Pharmacy education & training in

HUNGARY

2012 – Version 2

Education and Culture DG
Lifelong Learning Programme

PHARMINE
Pharmacy Education
in Europe

The PHARMINE or PHARMacy education IN Europe project is funded by the European Commission (LLL programme, Erasmus). Its aims and objectives are to survey the present state of pharmacy education and training in Europe, and on the basis of this survey, formulate recommendations for new competence curricula for pharmacy education and training in the EU. A model for pharmacy education and training for candidate member states and others will be proposed. The opportunities for a quality assurance and accreditation scheme for EU pharmacy courses will be investigated.

PHARMINE will take into account two important issues, (i) the EU directive 2005/36/EC on the recognition of professional qualifications and, (ii) the Bologna declaration. PHARMINE will focus both on recommendations for core education and training and for optional activities such as industrial and hospital pharmacy.

The PHARMINE consortium consists of university members of the European Association of Faculties of Pharmacy (EAFP), and EU partner associations representing community, hospital of industrial pharmacy, together with the European Pharmacy Students' Association and other interested bodies.

In order to reach the objectives of the PHARMINE project, a work-plan was set up and divided into 7 work-packages (WP).

The aims and objectives of the 7th PHARMINE WP (WP7) are to:

1. Survey European higher education institutions (HEIs)
2. Produce a databank of pharmacy education and training courses in Europe leading to core pharmacist qualifications and to qualifications required for optional activities such as industrial and hospital pharmacy
3. Survey to what extent the model for pharmacy education and training based on the principles enumerated in the Bologna declaration, and that based on the "Sectoral profession" directive of the EU (2005/36/EC), are compatible.

PHARMINE WP7 will produce several documents including a WP7 survey by country. **Such surveys are intended for the use of students and staff interested in mobility and/or contacts with the country in questions as well as educationalists working on pharmacy education and training in Europe.**

(see: http://enzu.pharmine.org/media/filebook/files/PHARMINE%20WP7%20survey%20of%20European%20HEIs%200309.pdf)

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This revised second version was produced by Gyöngyver SOOS in October 2012.

Validation of the first version of the PHARMINE WP7 survey Hungary, 2010:

This document was validated by the prof. F. Fulop dean of Pharmaceutical Faculty, University of Szeged,

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Summary.

There are 4 higher education institutions (HEIs) delivering pharmacy education and training in Hungary. Two of them – Budapest and Szeged – have existed for over 200 years. The other two – Debrecen and Pécs – are of much more recent origin.

The pharmacy degree course is a fully integrated 5-year university course with 32 weeks of HEI-supervised traineeship spread over the 2nd through the 5th year and taking place mainly in the 10th semester.

The main subject areas taught – besides generic subjects (including traineeship) – are medical sciences, chemical sciences and pharmaceutical technology. There are plans for a decrease in the teaching of chemistry-related subjects, and an increase in the weight of the biomedical and clinical subject matters.

Specialisation in hospital and various forms of industrial pharmacy occurs at the postgraduate level and is organised by the HEIs, as is CPD/LLL. The latter is mandatory for renewal of a government license to practice pharmacy (every 5 years).

Hungarian health and healthcare.

Statistics for Hungary.

(2006 unless otherwise indicated):

Total population: 10,058,000

Gross national income per capita (PPP international $): 16,970

Life expectancy at birth m/f (years): 69/78

Healthy life expectancy at birth m/f (years, 2003): 62/68

Probability of dying under five (per 1 000 live births): 7

Probability of dying between 15 and 60 years m/f (per 1 000 population): 249/104

Total expenditure on health per capita (Intl $, 2006): 1,382

Total expenditure on health as % of GDP (2006): 7.6

(From the WHO Statistical Information System (WHOSIS: http://www.who.int/whosis/en/index.html

See also: "World Health Statistics 2009, WHO".)

Further information can be found at: Health Care Systems in Transition, 13: 5, 2011

http://www.euro.who.int/__data/assets/pdf_file/0019/155044/e96034.pdf

The following link deals with health care and pharmaceuticals in Hungary especially in relation to pricing policy:

http://ppri.oebig.at/Downloads/Results/Hungary_PPRI_2007.pdf

Chapter 1. Organization of the activities of pharmacists, professional bodies

	Y/N, number or %	Comments
Community pharmacy		
Number of community pharmacists	4900	
Number of community pharmacies	2380	On average: 5033 inhabitants / pharmacy 2 pharmacists / pharmacy; 2.3 pharmacy assistants / pharmacy. At least one of the owners of a pharmacy must be a pharmacist. A pharmacist may collaborate with other pharmacists, druggists, general practitioners and insurance companies.
Competences and roles of community pharmacists		1. Supplying prescription medicines 2. Managing medicines for some ailments 3. Giving advice on medicines 4. Screening services 5. Services to the housebound 6. Services to nursing and care homes (medication reviews, advice on storage and administration of medicines) Management of the pharmacy Pharmacists can provide diagnostic services (measurement of blood sugar or blood pressure). Internet pharmacies can sell OTC drugs only.
Is ownership of a community pharmacy limited to pharmacists?	No	Anybody and all kinds of economic organisations can be pharmacy owners. However, the pharmacist who has professional responsibility for the pharmacy has to be a partial owner of the same pharmacy. Thus In principle ownership of community pharmacies is free. However, pharmacist has to be a partial owner of the pharmacy. Hungarian Act 98/2006 74.§
Are there rules governing the geographical distribution of community pharmacies?	Partially	5000 inhabitants /pharmacy; 275 m distance between two pharmacies. Since 2007 these limitations can be avoided if a new pharmacy provides special services. In the practice the limitations are not strictly adhered to since 2007, and the opening of pharmacies has been substantially liberalised Hungarian Act 98/2006 48-57.§
Are healthcare products available by other channels ?	Yes	Special OTC drugs only (*circa* 400 preparations) are distributed from closed shelves in petrol stations, post offices, perfumeries, supermarkets, *etc*. Internet and mail order pharmacies exist in Hungary. Decree Ministry of Health 44/2004 21/A§
Are persons other than pharmacists involved in community practice?	Yes	The total number of employees in community pharmacies is 12981. Only pharmacy assistants are involved in practice.
Their titles and number(s)	5400	Pharmacy assistant
Their qualifications		Middle level healthcare professional

Organisation providing and validating the E&T		Different professional schools, with a centralised examination organised by the government. The schools for pharmacy assistants are independent from the pharmacy HEIs. www.gytk.sote.hu www.pharm.u-szeged.hu www.pharmacol.dote.hu/pharmacy/ www.gytsz.pte.hu Every school has own, independent curriculum; outcome demands are legally declared and harmonised with EU requirements. The Hungarian Accreditation Committee validates the activity of schools .
Duration of studies (years)	2	
Subject areas		The same areas as for a pharmacist, but at a more superficial level.
Competences and roles		To help in all pharmacist's activities, especially supplying prescription and OTC medicines, contributing to drug compounding, help in managerial and financial activities.
Hospital pharmacy		
Does such a function exist?	Yes	They are members of the hospital section of the Hungarian Society of Pharmaceutical Sciences which is a member of the European Association of Hospital Pharmacists (EAHP) since 1991
Hospital pharmacists	105	
Hospital pharmacies	115	
Competences and roles of hospital pharmacists		Acquisition, storage, distribution of medicines and some medicinal products, clinical services all within a quality ensured system. In the previous phrase, "clinical" means personalised services: daily dose drug supply, bed side counselling, and production of individual sterile preparations: mixed infusions
Pharmaceutical and related industries		
Number of companies with production, R&D and distribution	Number: 39+105	Industrial pharmacists in Hungary are represented by the industrial pharmacist section (Association for the Pharmaceutical industry (API)) of the Hungarian Society of Pharmaceutical Sciences; this section is an official member of the EIPG since 2009. Pharmaceutical exports: 1837 million€; imports: 1852 million€ (balance 185 million€) Pharmaceutical market value: 1955 million€ The above figures are from: "*The Pharmaceutical Industry in Figures*". European Federation of Pharmaceutical Industries and Associations, EFPIA, Key figures 2009 www.efpia.eu/Content/Default.asp?PageID=317 Examples of company websites: G.Richter Co ; www.richter.hu Sanofi- Aventis Co www.sanofi-aventis.hu
Number of companies with production only	39	TEVA Magyarország Kft. www.teva.hu
Number of companies with distribution only	105	4 companies cover 85% of the turnover. HungaroPharma Zrt. www.hungaropharma.hu Phoenix Pharma Zrt www.phonix.hu Euromedic Pharma Zrt www.euromedic-hungary.com
Number of companies producing generic drugs	?	Examples: PannonPharma Gyógyszergyártó Kft www.pannonpharma.hu Meditop Gyógyszeripari Kft. www.meditop.hu

Industrial pharmacy		
Number of pharmacists working in industry	~1200	The Association for the Pharmaceutical industry (API) of the Hungarian Society for Pharmaceutical Sciences has approximately 4,000 members; it is a member of EIPG since 2009.
Competences and roles of industrial pharmacists		Whole spectra of R & D, regulatory affairs and marketing
Other sectors		
Number of pharmacists working in other sectors	800	
Sectors in which pharmacists are employed		Education, regulatory & authorities
Roles of professional associations		
Registration of pharmacists	Not since 2006	The Act (issued the end of 2006) for the liberalisation of the drug market reduced at the functions of the Chamber of Pharmacist. The government re-registers pharmacists every 5 years following acquisition of 250 ECTS (see www.eekh.hu). Membership of the chamber has become obligatory again (since January 2012) for all pharmacists who work in drug-supply system (hospital and community settings). Pharmacists educated in other EU or EEA countries are barred from owning, managing or supervising a pharmacy that is less than 3 years old (3-yeart clause). They must speak Hungarian.
Creation of pharmacies, territorial distribution	No	This is the responsibility of the Hungarian National Public Health and Medical Officer Service (ÁNTSZ) – which is a governmental body. There is a minimum number of customers (5000) and a minimum distance (275 metres) between pharmacies.
Ethical and other aspects of professional conduct	Yes	The Code of Ethics was developed by the Hunarian Chamber of Pharmacists.
Quality assurance and validation of HEI courses for pharmacists	No	
Other comments		The Hungarian Society for Pharmaceutical Sciences (http://www.mgyt.hu/index.php?option=com_content&task=view&id=322&Itemid=17 (in Hungarian)) dates back to 1924. Members of the society include HEI staff, pharmacists working in industry, heads of pharmacy administration and pharmacist involved in the treatment of in- and out-patients. It has over 5000 members. This society places special interest in the relationships between pharmacy practice and science. The Society also protects the professional interests of pharmacists.

References	
References to texts and articles of national law	Act CXL (2004) on the General Rules of Administrative Proceedings and Services: http://net.jogtar.hu/jr/gen/getdoc.cgi?docid=a0400140.tv&dbnum=62 (in English) Act XCVIII (2006) on the General Provisions Relating to the Reliable and Economically Feasible Supply of Medicinal Products and Medical Aids and on the Distribution of Medicinal Products: http://net.jogtar.hu/jr/gen/getdoc.cgi?docid=a0600098.tv&dbnum=62 (in English) See also: www.ogyi.hu/laws_and_regulations/ (in English)
Websites	
ECORYS: "*Study of regulatory restrictions in the field of pharmacies*". Report for the European Commission, Internal Market and Services DG, ECORYS Nederland BV, Dr. Bjørn Volkerink, Patrick de Bas, Nicolai van Gorp ; in cooperation with: Dr. Niels Philipsen (METRO – University of Maastricht). Rotterdam, 22 June 2007.	http://ec.europa.en/internal market/services/pharmacy en.htm
European Federation of Pharmaceutical Industries and Associations (EFPIA)	www.efpia.eu/Content/Default.asp?PageID=317
Pharmaceutical Group of the EU (PGEU)	http://www.pgeu.org/
European Association of Hospital Pharmacists (EAHP)	http://www.eahp.eu/
European Industrial Pharmacists' Group (EIPG)	http://www.eipg.eu/
European Hospital and Healthcare Federation (HOPE)	http://www.hope.be/
WHO	http://www.euro.who.int/countryinformation/CtryInfoRes?COUNTRY=HUN
Hungarian Society for Pharmaceutical Sciences	http://www.mgyt.hu/index.php?option=com_content&task=view&id=322&Itemid=17 (in Hungarian)

Chapter 2. Pharmacy HEIs, students and courses

	Y/N, number or %	Comments.
Number of HEIs in Hungary	4	1. Semmelweiss: www.gytk.sote.hu 2. Szeged: www.pharm.u-szeged.hu (English: http://www.pharm.u-szeged.hu/index.php?link=startpage&language=en&topic_id=351) 3. Debrecen: www.pharmacol.dote.hu/pharmacy/ 4. Pecs: www.gytsz.pte.hu
Public	4	
Organisation of HEIs		
Independent faculty	3	Budapest, Szeged, Debrecen
Attached to a medical faculty	1	Pécs
Do HEIs offer B + M degrees?	No	Only a 5-year fully integrated, master degree program
Do HEIs offer an M. Pharm. after a B degree in another HEI?	Exceptional situations	It is possible for a student who comes from abroad, but no HEI in Hungary has a B. Pharm. course.
Do HEIs offer a B. Pharm. followed by an M. Pharm. in the same HEI or elsewhere?	No	
Entry requirements following secondary school		
Specific pharmacy-related national entrance examination	No	
Is there a national *numerus clausus*?	Yes	This is based on finances. HEIs are financially dependent on the national government so the resources are limited by the national budget
Advanced entry		
	No	All students have to start at the beginning of the first year, no other possibility is allowed
Fees per year		
For home students	2500€ / year	
For EU MS students	4300€	
For non EU students	4300€	
Length of course	**5 years**	Although the course lasts 5 years and is this equivalent to a Master level, from 2009 onwards, graduating pharmacists will have the right to use the title of “doctor”.
Specialization		
Do HEIs provide specialized courses?	Yes	The new regulation regarding postgraduate specialisation is valid from 15 September 2012. Now there are 3 main directions: for community, hospital or industrial field. Specialisation depends on the demand of the job. It means these are practice-based teaching, organised by HEIs All HEIs offer specialised postgraduate courses. This consists of two years’ residency with obligatory and optional courses. The types of qualifications are as follows: • pharmaceutical technology • quality control

		• pharmacodynamics • pharmaceutical chemistry • social pharmacy • pharmacognosy and phytotherapy • clinical laboratory diagnostics • community pharmacy • pharmaceutical administration and management • radiopharmacy • hospital pharmacy* • clinical pharmacy • pharmaceutical microbiology • toxicology • quality assurance *The general structure of the hospital pharmacy postgraduate programme is as follows: Theoretical courses: *A. Obligatory (200 hours)* • Therapeutics (100 hours) • Compounding (25 hours) • Hospital pharmacy management (50 hours) • Quality assurance (25 hours) *B. Optional (80 hours)* • Biopharmacy • Special field of therapeutics • Interactions • Clinical laboratory investigations • Clinical Toxicology • Pharmaco-economics • Drug marketing Practice: General hospital pharmacy practice and specialised training in the preparation of large volume for parenteral administration and intravenous admixtures. Ph.D. programmes consist of theoretical courses and practical research and can be followed on a full-time or part-time (for those already working in industry, for example) basis.
In which years?		Postgraduate
In which specialisation ?		Hospital pharmacy and others (see above).
What are the student numbers ?		Hospital pharmacy: *circa* 20 / year
Past and present changes in E&T		
Have there been any major changes since 1999?		
Are any major changes envisaged before 2019?	Yes	The strategic reorganisation of the Hungarian healthcare system will involve a reduction in the budget of the Ministry of Health and therefore of the degree of financing of postgraduate specialisation.
Szeged		
Teaching staff		
Number of teaching	45	

staff (nationals)		
Number of international teaching staff	0	
Number professionals from outside the HEIs	150-200	Pharmacists: tutors in pharmacies for summer and preregistration practice. Traineeship is under the supervision of the HEI.
Students		
Number of places on entry following secondary school	320	320 are state commissioned places, plus about 10% self-financed studens start in the 1 year
Number of applicants for entry	800-900	3 applicants per place. University statistics at www.felvi.hu
Number that become professional pharmacists.	250-280	40-50 low achievers drop out. They are lost to the pharmacy profession; they change careers.
Number of international students (from EU member states)	<5	From Germany, Cyprus and Greece mainly.
Number of international students (non EU)	100-120	Mainly from Iran, Israel, Syria or Turkey.
Entry requirements following secondary school		
Specific entry requirement	Yes	Szeged has the right to select students. The general results (certificate of "maturation") and the records of biology and physics or chemistry are taken into consideration mainly, but there are some other factors involved.
Fees per year		
For home students	2500€ / yr	
For EU MS students	4300€	
For non EU students	4300€	
Length of course	**5**	
Specialization		
Does Szeged provide specialized courses?	No (post-graduate only)	The hospital pharmacist receives his/her special training at the postgraduate level. Albeit 4 weeks hospital pharmacy practice is obligatory during the pre-registration training (since 1998).
Past and present changes in E&T		
Have there been any major changes since 1999?	Yes	ECTSs were implemented into the curriculum (since 2002). This allows students to draw up individual practical programs, and timetables.
Are any major changes envisaged before 2019?	Yes	Decrease the teaching in chemistry-related subjects, and increase the weight of the biomedical, clinical subject matters.
Past and present changes in E&T		
Is your HEI typical of all HEIs in the country?	Yes	There are some minor but no major differences amongst the four faculties.

References	
References to texts	I. Antal, P. Mátyus, S. Marton, Z. Vincze (2002). Developing the Pharmacy Curriculum in a Hungarian Faculty. *Pharmacy Education*, 1: 241-246.

Chapter 3. Teaching and learning methods

Student hours (28-30 weeks per year)

Method	Year 1	%	Year 2	%	Year 3	%	Year 4	%	Year 5	%
Lecture	15 hours / week = 450*	46.9	17 hours / week = 510	46.4	15 hours / week = 450	40.9	16 hours / week = 480	43.6	20 hours / week = 600	37.5
Practical	17 hours / week = 510	53.1	15 hours / week = 450	46.9	17 hours / week = 510	46.4	16 hours / week = 480	43.6	10 hours / week = 300	18.8
Project work	0		0		0		Thesis work**		Thesis work**	
Subtotal	*960*		*960*		*960*		*960*		*900*	
Traineeship	**Year 1**		**Year 2**		**Year 3**		**Year 4**		**Year 5**	
Hospital					Summer 35 hours / week = 140 Or		Summer 35 hours / week = 140 Or		4 weeks 35 hours / week In 10th semester = 140	
Community			Summer (4 weeks) 35 hour / week = 140		35 hours / week = 140 Or		35 hours / week = 140 Or		16 weeks 35 hours / week In 10th semester = 560	
Industrial					35 hours / week = 140		35 hours / week = 140			
Total traineeship			*140*	*112.7*	*140*	*12.7*	*140*	*12.7*	*700*	*43.8*
Total	*960*		*1100*		*1100*		*1100*		*1600*	

*: hours calculated on basis of 30 weeks / year
**: duration is variable. Students are given 10 ECTSs for their work on their thesis.

Summary:

Year	Teaching and learning methods
1	Equal split between lectures and practicals
2	Equal split between lectures and practicals. Traineeship starts with 4 weeks community pharmacy
3	Equal split between lectures and practicals. Traineeship continues with 4 weeks in community, hospital or industry.
4	Equal split between lectures and practicals. Traineeship continues with 4 weeks year in community, hospital or industry. Thesis commences.
5	Twice more lectures than practicals. Traineeship period of 20 weeks mainly in community pharmacy. Traineeship occupies 10th semester. Thesis finalised.

Chapter 4. Subject areas

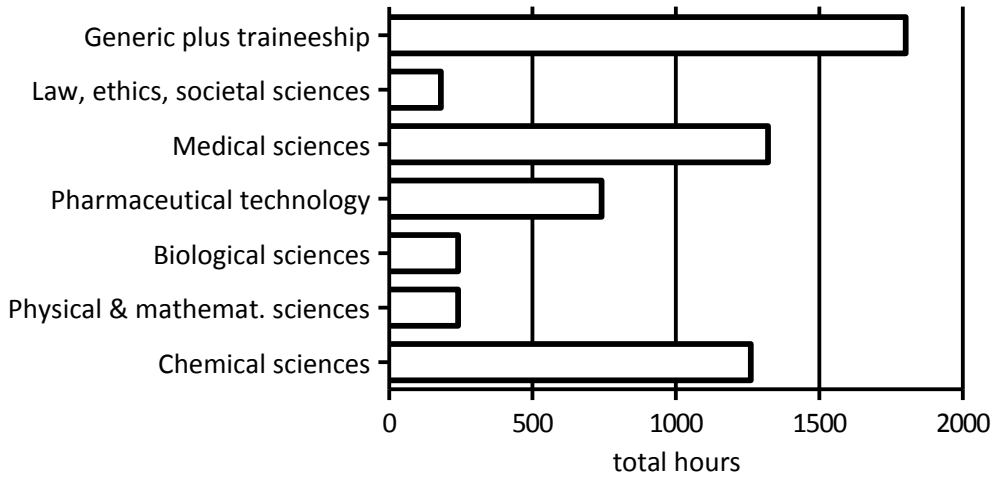
Student hours (per week/per year (30 weeks per year))

Subject area	Year 1	%	Year 2	%	Year 3	%	Year 4	%	Year 5	%
Chemical sciences	11/330	34.4	16/480	43.6	10/300	27.3	4/120	10.9	1/30	1.9
Physical and mathematical sciences	8/240	25.0	-		-		-		-	
Biological sciences	2/60	6.3	5/150	13.6	-		-		1/30	1.9
Pharmaceutical technology	-		1/30	2.7	14/320	38.2	11/330	30.0	2/60	3.8
Medical sciences	3/90	9.4	6/180	16.4	8/240	21.8	9/270	24.5	18/540	33.8
Law, ethics and societal sciences	2/60	6.3	-		-		4/120	10.9	-	
Generic subjects	6/180		4/120		-		4/120		8/240	
Generic subjects plus traineeship	-/180	18.8	-/260	23.6	-/140	12.7	-/260	23.6	-/960	58.8
Total	*32*		*32*		*32*		*32*		*30*	

Summary:

Year	Main subject areas
1	Chemical sciences, Physical and mathematical sciences, Generic subjects plus traineeship
2	Chemical sciences, Generic subjects plus traineeship, Medical sciences
3	Pharmaceutical technology, Chemical sciences, Medical sciences
4	Pharmaceutical technology, Medical sciences, Generic subjects plus traineeship
5	Generic subjects plus traineeship, Medical sciences

Total hours over the 5-year course for the various subject areas.



Chapter 5. Impact of the Bologna principles

Bologna principle	Is the principle applied?	Comments.
1. Comparable degrees / Diploma Supplement	Partially	Students receive a diploma supplement in Hungarian and English, at the end of the 5-year degree course.
2. Two main cycles (B and M) <u>with entry and exit at B level</u>	No	
3. ECTS system of credits / links to LLL	Yes	CPD is run by the HEIs, and "credits" are used for evaluation to measure the activity in LLL. Every working pharmacist is obliged to collect 250 HEI-accredited points (1 credit point = *circa* 1 hour of study) over 5 years in order to renew his/her licence to practice. A limited number of credits can be obtained by distance learning. Other CPD courses are organised by the HEIs on the instigation of the Ministry of Health, pharmaceutical companies and scientific associations.
4. Obstacles to mobility	Yes	Language barrier: the Hungarian language is far removed in its grammar and pronunciation from other European languages. It is difficult to learn for the majority of the Hungarians. There is a improvement and the situation is more favourable regarding the new in-coming students.
5. European QA	Yes	Following a Hungarian initiative, the Central and Eastern European Network of Quality Assurance Agencies in Higher Education was set up in 2000. The Hungarian Accreditation Committee (HAC) was set up under Hungary's first Higher Education Act in 1993 with a mandate for accreditation of all higher education institutions The HAC joined the European Network for Quality Assurance in Higher Education in 2000.
6. European dimension		Our HEI takes into consideration the main European traditions. An official, long-term student exchange agreement has been signed with Toledo University in the USA.

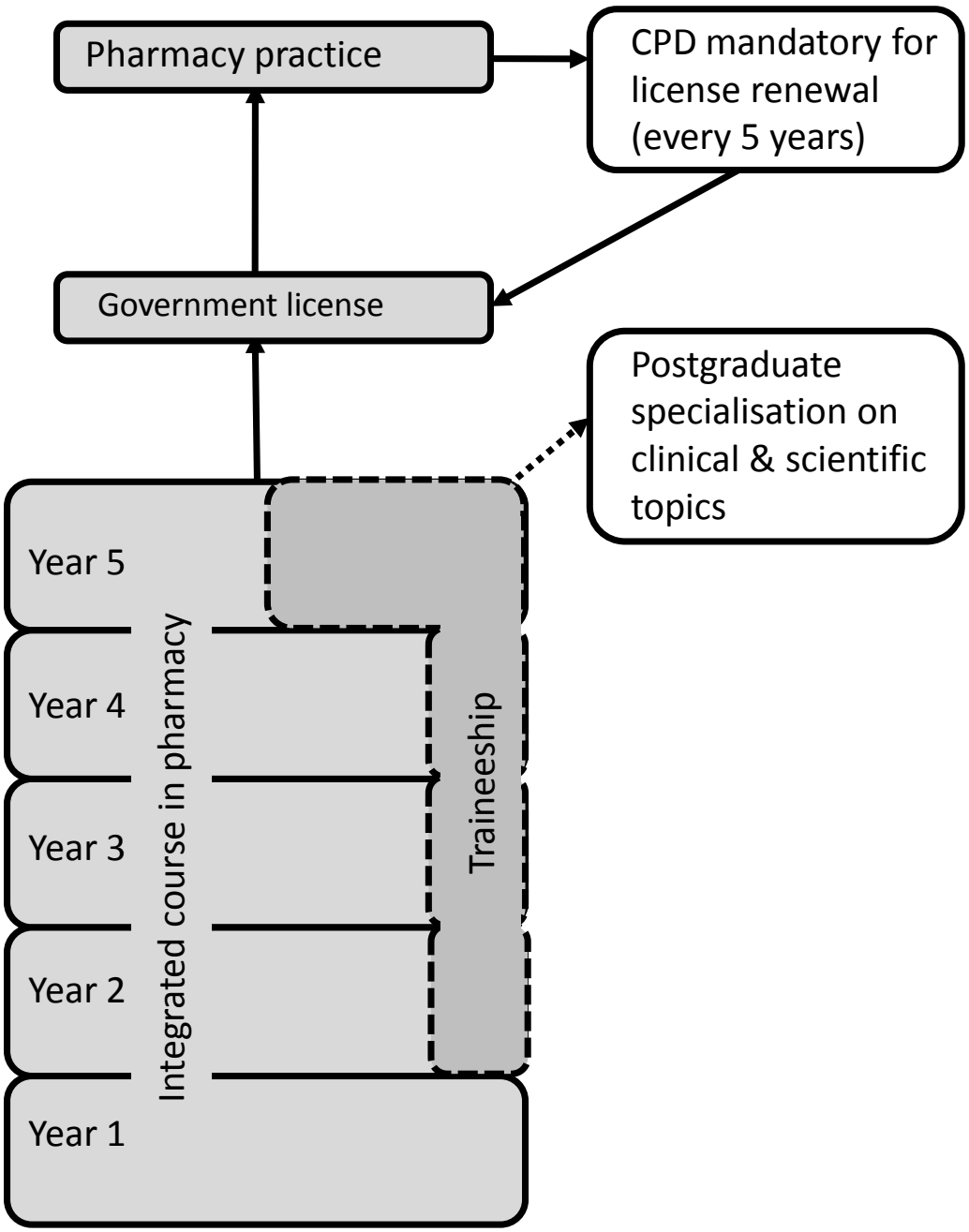
ERASMUS staff exchange to your HEI from elsewhere	Number of staff months: 1-2 / year – with the University of Ljubjana
ERASMUS staff exchange from your HEI to other HEIs	Number of staff months: 1-2 / year – with the University of Ljubjana
ERASMUS student exchange to your HEI from elsewhere	Number of student months: 0
ERASMUS student exchange from your HEI to other HEIs	Number of student months: 0

Chapter 6. Impact of EC directive 2005/36/EC

The directive states	How does / will this directive statement affect pharmacy E&T?
"Evidence of formal qualifications as a pharmacist shall attest to training of at least five years' duration,…"	The Hungarian curriculum is an integrated 5 years' course
"…four years of full-time theoretical and practical training at a university or at a higher institute of a level recognised as equivalent, or under the supervision of a university;"	This applies.
"…six-month traineeship in a pharmacy which is open to the public or in a hospital, under the supervision of that hospital's pharmaceutical department."	This applies. There is at least 6 months' pharmacy traineeship before the final examination.
"The balance between theoretical and practical training shall, in respect of each subject, give sufficient importance to theory to maintain the university character of the training."	As it can be seen above, the weight of theoretical courses is predominant.

Directive annex	Comments	Subjects to be added
V.6. PHARMACIST **5.6.1. *Course of training for pharmacists*** **Plant and animal biology / Physics / General and inorganic chemistry / Organic chemistry / Analytical chemistry / Pharmaceutical chemistry, including analysis of medicinal products / General and applied biochemistry (medical) / Anatomy and physiology; medical terminology / Microbiology / Pharmacology and pharmacotherapy / Pharmaceutical technology / Toxicology / Pharmacognosy / Legislation and, where appropriate, professional ethics.**	All of these courses are present in the Szeged and Hungarian programs.	Immunology Applied biotechnology (drug development) Clinical microbiology & infectious diseases Therapeutics Management and marketing

The Hungarian pharmacy education and training scheme (based on the model of Szeged, Hungary), December 2009.



Pharmacy education and training leading to community pharmacy is shown in grey.

Education and Culture DG
Lifelong Learning Programme
PHARMINE
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Website: www.pharmine.org