Course: Organic Chemistry 1 — credits: 5

Course code	CHVH24ORGCHEMIE1
Name	Organic Chemistry 1
Study year	2025-2026
ECTS credits	5
Language	Dutch, with parts in English
Coordinator	J. van Assen
Modes of delivery	Practical / Training Tutorial
Assessments	Organische Chemie 1 Theory - Written, organised by STAD examinations Practicum incl. opwerkingstechnieken - Other assessment

Learning outcomes

You describe the role of chemicals mentioned in prescriptions/procedures for organic chemical reactions, and divide the prescription into the following phases: 1) build setup, 2) combine chemicals, 3) start reaction, 4) course reaction, 5) end reaction, 6) reprocessing/purification.

You recognize reprocessing techniques in regulations for organic chemical reactions and explain the application.

You draw relevant resonance structures and apply this knowledge to reaction mechanisms.

You recognize aromatic structures and can draw a simple electrophilic aromatic substitution (including reaction mechanism).

You can draw a simple substitution reaction (including reaction mechanism) according to a Sn1 and Sn2 mechanism.

You can draw a simple elimination reaction (including reaction mechanism) according to an E1 and E2 mechanism.

You perform simple organic synthesis in a safe and responsible manner, work up the reaction mixture, apply relevant analytical techniques and report on this according to the applicable guidelines.

Content

In this module you will learn what resonance is and how to draw different resonance structures of molecules. Using resonance, you can make statements about the reactivity of these molecules. This will therefore recur in all further organic chemistry modules. In addition, attention is paid to substitution and elimination reactions. You will learn the distinction between different mechanisms in relation to the order of the reactions. The competition between these two types of reactions and its cause are also discussed.
You will apply the theory from the first three lectures (reprocessing techniques) in practice.
Practical work is assessed by logbooks, practical competencies and a report. Theory is taught through instructional lectures and tested through a written exam.

Included in programme(s)

Chemistry

School(s)

Institute for Life Science & Technology

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