**Table 5.2** Specification of subjects

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| **Study program:** Advanced Data Analytics in Business | | | | | |
| **Name of the subject: Data Acquisition in Business Intelligence** | | | | | |
| **Teacher(s):** Ognjen Radović, Jovica Stanković | | | | | |
| **Status of the subject:** Elective | | | | | |
| **Number of ECTS credits: 7** | | | | | |
| **Conditions:** Programming for business applications 1 | | | | | |
| **Subject goal**  Well-prepared and generated data is a powerful tool to manage business and customer relationships. In this sense, the aim of this course is to acquire students with theoretical and practical knowledge about the ways in which they can generate more relevant and reliable information. Students develop competencies such that they with the help of data acquisition and application of programming languages Python and R to users of information provide information which they need and in the form which they request. | | | | | |
| **Outcome of the subject**  With the help of Python and R students will be able to:   * collect information and analyze it; * personalize data and deliver it through different channels; * manage knowledge by taking certain actions. | | | | | |
| **Subject content**  *Theory*  **Basics of data acquisition:** The importance of data acquisition in business intelligence, basics of data analytics and machine learning, introduction to different Hadoop models.  **Application of Python language in business data acquisition:** data extraction from different formats SQL, XLS, HTML.  **Application of R language in business data acquisition:** Introduction to Hadoop, data analytics in R programming language, data extraction from MySQL, Excel, MongoDB, Hive.  *Practical learning*  Exercises in the computer center. Examples will be processed and implemented in accordance with the theoretical teaching. | | | | | |
| **Literature**   1. Bahga, A., Madisetti, V. 2016, *Big Data Analytics: A Hands-On Approach*, Arshdeep Bahga & Vijay Madisetti. 2. EMC Education Services, 2015, *Data Science & Big Data Analytics: Discovering, Analyzing, Visualizing and Presenting Data*, John Wiley & Sons, Inc. 3. Prajapati, V. 2013, *Big Data Analytics with R and Hadoop*, Packt Publishing. | | | | | |
| **Number of active teaching classes** | | **Theoretical teaching:** 30 | | **Practical teaching:** 45 | |
| **Method of carrying out the teaching**  Interactive lectures and exercises in the computer classroom. | | | | | |
| **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 | |  | |  |
| Seminar(s) | 10 | | **Total** | | **100** |