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| 1. Course title: Mathematical Basics of Physical Chemistry II. sem | | | | | |
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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: 12/group | | | | | |
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| 10. Responsible teacher (faculty, institute and department):  Beáta Lemli, PhD (Faculty of Science, Institute of Chemistry, Department of General and Physical Chemistry) | | | | | |
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| 11. Teacher(s) and percentage: | | Dr. Beáta Lemli | | 80 % | |
| Dr. Sándor Kunsági-Máté | | 20 % | |
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| 12. Language:English | | | | | |
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| 13. Course objectives and/or learning outcomes: The aim of the seminar is to provide students with the basic mathematical competencies required to undertake the Physics Chemistry course. | | | | | |
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| 14. Course outline  Week 1 Complex numbers  Week 2 Orthogonal Polynomials  Week 3 Furier Series  Weeak 4-5 Operators  Week 6 Vectors and plane polar coordinates and spherical coordinates  Week 7-8 Determinants, Cramer’s rule  Week 9-10 Matrices  Week 11-12 The classical wave equation, a vibrating string  Week 13 Summary | | | | | |
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| 15. Mid-semester works  written exams week 6-7 and week 13-14 | | | | | |
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| 16. Course requirements and grading  The acceptance criteria for both written exam is 50%.  Grades:  0–49% fail  50–64% acceptable  65–74% average  75–84% good  85–100% excellent | | | | | |
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| 17. List of readings   1. Donald A. McQuarrie: Mathematics for Physical ChemistryUniversity Science Books, Mill Valley, California, 2008, ISBN 978-1-891389-56-6 | | | | | |
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| 18. Recommended texts, further readings   1. Donald A. McQuarrie: Mathematics for Physical ChemistryUniversity Science Books, Mill Valley, California, 2008, ISBN 978-1-891389-56-6 | | | | | |
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| **Date** | 13 April, 2017 | **Prepared by** |  | | |
| Beáta Lemli, PhD  responsible reader | | |
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| **Endorsed by** | | |  | | |
| Dr. László Kollár, DSc program supervisor | | |