Chemistry
Master of Science

Researchers in the Leiden Institute of Chemistry take a fundamental approach in finding tailored solutions for complex societal problems in human health and environmental issues.

The aim of this two-year MSc programme is to train you as an independent scientist and to develop the necessary skills and proficiency to advance your career. The MSc programme in Chemistry offers you access to cutting-edge chemical research. The research is concentrated in two research areas:

Chemical Biology: you will study fundamental biological and biomedical problems to understand physiological processes at the molecular level and to gather more knowledge on human health and illnesses.

Energy & Sustainability: you will focus on the development of new sources of sustainable energy as well as the development of means to decrease the demand for energy in e.g. industrial processes.

Why Chemistry at Leiden University?

- You can tailor your programme based on your ambitions and interests within the research areas.
- During your programme, you will be part of a multidisciplinary research team of internationally renowned researchers where you will conduct your MSc research training project.
- You will receive personal guidance from a mentor of choice, who is a member of one of our international and young research groups.
- The programme offers flexibility and tailoring to meet your individual scientific interests and career aspirations.

Facts and figures

Language	English
Duration	2 years
Degree	Master of Science
Start	September or February
Admission	Start September: 1 April non-EU/15 June EU Start February: 15 October non-EU/1 December EU
Tuition fee	€ 2,078 EU/18,300 non-EU

Universiteit Leiden
The Netherlands

More information

For more information please visit our website or contact the programme:

masters.universiteitleiden.nl/chemistry
msc-coordinator@lic.leidenuniv.nl

Discover the world at Leiden University

Chemistry: programme overview and courses

The two-year MSc programme Chemistry offers one research specialisation and three specialisations in which you combine chemistry research with business studies (BS), communication (SCS) or education (EDU).

Programme overview Research in Chemistry (120 EC)

General compulsory courses (72 EC)

- Research training project (60 EC)
- Essay and Colloquium (6 EC)
- Academic Writing (2 EC)
- Science Methodology (4 EC)

You will have to make a choice to focus your studies on either Chemical Biology or Energy & Sustainability. Based on this choice you choose four core courses.

Core courses Chemical Biology (6 EC each, choose at least 4 courses)

- Modern Organic Chemistry
- Enzyme Dynamics: NMR Spectroscopy and Kinetics
- Molecular Biology
- Supramolecular Chemistry
- Advanced Medicinal Chemistry
- Reactivity in Organic Chemistry
- Cell Biology
- Chemical Biology

Core courses: Energy & Sustainability (6 EC each, choose at least 4 courses)

- Modern Quantum Chemistry
- Spectroscopy
- Organometallic Chemistry and Homogeneous Catalysis
- Electrochemistry and Bioelectrochemistry
- Photochemistry
- Heterogeneous Catalysis
- Photosynthesis and Bioenergy
- Dynamics of Molecule-Surface Reactions
- Quantum Reaction Dynamics

Elective courses (24 EC)

- Bioinorganic Catalysis (6 EC)
- Biomaterials (6 EC)
- Bio(medical) Informatics (6 EC)
- Bionanotechnology (6 EC)
- Chemical Immunology (6 EC)
- Chemistry and Physics of Solids (6 EC)
- Computational Drug Discovery and Development (6 EC)
- Cross-domain Chromatin Organisation (4 EC)
- Density Functional Theory in Practice (6 EC)
- Genome Organization and Maintenance in Cancer and Aging (6 EC)
- Integrated Cell Biology (2 EC)
- Metals and Life (6 EC)
- Molecular Aspects of RNA Viruses (4 EC)
- Molecules of Life (6 EC)
- Scientific Computing and Programming (6 EC)
- Solid State NMR (6 EC)
- Surface Science (6 EC)
- Synthetic Organic Chemistry (6 EC)
- Theory of Spectroscopy and Molecular Properties (6 EC)

* This is just a selection of potential courses; other MSc courses may be selected.

Programme overview BS, SCS, EDU (120 EC)

If you choose one of these specialisations, you will have a reduced research programme (60-80 EC) comprising a research training project (30 EC), core courses (24 EC) courses related to academic skills (6 EC) and electives (0-20 EC). You will follow specific BS, SCS or EDU courses, electives and/or internships (40-60 EC).