Course Program 2013

| MLK | EXERCISES IN INSTRUMENTAL ANALYSIS | | |
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| 4 EAP | 100 % e-course | Study semester: Spring, Autumn | A |
| Purpose: | To develop the knowledge and skills needed to understands the principles of instrumental analysis. The emphasis is on separation methods. | | |
| Short description of the course: | Principles of the separation and detection methods of instrumental analytical chemistry: gas and liquid chromatography, mass- spectrometry, capillary electrophoresis. | | |
| Results: | Is able to use correctly the essential chromatography, mass spectrometry and capillary electrophoresis vocabulary, is able to discuss about the keyword topics of lectures; Knows important submodes of separation methods and capillary electrophoresis methods, can describe the principles and applications of these submodes; Is able independantly read and understand the separation science literature including recent scientific research papers, is able to make summaries based on the before mentioned literature; Is able to present the results clearly and logically, interprete these and make proper conclusions. | | |
| Estimation criterion | Assessment | | |
| Lecturers: | Prof. PhD Ruth S | Shimmo, MSc Kert Martma, | |
| Name in Estonian: | Harjutusi instrun | nentaalanalüüsis | |
| Eeldusaine: | - | | |
| Reading list: | Kellner, R., Mermet, J. M., Otto, M., Widmer, H. M. (1998). Analytical Chemistry: the Approved text to thr FECS Curriculum Analytical Chemistry. Weinheim, Ney York, Chichester, Brisbane, Toronto, Singapore, Wiley-VCA. | | |
| Self-contained work: | Working with literature, writing a referative work. | | |

| Additional | Contents of course: e-course |
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| course: | 1. INTRODUCTION TO THE CHROMATOGRAPHY |
| | Reading, quiz, discussions in forum |
| | 2. GAS CHROMATOGRAPHY |
| | Reading, quiz, discussions in foorum |
| | 3. LIQUID CHROMATOGRAPHY |
| | Reading, quiz, discussions in forum |
| | 4. CAPILLARY ELECTROPHORESIS |
| | Reading, quiz, discussions in forum |
| | 5. MASS SPECTROMETRY |
| | Reading, quiz, discussions in foorum |
| | 6. CONCLUSION |
| | Referative work, course results, feedback |
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| Academic unit: | Institute of Mathematics and Natural Sciences |
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| Lectures: | Ruth Shimmo, Kert Martma |
| Signature: | |
| Date: | |

This programm is registred in academic unit

| Date: | |
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| Assistant: | Kristin Part |

| Signature: | |
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