



## Minor Molecular Diagnostics (2011-2012)



### Period

#### Spring semester

13 February 2012 – 6 July 2012

### General information

This minor is open to students in the third year of the bachelor phase or higher of a biomedical study. A reasonable background in molecular biology and microbiology is desired. The minor is taught in English and has a study load of 30 EC. Tuition will be in the Spring semester (2012) from February 13<sup>th</sup> till July 6<sup>th</sup>. An introduction to our institute, the lecturers and the laboratory will be given in the week preceding the minor.

### The field of Molecular Diagnostics

The molecular diagnostic field is developing extremely fast. Traditional methods are complemented or are even replaced by molecular methods, which for their part are further developed to more sophisticated methods with higher quality and throughput. The sector urgently needs people who can keep up with these developments and can interpret their value.

In this minor, the students learn modern molecular techniques in the field of microbiology, pathology, clinical genetics, proteomics and genomics. The minor is split in half. The first part consists of lectures and practical courses, which will be held at our university or at the Leiden University Medical Center (LUMC) and will end in April. In this period, students will learn a number of molecular techniques like for instance real time methylation specific PCR, mass spectroscopy and HPLC. The theory will be focused mainly on the experimental part. During this period, a modern molecular diagnostics company is visited.

The second part of the minor is an internship at a laboratory where molecular diagnostic methods are applied. The laboratories have a wide variety of specialisms such as clinical genetics, proteomics, microbiology and pathology. This practical period will cover the remaining months.

### Modules

The following modules are included in the minor:

- DNA diagnostics (6 EC)
- Quality issues and statistics (3 EC)
- Article with data analysis (1 EC)
- HPLC and protein isolation (2 EC)
- Proteomics and mass spectroscopy (3 EC)
- Internship (15 EC)

University of Applied Sciences  
Leiden

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2333 CK Leiden

Postbus 382  
2300 AJ Leiden

The Netherlands

Website:  
[www.hsleiden.nl/english](http://www.hsleiden.nl/english)



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### Entry requirements / level

Undergraduate level, at least third year level biomedical studies or biology. Basic knowledge of medical and molecular biology, good knowledge of English.

### Literature

To be announced later.

### Examination

Examination of the modules will be based on assignments, reports and tests.

### Internship

A number of research institutions participate in our Internship module. The student can decide whether to do the training in a hospital, in a specific institution or in a company. In addition, the student can choose a particular internship based on his or her specific interest in the field of molecular diagnostics. The internship will be judged by marks for the final written report and the performance in the lab.

### Application form

If you would like to come to our university to do this minor you have to fill in our application form. You can download our application form from our website: [www.hsleiden.nl/exchange-students](http://www.hsleiden.nl/exchange-students)

### Application deadline

15 November 2011

### Tuition fees

No tuition fees for students from partner institutions.

### Accommodation

Our university does not have its own student accommodation. A local student housing corporation offers temporary, furnished rooms and apartments to international students. You can find more information about accommodation on our website.

### Contact

If you have questions about the content and/or the organization of the minor please contact Ivo Horn, PhD.

E-mail: [horn.i@hsleiden.nl](mailto:horn.i@hsleiden.nl)

Phone: +31 71 5 188 426

For information about the application procedure and/or accommodation please contact Maureen Bergman.

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