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| **1. Course title:** Logic | | | | | |
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| **2. Code:** | | **3. Type (lecture, practice etc.):** seminar | | | |
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| **4. Contact hours: 2** hoursper week | | **5. Number of credits (ECTS):** 2 | | | |
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| **6. Preliminary conditions (max. 3):** | | | | | |
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| **7. Announced:** ☒fall semester, ☐ spring semester, ☐ both | | | | | |
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| **8. Limit for participants:** 150 | | | | | |
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| **10. Responsible teacher (faculty, institute and department):**  Tímea Eisner PhD (Faculty of Science, Institute of Mathematics and Informatics, Department of Mathematics) | | | | | |
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| **11. Teacher(s) and percentage:** | | Tímea Eisner, PhD | | 100 % | |
| Margit Pap, PhD, dr. Habil | | 100% | |
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| **12. Language:** English | | | | | |
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| **13. Course objectives and/or learning outcomes:**  **Objectives:** This is an introductory course in formal logic that covers the use of symbolic techniques for the analysis and construction of good arguments. Proofs in formal logic mirror the structure of good arguments in English generally, so to construct them, we learn about good methods of inference.  **Learning outcomes:** students completing the course can use the language of the formal logic. | | | | | |
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| **14. Course outline**   1. Logic puzzles 2. Logic puzzles 3. Simple and compound statements, properties of the operations 4. Equivalent statements, negating statements. 5. Implications and Their Connections. Methods of poof. 6. 1st midterm 7. Predicates and Quantifiers 8. Negating Quantifiers, Statements with Several Quantifiers and/or Variables 9. Statements with Several Quantifiers and/or Variables 10. The definition of sets and relations 11. Properties of relations, Equivalence relation, equivalence classes 12. Mapping as a special relation. 13. 2nd midterm. | | | | | |
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| **15. Mid-semester works**  Attending lectures is highly recommended. | | | | | |
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| **16. Course requirements and grading**  the two tests contribute 50-50% toward the final grade:   1. 41% – acceptable 2. 55% – average 3. 68% – good 4. 84% – excellent   Make up tests: at the end of the semester.  Failed tests must be repeated. | | | | | |
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| **17. List of readings**  Wolfgang Rautenberg; A Concise Introdutcion to Mathematical Logic (3rd edition), Springer | | | | | |
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| **18. Recommended texts, further readings** | | | | | |
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| **Date** | 4 May, 2017 | **Prepared by** |  | | |
| Tímea Eisner, PhD  responsible teacher | | |
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| **Endorsed by** | | |  | | |
| László Tóth, PhD, Dr. Habil program supervisor | | |