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| Course: | **PHYSIOLOGY OF ABIOTIC STRESS IN PLANTS** |
| Course id: 3МЗИ1И01 |
| Number of ECTS: 6 |
| Teacher: | Ivana Maksimović, Marina Putnik-Delić |
| Course status | Elective |
| Number of active teaching classes (weekly) |
| Lectures: 30 | Practical classes: 30 | Other teaching types: | Study research work: | Other classes: |
| Precondition courses | Passed exam Plant physiology at the BSc level  |
| 1. Educational goal

Acquiring of advanced knowledge in the field of role and impact of environmental factors on crop metabolism. Special emphasis will be on plant reactions to various stress factors and ways their tolerance may be increased. |
| 1. Educational outcomes

Knowledge of the impact of different types of abiotic stress on the physiological processes of cultivated plants that are important for yield and quality of agricultural products, as well as the ways in which these impacts can be reduced or alleviated. |
| 1. Course content

LecturesDefinition and subject of ecophysiology, stress, acclimatization, adaptation. The influence of different environmental factors on the main physiological processes: water regime, uptake, transport and distribution of nutrients, photosynthesis in C3, C4 and CAM plants, respiration, growth, development and fruiting. The effects and consequences of inadequate mineral nutrition. Nonparasitic diseases of cultivated plants. Practical workGrowing plants in semi-controlled conditions, provoking various types of abiotic stress (drought, flooding, inadequate mineral nutrition, lack of light, ....) and monitoring of physiological parameters in these conditions (transpiration, stomatal diffuse resistance, concentration of free proline, ....). |
| 1. Teaching methods

Lectures, Practical classes, Consultations, study, research work |
| Knowledge evaluation (maximum 100 points) |
| Pre-examination obligations | Mandatory | Points | Final exam (izabrati) | Mandatory | Points |
| Lecture attendance | Yes | 10 | Oral part of the exam | Yes | 60 |
| Test | Yes | 20 |  |
| Exercise attendance | Yes | 10 |
| Term paper | No |  |
| Literature  |
| Ord. | Author | Title | Publisher | Year |
|  | Larcher, W. | Physiological Plant Ecology | Springer-Verlag, Berlin, Heidelberg, New York | 1995 |
|  | Lincoln Taiz and Eduardo Zeiger | Plant Physiology | Sinauer Associates Inc., ISBN 978-0-87893-866-7 | 2010 |

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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: SOIL SCIENCE AND PLANT NUTRITION |
| Table 5.2 Course specification |