

# PHARMACEUTICAL SCIENCES

The Faculty of Health and Medical Sciences, School of Pharmaceutical Sciences at the University of Copenhagen (UCPH) offers a two-year MSc programme in Pharmaceutical Sciences taught entirely in English.



## Profile

The programme allows you to choose from one of three specialisations connected to the various phases of the drug development process: Drug Discovery, Drug Development and Medicines and Society.

## Key features:

- Choice of one of three specialisations
- Wide range of electives and choice of thesis topic allow you to create a highly specialised or broader programme that matches your interests
- Close cooperation with industry
- Research-based training at the highest academic level
- Interdisciplinary approach
- A fully international programme that prepares you for an internationally oriented career
- Varied teaching methods and project work

## Structure and teaching methods

All teaching is research based and methods vary, combining lectures, classroom teaching, hands-on laboratory exercises and report, article and poster preparation. Group projects are common. Focus is on an active problem-solving approach that prepares students for the job market.

Once you have chosen your specialisation you will have the possibility to select courses from the other specialisations as electives. You may also choose to take courses at other universities in Denmark or abroad. Likewise, there are good opportunities to conduct your industry-based thesis in Denmark or abroad.

## Career opportunities

Graduates in the pharmaceutical sciences are in heavy demand in the pharmaceutical industry internationally and in the Danish biotech, medico-tech and pharmaceutical industries, which hold a key position in the international arena. The location of the Faculty of Health and Medical Sciences, School of Pharmaceutical Sciences and its cooperation with industry provide excellent opportunities for students to build contacts to future employers already while they are studying.



## MSC IN PHARMACEUTICAL SCIENCES – PROGRAMME STRUCTURE (120 ECTS): EXAMPLES

| TRACK I: DRUG DISCOVERY |   |  |
|-------------------------|---|--|
| BLOCK                   | Year 1: Compulsory courses and ISU                  | Year 2: Electives* (examples) and MSc thesis                     |
| 1                       | Drug Discovery and Development (7.5 ECTS)           | Toxicology* (7.5 ECTS)   |
|                         | Principles of Pharmacology (7.5 ECTS)               | In-vitro Techniques in Biochemistry and Pharmacology* (7.5 ECTS) |
| 2                       | Pharmaceutics and Drug Development (7.5 ECTS)       | Structural and Computational Medicinal Chemistry*(7.5 ECTS)      |
|                         | Medicinal and Biostructural Chemistry (7.5 ECTS)    | Statistical Design and Analysis of Experiments* (7.5 ECTS)       |
| 3                       | Pharmacology from Physiology to Therapy (15 ECTS)   | Thesis (30 ECTS)   |
| 4                       | Advances in Medicinal Chemistry Research (7.5 ECTS) |  |
|                         | Individualised Study Unit (ISU)* (7.5 ECTS)         |  |

| TRACK II: DRUG DEVELOPMENT |  |  |
|----------------------------|--|--|
| BLOCK                      | Year 1: Compulsory courses and Electives* (examples)                               | Year 2: Electives* (examples) and MSc thesis   |
| 1                          | Drug Discovery and Development (7.5 ECTS)  | Pharmaceutical Formulation of Peptides and Proteins* (7.5 ECTS)                                  |
|                            | Principles of Pharmacology (7.5 ECTS)  | Advanced Manufacturing of Pharmaceuticals* (7.5 ECTS)  |
| 2                          | Pharmaceutics and Drug Development (7.5 ECTS)                                      | Pharmaceutical Preformulation, profiling drug substances for the biomedical sciences* (7.5 ECTS) |
|                            | Medicinal and Biostructural Chemistry (7.5 ECTS)                                   | Advanced Drug Discovery* (7.5 ECTS)  |
| 3                          | Pharmaceutical Analytical Chemistry (7.5 ECTS)                                     | Thesis (30 ECTS)   |
|                            | Intellectual Property Rights and Innovation in Pharmaceutical Sciences* (7.5 ECTS) |  |
| 4                          | Research Project in Pharmaceutics and Drug Delivery (15 ECTS)                      |  |

| TRACK III: MEDICINES AND SOCIETY |  |  |
|----------------------------------|--|--|
| BLOCK                            | Year 1: Compulsory courses and Electives* (examples)           | Year 2: Electives* (examples) and MSc thesis                 |
| 1                                | Drug Discovery and Development (7.5 ECTS)                      | Toxicology* (7.5 ECTS)                                       |
|                                  | Principles of Pharmacology (7.5 ECTS)                          | Pharmaceutical Marketing* (7.5 ECTS)                         |
| 2                                | Pharmaceutics and Drug Development (7.5 ECTS)                  | Research Methods in Social and Clinical Pharmacy* (7.5 ECTS) |
|                                  | Clinical Drug Development (7.5 ECTS)                           | Pharmaceutical Policy, Economics and Ethics* (7.5 ECTS)      |
| 3                                | Pharmacology from Physiology to Therapy (15 ECTS)              | Thesis (30 ECTS)   |
| 4                                | Social Pharmacy (7.5 ECTS)                                     |  |
|                                  | Regulatory Sciences in the Pharmaceutical Industry* (7.5 ECTS) |  |

(SUBJECT TO CHANGE)

### Admission criteria

To apply for the MSc programme in Pharmaceutical Sciences you must have completed a BSc with a solid background in chemistry and biology. You must have earned your Bachelor's degree a maximum of five years before the first semester of the Master's programme begins.

Applications must include a letter of motivation. An overall assessment is made on the basis of academic qualifications, including, in addition to grades, the relevance of the subjects studied, experience of experimental work and international experience. See also "Find out more".

Non-EU students are required to pay tuition fees. Current tuition fees (subject to change) for non-EU students per academic year: DKK 108,000 (approx. EUR 14,400).

Language requirements: IELTS 6.5; TOEFL 560 (paper) or 83 (Internet-based)

### Application deadlines

15 January: non-EU/EEA citizens

1 April: EU/EEA and Swiss citizens

The introduction programme starts at the end of August.

### Find out more

More information about the Faculty, the programme and application procedures and requirements is available at:

[www.studies.ku.dk/masters/pharmaceutical-sciences](http://www.studies.ku.dk/masters/pharmaceutical-sciences)

[www.healthsciences.ku.dk/education](http://www.healthsciences.ku.dk/education)

More information about living in Denmark and studying at the University of Copenhagen is available at:

[www.studies.ku.dk](http://www.studies.ku.dk)

You can contact us at:

[pharmaceuticalsciences@sund.ku.dk](mailto:pharmaceuticalsciences@sund.ku.dk)

