Course: Chemical Bonds — credits: 5

Course code	CCVP23CHBINDING
Name	Chemical Bonds
Study year	2025-2026
ECTS credits	5
Language	Dutch, with parts in English
Coordinator	R.A. Knigge
Modes of delivery	Assignment Lecture Practical / Training
Assessments	Chemische Binding Theorie - Written, organised by STAD examinations Practicum - Other assessment

Learning outcomes

This module has the following learning outcomes:

- You perform calculations for the energy of electromagnetic radiation and the wavelength of particles.
- You describe the structure and shape of orbitals in an atom and molecule, explaining trends of properties in the periodic table.
- You predict the types of bonds and intermolecular attraction forces based on the structure of a molecule.
- You draw Lewis structures for molecules and atoms and apply VSEPR theory to them.
- You draw and name simple molecules.
- You carry out a simple investigation in a safe and responsible way and communicate about it via a logbook and/or result form according to the applicable guidelines.

DAS competencies

Competency	Level (I-IV)
Research	I
Experimentation	I
Development	
Management	
Advise	
Instruction	
Instruct | Manage	
Leadership	
Self-Management	I

Content

Starting at the atomic level, the structure of atoms and then molecules are discussed. From this follows the properties and effects of molecules in the form of bonds and intermolecular interactions. A foundation is also laid to the naming of simple molecules.

Included in programme(s)

Chemistry
Chemical Engineering

School(s)

Institute for Life Science & Technology

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