

**COURSE: Advanced Organic Chemistry Mod. 1****ACADEMIC YEAR: 2016/2017****TYPE OF EDUCATIONAL ACTIVITY:** (Basic, Characterizing, Affine, Free choice, Other)**Characterizing****TEACHER: Prof. Maria Funicello**e-mail: **maria.funicello@unibas.it**

website:

phone: **+39 0971 205490**mobile (optional): **+39 320 4371612**Language: **Italian****ECTS: (4 lessons and 1 of laboratory activity)****n. of hours: (32 hours of lessons and 12 of laboratory activity) 44**Campus: Potenza  
Dept./School: **Dept of Science**  
Program: **Chemical Science LM54**Semester: **I****5****EDUCATIONAL GOALS AND EXPECTED LEARNING OUTCOMES**

This course has the aim to acquire the following: advanced knowledge of main reactions mechanism in organic chemistry; knowledge of pericyclic reactions and of cross-coupling reactions by metal transition catalysis; metathesis reactions; the experimental techniques to work.

**PRE-REQUIREMENTS**

Knowledge of basic contents of organic chemistry.

**SYLLABUS**

1. Study and description of organic reaction mechanism
2. Aromaticity
3. Theory of concerted reactions
4. Pericyclic Reactions: cycloadditions, electrocyclic reactions, sigmatropic rearrangements
5. Principal application of transition metals as catalyst: C-C bond formation by Suzuki coupling and Sonogashira reaction; metathesis reaction.

**TEACHING METHODS**

Theoretical lessons, laboratory experiences.

**EVALUATION METHODS**

Oral examination

**TEXTBOOKS AND ON-LINE EDUCATIONAL MATERIAL**

Carey, R.J. Sundberg, "Advanced Organic Chemistry"- Part A, Plenum Press London

F.A. Miller, P.H. Solomon., "Writing Reaction Mechanism in Organic Chemistry", Academic Press, II ed.

I. Fleming, "Frontier Orbitals and Organic Chemical Reactions", J. Wiley and Sons, 2005

T. L. Gilchrist, R. C. Storr. "Organic Reactions and orbital symmetry", Cambridge University Press.

**INTERACTION WITH STUDENTS**

Contact by mail and receive by appointment on every day

**EXAMINATION SESSIONS (FORECAST)<sup>1</sup>**

23/2/2017; 10/3/2017; 5/5/2017; 15/6/2017; 20/7/2017; 5/9/2017; 4/10/2017; 4/12/2017

**SEMINARS BY EXTERNAL EXPERTS** YES  NO  X**FURTHER INFORMATION**<sup>1</sup> Subject to possible changes: check the web site of the Teacher or the Department/School for updates.

LOGO DELLA STRUTTURA PRIMARIA