Pharmacy education & training in

MALTA

2012 – version 2

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PHARMINE (PHARMacy education IN Europe) is a project 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 other countries 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 activities such as industrial and hospital pharmacy.

The PHARMINE consortium consists of universities which are 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 PHARMINE 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 industrial and hospital pharmacy
3. Survey to what extent the "Bologna" (based on the principles enumerated in the Bologna declaration) and the "Sectoral profession" (based on 2005/36/EC) models for pharmacy education and training 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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All the data and information provided in this document have been provided to the best of the knowledge of the authors. Any comments and suggestions will be welcomed: jeffrey.atkinson@univ-lorraine.fr

This second version was produced in the fall of 2012.

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Summary.

Pharmacy education and training in Malta is characterized by:

- A 2 cycle model leading to an M.Pharm. degree.
- As it should be in a course for a sectoral profession such as pharmacy, traineeship starts early and plays a central role in the course representing (as percentage of the student workload) 6% in the 1st and 2nd years, 11% in the 3rd, 35% in the 4th and 67% in the M.Pharm. cycle.
- The possibility to specialise in industrial or clinical pharmacy from the 3rd year onwards
- A substantial amount of time (15% of student workload) spent on project work, with traineeship plus project work representing 40%
- A substantial amount of time on medical sciences (35% of student workload on taught courses) with chemical sciences and pharmaceutical technology coming equal second (18% each)
- Specialised postgraduate courses for industrial and clinical pharmacy exist in the pharmacy and chemistry faculties, the latter for industrial aspects.

Introduction.

Total population: 405,000

Gross national income per capita (PPP international $): 20,990

Life expectancy at birth m/f (years): 77/81

Healthy life expectancy at birth m/f (years, 2003): 70/73

Probability of dying under five (per 1 000 live births): 6

Probability of dying between 15 and 60 years m/f (per 1 000 population): 75/47

Total expenditure on health per capita (Intl $, 2006): 1,825

Total expenditure on health as % of GDP (2006): 8.3

Figures are for 2006 unless indicated. Source: World Health Statistics 2008

WHO Malta health profile August 2010: http://www.who.int/gho/countries/mlt.pdf

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

	Y/N, number or %	Comments.
Community pharmacy		
Community pharmacists	281	
Community pharmacies	204	
Competences and roles of community pharmacists		Generally, competences in Malta are similar to those elsewhere in Europe. Pharmacists can provide diagnostic services (blood sugar, pressure).
Is ownership of a community pharmacy limited to pharmacists?	No	
Rules governing the distribution of pharmacies	Yes	
Drugs and healthcare products available by other channels	No	Internet pharmacies are not allowed.
Are persons other than pharmacists involved in community practice?		Support staff: Pharmacy Technicians: 71. Pharmacy technicians are registered by the Pharmacy Council of Malta. Salesperson: 113
Pharmacy Technician		
Organisation providing and validating the E&T		Malta College of Arts, Science and Technology (MCAST) http://www.mcast.edu.mt/default.asp The sub-committee on Pharmacy Technicians' Education and Recognition of the Maltese Pharmacy Council monitors courses throughout the year and also monitors examination papers and students' answers. The final aim is to obtain BTEC recognition (Edexcel - BTEC), a Pearson company, is the UK's largest qualifications awarding body, offering academic and vocational qualifications and testing to more than 25,000 schools, colleges, employers and other places of learning in the UK and in over 100 countries worldwide).
Duration of studies (years)	2 full-time	Entry Requirements: 6 SEC/O-Level passes - Compulsory: Chemistry, Mathematics, English Language (from the MCAST website)
Subject areas		"Biological Sciences, Chemical Sciences and Microbiology, Physiology, Action and Use of Drugs (A), Action and Use of Drugs (B), Action and Use of Drugs (C), Action and Use of Drugs (D), Action and Use of Drugs (E), Pharmaceutics, Pharmacy Law and Ethical Practice, Scientific Method, Pharmacy Practice, Pharmacy Production, Organisation and Procedures and Practices, Chemistry for Pharmacy, Pharmacy Work Place Practice, English within the Pharmacy Environment." (from the MCAST website)
Competences and roles		"The course is designed to provide students with the skills and knowledge necessary for a career as a Pharmacy Technician. Students will be trained in scientific and pharmaceutical principles including hands-on experience. The programme will offer opportunities in the hospital pharmacy sector and in the pharmaceutical industry." (from the MCAST website)

Hospital pharmacy		
Does such a function exist?	Yes	Hospital Pharmacy services are provided in the 8 hospital pharmacies with the Mater Dei Hospital Pharmacy being the central Government Services. Services provided include dispensing to out-patient and in-patients, drug information, extemporaneous preparations and clinical pharmacy services.
Hospital pharmacists	120	
Number of hospital pharmacies	8	
Competences and roles of hospital pharmacists		The sub-committee on pharmacy specialities of the Pharmacy Council is working on the definition of specialist(s) in pharmacy and the identification of activities that have the potential to develop into specialities. At present there is no official recognition of the hospital pharmacy specialist.
Pharmaceutical and related industries		
Companies with production, R&D and distribution	9	Manufacturing sites for Active Pharmaceutical Ingredients (APIs) and finished products (generic products) that include specialised dosage forms such as modified release preparations
Number of companies with distribution only	1	
Companies producing generic drugs only	4	
Industrial pharmacy		
Pharmacists working in industry	71	In the Pharmaceutical Industry, pharmacists are employed in Quality Control, Quality Assurance, Production and Regulatory Areas.
Competences and roles of industrial pharmacists		
Other sectors		
Pharmacists working in other sectors	152	
Sectors		Marketing, sales and drug registration
Competences and roles of pharmacists employed in other sectors		Communication skills Quality system Regulatory affairs Patient safety
Roles of professional associations		
Registration of pharmacists	Yes	Pharmacy Council of the Ministry of Health, the Elderly and Community Care whose main function is to regulate the Pharmacy Profession in the interests of the general public. The Pharmacy Council administers the register and the list of licences. Licences must be renewed every two years.
Creation of community pharmacies and control of territorial distribution	No	There are no restrictions on the ownership of pharmacies or on the business model followed. The presence at all times of a qualified pharmacist is required by law.
Ethics / professional conduct	Yes	Pharmacy Council
Quality assurance and validation of HEI courses for pharmacists	No	Education sector Quality Assurance is run through a Centralised University Administration Structure.

References, websites	
References to texts and articles of national law	Health Care Professions Act Medicines Act (see PDFs in the country profile for Malta)
Ministry for Health, the Elderly and Community Care	https://ehealth.gov.mt/HealthPortal/default.aspx
Medicines Authority	http://medicinesauthority.gov.mt/index.htm

Chapter 2. Pharmacy HEIs, students and courses

	Y/N, number or %	If you wish to expand your answer, please add your comments below.
Number of HEIs in Malta	1	Msida: http://www.um.edu.mt/ms/pharmacy/
Public	1	
Organisation of HEIs		
Attached to a medical faculty	Yes	Faculty of medicine & surgery: http://www.um.edu.mt/ms
Do HEIs offer B + M degrees?	Yes	
Msida		
Teaching staff		
Number of teaching staff (nationals)	7 + equivalent of 3 staff from servicing departments	
Number professionals (pharmacists and others) from outside the HEI	20	
Students		
Number at entry following secondary school	Unlimited	2009-10: Eligible Applicants 48, drop-out 5
Number of applicants for entry	Varies	
Number of graduates that become registered pharmacists.	31 (2010)	31 out of 31 (2010)
Number of international students (from EU member states)	1 (per year)	
Entry requirements (beginning of S1 of B1, following secondary school)		
Pharmacy-related, national entrance examination	No	
Other form of entry requirement at a national level	University exam entry requirement	
Advanced entry		
At which level?		Advanced Candidates with a bachelor degree in another subject can enter the course of pharmacy provided they satisfy the special course requirements and will join the course at the beginning.
What are the requirements?		Chemistry and another science subject, a choice of three subjects at Intermediate level from language, sciences and social sciences
Fees per year		
For home students	Amount (€): 0	
For EU MS students	Amount (€): 0	

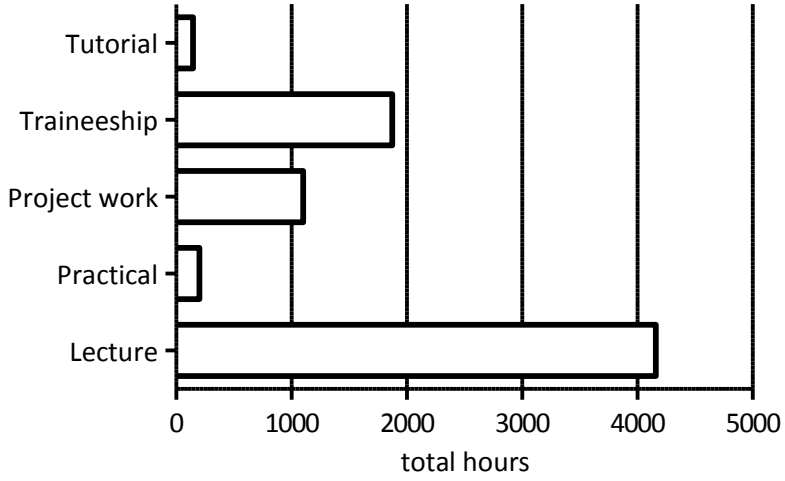
Length of course	**11 semesters**	
Pregraduate specialization		
Do HEIs provide specialized courses?	Yes	
In which years?	4th	
In which specialisation (industry, hospital…)?		Industrial, Clinical, Administration
Numbers in each specialization?	Split 50/50	
Postgraduate specialization		
	a. A 15-month, full-time, 90-ECTS M.Sc. in pharmacy, with specialization in Industrial pharmacy (the other 2 areas of specialization are pharmaco-economics and clinical pharmacy). The specialization is set by the choice of one particular 20-ECTS unit (industrial pharmacy, pharmaco-economics, or clinical pharmacy), the placement, and the dissertation. b. A 3- year part-time 90-ECTS M.Sc. in Applied Chemistry. This degree has the possibility of exit after 2 years and completion of 60 ECTS with a Postgraduate Diploma in Applied Chemistry. Exit is either voluntary or through failure to obtain the weighted average mark necessary to progress to the Masters (60%). The first 60-ECTS consists of a course structure designed chiefly on the recommendations of various UK societies - RPSGB (Royal Pharmaceutical Society of GB), Royal Society of Chemistry (http://www.rsc.org/) and Institute of Biology (http://www.societyofbiology.org/home) - re educational requirements for Qualified Persons, plus a mini-project. The 30-ECTS difference to the Masters degree consists of the dissertation. This degree is offered by the Department of Chemistry. The course was established at the specific request of the pharmaceutical manufacturing industry in Malta. The MQPA (Maltese Qualified Persons' Association, http://www.mqpa.org/home.htm were actively involved in, and endorsed the course. c. Post-graduate degree by research: Master of Philosophy and Doctor of Philosophy	
Past and present changes in E&T		
Have there been any major changes since 1999?		Changes: specialisation (duration 1 semester) in the 7th semester and orientation in another area not taken up for specialisation (6 weeks) in the 6th semester, Changes in entry course requirements to include a Pass in Intermediate Pure Mathematics In 2011/12, the two cycle programme was launched whereby students graduate with a Bachelor of Science (Hons) in Pharmaceutical Science after their fourth year and following that they progress to a 3 semester programme leading to an MPharm. Also in 2011/12 a new three year programme leading to a Bachelor of Science (Hons) in Pharmaceutical Technology has been launched. Graduates are being prepared to work as pharmaceutical technologists in the pharmaceutical industry and in health-related institutions.

Chapter 3. Teaching and learning methods

Student hours

Method	Year 1 (1st cycle)	Year 2 (1st cycle)	Year 3 (1st cycle)	Year 4(1st cycle)	2nd cycle MPharm	Total
HEIs courses						
Lecture	1300	1150	1060	650		**4160**
Tutorial	41	66	20	20	56	**147**
Practical		50	100	50		**200**
Project work	50	100	150	300	750	**1100**
Traineeship: including practice and tutorial sessions						
Community	84	84	84	42	1000	**1294**
Other (please specify)			Choice clinical or industrial: 80	Choice clinical or industrial: 500	44 independent learning	**580**
Total	**1475**	**1459**	**1494**	**1562**	**1850**	**7481**

Student hours according to teaching and learning methods

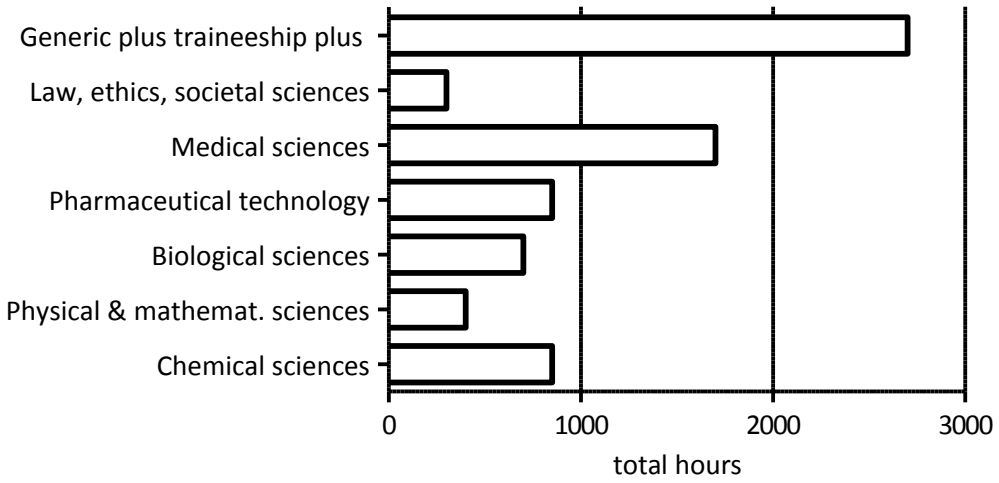


Chapter 4. Subject areas

Student hours

Subject area	Year 1	Year 2	Year 3	Year 4	Year 5	Total
CHEMSCI	**300**	**250**	**200**	**100**		**850**
PHYSMATH	350	50				400
BIOLSCI	300	300	100			700
PHARMTECH	150	250	300	150		850
MEDISCI	250	500	600	350	1100	1700
LAWSOC	50	50	100	100		200
TOTAL taught courses	1400	1400	1300	700	0	4800
GENERIC + traineeship + project	100	100	200	300+500 (optional area)	750	2700
Total	**1500**	**1500**	**1500**	**1500**	**1850**	**7400**

Student hours according to subject area



Chapter 5. Impact of the Bologna principles

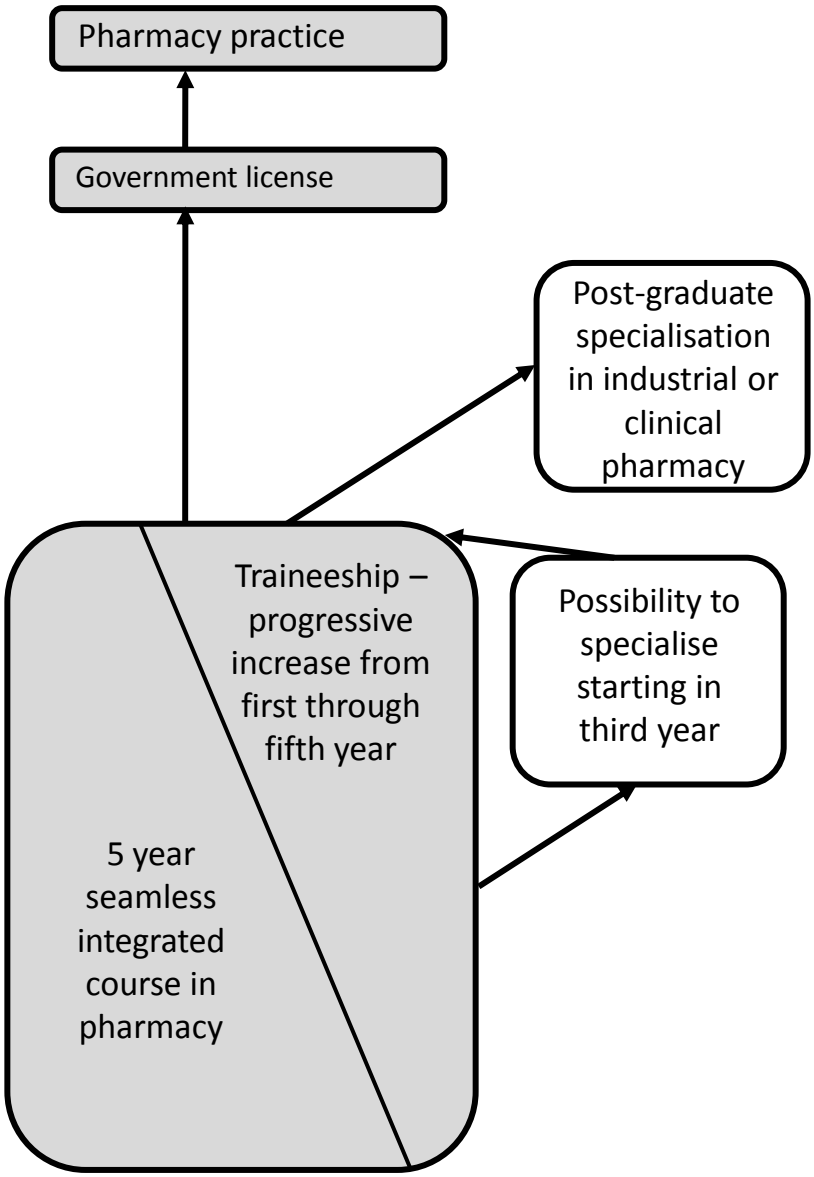
Bologna principle	Is the principle applied? Y/N or partially	How is it applied? Does your HEI have multilateral recognition and agreements? Other comments.
1. Comparable degrees / Diploma Supplement	**Yes**	All teaching is English
2. Two main cycles (B and M) <u>with entry and exit at B level</u>	Yes	BSc (Hons) in Pharmaceutical Science and MPharm
3. ECTS system of credits / links to LLL	ECTS- yes	CPD is organised by the Malta College of Pharmacy Practice and other organisations: it is voluntary There are no links between ECTS obtained before registration and those obtained following.
4. Obstacles to mobility	No	
5. European QA	Yes	University Programme Validation Committee operates in line with national requirements
6. European dimension	Yes	Teaching material and experiences are shared with a number of universities in the EU and USA through academic networking

ERASMUS staff exchange to your HEI from elsewhere	Number of staff months: 1
ERASMUS staff exchange from your HEI to other HEIs	Number of staff months: 1
ERASMUS student exchange to your HEI from elsewhere	Number of student months: 51
ERASMUS student exchange from your HEI to other HEIs	Number of student months: 51

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

The directive states	Does this directive statement affect pharmacy E&T?	Comments
"Evidence of formal qualifications as a pharmacist shall attest to training of at least five years' duration,…"	**Yes**	
"…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;"	Yes	Practical sessions to include short placements in industry as well so that graduates also have hands on approach in the area.
"…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."	Yes	Confirmed
"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."	Yes	Confirmed
Directive annex	**Comments**	
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.**	To add in list Pharmacy Practice rather than having it labelled within the Pharmacotherapy aspect. Pharmacy Practice is the module that is used to assist the student to merge the scientific knowledge from pharmacology, chemistry and pharmaceutical technology to pharmacotherapy.	

The Maltese pharmacy education and training scheme.



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With the support of the Lifelong Learning Programme of the European Union
(142078-LLP-1-2008-BE-ERASMUS-ECDSP).

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