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

|  |
| --- |
| **Course name: Scientific research method** |
| **Teacher or teachers:** [**Kisi S. Ozgur**](../P%209.3%20Knjiga%20Nastavnika%20DOS%20He/13.%20Ozgur%20S.%20Kisi%2C%20redovni%20profesor.xlsx)**,** [**Trajković R. Slaviša**](../P%209.3%20Knjiga%20Nastavnika%20DOS%20He/34.%20Slavisa%20R.%20Trajkovic%2C%20redovni%20profesor.xlsx)**,** [**Karamarković P. Jugoslav**](../P%209.3%20Knjiga%20Nastavnika%20DOS%20He/12.%20Jugoslav%20P.%20Karamarkovic%2C%20redovni%20profesor.xlsx)**,** [**Gocić Lј. Milan**](../P%209.3%20Knjiga%20Nastavnika%20DOS%20He/53.%20Milan%20Lj.%20Gocic%2C%20docent.xlsx) |
| **Course status:** Mandatory |
| **Number of ECTS:** 10 |
| **Precondition courses:** None |
| **Educational goal**The main goal is to enable students for successful writing of scientific papers and doctoral dissertation. |
| **Educational outcomes** Students will be able to understand the research methods,steps of the scientific mеthod and how to write and publish a scientific research paper. |
| **Course content**Base terminology: methodology, method. Nature of the scientific method. Overview of research methods. Steps of the scientific mеthod: research question (problem), background (observation), formulate hypothesis, design experiment, test hypothesis (collect data), interpret (analyze results), publish findings. Engineering research: Research methods in engineering. Structure of a scientific paper. Writing and publishing a scientific research papers. Ethics in research and publication. Open access journals. Attributes of a good thesis. Presentation languages. Role of simulation. Invention of new terms. Find and combine keywords. How to use KOBSON. Web of knowledge. How to cite. Plagiarism. Authors' rights. |
| **Literature**1. Steven Gimbel, Exploring the Scientific Method: Cases and Questions, University Of Chicago Press, 20112. E. Bright Wilson, An Introduction to Scientific Research, Dover Publications, 20123. Robert A. Day, Barbara Gastel, How to Write and Publish a Scientific Paper, Greenwood, 20114. Wendy Laura Belcher, Writing Your Journal Article in Twelve Weeks: A Guide to Academic Publishing Success, Sage Publications, 20095. Joshua Schimel, Writing Science: How to Write Papers That Get Cited and Proposals That Get Funded, Oxford University Press, USA, 2011 |
| **Number of active teaching classes (weekly)** | Lectures: 3 | Study research work: 0 |
| **Teaching methods**Lectures. Consultations and interactive work with the students. Lectures are organized in combined form. The presentation of the theoretical part is followed by the corresponding examples. |
| **Knowledge evaluation (maximum 100 points)****Pre-examination obligations Points Final exam Points**Lecture attendance **10**  Oral part of the exam **30**Presentation **20**Term paper **40**  |