



Cooperative European Medicines  
Development Course



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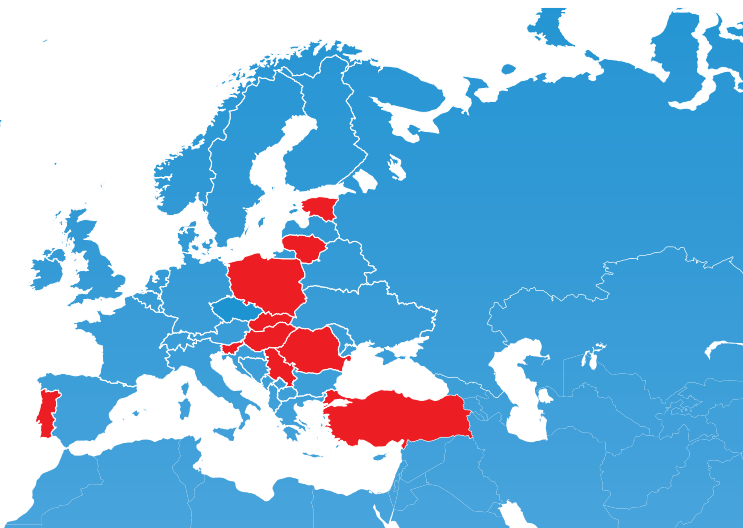
PharmaTrain accredited  
Center of Excellence

[www.cemdc.eu](http://www.cemdc.eu)



## Cooperative European Medicines Development Course

This multinational university program covers the entire process from drug discovery through all steps of medicines development up to the market.



### Participating Universities

Estonia - Tartu, Hungary - Budapest, Lithuania - Kaunas, Poland - Warsaw, Portugal - Lisbon, Romania - Targu Mures, Serbia - Belgrade, Slovakia - Bratislava, Slovenia - Ljubljana, Turkey - Ankara

### PharmaTrain, the European harmonized concept of teaching medicines development

PharmaTrain offers high-quality standards for post-graduate education and training in medicines development (pharmaceutical medicine). The program was developed jointly by university, regulatory and pharmaceutical industry experts to fulfill the expectations of both the future-oriented trainees and prospective employers.

PharmaTrain has established 180 teaching topics along the road from molecule to the market place. This comprehensive Syllabus of

Medicines Development is mapped to Learning Outcomes which are expected to be understood and mastered by the students.

**Goal of the education** is to train experts who can competently function in the matrix organizations of innovative and generic pharmaceutical industries, small and middle-size enterprises, regulatory agencies, health care and health insurance management.

**The PharmaTrain Federation**, the successor organization of the IMI-PharmaTrain project is a non-profit association based on public-private partnership. It is a global network of Course Providers which all follow the PharmaTrain harmonized educational program and are accredited to fulfill the shared scientific standards and quality criteria of PharmaTrain. Global collaboration and mutual recognition of courses by PharmaTrain centers provide great educational flexibility for the students.

### **Further information**

For further details concerning the general principles of PharmaTrain educational concept visit the PharmaTrain website ([www.pharma-train.eu](http://www.pharma-train.eu)). Many additional useful programs for continuous professional education in medicines development are listed on the website: <http://www.on-course.eu/index.htm>

## **The CEMDC educational program**

The CEMDC is member of the PharmaTrain Federation. The educational program offered by the multinational university network is coordinated by Semmelweis University, Budapest, Hungary.

### **The modular teaching concept**

The PharmaTrain program is divided into modules. The individual modules can be attended separately enabling the students to build an educational program according to their needs. The Bologna system is applied to define each module in terms of European Credit Transfer System (ECTS) credits where 1 ECTS credit equals to a total of approximately 25 learning hours including homework, face-to-face and e-learning. Each PharmaTrain module is planned to be worth minimally 5 ECTS.

The face-to-face session of the modules lasts usually 4 days and includes review presentations, tutorial workshops, case discussions and a multiple-choice question (MCQ) examination at the end of each module. Modules are usually given in 2-3 months long intervals permitting the students to continue working at their working place. The contact teaching must be preceded by extensive home learning using e-modules, selected texts as well as preparatory reading for the team works at the joint sessions. The MCQ examination at the end of each module is based both on materials learned at home and

on information presented during the contact teaching. In addition, following the face-to-face meeting the students have to submit 1 or 2 assignments consisting of 800 to 1200 words discussing topics related to the program of the module. The final note of a module is based on the joint evaluation of the MCQ examination and the scoring of the assignments.

### **Basic Modules and the Diploma in Medicines Development.**

Six basic modules provide a complete overview of all drug development related topics listed in the PharmaTrain Syllabus:

**Module 1a:** Introductory overview of medicines development: from molecule to drug therapy

**Module 1b:** Principles of discovery of medicines and development planning

**Module 2:** Non-clinical, pharmaceutical and early clinical development of medicines

**Module 3:** Exploratory and confirmatory clinical development of medicines

**Module 4:** Clinical trials

**Module 5a:** Regulatory affairs

**Module 5b:** Drug safety & pharmacovigilance

**Module 6:** Health care marketplace; economics of healthcare

*For those who wish to obtain a diploma in medicines development it is recommended to register immediately for the entire Basic Course and not to follow the program in a random sequence extended over a prolonged time.*

### **Elective modules**

In addition to the basic modules, the PharmaTrain course providers, including the CEMDC, give PharmaTrain accredited elective modules which offer a more detailed knowledge and competence in special fields of medicines development. The PharmaTrain Federation possesses a large pool of accredited elective modules and many others are being developed in line with the scientific progress of drug research. The various elective modules are presented by different course providers and can be freely selected according to the individual professional needs. Similar to the basic modules, the elective modules are finished by an examination.

The ECTS credits gained are transferable between PharmaTrain accredited courses, in order to encourage the international mobility of the students.

### **Master-level education**

After successfully finishing the Basic Course the students can enroll into a master course program by taking up 6 additional elective modules. Following the submission of a thesis and its successful defense, the candidates will receive a MSc Degree in Medicines Development from the university where the thesis was submitted.

### **Who should apply?**

Newly graduated students or already established professionals with medical, pharmaceutical diplomas or having MSc or equivalent degrees in natural and life sciences, economics, etc. can apply from any country. (Applicants with a bachelor degree but having extensive work experience in medicines development might be accepted following special consideration of their professional background.)

Adequate knowledge of English is necessary to follow the lectures, participate in the discussions and complete the various forms of assessments. For admission, students must submit a copy of their degrees, document(s) proving their knowledge of English and a CV describing their professional experience if available.

### **International acceptance**

Thanks to the multinational university network organization of the CEMDC education and its involvement in the Pharma-Train harmonized training project, the diplomas issued by the CEMDC are expected to receive favorable acceptance at the international job market.

### **CEMDC program, time table and expenses**

For further information concerning courses and modules of the CEMDC please consult the [cemdc.eu](http://cemdc.eu) website. Information on dates, time-tables, the sites of the planned modules and associated expenses will be posted and updated as required.

## **Contacts**

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Innovative Medicines Initiative



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Faculty of Pharmacy

