

Courses offered in English Language

Fall Semester 17-18

CHE 311 Analytical Chemistry II (6 ECTS)

OP(K), BC(K), FEC(K), MC(K)

Instrumental Analysis Methods: Classification, Analytical Instrumentation, Characteristics of Methods, Figures of Merit, Signal-to-Noise Ratio, Sources and Elimination Methods of Noise, Signal-to-Noise Enhancement. Atomic Spectroscopy: Atomic Absorption Spectrometry, Atomic Fluorescence Spectrometry, Atomic Emission Spectrometry, Atomic Mass Spectrometry, Atomic X-Ray Spectrometry. Molecular Spectroscopy: Ultraviolet-Visible Molecular Absorption Spectrometry, Molecular Luminescence Spectrometry, Infrared Spectrometry, Raman Spectroscopy, Nuclear Magnetic Resonance Spectroscopy, Molecular Mass Spectrometry. Electroanalytical Methods: Potentiometry, Coulometry, Voltammetry. Separation Methods: Gas Chromatography, High Performance Liquid Chromatography, Capillary Electrophoresis, Capillary Electrochromatography.

CHE 331 Organic Chemistry III (6 ECTS)

OP(K), BC(K), FEC(K), MC(K)

Heterocycles: furan, thiophene, pyrrole, pyridine, quinoline, isoquinoline and indole. Organic Free Radical Chemistry: mechanisms; functional group manipulation; C-C bond formation; Alicyclic Chemistry: ring strain; cycloalkanes (3-7) and larger (8-14 membered) rings. Non-Aromatic Heterocycles and Natural Products: small (3 & 4) and medium (5 & 6-membered) rings, steroids, β -lactams, carbohydrates; alkaloids, stereoelectronic, kinetic & thermodynamic control, NGP, phenolic oxidative coupling. B, Si & Sn: hydroboration, silylenolethers, Shapiro reaction, electrophilic substitution with allylic rearrangement, Crotylsilanes, Brook, Sila-Pummerer & Si-Baeyer-Villiger rearrangement, hydrostannylation, Crotylstannanes, Sn-Li exchange. Pd(0/II), Co & Fe: applications in synthesis; C-C bond formation via transmetallation, cyclisation, carbonyl/alkene insertions. Mixed Mechanism Workshop.

CHE 438 Introduction to Supramolecular Chemistry (6 ECTS)

MC(K)

Definition and Development of Supramolecular Chemistry. Host-Guest Chemistry. Energetics of Supramolecular Complexes: Experimental Methods. Templates and Self-Assembly. Molecular Devices. Fullerenes and Carbon Nanotubes.

For more information please follow the links below

<http://www.ucy.ac.cy/chem/en/>

<http://www.ucy.ac.cy/chem/en/academicprogramms/undergraduate/27-en-articles/en-topm/undergraduate/61-description-of-undergraduate-courses>

Erasmus Departmental Coordinator

Professor Agapios Agapiou

agapiou.agapios@ucy.ac.cy

Tel.: 00357 22895432