Subject title: Technology of bioactive natural products

Studijski programi za koje se organizuje: Hemijska tehnologija – magistarske/master studije

Status predmeta	*Semestar*	*Broj ECTS kredita*	*Fond časova*
obavezni	***II***	***5***	***2+0+2***

Course prerequisites	-
Course objectives	Through this course student acguire knowledge of secondary metabolites and for selection of best available extraction, isolation and identification processes of bioactive natural products
Teacher	Dr Biljana Damjanovic-Vratnica, full professor
Assessment structure	Lectures, tutorials, midterm thesis, consultation
I week (lecture)	Informations about the course and methodology of examination. Introduction
I week	Secondary metabolites, introduction
II week (lecture)	Production of bioactive compounds
II week	Field exercise
III week (lecture)	Medinicinal and aromatical plants
III week	Filed work
IV week (lecture)	Chemistry of essential oil
IV week	Laboratory work
V week (lecture)	Techniques of bioactive compounds isolation
V week	Laboratory work
VI week (lecture)	Biological activity of essential oil
VI week	Laboratory work
VII week	First midterm exam
VII week	Makeup first midterm exam
VIII week (lecture)	Essential oil toxicity
VIII week	Laboratory work
IX week (lecture)	Animal raw materials
IX week	Laboratory work
X week (lecture)	Unit operations in processing of bioactive organic products
X week	Laboratory work
XI week (lecture)	Biotechnology of bioactive compounds

XI week	Midterm thesis defense
XII week (lecture)	Alkaloids/production
XII week	Second midterm exam
XIII week (lecture)	Glycosides/production
XIII week	Midterm thesis defense
XIV week (lecture)	Makeup first midterm exam
XIV week	Midterm thesis defense
XV week (lecture)	Završni ispit
XV week	Završni ispit
Student responsibilities	Attending lectures, midterm thesis defense, midterm and final exams
Office hours	Working days: 11-12 h
ECTS hours	Weekly: 5 ECTS x 40/30 sati = 6,67 h The total load for the semester = 1250 h
Recommended textbooks	K. Baser, G. Buchbauer, Handbook of Essential Oils: Science, Technology, and Applications, CRC Press 2009. ; W. Thieman, M. Palladino, Introduction to Biotechnology, Pearson Int Edition, 2009; H. Tormar, Lipids and Essential oils as Antimicrobial Agents, Wiley 2011.
Assessment	Activity during lectures: (0 - 3 points) Activity during exercises and midterm thesis: (0 - 12 points), First midterm exam: (0 - 20 points), Second midterm exam: (0 - 15 points), Final exam : (0 - 50 points), Passing grade gets the cumulative collection at least 50 points.
Special course marks	-
Notes	-