

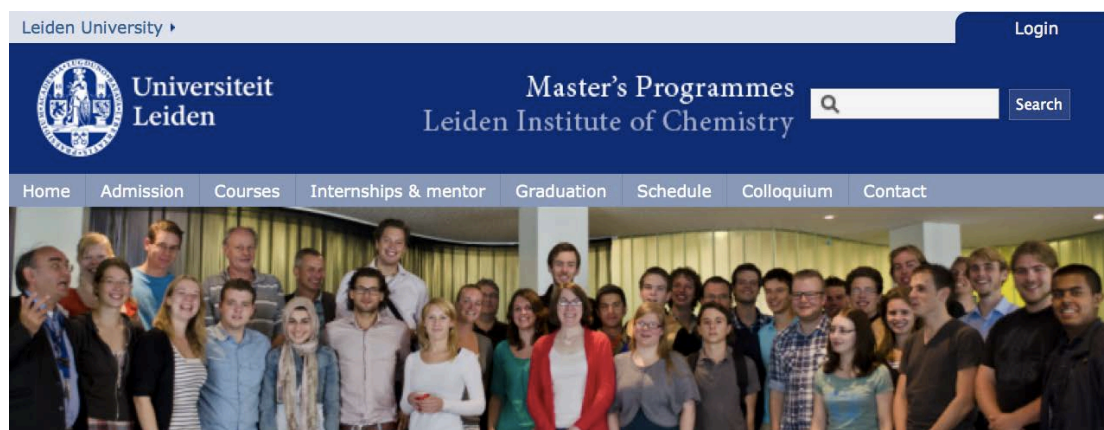
# Study Guide

Master program

# Life Science and Technology



Study year 2014-2015



*Program, rules, schedules of the master program Life Science and Technology*

- Program information <https://masters.lic.leidenuniv.nl/programmes/lst>
- Admission & enrolling in the program <https://masters.lic.leidenuniv.nl/admission>
- Schedule information <https://masters.lic.leidenuniv.nl/download-schedule>
- Course registration <https://masters.lic.leidenuniv.nl/registration-exams>
- Contact information <http://masters.lic.leidenuniv.nl/contact>

You can find us on Blackboard Leiden (LST-MSc-0910FWN). You can enrol yourself and next we will approve your enrolment. By enrolling you check if you have access to our ICT resources and are properly registered.

You can also create an account on our website using your student number to create your first master plan.

<https://masters.lic.leidenuniv.nl>

Version May 26 2014

*The faculty staff compiled this study guide with the greatest care. However, further details concerning a number of subjects will only be available after the guide has been published. For that reason, the information published in this study guide may be subject to change. Amendments, further details, and a more extensive description of the subjects can be found on the Blackboard site: [blackboard.leidenuniv.nl](http://blackboard.leidenuniv.nl). Direct information can be found on our website <http://masters.lic.leidenuniv.nl>, which includes up to date agenda items and links to the room reservations.*

***Important note to students:***

*The University uses your U-mail account as primary e-mail address. If you do not check this mail account regularly, forward this account automatically to another e-mail address to keep receiving all official mail (including uSis mail).*

## Contents

Words of welcome .....	4
People in the program .....	6
Admission.....	7
Admission rules.....	7
At the start of the program.....	7
Mentor system.....	7
Master planner .....	8
International Students Support .....	8
Rights and obligations of students .....	8
Program structure.....	9
Specialisations.....	9
Composition of each study program .....	9
Research Internship .....	10
Thesis Talks .....	10
Core courses.....	11
Electives .....	11
Specialisation specific components .....	12
National Graduate Schools .....	13
Global overview of the program.....	15
Lists of core courses and electives in the Life Science and Technology program .....	15
Schedule and Timetable.....	19
Lecturers and mentors.....	24
Important Committees and Boards in the organisation.....	25
Board of Admission .....	25
Educational Committee .....	25
Board of Examiners .....	26
Examinations and re-examinations .....	26
General rules.....	26
uSis and frequently-asked-questions page.....	26
Graduation and Exit .....	27
Graduation dates 2014-2015 .....	27
Studying abroad during your Leiden MSc Program.....	28
Study associations: CDL & LIFE .....	29
Leiden University Address Information .....	30
Other useful addresses .....	32
Safety Information Gorlaeus Laboratories - Leiden University .....	33

## Words of welcome

Dear students,

In this study guide you will find the master program Life Science & Technology (LST) – Leiden. During the last decennia, molecular and cellular as well as chemical biology research have witnessed an unprecedented progress in our understanding of fundamental cellular processes and mechanisms underlying diseases. Both knowledge about genomic organization, studies on protein-protein interactions and determination, synthesis and application of molecular chemical structures and understanding of bio(medical) informatics are part of our modern understanding of health & disease.

Both chemical and life sciences related topics form the basis of the master study LST. The master study LST fits within the profiling research theme of the Leiden University: “BioScience: The Science Base of Health”. This implies that our master students will learn to understand the molecular and structural chemical and biological aspects of disease-related processes as well as be able to apply chemical tools in treating diseases. Apart from a research oriented specialisation there are three LST-based specialisations that train students for a career in future business, communication and education.

The MSc students will become a member/colleague of one of our research groups. The student will compose her/his MSc program together with their mentor. The mentor will guide and advise the student during the complete MSc program. The students who will choose the SBB, communication or education specialisation will, besides their specialisation modules, have a reduced research program in comparison with students in the research specialisation.

We hope that this study guide will help you to graduate successfully and above all to enjoy your master program.

On behalf of the MSc program Life Science & Technology Leiden

Prof. dr. Mathieu H. M. Noteborn  
Program Director

Dear future academics,

The Leiden Institute of Chemistry houses the research groups in Chemistry and Life Sciences. Our environment and quality of life is largely determined by chemistry, therefore research at the forefront of the molecular and the life sciences is of utmost importance for our future. For example, the next generation of solar cells or batteries, and the improvement of existing as well as the development of new drugs rely on smart chemical solutions. Knowledge of catalysis, synthesis and biological processes on molecular scale will enable us to discover novel processes and products that range from new materials to pharmaceuticals. The chemistry and life science research in the Leiden Institute of Chemistry is organized around two major research areas: Chemical Biology and Energy & Sustainability. The chemical biology theme illustrates the central position of chemistry and life sciences between biology and medicine.

The study Life Science and Technology (LST) is based on the Leiden University profiling research theme “BioScience: Science Base of Health”. The diversity of research topics to be carried out within LST are ideal for executing interdisciplinary research. Recently, the Cell Observatory was founded to support the study of living systems from organisms, cells, and molecules down to atomic structures unravelling fundamental and disease-related processes. The Leiden Institute of Chemistry attracts students from all over the world and participates in worldwide foreign exchange programs.

Prof. dr. Jaap Brouwer  
Scientific Director of the Leiden Institute of Chemistry

## People in the program

Function	Name & E-mail	Phone
Program Director	Prof. dr. M.H.M. Noteborn <a href="mailto:m.noteborn@chem.leidenuniv.nl">m.noteborn@chem.leidenuniv.nl</a>	4544
Study coordinator*	Dr. M.E. Kuil, <a href="mailto:m.kuil@chem.leidenuniv.nl">m.kuil@chem.leidenuniv.nl</a>	4416
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Board of Examiners	Prof. dr. J. P. Abrahams, <a href="mailto:abrahams@chem.leidenuniv.nl">abrahams@chem.leidenuniv.nl</a>	4213
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Laboratory Safety / Safety coordinator	Mr. M.F.J. Fluttert, <a href="mailto:amd@science.leidenuniv.nl">amd@science.leidenuniv.nl</a>	4333
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Specialisation Education	Drs. W. van der Wolk, <a href="mailto:wolk@iclou.leidenuniv.nl">wolk@iclou.leidenuniv.nl</a>	4023

Phone: internal phone numbers

International numbers dial first +31-71-527-....

\* Office hours study coordinator:

Tuesday & Wednesday 10:00–12:00, walk in (Room HB-219).

Otherwise by appointment via e-mail [m.kuil@chem.leidenuniv.nl](mailto:m.kuil@chem.leidenuniv.nl)

\*\* Office hours Graduate School Office (“Educatief Centrum”):

Monday to Thursday 10:00–15:00, Room HB-206, Gorlaeus Laboratories

Otherwise by appointment via e-mail [berge@edufwn.leidenuniv.nl](mailto:berge@edufwn.leidenuniv.nl)

## Admission

### Admission rules

Students from any university in The Netherlands with a BSc degree in Life Science & Technology will be admitted to the program.

All other (international) candidates, students with a degree related to Life Science & Technology such as BFW or Chemistry, HBO Bachelors and foreign students have to apply for admission and can apply on-line via <http://en.mastersinleiden.nl/arrange/admission>. The Board of Admission will review all on-line applications. Please notify the study coordinator if you plan to apply on-line.

The Board of Admissions will judge the qualifications of the applicant on the basis of the curriculum and grades of his/her previous training. The admission process may include an interview with the Board of Admissions. Foreign applicants must provide proof of proficiency in English (IELTS level  $\geq 6.5$ ). The applicants for the Education and Science Communication and Society specialisations must provide proof of proficiency in Dutch. Admission is possible throughout the year, but we advise (foreign) students to start in September or February. Additional student information is available on the institute website <https://masters.lic.leidenuniv.nl> and from the Foreign Admission Office of the Leiden University.

Students wishing to enrol the Life Science & Technology master program at the Leiden Institute of Chemistry should consult the webpages:

<http://www.students.leiden.edu/application-admission/master>

<https://masters.lic.leidenuniv.nl/admission>

To get the most up-to-date information or personal advice in a consult, contact the study coordinator. For all candidates the admission rules apply as stated in the Faculty “[OER](#)”. For further information consult the faculty website: <http://www.science.leidenuniv.nl>.

Talented students admitted to the master Life Science & Technology can apply for admission to one of four National Graduate Schools (see page 13).

### At the start of the program

All admitted students in the program must be registered at the Leiden University **and** Studielink as an MSc student before the start of their studies. All admitted students have to make an appointment for an intake interview with the study coordinator, who will explain the use of the master planner tool and the role of the mentor. Appointments can be made by e-mail: [m.kuil@chem.leidenuniv.nl](mailto:m.kuil@chem.leidenuniv.nl). Students who need help with their choice of the specialisation or mentor should contact the study coordinator for advice.

### Mentor system

All mentors are appointed by the board of the program and are experienced “Principal Investigators” (PI). A list of the PI’s and a brief summary of their research interests can be found on the master website (see also page 24). Each student chooses a mentor in a research field related to the selected research area; the mentor will be the student’s personal coach during the complete master program. When a mentor accepts this role the student and mentor together will compose a tailor-made study program. The students will conduct their research work under supervision of their mentor.

The web-based master planner is used for planning and registration of your study program, and is to be filled in in consult with your mentor. Student and mentor regularly (at least once in six months) discuss the study progress with the aid of master planner. The student will report the results of examinations and courses and may provide the mentor with a printout of the exam results using the uSis system (see page 26). It is the student's responsibility to contact the mentor for these regular discussions.

### Master planner

Student can create a login on our website and add their master plan to their own profile. The student, mentor and study coordinator can view the master plan and monitor the student's progress. <https://masters.lic.leidenuniv.nl/registration>  
After creating your own account you can use our website to plan your studies, download forms, and arrange your research internship evaluation on-line. For questions about the master planner you can contact the study coordinator.

### International Students Support

Leiden University has arranged a special portal for the support of international students: <http://www.students.leiden.edu/your-study/guidance>.

### Rights and obligations of students

In the Student Charter ('Studentenstatuut' in Dutch) all rights and obligations of students, the University, Faculty and the programme are laid down. Besides being a collection of all rights and obligations, the Student Charter also lists all facilities provided by the University available to students. The charter also contains an overview of the legal protection of students. The rights and obligations laid down in the Student Charter are derived from the legislation of the Higher Education and Research Act ('Wet op het Hoger Onderwijs en Wetenschappelijk Onderzoek', WHW). Every student is deemed to have taken notice of all parts of the Student Charter.

The charter comprises two parts. The Institutional part is equal for all students and can be found on the website of the University and a hard copy is made available at PITSstop (Information and Support Services & Information Desk Plexus Student Centre).

The departmental part of the charter addresses students of a specific programme and comprises two parts:

- Course and Examination Regulations (OER in Dutch), and
- Rules and Regulations for the examinations, practicals and final examinations (R&R).

In the OER and R&R a.o. the rules of the Faculty regarding admission, examinations, the degree programme and organisation are laid down. **This information can be found on** [http://www.science.leidenuniv.nl/index.php/english/education/oer\\_msc\\_programmes/](http://www.science.leidenuniv.nl/index.php/english/education/oer_msc_programmes/)



## Program structure

Life Science & Technology researches the processes in the living cell. The cell is the building block of life, the smallest unit with the characteristics of living systems. Increased knowledge of the mechanisms of the cell can lead to better medicines, new methods for combating diseases.

The master course Life Science and Technology (LST) is based on the Leiden University research profiling theme of “BioScience: Science Base of Health”. The study aims that students can understand the outcomes of molecular and structural chemistry and gain insight in basic targets underlying various diseases. As important students can get knowledge in the fields of bio(medical) informatics and chemical tools for health-related applications. LST master students with an interest in the molecular chemical basis of Life Sciences can perform internships at the LIC, e.g. chemical biology. Students with a medical preclinical biomedical interest can attend their internships at relevant departments of the IBL, LACDR, LUMC, NKI or ErasmusMC.

Our Master program is a two-year, full-time, English spoken, multidisciplinary program. In these two years the program aims to equip students with knowledge and expertise on molecular and biomedical fundamental level, preparing them for careers in both industrial and academic environments. Biotechnological-, food- and biopharmaceutical industries as well as healthcare and fundamental research institutions are employers of our graduates.

## Specialisations

The MSc LST Leiden program consists of four specialisations:

- Life Science research and development (RESEARCH)
- Life Science & Education (EDU)
- Life Science & Communication (SCS)
- Life Science Based Business development (SBB)

More information on contents of the different specialisations is given at ‘Specialisation specific components’ (see page 12). The Life Science and Technology program has two focus areas: Molecular Science and Biomedical Science.

## Composition of each study program

The distribution and size of the compulsory components of the MSc program depend on the specialisation and comprises the research internship (30-60 EC) and four compulsory courses (24 EC) to be selected.

Students in the EDU, SCS or SBB specialisation need to follow modules specific for a specialisation (30-60 EC) and therefore have a reduced Life Science and Technology program (90-60 EC). The compulsory components in these specialisations comprise a research internship (at least 30 EC) and four core courses (24 EC). Students in the research specialisation train their communication skills via the essay and colloquium (6 EC).

**Each specialisation thus comprises four main components:**

- Research Internship and Thesis Talk
- Core course components of the research area

- Electives
- Specialisation specific components

### Research Internship

The research internships are carried out under the supervision of the mentor. The mentor guides the student with their research project(s) and will advise on how courses are best fit in their study planning. The major research internships can be carried out in the LIC home institute, our affiliated institutes IBL, LACDR, LUMC, NKI, ErasmusMC or abroad.

Before the start of any internship the mentor has to initiate an on-line internship agreement that is completed by the student. The student and mentor must complete and agree on this agreement before the start of the internship. The student can carry out a single internship or carry out a major and a minor internship.

The internship includes a presentation a written report and a thesis talk (for major master thesis only).

The optional 'minor' internship is a research project covering another topic, which can be related to the major research internship. As an example the student may develop an expression system in one research group and investigate its properties in another research group. Or the student may investigate a process in one research group and calculate theoretical predictions in another research group. Students are encouraged to carry out a 'minor' internship/project abroad. The duration of the project is preferably three to four months based on full-time attendance. All external research projects (=outside the LIC or affiliated institutes) must be discussed in advance with the study coordinator. Before the start of the internship the Board of Examiners must approve the external research project. The mentor creates a digital research evaluation form on the educational web site <https://masters.lic.leidenuniv.nl> at the end of any internship, initiating the grading of the research internship(s). The reviewers and the student approve this form. In special cases, for instance if the report is delayed, the project may be provisionally awarded with 80% of the assigned credits, provided that the practical work is finished.

The total duration of the research project(s) is based on full-time attendance. This means that courses attended during this period will lead to an extension of the duration of the internship. Also, insufficient attendance or lack of motivation can lead to an extension of the duration of the internship.

Before a final grade can be given the student should submit the final Master thesis to the study coordinator for the jury of the Thesis Talk (see below).

### Thesis Talks

All master students prepare a master thesis during their studies and present their research results in a Thesis Talk that is organized preferably on Wednesday afternoon or alternatively on Thursday afternoon in the Cell Observatory Lecture Room. The current agenda can be found in the list of upcoming events on the website <https://masters.lic.leidenuniv.nl>.

### Practical considerations concerning the Thesis Talk

- Students starting after September 2013 have to attend 10 Thesis Talks; students who started before that date have to attend at least 5 Thesis Talks. The Thesis Talks can be registered on the colloquium form (see also page 12). You must attend a few Thesis Talks before you give your own presentation.
- A Thesis Talk is booked via e-mail to the program coordinator, the mail contains:

- the final digital version of the internship report
- the approval of the supervisor/mentor
- the title of the talk and the names of the two referees of the report
- a proposed date agreed upon with the referees.

This information will be used to announce your Thesis Talk title, time and location and the Thesis Talk jury on the master's web site.

- We strongly advise all students to give a rehearsal talk. Note that your thesis talk may be very suitable for a future job application.
- The student has to organize the required equipment for the thesis talk. Make sure your laptop, pointer, white board markers etc. are in good shape!
- The mentor must provide a printed version of the evaluation form for the jury.
- Immediately after the talk(s) the jury discusses their findings with the supervisor(s) and/or mentor(s) who will propose their grading. The jury cannot judge an internship of at least 30 EC based only on a thirty minutes presentation, but will acquire a good impression of the research discussed in the presentation.
- The jury reports to the study coordinator and their findings are discussed in the educational forum.
- The jury consists of experienced researchers who are selected based on their affinity with the topic and their independence from the investigation discussed. The program coordinator establishes the jury.

### Core courses

The size of the compulsory components of the MSc program depends on the specialisation and comprises the research internship (30-60 EC) and four compulsory components (24 EC) (detailed below).

Students in the EDU, SCS or SBB specialisation need to follow modules specific for a specialisation (30-60 EC) and therefore have a reduced Life Science and Technology program (90-60 EC). The compulsory LST modules in these specialisations comprise a research internship (at least 30 EC) and four core courses (24 EC). Students in the research specialisation train their communication skills via the essay and colloquium (6 EC).

### Electives

The electives consist of a free choice of theoretical courses or an extension of the research internship(s) by a maximum of 20 EC, provided that the total duration of the major research internship does not exceed 60 EC. The mentor may limit the choice in elective courses by the need to adapt the program to the present knowledge of the student.

Students can choose their electives from the list of core courses or electives, the core or elective courses the MSc program Chemistry or in the Science Faculty of level 400 or higher, or level 400 courses from the BSc LST and MST programs provided that these were not part of the student's earlier studies. Students may also choose MSc courses of any Science Faculty in the Netherlands as elective courses.

*Note: other electives have to be approved by the Board of Examiners when they will be included in the master curriculum*

## Specialisation specific components

### Life Science research and development

The research specialisation offers the student the opportunity to spend two full years on training in a research area to become an independent and creative scientist. The majority of the students with an MSc in Life Science research will continue their career in a PhD position. Students in this specialisation have to prepare an essay and present the essay in their colloquium (6 EC).

#### Literature essay and colloquium guidelines

In the research specialisation the student selects a topic for the colloquium & (literature) essay topic in consultation with a colloquium supervisor. The colloquium supervisor is a member of the LIC staff but cannot be the student's mentor. The subject of the essay & colloquium is chosen within the field of Life Sciences or Chemistry but may not be directly related to the student's research project.

The colloquium & essay comprises two parts:

- A written essay of 10-15 pages.
- A colloquium of 30 minutes, including 5 minutes of discussion.

The colloquium & essay should contain the following basic elements:

- Introduction and scope
- Review of the topic
- Conclusion and outlook

A committee of two staff members (NOT the mentor NOR the colloquium supervisor) grades the colloquium & essay. The student in consult with the colloquium supervisor composes the jury and invites the jury members to read the essay and to be present at the colloquium. Every MSc student is required to attend at least 10 colloquia by fellow MSc students of the various research themes during their MSc period. As proof of attendance, the chairman of the colloquium signs the student's attendance list. Upon graduation the student submits the colloquium attendance list in the exit interview with the study coordinator.

For the colloquia a fixed number of opportunities are scheduled. The colloquia are preferably held on Thursdays at 16:00 in the lecture hall of the Cell Observatory. To schedule the colloquium the student is supported by the group administration to compose an announcement containing the title, abstract, time and place of the colloquium. The student is responsible to post the announcement on the MSc communication board and to send an electronic version to the study coordinator. Detailed instructions on the colloquium procedure can be found at the master education web site:

<https://masters.lic.leidenuniv.nl/literature-essay-and-colloquium>.

### Life Science Based Business development (SBB)

The specialisation Life Science Based Business development (SBB) offers the opportunity to combine training in chemical research with education in business and entrepreneurship. It enables science students to understand the fundamentals of business management and innovation. The emphasis is on science-driven organisations and on establishing new business based on the outcomes of scientific research. The SBB program is geared towards

pursuing future career opportunities, both in academia and in industry. The majority of the SBB-students have found employment in industry as consultant or in a managerial position. The specific SBB modules consist of SBB Fundamentals (15 EC) and the SBB internship (25 EC). The total amount of SBB program components is limited to 60 EC.

More information and registration instructions for Science-Based Business are available on the website [www.sbb.leidenuniv.nl](http://www.sbb.leidenuniv.nl). **The SBB program starts twice a year in September and February.**

### Life Science & Education (EDU)

The education part of the MSc program Chemistry and Education is organised by the Leiden University Graduate School of Teaching (ICLON) and the program language is Dutch. The specific modules comprise courses in Didactics (10 EC), Professional Functioning (12 EC), Educational Research (8 EC) and School Training (30 EC). The program is designed to obtain the so-called “eerstegraads lesbevoegdheid” which qualifies for teaching Chemistry at all levels in Dutch high schools. Students that already have chosen the minor Education in their BSc program need only 30 EC of the specific modules; the remaining 30 EC is then added to the Electives of the Chemistry program.

More information can be found on the website [www.iclon.leidenuniv.nl](http://www.iclon.leidenuniv.nl). **The education program can only be started in September after completion of the Chemistry modules of the program.**

### Life Science & Communication (SCS)

The MSc track in Communication offers students the opportunity to combine research training with programs in different aspects of science communication, such as journalism, new media, museology and information visualisation. The MSc specialisation Life Science & Communication is offered by lecturers in Science Communication & Society (SCS). This program is in Dutch.

The primary focus in this specialisation is on science communication in the Netherlands and students explore various aspects of professional science communication.

More information can be found on the SCS website <http://science.leidenuniv.nl/index.php/scs/onderwijs> (in Dutch). **The communication program starts in September.**

## National Graduate Schools

In the Leiden Institute of Chemistry state-of-the-art chemical research is done. The institute co-organizes two bachelor programs, Molecular Science & Technology and Life Science & Technology that cover Chemistry in the broadest sense and prepare for a career in Chemistry, Chemical Engineering or Life Science & Technology. The two master programs Chemistry and Life Science & Technology are centred around the core research of the institute. These master programs are organised in the Graduate School of the Faculty of Mathematics and Natural Sciences.

The LIC houses eight research groups and participates also in four National Graduate Schools with eight other universities. These National Graduate Schools are designed for talented students aiming for a future PhD position. Talented LST students can apply for admission in two of these Graduate Schools (NRSCB and NMARRS).

- **Netherlands Research School of Chemical Biology, NRSCB** (collaboration of research groups in Leiden University, the University of Groningen, the Radboud University, Nijmegen and the Eindhoven University of Technology, <http://nrscb.nl>).
- **Netherlands MAgnetic Resonance Research School, NMARRS** (collaboration of research groups in Leiden University, the Radboud University Nijmegen, Utrecht University, Eindhoven University of Technology, Wageningen University, <http://www.nmr-nl.org>).
- **Sustainability: the Molecular Approach, HRSMC** (collaboration of research groups in the Leiden University with the VU University Amsterdam and University of Amsterdam, <http://www.hrsmc.nl/graduate-programme>).
- **Solar Fuel Catalysis, NIOK** (collaboration of research groups at Utrecht University, the Eindhoven University of Technology, Leiden University and the University of Twente, <http://www.niok.eu/en/solarfuels>).

## Global overview of the program

You will organize your program according to the global scheme shown below in accordance with your mentor. Your program must comply with the “[OER](#)”, the program regulations.

<b>Global overview of the Life Science and Technology program by specialisation</b>				
	<b>Research</b>	<b>Education</b>	<b>Communication</b>	<b>Business</b>
Research Internship	60	30	30	30
Core components	24	24	24	24
Electives**	30	6/36*	26	26
Specialisation specific components	6	60/30*	40	40
<b>Total</b>	<b>120</b>	<b>120</b>	<b>120</b>	<b>120</b>

\* Students who have finished a minor Education of 30 EC in their BSc study (tweedegraads lesbevoegdheid), need only 30 EC in their MSc study to obtain the “eerstegraads lesbevoegdheid”. The elective options for these students comprise 36 EC.

\*\* The electives are chosen in consultation with the mentor. A maximum of 20 EC can be used for extension of the research internship(s).

## Lists of core courses and electives in the Life Science and Technology program

### Core courses in the Life Science and Technology program<sup>@</sup>

The LST master students have to choose 2 courses from the Molecular Science series and 2 from the Biomedical Science series. Description of the Life Science core courses in the LST program.

<b>All courses: level 500 &amp; 6 EC</b>	<b>Lecturer</b>	<b>Code</b>
<b>Molecular Science series</b>		
Molecular Chemistry	van der Marel	MC
Biomolecular Structures	Ubbink/Pannu	BMS
Chemical Genetics	Brouwer et al.	CG
<b>Bio(medical) Science series</b>		
Genome organization and maintenance in cancer and aging	Brouwer	GCA
Bio(medical) Informatics	Gulyaev et al.	BMI
Global Regulatory Networks in bacteria	van Wezel et al.	GRNB
In-vivo biomolecular interactions underlying diseases	Noteborn	IBID

- **Molecular Chemistry**

Fundamental concepts of organic chemistry, the most common transformations and corresponding reaction mechanisms are discussed and illustrated with examples of reactions that are part of biological processes.

- **Biomolecular Structures**

The course introduces the students to the methods of structure determination of biomacromolecules: X-ray diffraction of crystals, Electron Microscopy and Nuclear Magnetic Resonance. The aims are:

1. to give an introduction of the methods (physical principles, implementation, raw data, analysis, modelling)
2. to give the student sufficient background to interpret molecular models critically on the basis of the standard quality parameters
3. to make the student aware of the possibilities and limitations of the various methods and
4. to introduce the latest developments and insights in the field of structural biology (e.g. free electron laser for nanocrystallography, structure determination of minor states by NMR, high resolution cryo-EM).

- **Chemical Genetics**

Chemical genetics is a research method that uses small molecules to change the way proteins work- directly in real time rather than indirectly by manipulating their genes. It is used to identify which proteins regulate different biological processes, to understand in molecular detail how proteins perform their biological functions, and to identify small molecules that may be of medical value.

In this course several examples of chemical genetics will be introduced. Prof. Jaap Brouwer will introduce the biologic background of the problems. Subsequently, the chemistry will be explained by chemical specialists (Dr. Bobby Florea, Dr. Jacob Gubbens, Dr. Jeroen Codee and Dr. Mario van der Stelt).

- **Bio(medical) Informatics**

This course consists of the following main topics:

1. Computational analysis of genomic data (genome assemblies, genome-scale alignments, genomic context analysis, SNP data analysis)
2. Evolution and diversity of human genome.
3. Medical Genomics (biomarker identification, epigenetics, disease-associated genes, human pathogen data, gut metagenomics).
4. Computational analysis of biopolymers (structure predictions, biomolecular engineering, functional annotation of proteins, protein design).
5. Cheminformatics, data mining of biologically active compounds, searching for drugs and drug targets.

- **Genome organization and maintenance in cancer and aging**

To understand the organization, regulation and functioning of our genome, in normal, cancer and aging situations the students will be lectured in the following topics: chromatin structure, histone modifications, gene regulation, recombination, silencing of genes on DNA



and RNA level and chromatin remodelling. Bioinformatics aspects are also part of this course.

- **Global regulatory networks in bacteria**

Series of lectures and workshops will be given on understanding how global regulatory networks govern gene expression in bacteria, with comparison to (lower) eukaryotes. We will look at how environmental signals (e.g. nutrients, stress) are translated to switch sets of genes on and off, and how this affects metabolism, competence, development and antibiotic production. Focus is on *E. coli*, *Bacillus* and *Streptomyces*. This course includes workshops on use of the databases and regulon prediction programs.

- **In-vivo bio-molecular interactions underlying diseases**

Studies of In-vivo bio-molecular interaction are essential for our understanding of cellular functioning. Specific in-vivo interactions controlling e.g. cell cycle, differentiation, proliferation or apoptosis events will be discussed in normal healthy and in disease-related situations. This MSc-course will also discuss the fundamental, applied and technical aspects of proteomics and transcriptomics. In addition, academic skills of writing and reading scientific articles are included.

### Elective courses of the Life Science and Technology program

Title	Lecturer	EC	Code
Advanced Life Cell Imaging	Kuil	4	4363ALCI4
Advanced Molecular Modelling	Fraaije	6	AMM2
Bio-modeling and Petri Nets	Bertens/Verbeek	6	4343BIOPN
Advanced Molecular Modelling	Fraaije	6	4333_____
Bioanalytical Mass Spectrometry	Hankemeier	6	4323CAAMSY
Drug Discovery: From Biology and Structure to New Chemical Entity	Van Boeckel	4	4333DDBSN
Genomic Scale Data Analysis*	Reinders	4	LB2591
Industrial Biotechnology*	Van Maris	5	LB2581
Introduction Molecular Modelling	Fraaije	6	4052INMOM
Mathematical Biology, Metabolic Network Analysis	Hille	6	4373MABIM
Metals and Life	Bonnet	6	4333METL6
Modern Organic Chemistry	van der Marel	6	4333MODOC
Molecular Aspects of RNA Viruses	Olsthoorn	4	4333MAORV
Molecular Biophysics*	Dame	3	LB2282
Molecular Cell Signaling*	Noteborn	4	LB2211
Molecular Defects in Human Diseases*	Brouwer	5	LB2201
Molecular Mechanisms of Cell Death	Daanen	4	4323LSMCD
Bionanotechnology(2015-2016)	Schneider	6	4333_____
Science Methodology	Ubbink	4	4603SCMTH

\* Bachelor courses (level 400) that may be included in a master program provided that this course is not part of a prior bachelor program.

\*\* Master courses in Leiden and Delft that are frequently chosen in LST master programs.

### Short intensive week courses

The regular courses are scheduled in four periods of 7 weeks, and are concluded with two weeks of exams. The four periods are separated with 'free weeks'. In these 'free weeks' (see schedules from page 19 onwards) short specialised courses will be offered. These courses may comprise lectures in combination with practical work, tasks or demonstrations, or may be courses offered by one of the National Graduate Schools. The courses that are offered may change from one year to another. The various courses that will be offered in a specific week will be announced separately via the web site <https://masters.lic.leidenuniv.nl>.

### Literature study

Students are also allowed to do a literature study. This is an individual course that is directly related to a research topic in one of the LIC research groups. Students can put forward a request to a research group leader and discuss the precise subject of the literature study. The research group leader decides who will become the supervisor of the course and may appoint one of his co-workers (staff, post-doc, PhD-student) to be the supervisor. Literature studies are not scheduled and may be requested all year round.

A literature study may be carried out on two different levels:

- A broadened literature study on a reviewed subject, level 500, 3-6 EC
- An in depth literature study on a novel subject in primary literature which has not yet been reviewed, level 600, 3-6 EC

When more students want to do a literature study about the same topic, the appointed supervisor may decide to change the course into a regular course (i.e. lectures or work group). The lecturer will decide the way in which the course is examined. Several forms of examination are possible: written report, written examination, oral examination, etc. The supervisor will determine the scope of the course and the amount EC before the start of the course. Students are also allowed to suggest their own topic. NB: an individual literature study in the form of a written report is not equivalent to the report of your research project!

### Other eligible courses in the MSc Life Science and Technology program

Electives are often announced on the master program web pages, Blackboard or in the University newspaper 'Mare' under 'Mededelingen FWN' (announcements of the Faculty of Science).

In addition to the courses described above students may also choose MSc courses from the MSc Chemistry, the BSc LST and BSc MST. Details about these courses can be found on the website <https://masters.lic.leidenuniv.nl/courses> where we also recommend other courses in Leiden and Delft.

Students may also choose courses from MSc programs in all Dutch Science Faculties. It may be necessary to enrol as an external student at the university that organizes the chosen course. For more information contact the study coordinator.

An overview of all Dutch master programs in Chemistry and Chemical Engineering is presented on: [www.universitairemasters.nl](http://www.universitairemasters.nl).

Optional courses may also be taken from the educational program of one of the national research schools (HRSMC, NIOK, NRSCB, NMARRS, see page 13). These Graduate Schools offer a number of inter-university courses and schools on yearly varying subjects.

## Schedule and Timetable

The schedule is maintained on-line on our web site and consists of two parts: the timetable and the location of the lectures. The lectures are booked in the “ZRS” system and in the Cell Observatory agenda.

The most actual schedule can be found here: <https://masters.lic.leidenuniv.nl/download-schedule>

The locations can be found at: <http://zrs.leidenuniv.nl/ul/start.php>

### Lecture hours

1<sup>st</sup> & 2<sup>nd</sup> Class 9:00 – 11:00

3<sup>rd</sup> & 4<sup>th</sup> Class 11:00 – 13:00

5<sup>th</sup> & 6<sup>th</sup> Class 13:30 – 15:30

7<sup>th</sup> & 8<sup>th</sup> Class 15:30 – 17:30

**The most up to date schedule for the rooms will be available on the website of the program and on the large screen at the main entrance of the Gorlaeus Laboratories.**

**Course schedule – period 1**

**Course schedule – period 2**

**Course schedule – period 3**

**Course schedule – period 4**

## Lecturers and mentors

### Links to important contacts

Description of the research topics and mentors can be found on the educational website (<https://masters.lic.leidenuniv.nl/internships>) and the institute website (<http://lic.leidenuniv.nl>). The contact details of the groups can be found here <https://masters.lic.leidenuniv.nl/internships/contact-details-research-groups>

### List of LIC lecturers and mentors ( ■ )

		phone	e-mail
■	Prof. dr. J.P. Abrahams	4213	<a href="mailto:abrahams@chem.leidenuniv.nl">abrahams@chem.leidenuniv.nl</a>
	Dr. C.M.P. Backendorf	4409	<a href="mailto:backendo@chem.leidenuniv.nl">backendo@chem.leidenuniv.nl</a>
	Dr. R.J.B.H.N. van den Berg	4768	<a href="mailto:r.j.vdberg@chem.leidenuniv.nl">r.j.vdberg@chem.leidenuniv.nl</a>
	Dr. E.M. Blokhuis	4542	<a href="mailto:e.blokhuis@chem.leidenuniv.nl">e.blokhuis@chem.leidenuniv.nl</a>
	Prof. dr. C.A.A. van Boeckel	3489	<a href="mailto:boeckelcaavan@chem.leidenuniv.nl">boeckelcaavan@chem.leidenuniv.nl</a>
■	Dr. S. Bonnet	4260	<a href="mailto:bonnet@chem.leidenuniv.nl">bonnet@chem.leidenuniv.nl</a>
■	Prof. dr. E. Bouwman	4550	<a href="mailto:bouwman@chem.leidenuniv.nl">bouwman@chem.leidenuniv.nl</a>
■	Dr. F. Buda	5723	<a href="mailto:f.buda@chem.leidenuniv.nl">f.buda@chem.leidenuniv.nl</a>
	Prof. dr. J. Brouwer	4755	<a href="mailto:brouwer@chem.leidenuniv.nl">brouwer@chem.leidenuniv.nl</a>
■	Dr. J. Codée	4280	<a href="mailto:jcodee@chem.leidenuniv.nl">jcodee@chem.leidenuniv.nl</a>
	Dr. D.V. Filippov	4768	<a href="mailto:filippov@chem.leidenuniv.nl">filippov@chem.leidenuniv.nl</a>
	Dr B.I. Florea	4362	<a href="mailto:b.florea@chem.leidenuniv.nl">b.florea@chem.leidenuniv.nl</a>
	Prof. dr. J.G.E.M. Fraaije	4243	<a href="mailto:j.fraaije@chem.leidenuniv.nl">j.fraaije@chem.leidenuniv.nl</a>
	Dr W.T. Fu	4215	<a href="mailto:w.fu@chem.leidenuniv.nl">w.fu@chem.leidenuniv.nl</a>
	Dr. N. Goosen	4773	<a href="mailto:n.goosen@chem.leidenuniv.nl">n.goosen@chem.leidenuniv.nl</a>
■	Prof. dr. H.J.M. de Groot	4539	<a href="mailto:h.groot@chem.leidenuniv.nl">h.groot@chem.leidenuniv.nl</a>
	Dr. A.P. Goultiaev	5604	<a href="mailto:goultiaevap2@chem.leidenuniv.nl">goultiaevap2@chem.leidenuniv.nl</a>
■	Dr. D.G.H. Hetterscheid	4545	<a href="mailto:d.g.h.hetterscheid@chem.leidenuniv.nl">d.g.h.hetterscheid@chem.leidenuniv.nl</a>
■	Dr. L.B.F. Juurlink	4221	<a href="mailto:l.juurlink@chem.leidenuniv.nl">l.juurlink@chem.leidenuniv.nl</a>
■	Dr. S.I. van Kasteren	4276	<a href="mailto:s.i.van.kasteren@chem.leidenuniv.nl">s.i.van.kasteren@chem.leidenuniv.nl</a>



■	Dr. R.E. Kieltyka	4441	<a href="mailto:r.e.kieltyka@chem.leidenuniv.nl">r.e.kieltyka@chem.leidenuniv.nl</a>
■	Prof. dr. M.T.M. Koper	4250	<a href="mailto:m.koper@chem.leidenuniv.nl">m.koper@chem.leidenuniv.nl</a>
■	Prof. dr. G.J. Kroes	4396	<a href="mailto:g.j.kroes@chem.leidenuniv.nl">g.j.kroes@chem.leidenuniv.nl</a>
■	Dr. A. Kros	4234	<a href="mailto:a.kros@chem.leidenuniv.nl">a.kros@chem.leidenuniv.nl</a>
	Dr. M.E. Kuil	4416	<a href="mailto:m.kuil@chem.leidenuniv.nl">m.kuil@chem.leidenuniv.nl</a>
■	Prof. dr. G.A. van der Marel	4280	<a href="mailto:marel_g@chem.leidenuniv.nl">marel_g@chem.leidenuniv.nl</a>
	Prof. dr. M.H.M. Noteborn	4544	<a href="mailto:m.noteborn@chem.leidenuniv.nl">m.noteborn@chem.leidenuniv.nl</a>
	Dr. R.R.C.L. Olsthoorn	4586	<a href="mailto:olsthoor@chem.leidenuniv.nl">olsthoor@chem.leidenuniv.nl</a>
	Dr. Ing. M. Overhand	4483	<a href="mailto:overhand@chem.leidenuniv.nl">overhand@chem.leidenuniv.nl</a>
■	Prof. dr. H.S. Overkleeft	4342	<a href="mailto:h.s.overkleeft@chem.leidenuniv.nl">h.s.overkleeft@chem.leidenuniv.nl</a>
■	Dr. N.S. Pannu	4414	<a href="mailto:raj@chem.leidenuniv.nl">raj@chem.leidenuniv.nl</a>
■	Dr. G.F. Schneider	4770	<a href="mailto:g.f.schneider@chem.leidenuniv.nl">g.f.schneider@chem.leidenuniv.nl</a>
	Dr. G.J.A. Sevink	4344	<a href="mailto:a.sevink@chem.leidenuniv.nl">a.sevink@chem.leidenuniv.nl</a>
	Dr. M.F. Somers	4437	<a href="mailto:m.somers@chem.leidenuniv.nl">m.somers@chem.leidenuniv.nl</a>
■	Dr. M. v.d. Stelt	4768	<a href="mailto:m.van.der.stelt@chem.leidenuniv.nl">m.van.der.stelt@chem.leidenuniv.nl</a>
■	Prof. dr. M. Ubbink	4628	<a href="mailto:m.ubbink@chem.leidenuniv.nl">m.ubbink@chem.leidenuniv.nl</a>
	Prof. dr. G. van Wezel	4310	<a href="mailto:g.wezel@biology.leidenuniv.nl">g.wezel@biology.leidenuniv.nl</a>

## Important Committees and Boards in the organisation

### Board of Admission

The Board of Admission is an independent body judging the qualifications of students who want to start a master program and decides on the admission. The chair of the Board of Admission seeks advice with the senior staff when needed.

### Educational Committee

The master program is monitored by an Educational Committee formed by elected student representatives from the MSc Chemistry, MSc Life Sciences and Technology and a MSc student from the Science Faculty representing the Science Based Business specialization. The study association Chemisch Dispuut Leiden and S.V. LIFE each have a student representative in the Educational Committee. The Educational committee is a joint committee of the two master programs organized by the LIC, LST and Chemistry. It also acts an advisory board for the master specialisation Science Based Business organized by the Faculty of Science.

In the Educational Committee all educational matters that concern students and staff can be discussed. The program directors and the chairs of the Board of Examiners are invited for each meeting of the Committee. The study coordinator is present at the meetings and is secretary of this Committee.

### Board of Examiners

The Board of Examiners is the most important board in the program as they are entitled to approve your graduation, assign the right to grade courses and the right to supervise internships to the lecturers. Moreover, the official task of the Board of Examiners is to guard the educational level of the academic program.

The Board of Examiners have to approve of changes in student's individual program and may permit students to execute part of their program at other institutes.

The board of examiners validates the graded research internship and needs access to the following documents for each internship:

- The internship agreement
- The signed and completed internship evaluation form
- A pdf version of the graded version of the final thesis (as a single file)
- A report of the jury of the Thesis Talk.

Students may contact the Board of Examiners via the study coordinator or in urgent cases directly by an e-mail to the Chairman.

## Examinations and re-examinations

### General rules

*Students must sign-up for all exams using the uSis system.* On the website of the Graduate School all course ID and class numbers can be found. If a student fails to pass an exam they are given the opportunity to participate in a re-examination. As the re-examinations are not scheduled, the following procedure is used to set the date of the re-examination:

1. Students who want to take part in a re-examination should contact the teacher as soon as the results are available.
2. The teacher composes a list of students who want to take part in the re-examination and determines a date for the re-examination and informs the students involved. The re-examination is scheduled preferably within 1 or 2 months after the first exam.
3. Time and place of the re-examination are communicated via ULCN mail to the students at least two weeks prior to the re-examination.

The lecturer submits a signed list of the results of examinations to the Graduate School Office. For each individual grade such as for a research project, internship or colloquium, the responsible lecturer will hand in a signed 'examination card' at the Graduate School Office. Students can check their examination results via uSis.

### uSis and frequently-asked-questions page

In uSis – <https://usis.leidenuniv.nl> – all student information such as addresses, programs and grades are registered. Students can monitor their own progress. Registration for examinations is obligatory and should be done via uSis. More information on the system and manuals can be found on <http://www.usishelp-en.leidenuniv.nl>

There is a frequently-asked-questions page in English available:

<http://media.leidenuniv.nl/legacy/usis-faq-en.pdf>

The faculty has a local contact for uSis specific questions: [usis-fwn@edufwn.leidenuniv.nl](mailto:usis-fwn@edufwn.leidenuniv.nl).

### Graduation and Exit

After the student has completed the 120 EC required for the MSc degree, the student contacts the study coordinator to draw a final program for approval by the board of examiners. At least six weeks before the desired graduation date the student should hand in the following documents at the Graduate School Office:

- Curriculum of the fulfilled program, signed for approval by the mentor (a standard program) or the board of examiners (a non-standard program); this is a printout of your master plan.
- A copy of the front page of the final written report of each research project.
- A copy of the front page of your colloquium (Research Specialisation) or the title of your specialisation internship.

The Graduate School Office will check the registration of all exam results. The student will be informed about the exact time and place where the formal part of the exam takes place (including a public presentation) as well as of the graduation ceremony where the student will receive the official documents.

### Graduation dates 2014-2015

The graduation ceremonies of the MSc Chemistry and MSc Life Science & Technology always take place on a Tuesday. The following dates are available for the academic year 2014-2015:

16 September 2014*	20 January 2015
21 October 2014	17 February 2015
18 November 2014	17 March 2015
16 December 2014	21 April 2015
	19 May 2015
	16 June 2015
	22 September 2015**

\* Available only for students who have finalized all their subjects before August 22, 2014.

\*\* Available only for students who have finalized all their subjects before August 21, 2015.

Note that you have to submit your formal application for graduation at least six weeks before the desired graduation date at the "Educatief Centrum", HB-206 and notify the study coordinator to arrange for an exit interview. In this exit interview with the study coordinator the student's opinion and evaluation on the program are registered.

## Studying abroad during your Leiden MSc Program

Students who are enrolled in one of the Leiden University MSc-programs can choose to spend some time abroad. It is the policy of the University to stimulate this, in order to broaden the students' horizon and improve their academic and language skills. Especially students who are enrolled in a 2-year (research) master program are advised to spend some time abroad.

Leiden has many bilateral exchange and cooperation agreements with universities all over the world, including many who belong to the top. First of all, Leiden University participates in the European Union's Erasmus program. This program offers many possibilities to follow courses or to do a research training project at one of the universities in the European Union, please see:

[http://science.leidenuniv.nl/index.php/faculteit/onderwijs/studeren\\_in\\_buitenland/contracten](http://science.leidenuniv.nl/index.php/faculteit/onderwijs/studeren_in_buitenland/contracten)

Beside this, there are many exchange agreements with universities outside of Europe such as the United States, Canada, Australia, Japan, South Africa and Korea. Students can also ask their academic staff members to recommend an international institute. A list of the non-European partner universities can be found at [www.buitenland.leidenuniv.nl](http://www.buitenland.leidenuniv.nl) (in Dutch; choose "Uitwisselingsprogramma's buiten Europa").

### Conditions

Students who want to spend some time abroad have to meet certain conditions first: your Board of Examiners has to approve the study program you intend to follow. Furthermore, you must have the right academic qualifications and language skills for the intended program. You can study abroad one semester or a full academic year. Students of the Faculty of Science should always contact Ms. Gloria Schildwacht for information, registration, selection, introduction to host university, safety regulations, scholarships, etc.

### Scholarships and tuition fee

There are several scholarships for outgoing students, such as the Erasmus scholarship if you stay in Europe and the Lustra scholarship if you go outside of Europe. Students enrolled in a 2-year (research) master program can apply for the Outbound Study Grant. Selected students who go abroad to an exchange partner institute don't have to pay tuition fee to the guest university, because they are already enrolled at Leiden University.

### Contact and Information

Ms. Gloria Schildwacht,  
International Office of the Faculty of Science  
Gorlaeus Laboratories, room 2.05  
Einsteinweg 55  
2333 CC Leiden  
Phone: 071-527 57 83  
Email: [schildwacht@edufwn.leidenuniv.nl](mailto:schildwacht@edufwn.leidenuniv.nl)

## Study associations: CDL & LIFE

### Life Science & Technology Study Association LIFE

Study association LIFE was founded on the 9th of September 1999 for the interest of all the Life Science & Technology (LST) students. With 30 members, all first cohort LST students, the first committees were installed and activities were organised. After ten years LIFE has developed into a full-grown study association with over 500 members and is still expanding each year. The study association has a lot to offer its members under guidance of a fulltime board. With 17 installed committees, existing of approximately 50 active members, LIFE provides a supplement to the education program of LST by organising excursions to companies and social activities. Study association LIFE operates as an intermediary between companies and its members. Many contacts are already established over the years with companies in the Netherlands and abroad. Members are brought in contact with the corporate world and research in the field of life sciences and technology. To achieve this, activities are being organised in cooperation with companies. For example excursions, workshops, trainings and lectures are organised annually. LIFE also takes care of supplying study books and lab equipment for reduced prices throughout the year. The association ensures feedback on the education program of LST and ensures evaluation meetings for both bachelor and master students. Each year a Benelux study trip is organized for first year students and a European study trip for bachelor students. Once every two years an intercontinental study trip is organised for master students. The aims of these study trips are to visit interesting companies and research groups abroad and to become familiar with other cultures. Each two months LIFE brings a journal with a report of all activities, interesting internships reports, and interviews concerning interesting functions within companies and research groups. Furthermore LIFE organises Life Science symposia and congresses within this interesting field of science. Regularly LIFE also organises activities with related study associations in the Netherlands. These are only a few of the services LIFE provides. An interesting and joyful year is being realized by LIFE for all LST students.

**Contact information:** <http://www.svlife.nl/contact>

### Chemistry Study Association CDL

The 'Chemisch Dispuut Leiden' (CDL) has been the study association for Chemistry students at Leiden University since May 20th 1926. Since 2006, CDL also represents students from the bachelor study Molecular Science & Technology.

The CDL has an annual book market where we offer study books for a reduced price. Furthermore, we offer exams from previous years on our website to give our members an idea of what they can expect from examinations still to come. We provide the opportunity to get an idea about career prospects by organising excursions and lectures, about career opportunities or research subjects.

Besides these study-related activities the CDL also likes to create a positive atmosphere among the Chemistry students. In order to do this we organize activities such as: weekly drinks in the Science Club, laser gaming, parties and other fun activities. Together with the other study associations of the Faculty of Science we organize the annual 'Bètagala' (a ball for all students of our Faculty) and the Science Career Event, a great way to gain more information about a large number of companies. Together with the chemistry study associations from Amsterdam and Utrecht we organize the annual PAC symposium, a day

full of interesting lectures from renowned researchers, including a great diner and party afterwards. We also issue our magazine called 'Chimica acta Lugduni' four times a year. Our office is located next to the main entrance of the Gorlaeus Laboratories. The board is present daily from 09.30 until 17.30 p.m. Our members often drop by for a cup of coffee or a cup of tea – both of which are free – or just to relax and have a chat.

We look forward to meeting you!

T: 071-5274502

E: [Bestuur@chemischdispuutleiden.nl](mailto:Bestuur@chemischdispuutleiden.nl)

W: [www.chemischdispuutleiden.nl](http://www.chemischdispuutleiden.nl)

## Leiden University Address Information

- **MSc Program Life Science and Technology**  
Program coordinator Dr. M. E. Kuil  
Gorlaeus Laboratories, Room HB-2.19  
PO Box 9502  
2300 RA Leiden  
Phone +31-71-527 4416, E-mail [m.kuil@chem.leidenuniv.nl](mailto:m.kuil@chem.leidenuniv.nl)
- **Graduate School Office (Educatief Centrum)**  
Drs. C. M. van den Berge  
Gorlaeus Laboratories, room HB-2.06  
Einsteinweg 55  
2333 CC Leiden  
Phone: (071) 527 5762  
Email: [berge@edufwn.leidenuniv.nl](mailto:berge@edufwn.leidenuniv.nl)  
Opening hours: Monday to Thursday 10.00-15.00
- **International Office of the Faculty of Science**  
Ms. G. Schildwacht  
Gorlaeus Laboratories, room HB-2.05  
Einsteinweg 55  
2333 CC Leiden  
Phone: (071) 527 57 83  
Email: [schildwacht@edufwn.leidenuniv.nl](mailto:schildwacht@edufwn.leidenuniv.nl)
- **ICT services / facilities**

ICT contact person	Dhr J. Detollenaere	
ICT Helpdesk Gorlaeus Laboratories	Monday/Friday 09:00-12:00 / 13:30-16:30	Room L103
Phone	071 - 527 8888	
Fax	071 - 527 6967	
Email	<a href="mailto:helpdesk@issc.leidenuniv.nl">helpdesk@issc.leidenuniv.nl</a>	
ICT for Students	<a href="http://issc.leiden.edu/ict-students">http://issc.leiden.edu/ict-students</a>	

- **Front Office Student Affairs / Plexus Student Centre**

The staff of the Front Office can provide information on the following subjects:

- Student registration / termination of registration, tuition fees
- Dutch student loans (studiefinanciering), completing forms
- Questions about applications for admission to Bachelor's and Master's programs & Study Abroad and exchange programs
- Illness and delayed study progress and the student financial support regulation 2000 (i.e. the Afstudeerfonds)

Contact form: <http://www.students.leiden.edu/form-front-office>

Kaiserstraat 25

2311 RA Leiden

Tel: 071-5278011

Visiting hours: Monday, Wednesday, Friday 09.00 – 17.00,

Tuesday and Thursday 09.00 – 21.00

- **PITSstop**

(Study guides for other universities in the Netherlands, info on studying abroad, the employment market, application procedures and university regulations).

Plexus Student Centre, address: see above

Telephone: 071-5278025

The International Office holds a consultation session at the Meeting Point every Monday and Thursday from 13.00 – 17.00.

[pitsstop@sea.leidenuniv.nl](mailto:pitsstop@sea.leidenuniv.nl)

<http://www.studenten.leidenuniv.nl/organisatie/pitsstop>

- **Student Career Service**

(Study options and career advice, a study options test is available;

Workshops: Career orientation, CV and job application letters, Interviews and the application procedure, Psychological tests and assessment centres)

Plexus Student Centre, address: see above

Telephone: 071-5278011

There is an open consultation session: Tuesday and Friday 10.00 – 11.00

<http://students.leiden.edu/career>

- **Student Counsellors**

(Advice on financial problems, problems with study progress, legal position, students who are involved in top-level sports, students with a handicap)

Plexus Student Centre, address: see above

Telephone: 071-527 8026 and 071-527 8011

Open consultation session: Monday to Friday 15.30 – 16.30

[decanen@sea.leidenuniv.nl](mailto:decanen@sea.leidenuniv.nl)

<http://students.leiden.edu>

- **Student psychologists**

(Advice on any problem, like family problems, concerns about social contacts, feelings of depression and relationship problems; there are courses and training sessions available)

Plexus Student Centre, address: see above

Telephone: 071-527 8026

Open consultation sessions: Monday to Friday 11.00 – 12.00 Appointments possible:

Monday to Friday 09.00 – 17.00

[psychologen@sea.leidenuniv.nl](mailto:psychologen@sea.leidenuniv.nl)

<http://students.leiden.edu>

- **Ombudsperson**

For complaints about the behaviour of a staff member or an administrative body of Leiden University, one can apply to the ombudsperson. He or she is independent and handles complaints in strict confidentiality. Anonymous complaints cannot be dealt with.

Plexus Student Centre, address: see above

Telephone: 071-527 3657

[ombudsfunctionaris@leidenuniv.nl](mailto:ombudsfunctionaris@leidenuniv.nl)

<http://students.leiden.edu>

- **(Sexual) Harassment**

For any cases of sexual harassment, bullying at work, aggression, violence and discrimination you may report.

Address: Occupational Health Department (GBGD),

Poortgebouw Zuid (3rd Floor),

Rijnsburgerweg 10,

2333 AA Leiden

Telephone: 071-527 8015

## Other useful addresses

- **'Dienst Uitvoering Onderwijs' (formerly IBG)**

Regiokantoor DUO (Regional Office)

Koninginnegracht 12b/13, 2514 AA Den Haag,

tel. 050 599 77 55

Office hours: Monday through Friday from 9:00 to 17:00 o'clock, [vragen@ocwduo.nl](mailto:vragen@ocwduo.nl)

[www.ocwduo.nl](http://www.ocwduo.nl)

- **Stichting Leidse Studentenhuisvesting (SLS)**

(Foundation for Leiden's Student Housing)

Visiting address: Doelengracht 4b, 2311 VM, Leiden

Postal address: Postbus 11275, 2301 EG, Leiden

Telephone +31 (0)71 516 1718

[www.sls.nl](http://www.sls.nl)



## Safety Information Gorlaeus Laboratories - Leiden University

### What to do in case of a fire, incident or other calamity?

**Do Not** Call 112!

*but*

Call the **Emergency Number 4222** (see the orange sticker on the phone or after office hours: 4444)

### In case of fire

Activate the fire-alarm button

In case of a starting or small fire:

- Try to extinguish the fire use the handheld extinguisher or fire hose

In case of a large fire:

- Close doors and windows

- Go to the meeting point\* (restaurant or car park)

and *follow instructions of the first-aid-personnel (BHV-ers)*

### What to do if the alarm signal (“Slow Whoop”) sounds?

- Close windows, leave the room and close the door

- Follow the escape route (green pictogram plates)

In case of fire use the stairs and NEVER the elevator!

Go to the meeting point\* (restaurant or car park);

DO NOT go home: All people who were present in the building have to be registered

DO NOT make the firemen look for you unnecessarily

*Always follow the instructions of the firemen or the first-aid personnel (BHV-ers)*

### What to do when a dangerous situation is discovered?

Fill out a registration form digitally on <http://amd.leidenuniv.nl>

Or: Fill out the red paper form available at the reception

Or: Contact the safety officer of the faculty:

[amd@science.leidenuniv.nl](mailto:amd@science.leidenuniv.nl), 071 – 527 4333

\* Meeting points are indicated in the evacuation plan (ontruimingsplan) of each building.

This plan is available at the reception or on

<http://www.science.leidenuniv.nl/index.php/faculteit/organisatie/amd>