**Table 5.2.** Course specification

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| **Study program : Advanced Data Analytics in Business** | | | | |
| **Course title: R for Data Science** | | | | |
| **Teachers:** **Мирко Савић, Роналд Хохрајтер, Александар Купусинац** | | | | |
| **Status of the course: Obligatory** | | | | |
| **Number of ECTS: 7** | | | | |
| **Condition: None** | | | | |
| **Goal of the course**  The goal of the course is students to teach students at the beginning basic tools for management of big data in R language and later on advanced tools and be capable to program in R language. The entire course is in the context of business environment and through examples of good praxis, because the final goal is for student to develop competencies related to R language in order to implement them for the need of business analytics in fast and efficient way. | | | | |
| **Learning outcome**  Student know and understands R language, uses R studio, ggplot2, tidyverse and collection of packages for massive data. Student imports, manipulates, analyse and models data. Student knows how to communicate results of analysis to final users. | | | | |
| **Content of the course**  *Theoretical part*  *1-2. Basics of R language*  *3. Relationship of statistics and R language*  *4. Relationship of econometrics and R language*  *5. Data visualisation*  *6. Data transformation*  *7. Writing of scripts*  *8. Exploratory data analysis*  *9. Projects in R package*  *10. Data wrangling*  *11-13. Programming*  *14. Modelling*  *15. Communication of results.*  *Practical part*  *Work on practical tasks, writing of seminar paper on the basis of theoretical topics and learning R language in computer lab.* | | | | |
| **Literature**   1. Wickham, H., & Grolemund, G. (2016). R for Data Science - First Edition. O'Reilly, Sebastopol, Canada. 2. Peng, D. R. (2015). R Programming for Data Science. Lulu Press Inc. 3. Dalpiaz, D. (2018). Applied Statistics with R. University of Illinois, USA. 4. Chang, W. (2013), R Graphics Cookbook. O'Reilly, Sebastopol, Canada. | | | | |
| **Number of hours of active teaching** | **Theoretical teaching: 3** | | **Practical teaching: 2** | |
| **Teaching methods**  All lectures are conducted in computer lab. | | | | |
| **Assessment (maximum number of points 100)** | | | | |
| **Pre-exam obligations** | Points | **Final exam** | | Points |
| Activities during semester | **5** | Written exam | | **15** |
| Practical part | **5** | Oral exam | | **15** |
| Colloquium (2 colloquiums times 20 points) | **40** | *..........* | |  |
| Seminar paper | **20** |  | |  |