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| Course: | **DECISION SUPPORT SYSTEMS** |
| Course id: |
| Number of ECTS: 6 |
| Teacher: | **Zorica Srdjevic** |
| Course status | Elective |
| Number of active teaching classes (weekly) |
| Lectures: 2 | Practical classes: 2 | Other teaching types: | Study research work: | Other classes: |
| Precondition courses | None |
| 1. Educational goal

The topic will give an understanding and an introduction to methods and tools for structuring water and agriculture related decision support systems, as well as to instruments and technologies, including software, in connected sectors. |
| 1. Educational outcomes

On successful completion of this subject, the students should: a) have acquired understanding of concept and importance of developing and using decision support systems with focus on agricultural sector; b) have acquired basic knowledge of a number of methods, tools and software products to be moduels of advanced decision support systems; c) improve IT skills and skills for independent learning, reporting and presentation. |
| 1. Course content

Introduction. Decision making process. Modeling a decision problem. Decision elements. Well and ill structured problems. Waek Optimization. Single and multi criterion(s) approaches. Multicriteria analysis and methods. Definition, types and architectures of decision support systems. Components of the decision support systems. Data management. Work with models and modules. Kknowledge-based systems. Users interface. Dilogue menues. |
| 1. Teaching methods

Consultations. In case there are sufficient students(4+) lectures and exercises will be organized. Students will accomplish a semester project and present results in oral and in writing. The semster project counts for 60% of the final grade. The final grade is oral and counts for 40%. The lectures are held in English. Retake exams may be oral only. |
| Knowledge evaluation (maximum 100 points) |
| Pre-examination obligations | Mandatory | Points | Final exam | Mandatory | Points |
| Semester project | Yes | 60 | Oral | Yes | 40 |
| Literature  |
| Ord. | Author | Title | Publisher | Year |
| 1. | Srdjevic B. | Systems Analysis Methods in Engineering With Extensions in Environmental Engineering, | Federal University of Bahia, Salvador, Brazil. (Lecturing Notes) | 2003 |
| 2. | Burstein F., Holsapple C.W. | *Handbook on Decision Support Systems.*  | *Berlin: Springer Verlag*  |   2008 |
| 3. | Simonovic S.  | Decision support systems for sustainable management of water resources: 1. General principles  | Water International, Taylor & Francis | 1996 |
| 4. |  |  | Internet sources (articles, reports, presentations). |  |

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