
COURSE: Chemistry of natural organic compounds

ACADEMIC YEAR: 2016-2017

TYPE OF EDUCATIONAL ACTIVITY: Affine

TEACHER: Lucia Chiummiento

e-mail: **lucia.chiummiento@unibas.it**

website:

phone: **0971 205492**mobile (optional):

Language: **italian**

ECTS: (lessons e
tutorials/practice)
6n. of hours: (lessons e
tutorials/practice)
48Campus: Potenza
Dept. of Science
Program: **Scienze Chimiche**
(LM54)Semester: I:
**03/10/2016, 15-
31/01/2017)**

EDUCATIONAL GOALS AND EXPECTED LEARNING OUTCOMES

The aim is to give to students complete information about the main characteristic of the different metabolic pathways. At the end of the course students should know the ecological role of secondary metabolites and their use as drugs.

PRE-REQUIREMENTS

SYLLABUS**Primary and secondary metabolism:** main coenzymes and metabolic intermediates. Building blocks.**Acetate pathway.** Saturated and unsaturated fatty acids, polyacetates and polypropionates
Prostaglandins, leucotrienes and tromboxanes. Aromatic polyketides.**Shikimate pathway.** Aromatic aminoacids. Cinnamyl acid and derivatives. Coumarins,
flavonoids, stilbenes.**Mevalonic acid and methyl-erythritol phosphate pathways.** Terpenes (nomenclature)and steroids
(stereochemistry): cholesterol, steroidal saponines, cardioactive glycosides, pythosterols, vitamin D,
biliar acid, steroidal hormones.**Alkaloids. Alkaloids of hornitine, lysine, nicotine, tyrosine, triptophan, histidine..**

TEACHING METHODSTheoretical lessons, Classroom tutorials..

EVALUATION METHODSOral examination.

TEXTBOOKS AND ON-LINE EDUCATIONAL MATERIAL

- P. M. Dewick: **Medicinal Natural Products, A Biosynthetic Approach**, (Wiley 2009)- "**Chimica, biosintesi e bioattività delle sostanze naturali**", Piccin, Padova, 2013
 - X.-T. Liang, W.-S. Fang: **Medicinal Chemistry of Bioactive Natural product**, Wiley 2006
 - J. Clayden, N. Greeves, S. Warren, P. Wothers: **Organic Chemistry**, Oxford press
 - Nicolaou, K. C.; Montagnon, T. "**Molecules that changed the world**", Wiley-VCH. 2007
-

INTERACTION WITH STUDENTS

EXAMINATION SESSIONS (FORECAST)¹

13/02/2017

20/03/2017

10/04/2017

22/05/2017

19/06/2017

17/07/2017

18/09/2017

16 /09/2017

16/10/2017

20/11/2017

¹ Subject to possible changes: check the web site of the Teacher or the Department/School for updates.

18/12/2017

15/01/2018

SEMINARS BY EXTERNAL EXPERTS YES NO

FURTHER INFORMATION
