
COURSE: Advanced Organic Chemistry Mod.1

ACADEMIC YEAR: 2017-2018

TYPE OF EDUCATIONAL ACTIVITY: **Characterizing**

TEACHER: Prof. Maria Funicello

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Language: Italian

ECTS: (lessons e
tutorials/practice)
5

n. of hours: (lessons e
tutorials/practice)
44 (32 frontal lessons and
12 practical activity)

Campus: **Potenza**
Dept./School: **Dipartimento di
Scienze**
Program: **Chemical Science
(LM54)**

Semester:
(date)
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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. Synthetic approach for preparation of heterocycles

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: cicloaditions, electrocyclic reactions, sigmatropic rearrangements
 5. Principal C-C bond formation by using transition metals as catalyst: Suzuki coupling and Sonogashira reaction; metathesis reaction.
 6. Synthesis of Heterocycles
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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 receiving by appointment on every day

EXAMINATION SESSIONS (FORECAST)¹

5/2/2018; 5/3/2018; 21/5/2018; 2/7/2018; 5/9/2018; 10/10/2018; 11/12/2018

SEMINARS BY EXTERNAL EXPERTS YES ☐ NO ☒

FURTHER INFORMATION

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