

Information sheet for the course Analytical Chemistry II.

University: <i>Alexander Dubček University of Trenčín</i>	
Faculty: <i>Faculty of Health Care</i>	
Course unit code: <i>AnCh2/d</i>	Course unit title: <i>Analytical Chemistry II.</i>
Type of course unit: <i>compulsory</i>	
Planned types, learning activities and teaching methods: <i>Lecture: 3 hours weekly/39 hours per semester of study; full-time</i>	
Number of credits: <i>4</i>	
Recommended semester: <i>2nd semester in the 1st year (full-time)</i>	
Degree of study: <i>I (bachelor)</i>	
Course prerequisites: <i>Analytical Chemistry I.</i>	
Assessment methods: <i>Written or oral examination (50 score points) - for obtaining the particular grades it is necessary to achieve:</i> <i>at least 45 score points for the grade A</i> <i>at least 40 score points for the grade B</i> <i>at least 35 score points for the grade C</i> <i>at least 30 score points for the grade D</i> <i>at least 25 score points for the grade E</i>	
Learning outcomes of the course unit: <i>The student will acquire knowledge by studying the subject of basic concepts and theoretical principles of instrumental analysis focusing on chromatography, optical, electrochemical and electromigration methods.</i>	
Course contents: <i>1. General procedures of chemical analysis</i> <i>2. Separation methods</i> <i>3. Introduction to chromatographic methods</i> <i>4. Liquid chromatography</i> <i>5. Thin-layer chromatography</i> <i>6. Polarographic analysis</i> <i>7. Newer polarographic techniques, voltammetry, potentiometry, coulometry, conductometry, electrogravimetry</i> <i>8. Optical Methods</i> <i>9. Flame photometry, atomic absorption spectrometry</i> <i>10. MS, IR, nuclear magnetic resonance, electron paramagnetic resonance</i> <i>11. Electromigration methods - electrophoresis, zone electrophoresis, isoelectric focusing</i> <i>12. Isotachophoresis</i>	
Recommended of required reading: <i>1. GARAJ, J., BUSTIN, D., HLADKÝ, Z.: Analytická chémia, Alfa/SNTL, Bratislava, 1987</i> <i>2. HOLZBECHER, Z., CHURÁČEK, J. a kol.: Analytická chemie, SNTL/Alfa, Praha, 1987</i> <i>3. HIGSON, P.J.: Analytical chemistry, Oxford, 2004</i> <i>4. ZÝKA, J.: Analytická príručka 1, SNTL/Alfa, Praha, 1979</i> <i>5. GARAJ, J. a kol.: Fyzikálne a fyzikálnochemické analytické metódy, Alfa, Bratislava, 1977</i> <i>6. ZELENSKÝ, I. a kol.: Seminár a cvičenie z analytickej chémie, PriF UK, Bratislava, 1999</i> <i>7. ČAKRT, M., KRUPČÍK, J., MOCÁK, J. a kol.: Analytická chémia Praktikum 1, SVST, Bratislava, 1981</i>	

8. CHURÁČEK, J., JANDERA, P.: *Úvod do vysokoúčinné kapalinové kolonové chromatografie*, SNTL, Praha, 1985
9. DEAN, J.A.: *Chemické dělicí metody*, SNTL, Praha, 1974
10. KRUPČÍK, J.: *Separačné metody*, SVST, Bratislava, 1986
11. SÁDECKÁ, J., NETRIOVÁ J.: *Analytické metody v klinickej chémii*. Slovenská technická univerzita v Bratislave, 2008. 270 p. ISBN 978-80-227-2821-8

Language: Slovak

Remarks: -

Evaluation history: Number of evaluated students 77

A	B	C	D	E	FX
50.65	11.69%	10.39%	7.79%	7.79%	11.69%

Lectures: RNDr. Zdenka Krajčovičová, PhD.

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