**Table 5.1** Course specification to doctoral study programs

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| **Course name: Intelligent data processing** |
| **Teacher or teachers:** [**Todorović T. Branimir**](../P%209.3%20Knjiga%20Nastavnika%20DOS%20He/44.%20Branimir%20T.%20Todorovic%2C%20vanredni%20profesor.xlsx) |
| **Course status:** Elective |
| **Number of ECTS:** 10 |
| **Precondition courses:** None |
| **Educational goal**Acquainting with the methods and algorithms of machine learning and computer intelligence for intelligent analysis of structured and non-structured data. |
| **Educational outcomes** Fundamental theoretical knowledge and capacity for software implementation of methods and algorithms of intelligent processing oaf structured and non-structured data. |
| **Course content**Measurements and data. Data reliability analysis; Structured data processing, bases of data, graphs and trees; Non-structured data processing; Association analysis; clustering; classification; Regression; Sequential data processing; Prediction of non-stationary time series; Blind signal processing techniques: blind separation, convolution separation and deconvolution. |
| **Literature**1. David Hand, Heikki Mannila and Padhraic Smyth, Principles of Data Mining, The MIT Press, 2001. |
| **Number of active teaching classes (weekly)** | Lectures: 4 | Study research work: 0 |
| **Teaching methods**The lectures make use of the classical teaching methods, with using of video projectors and interaction with students. The students’ knowledge is tested through homework and colloquia. The final exam tests the comprehensive understanding of the subject matter. |
| **Knowledge evaluation (maximum 100 points)****Pre-examination obligations Points Final exam Points**Lecture attendance **10**  Oral part of the exam **50**Colloquium exam **20**Term paper **20**  |