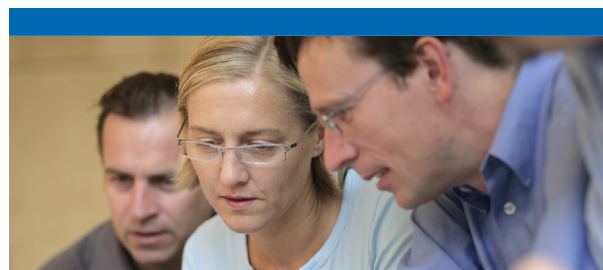


# Master of Science (MSc) in Pharmaceutical Medicine

Knowledge to shape the future



## Idea

Highly skilled, experienced professionals in many different disciplines are required in order to speed up the discovery and development of more effective and safer medicines for patients.

As a postgraduate interested in the process of discovery, development, regulation and marketing of medicines you have new opportunities to widen your horizon and to drive your career.

## Entry requirements

Degree in one of the following disciplines:

- Life Sciences
- Medicine
- Pharmacy

as well as one year's professional experience and good English language skills.

## Selection procedure

The best qualified applicants will be invited to participate in an intensive interviewing process designed to assess their motivation, social competence, level of commitment, and to confirm their basic knowledge of the field.

## Educational objective

The objective of this study course is


- to focus on day-to-day practice
- to promote interdisciplinary knowledge
- to improve the information flow between the different phases of the drug development process
- to enable the participants to deal with the complex international tasks facing health care institutions and the pharmaceutical industry.

**Key elements of the study course: emphasis on practice, international focus and interdisciplinary nature.**

## Accreditation and Approval

- Accreditation by AQAS/ENQA and State Recognition
- International Accreditation by IFAPP
- Centre of Excellence IMI PharmaTrain

## Course structure

SU 1	<b>General Introduction to the Health System and the Pharmaceutical Industry</b> General Introduction to the Health System and the Pharmaceutical Industry	<b>M 1</b>
SU 2 SU 3	<b>Core Competencies: Leadership, Management Methods, Organizational Power</b> Working in a Complex Organization Project Management	<b>M 2</b>
SU 4 SU 5	<b>Economics of Healthcare</b> Health Economics International Health Systems and Market Access	<b>M 3</b>
SU 6 SU 7	<b>Biopharmaceutical Development</b> Drug Discovery and Development Biopharmaceuticals and –technology	<b>M 4</b>
SU 8 SU 9	<b>Non-Clinical Testing, Pharmaceutical and Early Clinical Development</b> Toxicology Clinical Pharmacology, Pharmacokinetics	<b>M 5</b>
SU 10 SU 11	<b>Clinical Trials, Strategies and Management</b> Clinical Trials Strategies and Managing Clinical Trials	<b>M 6</b>
SU 12	<b>Ethical and Legal Issues in Drug Development</b> Ethical and Legal Issues in Drug Development	<b>M 7</b>
SU 13 SU 14	<b>Data Management and Statistics</b> Clinical Systems and Data Management Biostatistics	<b>M 8</b>
SU 15 SU 16	<b>Drug Safety and Pharmacovigilance</b> Drug Safety Post-Marketing Surveillance	<b>M 9</b>
SU 17	<b>Regulatory Affairs</b> Regulatory Affairs	<b>M 10</b>
SU 18	<b>Healthcare Marketplace</b> Marketing and Sales	<b>M 11</b>
SU 19	<b>Pharmaceutical Related Case Studies</b> Pharmaceutical Related Case Studies	<b>M 12</b>
	<b>Master-Thesis</b> Final Oral Examination	



The study course covers two years and is divided into 12 modules with 19 study units, taught in block seminars on Thursday afternoon, Friday and Saturday at the University of Duisburg-Essen. Each study unit concludes with an examination.

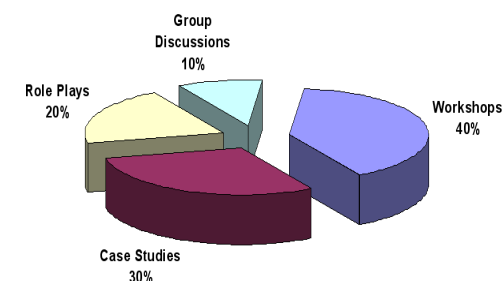
**The study course can be conducted while the participant is working.**

## Course concept

For each study unit the participant has on-month preparation time based on a given "Reader" which contains basic and additional information and tasks about the topic to be taught and discussed during the block seminar. The participant studies the "Reader" and becomes a "junior expert". During the block seminar the "junior expert" (participant) would meet the "senior experts" (lecturing team) to ask, to discuss and to demonstrate his knowledge on a scientific basis.

## Teaching methods

The main emphasis of the study course is teamwork, along with participation, presentations and discussions to teach ability in competent management. Classic lectures will be given only for the introduction of a topic, to present basic knowledge and fundamental theories.



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### Lecturers

Participants will interact with lecturers from Belgium, France, Germany, Spain, Switzerland, the UK and the USA. They are key thought and opinion leaders. They work in health care institutions and the international pharmaceutical industry.

### Students

They are all proud of being part of such an engaged, dedicated group with a high sense of commitment.

#### Characteristics of the students (1997- 2011)

Mean age (in years)	34
Gender (m/f)	51/49
Overall average final grade	1.7
Participation while the student is working	98 %
Doctorate	63 %
State doctorate	8 %
Being abroad	50 %
Minimum one career step during the study course	90 %

*„Already the first modules enriched my work in the pharmaceutical industry. Because of this it is worth for me to attend the study course despite the high workload as a medical manager in a pharmaceutical company.“*

*Dr. med. Katja Pütter*

90 percent of our students made a career step. The majority of our students are graded with “excellent” or “very good”.

### Scientific Course Committee (SCC)

The Scientific Course Committee (SCC) is charged with the overall responsibility of the success and applicability of the study course. The Scientific Course Committee consists of highly experienced scientists and subject matter experts actively employed in different disciplines. The main obligation of this board is to ensure that the content of the study course is state of the art.

### Course Language

The course language is English.

### Duration

2 years. After 19 study units a period of time for thesis preparation and oral examination follows.

### Venue

The study units are held at the University of Duisburg-Essen, Faculty of Medicine, Germany.

### Degree

Master of Science (MSc)



### Fees

The course fee is currently EUR 7,425 per year (total amount EUR 14,850). The fee includes the costs for the final examination.

### Schedule

Usually a new study course starts every two years in April (2013, 2015, 2017...).

### Further Information

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- Mastering Medicines Development -

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