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| 1. Course title: Plant Physiology | | | | | |
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| 2. Code: | | 3. Type (lecture, practice etc.): lecture | | | |
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| 4. Contact hours: 3 | | 5. Number of credits (ECTS): 3 | | | |
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| 6. Preliminary conditions (max. 3):   * Biochemistry lecture | | | | | |
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| 7. Announced:fall semester, spring semester, both | | | | | |
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| 8. Limit for participants: | | | | | |
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| 10. Responsible teacher (faculty, institute and department):  Dr. Éva Hideg | | | | | |
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| 11. Teacher(s) and percentage: | | Dr. Éva Hideg | | 57.1% | |
| Dr Marianna Kocsis | | 28.6% | |
| assistant lecturer (Dept. Plant Biology) | | 17.3% | |
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| 12. Language:English | | | | | |
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| 13. Course objectives and/or learning outcomes:  Objectives: Basic aspects of plant development, metabolics and stress physiology. The course emphasizes the synthesis of the students’ knowledge acquired in earlier biochemistry, physics and chemistry courses into physiology.  Learning outcomes:  Upon completing the course, students are expected to understand how the basic principles of natural sciences (as studies in Physics, Chemistry and Biochemistry courses) are realized in plants: in the regulation of development, growth and bio-production. Students are expected to acquire a responsible thinking attitude towards nature as a whole, and an awareness of the importance of plants in the biosphere.  Students will be ready to join advanced plant study courses. | | | | | |
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| 14. Course outline   1. Introduction. Water and nutrients. 2. Minerals, essential elements, transport 3. Stomata and transpiration 4. Photosynthesis: the light reactions. 5. Photosynthesis: carbon uptake and photorespiration 6. Carbohydrate anabolism and catabolism 7. Test based on lectures 1-6. (eLearning) 8. Lipid anabolism and catabolism, terpenoids 9. Special products 10. Phytohormones 11. Stress physiology – 1. Basic concepts, abiotic stress 12. Stress physiology – 2. Biotic stress 13. Growth and development. Summary: interconnections of pathways. 14. Test based on lectures 8-13. (eLearning) | | | | | |
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| 15. Mid-semester works  Attending lectures is highly recommended. Two written tests are to be taken as compulsory during the semester. | | | | | |
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| 16. Course requirements and grading  Students passing both written tests (scoring more than 60%) are eligible to take an oral exam during the examination period. Failed tests can be repeated once, at the beginning of the examination period. Actual scores of the written tests do not affect grades of the oral exam.  Oral exam: A list of questions/topics will be announced at the end of the semester. Students are to answer two questions/topics from the list, one in detail (A-question) and another briefly (B-question).  Grades will based on the student’s performance at the oral exam as:  0–60% fail (1)  61–70% pass (2)  71–80% satisfactory (3)  81–90% good (4)  91–100% excellent (5) | | | | | |
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| 17. List of readings   1. Lecture summaries available at eLearning | | | | | |
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| 18. Recommended texts, further readings   1. Taiz, L. & Zeigel, L.: Plant Physiology and Development, 6th Ed., 2015 Sinauer Associates, ISBN: 978-1-60535-255-8, Companion web site: http://6e.plantphys.net/ | | | | | |
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| **Date** | 27 April, 2017 | **Prepared by** |  | | |
| Dr. Éva Hideg | | |
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| **Endorsed by** | | |  | | |
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