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| 1. Course title: Statistics, practical course | | | | | |
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| 2. Code: | | 3. Type (lecture, practice etc.): practical course | | | |
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| 4. Contact hours: 3 | | 5. Number of credits (ECTS): 3 | | | |
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| 6. Preliminary conditions (max. 3):   * Mathematics lecture * Mathematics practical course | | | | | |
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| 7. Announced:fall semester, spring semester, both | | | | | |
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| 8. Limit for participants: Number of students participating the calculus in the second half of the semester is limited by the capacity of available computer rooms. Studenst will be assigned to groups as necessary. | | | | | |
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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 | | 50% | |
| assistant lecturer (Dept. Plant Biology) | | 50% | |
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| 12. Language:English | | | | | |
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| 13. Course objectives and/or learning outcomes:  Objectives: Fundamental statistics necessary for designing and evaluating biological experiments. Step-by-step demonstration of calculus and underlying principles. Descriptive statistics and elementary predictive statistics.  Learning outcomes:  Upon completing the course, students are expected to be capable of designing biological experiments with appropriate sampling strategies, evaluate the outcome of such experiments using simple statistic methods. The course enables students to enlist advanced statistics courses. | | | | | |
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| 14. Course outline   1. Introduction, Sampling, Variables 2. Data and statistical characterisation, Graphics, Data transformation 3. Distributions, Estimation 4. Hypothesis, Statistical probes-I. 5. Statistical probes-II. Statistical connections between two variables 6. ANOVA basics, Non-parametric probes. 7. Mid-term test (covering lectures 1-6.) 8. Calculations and discussions based on lecture-1. and 2. 9. Short test (previous week’s calculations) Calculations and discussions based on lecture-3. 10. Short test (previous week’s calculations) Calculations and discussions based on lecture-4. 11. Short test (previous week’s calculations) Calculations and discussions based on lecture-5. 12. Short test (previous week’s calculations) Calculations and discussions based on lecture-6. 13. Short test (previous week’s calculations) 14. Closing discussions, repetitions of failed short tests | | | | | |
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| 15. Mid-semester works  Attendance during weeks 1-6 is highly recommended. Attendance during weeks 7-13 is compulsory. | | | | | |
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| 16. Course requirements and grading  Students failing (scoring less than 60%) a *mid-term test* are to repeat the course in the next academic year.  Students passing (scoring more than 60%) this test should attend five practicals (Calculations and discussions) to be held in a computer room. In the second part of the semester, *five short calculus tests* consisting of statistical calculations are to be completed (all scoring more than 60%). If failed, short tests can be repeated once, at the end of the semester.  Grades are formed based on the average of the above six tests (mid-term + five short calculus tests) 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. Van Emden: Statistics for Terrified Biologists, 2008, Wiley, ISBN 1405149566 | | | | | |
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| **Date** | 27 April, 2017 | **Prepared by** |  | | |
| Dr. Éva Hideg | | |
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| **Endorsed by** | | |  | | |
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