

CH-332

**Medicinal chemistry**

Goun Elena

<b>Cursus</b>	<b>Sem.</b>	<b>Type</b>
Chemistry	BA6	Opt.
HES - CGC	E	Opt.

Language of teaching	English
Credits	2
Session	Summer
Semester	Spring
Exam	Written
Workload	60h
Weeks	14
<b>Hours</b>	<b>2 weekly</b>
Courses	2 weekly
<b>Number of positions</b>	

**Summary**

The course tends to provide fundamentals to the following question: why and how a chemical compounds become a drug?

**Content**

The identification of hit compounds and their transformation to lead compounds with pharmacodynamic and pharmacokinetic properties that have to be optimized are the main subjects of the course.

Discussed aspects:

- Physicochemical and structural properties relevant to medicinal chemistry: ionisation, solubility, lipophilicity, conformation and configuration, stereoelectronic properties, intermolecular interaction forces, pharmacophore, molecular modeling, drug design, SAR, QSAR, linear and multilinear relations.
- Natural products as source of hit compounds.
- Drug metabolism: activation, inactivation, detoxification, toxification, enzyme catalysis, biochemical reaction mechanisms, enzyme induction and inhibition, pharmacogenetics, drug interactions.
- Combinatorial chemistry of focalized libraries of chemical compounds.