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| Course: | **Hydroecology** |
| Course id: 3ОUV2О09 |
| Number of ECTS: 5 |
| Teacher: | Jasna Grabić |
| Course status | Mandatory |
| Number of active teaching classes (weekly) |
| Lectures: 45 | Practical classes: 45 | Other teaching types: | Study research work: | Other classes: |
| Precondition courses | None |
| 1. Educational goal

Adoption of the basic concepts of hydrology and ecology, as well as the introduction to modern approaches to water quality management in agriculture and the environment. |
| 1. Educational outcomes

Knowledge gained from freshwater ecology is the basis for understanding the hydrological and ecological processes. Students become competent to work in the field of the water management in agriculture and the environment, since it will provide basic knowledge about water, factors that threaten its quality and water quality modeling methods. Moreover, Hydroecology is the basis for the subjects Hydrology, Water Pollution Control and Constructed Wetland Systems. |
| 1. Course content

*Theory lessons*: The importance of water. Definitions and basic concepts of hydrology and ecology. Circulation of water in the environment (hydrological cycle). Types of water bodies. The parameters of water quality. The significance of oxygen in the aqueous environment. The most common sources of water pollution (concentrated and dispersed pollutants). The importance of nutrient cycling in the environment (nitrogen, phosphorous, etc.). Eutrophic processes in water bodies. Trophic level of aquatic ecosystems. Determining the degree of contamination on the basis of biocenosis. Biological and ecological minimum and instream flows maintaining. Modeling water quality: definition, historical overview and development of water quality models. Divisions and examples of water quality models. Hydroecology and river restoration with examples. *Practical classes*: Introducing to the basic hydrometric methods, sampling of water and sludge, and measuring water quality parameters. Field study. Finalizing a term paper. |
| 1. Teaching methods

Lectures, Practical classes. |
| Knowledge evaluation (maximum 100 points) |
| Pre-examination obligations | Mandatory | Points | Final exam  | Mandatory | Points |
| Lecture attendance | Yes | 5 | Oral part of the exam | Yes | 50 |
| Test | Yes | 2x10=20 |  |
| Exercise attendance | Yes | 5 |
| Term paper | Yes | 20 |
| Literature  |
| Ord. | Author | Title | Publisher | Year |
|  | Grabić, J., Salvai, A. | Hydroecology | Script (in Serbian) | 2014 |
|  | Wood P. J., Hannah, D. M., Sadler J.P. eds | Hydroecology and Ecohydrology: Past, Present and Future,  | John Wiley & Sons Ltd, Chichester, UK | 2008 |
|  | USDA- Natural Resource Conservation Service | Stream Restoration Design, National Engineering Handbook, Part 654. | USDA, Washington, DC. | 2007 |

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| Znak univerziteta | UNIVERSITY OF NOVI SADFACULTY OF AGRICULTURE 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 8 | Znak fakulteta2 |
| Study Programme AccreditationUNDERGRADUATE ACADEMIC STUDIES WATER MANAGEMENT  |
| Table 5.2 Course specification |