s) | 10 | **Total** | | **100** |