

Pharmacy education & training in the

UNITED KINGDOM

2011

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 or 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: [The PHARMINE paradigm.pdf](#))

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Summary.

- Twenty-five universities provide pharmacy first degree education in the UK. All offer integrated masters qualification of four years duration and rated at 480 credits on the relevant UK Higher Education Credit System.
- To register as a pharmacist, a student must complete the integrated masters MPharm and complete a one year period of post-graduate (pre-registration) training and pass the Registration Examination for admission to the Register. Pre-registration training consists of 52 week's of satisfactory supervised and assessed training in employment. To register as a pharmacist at least six months of the pre-registration training must be in either community pharmacy or hospital pharmacy.
- All UK universities are quality assured by an The Quality Assurance Agency for Higher Education (QAA) which has a presence in each of the devolved countries (England, Wales, Northern Ireland and Scotland). The QAA undertakes periodic quality audits at each university.
- Higher Education Institutions offer a range of post-graduate programmes relevant to pharmacy. Individual institutions vary in the programmes they provide. Some of these programmes may contribute to career development or progression but there are no national requirements regarding entry to the different branches of pharmacy (industry, hospital, community).
- Since September 2010 the pharmacy regulator in Great Britain is the General Pharmaceutical Council (GPHC) which has powers to set standards for education leading to registration and for post-registration education. The Council also sets standards for CPD and for periodic revalidation of registered pharmacists and operates a comprehensive fitness to practice process covering health and professional performance. Northern Ireland has a separate pharmacy regulator, the Pharmaceutical Society of Northern Ireland, which has similar regulatory powers to that of the General Pharmaceutical Council.
- The GPHC is also the statutory regulator for pharmacy technicians and technician regulation will be mandatory from July 2011. Pharmacy technicians and pharmacists are two separate regulated professions but share a common register held by the GPHC.

- The pharmacy regulators undertake periodic accreditation of all university providers of pharmacy first degree programmes. Currently the only accredited post-registration programme is for independent pharmacist prescribing.
- The pharmacy regulators currently set the standards for, assess and organise the pre-registration training programme.
- New educational standards for pharmacy education in Great Britain are under development and should be introduced by the General Pharmaceutical Council later in 2011. These move to a focus upon outcomes of education rather than the process of education which will be the decision of the provider.
- Pharmacy education and training at both the pre-registration and post-registration phases is currently under review in England by the Modernising Pharmacy Careers Programme. As the first output, the programme has recommended that there is reform of the pre-registration programme which would involve a move to a five year integrated degree which encompassed the pre-registration training period.
- There is a significant move in pharmacy education to first registration towards a focus upon the clinical role of the pharmacist including diagnosis, prescribing and therapeutics. This is reflected in the proposals of the MPC programme board.

Introduction.

Total population: 60,512,000

Gross national income per capita (PPP international \$): 33,650

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

Healthy life expectancy at birth m/f (years, 2003): 69/72

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): 98/61

Total expenditure on health per capita (Intl \$, 2006): 2,784

Total expenditure on health as % of GDP (2006): 8.4

Figures are for 2006 unless indicated. Source: [World Health Statistics 2008](#)

For further information, see:

Highlights on health in the UK WHO 2005, at

<http://www.euro.who.int/en/where-we-work/member-states/united-kingdom-of-great-britain-and-northern-ireland/publications3/highlights-on-health-in-the-united-kingdom>

Pharmaceutical pricing and reimbursement information UK OBIG 2007, at:

http://ppri.oebig.at/Downloads/Results/United%20Kingdom_PPRI_2007.pdf

ECORYS - Study of regulatory restrictions in the field of pharmacies, at :

http://ec.europa.eu/internal_market/services/docs/pharmacy/appendices_en.pdf

Eurybase - Descriptions of National Education Systems and Policies – UK – England 2010, at:

http://eacea.ec.europa.eu/education/eurydice/documents/eurybase/national_summary_sheets/047_UK_ENG_EN.pdf

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

	Y/N, number or %	Comments
Community pharmacy		
Number of community pharmacists	21,712	NHS Workforce Review Team (2008). Workforce Summary – Pharmacy Workforce Pharmacists and Pharmacy Technicians. www.cfwi.org.uk/intelligence/previous.../workforce.../pharmacy/.../attachment1
Number of community pharmacies	13,193 (2011) Plus 500 Northern Ireland	Registered pharmacies in Great Britain (England, Wales and Scotland). Mainly in the community but includes those hospital pharmacies that are regulated with the General Pharmaceutical Council In Northern Ireland, pharmacies are registered with the Pharmaceutical Society of Northern Ireland under different legislation to that applying in Great Britain. Estimated number of inhabitants per pharmacy: 5020.
Competences of community pharmacists		There are no standards for proficiency for community pharmacists. The development of standards is part of the General Pharmaceutical Council standards development programme.
Is ownership of a pharmacy limited to pharmacists?	No	Ownership of Community Pharmacies is controlled by the Medicines Act 1969 and by the Pharmacy Order 2009. Pharmacies may be owned and operated by individual pharmacist, partnerships of pharmacists or by corporate bodies which include limited companies, private companies and public limited companies. There are no requirements for pharmacist membership of the Board of such companies.
Are there rules governing the geographical distribution of community pharmacies?	No	The number of pharmacy outlets is not restricted. If a non-pharmacist owns a pharmacy, then a qualified pharmacist must be employed as superintendent pharmacist. Changes of ownership are not subjected to any regulation. The possible business forms of a pharmacy are not restricted. Performance of National Health Services (NHS: government health insurance scheme) is restricted and requires a contract with a local health body. The regulations relating to contracts are negotiated nationally and for further information see Pharmaceutical Services Negotiating Committee (England), Community Pharmacy Wales (Wales) and Community Pharmacy Scotland.
Are drugs and healthcare products available to the general public by channels other than pharmacies?	Yes	The Medicines Act 1968 includes the legislation covering medicines classification and supply. General Sales List Medicines (GSL) can be supplied from any retail outlet – including garages, and other outlets. Internet pharmacies are allowed to sell and supply both prescription and OTC drugs. Websites must display the owner of the business, the address of the pharmacy to which it is connected and the name of the superintendent pharmacist.
Are persons other than pharmacists involved in community practice?	Yes	An estimated 76592 persons work in pharmacies in GB. Pharmacy technicians undertake work to support, develop or provide these pharmaceutical services. Community pharmacy also employ medicines counter assistants and dispensing assistants.

Titles and number	14,838	Registered pharmacy technicians in January 2011. Mandatory registration comes in July 2011 and the full number of registered technicians will not be known until this point in time.
Their qualifications		
Organisation providing and validating the E&T		Pharmacy Technicians and pharmacists are regulated by the statutory pharmacy regulator, the General Pharmaceutical Council. Both professions are listed in a single register. The GPHC sets the educational standards for both groups.
Duration of studies (years)		2 years training in a wide range of science and pharmacy subjects. This is a National Vocational Qualification (NVQ) level 3.
Subject areas		General Science, physiology and pharmacology, pharmaceuticals and dispensing, law relating to medicines, clinical use of medicines.
Competences and roles		Complete dispensing process prior to checking by registered pharmacist. Accredited Checking Technicians have an additional qualification and may check and sign off dispensing undertaken by other staff for supply to patients.
Hospital pharmacy		
Does such a function exist?	Yes	Pharmacists are employed in both National Health Service hospitals and in Private Hospitals. Under the Medicines Act 1968 there is no legal requirement for employment of pharmacists in hospitals which are exempt from most of the provisions of the Act in relation to medicines supply.
Number of hospital pharmacists	6,213 fte	NHS Workforce Review Team (2008). Workforce Summary – Pharmacy Workforce Pharmacists and Pharmacy Technicians. www.cfwi.org.uk/intelligence/previous.../workforce.../pharmacy/.../attachment1 .
Number of hospital pharmacies	505 : 171 (England), 187 (Scotland), 137 (Wales) 10 (N. Ireland)	Hospital pharmacies are organised in substantially the same way in England, Scotland, Wales and Northern Ireland
Competences and roles of hospital pharmacists		As for community pharmacists, there are currently no national standards for proficiency for hospital pharmacists. The development of standards for pharmacists is part of the General Pharmaceutical Council standards development programme but there is no indication that there will be separate standards for community and hospital practice.
Pharmaceutical and related industries		
Number of companies with production, R&D and distribution		150 research based pharmaceutical companies operate in the UK. They are represented by the Association of the British Pharmaceutical Industry (ABPI). http://www.abpi.org.uk/Pages/default.aspx
Number of companies with production only		National data differentiating production, distribution and R&D is not available.
Number of companies with distribution only		National data differentiating production, distribution and R&D is not available.
Number of companies producing generic drugs only	18	Generic Medicines account for around 85% of medicines used in the UK. There are 20 major generic suppliers that are members of the The

		British Generic Manufacturers Association (BGMA) http://www.britishgenerics.co.uk/
Industrial pharmacy		
Number of pharmacists working in industry	1137	NHS Workforce Review Team (2008). Workforce Summary – Pharmacy Workforce Pharmacists and Pharmacy Technicians. www.cfwi.org.uk/intelligence/previous.../workforce.../pharmacy/.../attachment1 .
Competences and roles of industrial pharmacists		There are no national standards on the competencies of industrial pharmacists other than the standards for a Qualified Person. Pharmacists are one of a number of groups that may become QPs (including Chemists and Biologists).
Other sectors		
Number of pharmacists working in other sectors	Number: 2372 (primary care organisations, 270 academia),	NHS Workforce Review Team (2008). Workforce Summary – Pharmacy Workforce Pharmacists and Pharmacy Technicians. www.cfwi.org.uk/intelligence/previous.../workforce.../pharmacy/.../attachment1 . The NHS health services outside hospitals are managed through Primary Care Organisations (Primary Care Trusts in England, Boards in Wales and in Scotland). Over 85% of the total health spend is via these organisations since hospital services are purchased by the organisations on behalf of patients. The major primary care services (general medical practitioners, pharmacists, dentists etc) are provided by independent contractors through national contracts with the relevant primary care organisation.
Roles of professional associations		
Registration of pharmacists	Yes	Registration is compulsory with General Pharmaceutical Council (GPhC, www.pharmacyregulation.org/)
Creation of community pharmacies and control of territorial distribution	Partially	Local Primary Care Trusts (or Health Boards in Wales or Scotland) decide whether it is necessary to grant the pharmacy application to secure adequate provision of pharmaceutical services in a given neighbourhood (NHS Act 1977; NHS Pharmaceutical Services Regulations 2005). Automatic contracts are given to pharmacies that will open for more than 100 hours per week or ones located in major retail developments (see contract terms). A pharmacist, partnership or limited company can own an unlimited number of pharmacies. Thus the community pharmacy network consists of a number of large and medium-sized chains owning between 20 and 2,000 pharmacies; and smaller businesses, including sole traders.
Ethical and other aspects of professional conduct	Yes	Controlled by fitness to practice requirements operated by the pharmacy regulator. Revocation in the case of: Death Non-payment Unfit to practice (e.g. breach of code of Ethics and Standards, health issues, performance failures.)
Quality assurance and validation of HEI courses for pharmacists	Yes	Programmes are accredited on a maximum cycle of 5 years by the General Pharmaceutical Council. Lesser periods of accreditation may be given when there are issues of concern with an individual school.

References	
National law	<p>ECORYS 2007: <i>“Requirements regarding registration with, and membership of the professional association are laid down in various laws; the Medicines Act 1968, the Pharmacy Order 2009. The powers of the General Pharmaceutical Council as the national pharmacy regulator are derived from the Pharmacy Order 2009. A number of other Acts of Parliament provide for secondary legislation affecting pharmacy and the roles of pharmacists as health professionals.</i> <i>The Pharmacy Order 2010.</i> http://www.legislation.gov.uk/ukdsi/2010/9780111487358/contents</p> <p><i>The Medicine Act 1968 further regulates the scope of the professional monopoly and sets conditions on ownership. The Act outlines the requirement to have a pharmacist present at all times. It also imposes the so-called 3-year clause on the ownership and management of pharmacies by pharmacists from other EU countries.</i> <i>Medicines Act 1968.</i> http://www.legislation.gov.uk/ukpga/1968/67</p> <p><i>The NHS Act 1977 requires that in order to be allowed to perform NHS services, approval from the local health body is required on the establishment of a pharmacy.”</i> <i>Medicines Act 1968:</i> http://www.opsi.gov.uk/RevisedStatutes/Acts/ukpga/1968/cukpga_19680067_en_1 <i>NHS Act 1977:</i> http://www.sochealth.co.uk/law/nhsact1977.htm</p>
Websites	<p>General Pharmaceutical Council: http://www.pharmacyregulation.org National Pharmacy Association : http://www.npa.co.uk/index.php Pharmaceutical and Healthcare Sciences Association: http://www.phss.co.uk/ Pharmaceutical Society of Northern Ireland: http://www.psn.org.uk PharmWeb: http://www.pharmwab.net/</p>

General Pharmaceutical Council (GPhC)

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www.pharmacyregulation.org

Pharmaceutical Society of Northern Ireland (PSNI)

www.psn.org.uk

Standards of conduct, ethics and performance

Student Fitness to Practise Procedures in Schools of Pharmacy

Professional Membership Organisations

Royal Pharmaceutical Society (RPharmS)

www.rpharms.com

Association of Pharmacy Technicians UK

<http://www.aptuk.org/>

Other Organisations

British Pharmaceutical Students' Association (BPSA)

www.bpsa.co.uk

Council of University Heads of Pharmacy (CUHOP)

www.cuhop.ac.uk

Quality Assurance Agency for Higher Education

<http://www.qaa.ac.uk/>

Chapter 2. Pharmacy HEIs, students and courses

	Y/N, number or %	If you wish to expand your answer, please add your comments below.
Total number of HEIs in the UK	25	<ol style="list-style-type: none"> 1. Aston Pharmacy School, Aston University 2. School of Pharmacy and Pharmacology, University of Bath 3. School of Pharmacy, The Queen's University of Belfast 4. School of Pharmacy, University of Bradford 5. Department of Pharmacy, University of Brighton 6. School of Pharmacy and Pharmaceutical Sciences, University of Central Lancashire 7. Leicester School of Pharmacy, De Montfort University 8. School of Chemical Sciences and Pharmacy, University of East Anglia 9. Medway School of Pharmacy, University of Greenwich at Medway 10. School of Pharmacy, University of Hertfordshire 11. School of Pharmacy, University of Huddersfield 12. School of Pharmacy, Keele University 13. School of Pharmacy, University of Kingston 14. Department of Pharmacy, King's College London 15. School of Pharmacy and Chemistry, Liverpool John Moores University 16. School of Pharmacy, University of London 17. School of Pharmacy and Pharmaceutical Sciences, University of Manchester 18. School of Pharmaceutical Sciences, University of Nottingham 19. School of Pharmacy and Biomedical Science, University of Portsmouth 20. School of Pharmacy, University of Reading 21. School of Pharmacy, Robert Gordon University 22. School of Pharmacy, University of Strathclyde 23. School of Pharmacy, University of Sunderland 24. Welsh School of Pharmacy, University of Wales 25. Department of Pharmacy, University of Wolverhampton
Public	25	
Organisation of HEIs		
Independent faculty	1	School of Pharmacy, London.
Attached to a science faculty	23	The majority are part of a larger organisational unit – either a Faculty or a School of Studies. In some cases, this unit will be the resource centre. However, all schools must report pharmacy specific resources to the pharmacy regulator on an annual basis.
Attached to a medical faculty	1	School of Pharmacy and Pharmaceutical Science, Manchester.
Do HEIs offer B + M degrees?		In the UK all schools offer an integrated masters degree with exit at Masters level. All schools can award a bachelors level degree after three years study but this is not the normal pattern.
Great Britain		
Teaching staff		
Number of teaching staff (nationals)	902	2008 Figure derived from the last national census undertaken by the Royal Pharmaceutical Society of Great Britain.

Number of international teaching staff (from EU MSs)	-	No Data Available
Number of international teaching staff (non EU)	-	No Data Available
Number professionals (pharmacists and others) from outside the HEIs, involved in E&T	Circa 250 3500	Each HEI will involve pharmacist professionals in teaching. Many will be employed in hospitals or community pharmacy and therefore the number varies from year to year and can only be estimated. Involved in pre-registration training
Students		
Number of places at traditional entry (beginning of S1 of B1, following secondary school)	4400	This is the total entry data for pharmacy, pharmacology and toxicology which is a single code within the UK application system (Data Source UCAS Statistics). Entry numbers for pharmacy in the same year were circa 3500.
Number of applicants for entry	29,000 for entry 2010	This data is for the subject area of pharmacy, pharmacology and toxicology which is a single code within the UK application system. (Data Source UCAS Statistics).
Number of graduates that become registered pharmacists.	Greater than 95%	
Number of international students (EU)		
Number of international students (non EU)		
Entry requirements (beginning of S1 of B1, following secondary school)		
Specific pharmacy-related, national entrance examination	No:	
Other form of entry requirement at a national level	Yes:	All applications for entry to undergraduate degree programmes are made through a central admissions system – University Central Admissions Scheme (UCAS). Individual HEIs will set specific entry requirements and these will be detailed on their web site.
Is there a national <i>numerus clausus</i> ?	No	The annual number allowed to begin a course on pharmacy is not limited. Each HEI has a limited number of government funded places and pharmacy is banded with science and engineering (Band B). Each HEI must not exceed the funded number for the band but may vary numbers between subjects within the band.
Advanced entry		
At which level?		Limited number of graduates is admitted to pharmacy undergraduate degree programmes but must complete the full four years of the programme.
Fees per year		
EU		£3290
Overseas		Typically £14,500 but variable with institution
Length of course	4 years	
Specialization		
Do HEIs provide specialized courses?		No. There is a single MPharm programme for entry to the pharmacy register.

Past and present changes in E&T		
Have there been any major changes since 1999?	Yes	A new set of educational standards was introduced in 2003 for education and training up to registration (Royal Pharmaceutical Society). The General Pharmaceutical Council replaced the Royal Pharmaceutical Society as the national regulator for pharmacy in 2010. It is currently consulting on a major revision to the educational and training standards for registration as a pharmacist and new standards will be introduced in 2011.
Are any major changes envisaged before 2019?		The modernising pharmacy careers programme run by the Department of Health has proposed a move to a five year integrated degree in pharmacy which incorporates the pre-registration year. This proposal is to be considered by government later in 2011. There is a major review of the Medicines Act 1969 and it is proposed to introduce a new set of consolidated medicines regulations in 2012. This review will also cover those parts of the Medicines Act relating to the profession of pharmacy including the role of the pharmacist in relation to other members of the pharmacy team. Electronic transfer of national health prescriptions is being introduced and the prescription system will become paperless at some point in the near future.
Aston University		
Teaching staff		
Number of teaching staff (nationals)	29	
Number of international teaching staff (EU)	1	
Number of international teaching staff (non EU)	0	
Number professionals (pharmacists and others) from outside the HEIs, involved in E&T	14	
Students		
Number of places	150	Entry 2010
Number of applicants	1600	Entry 2010
Number of graduates that become registered pharmacists.	97%	
Number of international students (EU)	4	Entry 2010
Number of international students (non EU)	23	Entry 2010
Entry requirements (following secondary school)		
Your HEI has a specific pharmacy-related entrance examination	No	For most places, entry is conditional upon the academic achievement in the relevant national qualification (Advanced levels in England, Wales and Northern Ireland and Scottish Higher Qualifications in Scotland)
Advanced entry		
At which level?		A small number of graduates enter the programme – these are graduates in other disciplines. They must complete all four years of the programmed and pay overseas (non EU) fees.
What are the requirements?		First or upper second in a relevant degree.

Fees per year		
EU	£ 3375 pa	Scheduled to rise to £9000 in 2012
Overseas	€ 14,750 pa	
Length of course	4 years	
Specialization		
Does your HEI provide specialized courses?	No	
Past and present changes in E&T		
Have there been any major changes since 1999 at your HEI?	Yes	Major change to programme to meet the 2003 Educational Standards of the then regulator, Royal Pharmaceutical Society of Great Britain. Major revision of programme 2008 with workbased learning in all four years of the programme, move to electronic support for all modules. Now major revision to develop the programme in line with the anticipated educational standards of the GPHC to be introduced 2011.
Are any major changes envisaged before 2019 at your HEI?	Yes	Advanced planning for an integrated five year programme as proposed by the Modernising Pharmacy Careers programme. This will involve a significant increase in the clinical content of the programme.
Is your HEI typical of all HEIs in the country?	Yes	
If your HEI is not typical, how do HEIs differ (e.g. in terms of organisation, subject areas, specialization...)?		Individual HEIs will have different structures and will have detailed differences in operation and in organisation and curricular structure but all that provide an MPharm degree must meet the educational standards set by the statutory regulator for pharmacy (General Pharmaceutical Council in GB and the Pharmaceutical Society of Northern Ireland in Northern Ireland).
Manchester University MPharm		
Teaching staff		
Number of teaching staff (nationals)	30	
Number of international teaching staff (EU)	4	
Number of international teaching staff (non EU)	1	
Number professionals (pharmacists and others) from outside the HEIs, involved in E&T	20	
Students		
Number of places	130	
Number of applicants	1900	
Number of graduates that become registered pharmacists.	95%	
Number of international students (EU)	1	
Number of international students (non EU)	1	

Entry requirements (following secondary school)		
Your HEI has a specific pharmacy-related entrance examination	NO	For most places, entry is conditional upon the academic achievement in the relevant national qualification (Advanced levels in England, Wales and Northern Ireland and Scottish Higher Qualifications in Scotland)
Advanced entry		
At which level?		A small number of graduates enter the programme – these are graduates in other disciplines. They must complete all four years of the programmed and pay overseas (non EU) fees.
What are the requirements?		First or upper second in a relevant degree.
Fees per year		
EU	£ 3290	
Overseas	€ 14,200	
Length of course	4 years	
Specialization		
Does your HEI provide specialized courses?	Y/N: Y	Yes Post Registration
In which years?	Years:	Hospital Diploma PIAT – any year (s) after B
In which specialisation (industry, hospital...)?		
What are the student numbers in each specialization?	Number:	Hospital Diploma 40 over 2 years
Past and present changes in E&T		
Have there been any major changes since 1999 at your HEI?	Y/N: Y	4 new PIAT Programmes since 2007
If your HEI is not typical, how do HEIs differ (e.g. in terms of organisation, subject areas, specialization...)?		Unique role of PIAT in distance learning programmes designed for pharmaceutical industry
Manchester – postgraduate Pharmaceutical Industrial Advanced Training (PIAT)		
Teaching staff		
Number of teaching staff (nationals)	Number:	Diploma – 30 PIAT - 48
Number of international teaching staff (from EU MSs)	Number:	Diploma – 0 PIAT - 2
Number of international teaching staff (non EU)	Number:	Diploma – 0 PIAT - 2
Number professionals (pharmacists and others) from outside the HEIs, involved in E&T	Number:	Diploma – 0 PIAT - 30
Students		
Number of applicants for entry	Number:	Diploma – 20/year PIAT - 168

Number of graduates that become registered/professional pharmacists.	Number:	N/A
Number of international students (from EU member states)	Number:	Diploma – 1 PIAT - 40
Number of international students (non EU)	Number:	Diploma – 1 PIAT - 15
Entry requirements (beginning of S1 of B1, following secondary school)		
Your HEI has a specific pharmacy-related entrance examination	Y/N:	
Advanced entry		
At which level?		PGT
What are the requirements?		B level
Specific requirements for international students (EU or non EU).		
Fees per year		
For home students	Amount (€):	Diploma - € 1324 PIAT - € 1464
For EU MS students	Amount (€):	Diploma - € 1324 PIAT - € 1464
For non EU students	Amount (€):	Diploma - € 5216 PIAT - € 1464
Length of course	Number of years:	Diploma - 2 PIAT - 5
Specialization		
Does your HEI provide specialized courses?	Y/N: Y	
In which years?	Years:	Hospital Diploma – 7-10 PIAT – any year (s) after B
In which specialisation (industry, hospital...)?		
What are the student numbers in each specialization?	Number:	Hospital Diploma 40 over 2 years PIAT 168
Past and present changes in E&T		
Have there been any major changes since 1999 at your HEI?	Y/N: Y	4 new PIAT Programmes since 2007

Are any major changes envisaged before 2019 at your HEI?	Y/N:	
Is your HEI typical of all HEIs in the country?	Y/N: N	
If your HEI is not typical, how do HEIs differ (e.g. in terms of organisation, subject areas, specialization...)?		Unique role of PIAT in distance learning programmes designed for pharmaceutical industry

Chapter 3. Teaching and learning methods

Student hours: Aston University MPharm Degree

Method	Year 1	Year 2	Year 3	Year 4
Lecture	233	207	232	103
Tutorial	30	11	12	16
Practical	82	78	103	72
Project work	-	-	-	200
Hospital	6	12	12	30
Community	12	80	-	-
Industrial (academic or industrial)	-	-	-	
Other (please specify)	14 workshops	Workshops 34 hours	Workshops 44 hours	Clinical Workshops 47 hours
Choice	Nil	Nil	Nil	Project Area
Optional	Nil	Nil	Nil	Nil
Total	377	422	403	468

Programme Total Contact: 1670 hours. Total Study hours 4800 (including directed study and private study).

The pre-registration training programme takes place after the award of the degree. This is run by and assessed by the pharmacy regulator, the General Pharmaceutical Council. The requirements are: "All trainees must complete 52 week's of satisfactory supervised and assessed training in employment and pass the Registration Examination for admission to the Register. There are staged assessments every 13 weeks. Trainees are eligible to sit the Registration Examination after a satisfactory 39-week progress report and after completing 45 weeks of training. There is a final assessment at 52 weeks and a final declaration by the tutor, which must be satisfactory. Once the Registration Examination has been passed, the 52 weeks (or more in some cases) of satisfactory training have been completed and the other requirements met (such as providing a Health Declaration), then applicants can be entered on the Register."

Student hours: Manchester MPharm

Method	Year 1	Year 2	Year 3	Year 4
Lecture	168	243	264	134
Tutorial	80	33	35	108
Practical	270	216	173	130
Project work	-	-	-	150
Hospital	-	33	33	-
Community	2	-	-	-
Industrial (academic or industrial)	-	-	-	
Other (please specify)	-	-	-	
Choice				
Optional	-	-	-	48

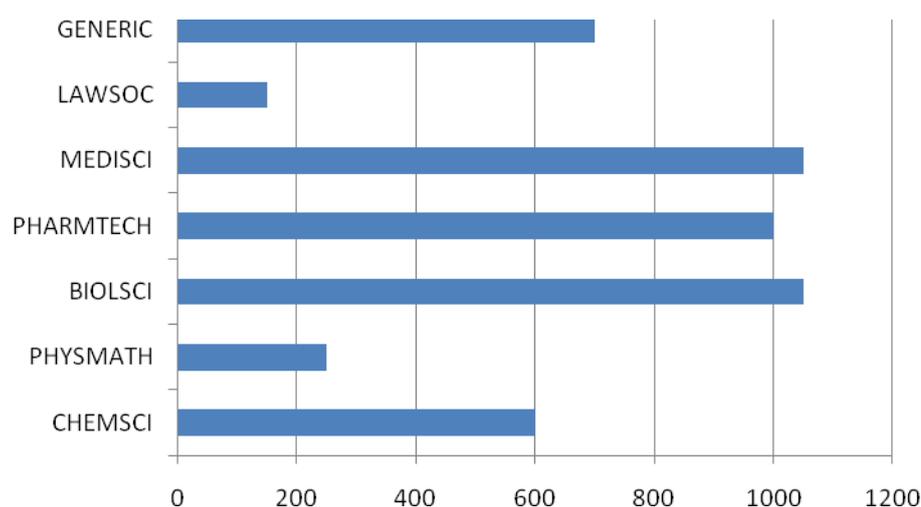
Chapter 4. Subject areas

Student hours: Aston University MPharm Degree

Subject area	Year 1	Year 2	Year 3	Year 4
CHEMSCI	200	200	200	0
PHYSMATH	100	50	50	50
BIOLSCI	300	400	300	50
PHARMTECH	300	250	250	200
MEDISCI	150	200	200	500
LAWSOC	50	0	100	0
GENERIC	100	100	100	400*

* This is the research project which will be within one of the broad subject areas.

These hours include formal contact hours, directed study and self directed student learning. Each year of the programme involves 1200 hours of study equivalent to 120 credits on the English Qualifications Framework¹. This study is made up of 3600 hours (360 credits) of study up to level 6 on the English Qualifications Framework and 120 credits of study at level 7 (Masters)². The pre-registration is work based and not included in the curriculum hours

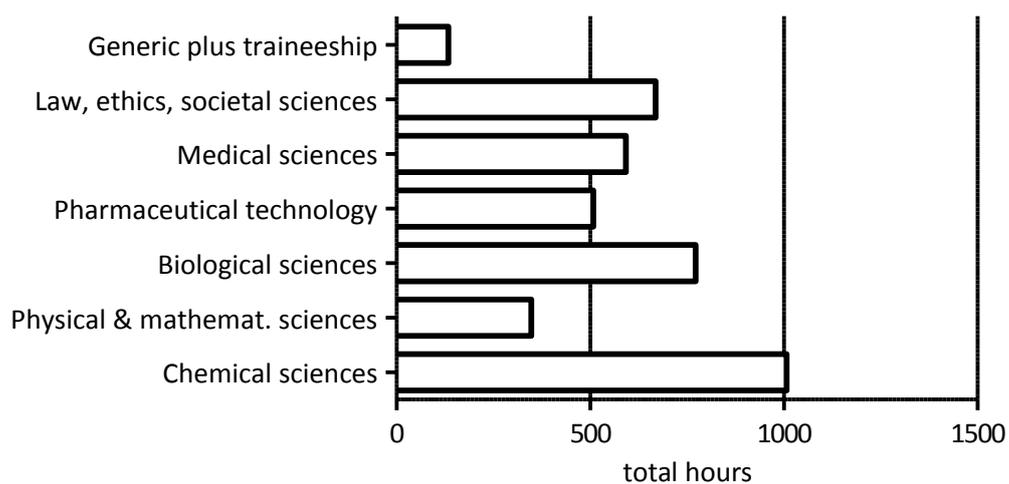


¹ QUALITY ASSURANCE AGENCY 2008. Higher Education credit framework for England: guidance on academic credit arrangements in higher education in England. Gloucester: QAA.

² QUALITY ASSURANCE AGENCY 2008. The framework for higher education qualifications in England, Wales and Northern Ireland. Gloucester: QAA.

Student hours: Manchester MPharm

Subject area	Year 1	Year 2	Year 3	Year 4
CHEMSCI	366	271	220	150
PHYSMATH	348	-	-	-
BIOLSCI	250	149	373	-
PHARMTECH	-	220	211	77
MEDISCI	-	122	204	266
LAWSOC	4	95	209	361
GENERIC	-	-	70	64



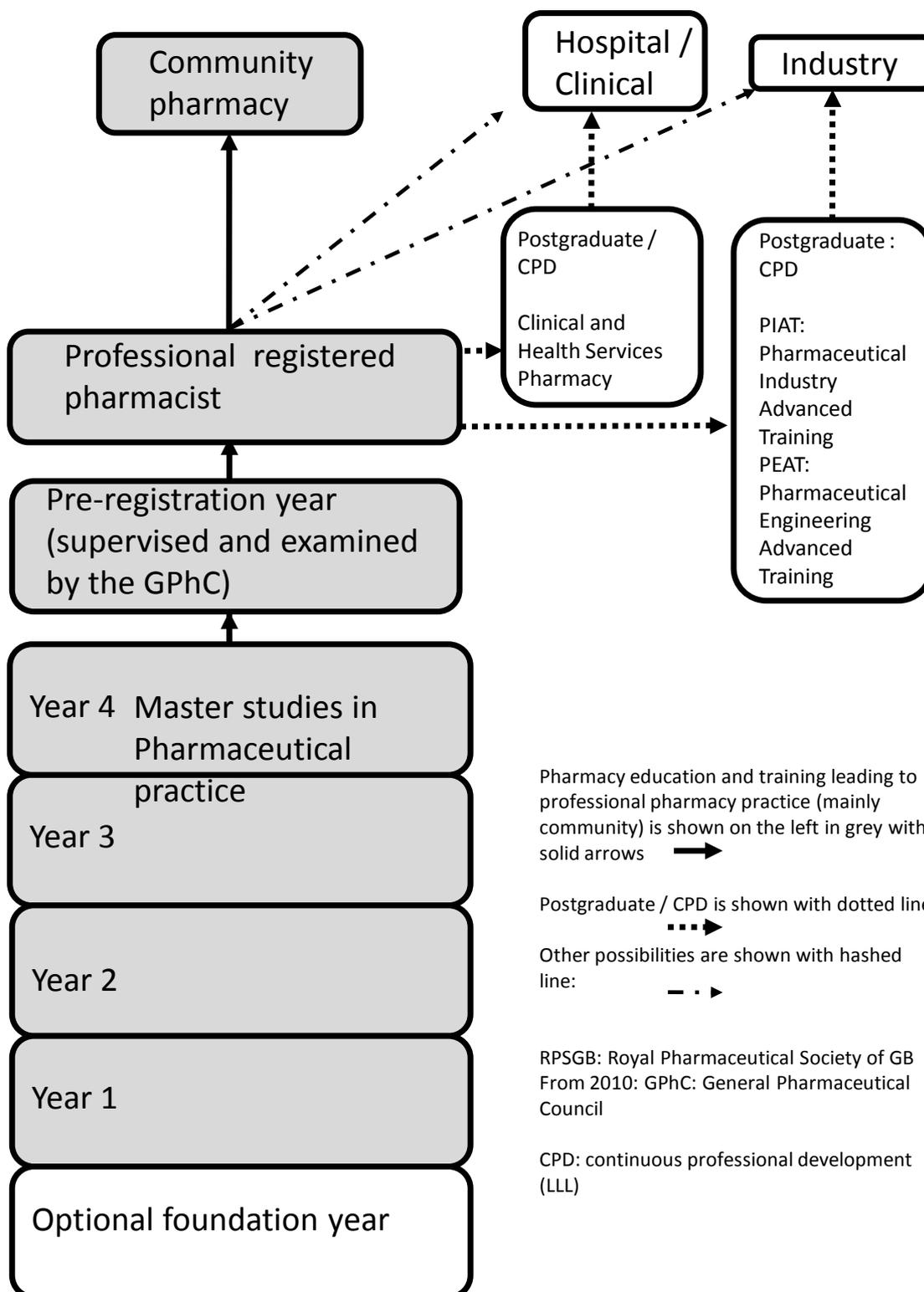
Chapter 5. Impact of the Bologna principles

Bologna principle	Is the principle applied? Y/N or partially	How is it applied? Does your HEI have multilateral recognition and agreements? Other comments. (Aston University Programme)
1. Comparable degrees / Diploma Supplement	Yes	A diploma Supplement is awarded.
2. Two main cycles (B and M) with entry and exit at B level	No	The UK MPharm is a four year integrated Masters programme. Exit at level 6 (BSc) is possible but entry at this level is not.
3. ECTS system of credits / links to LLL	No	Credit rating is according to the English Credit Framework but this has formal linkage to ECTS credits. The UK has a mandatory requirement for CPD for pharmacists empowered by the Pharmacy Order 2010.
4. Obstacles to mobility		The programme is taught in English.
5. European QA	No	
6. European dimension	No	
ERASMUS staff exchange to your HEI from elsewhere	Number of staff months:	Nil
ERASMUS staff exchange from your HEI to other HEIs	Number of staff months:	Nil
ERASMUS student exchange to your HEI from elsewhere	Number of student months:	6
ERASMUS student exchange from your HEI to other HEIs	Number of student months:	Nil

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

The directive states	How does / will this directive statement affect pharmacy E&T?	If you wish to expand your answer, please add your comments below. Do you consider the directive statement valid? If not how would you change it?
“Evidence of formal qualifications as a pharmacist shall attest to training of at least <u>five years' duration,...</u> ”	The UK programme is fully compliant with the directive.	
“ <u>...four years of full-time theoretical and practical training</u> at a university or at a higher institute of a level recognised as equivalent, or under the supervision of a university;”	The UK programme is fully compliant with the directive.	
“ <u>...six-month traineeship in a pharmacy</u> which is open to the public or in a hospital, under the supervision of that hospital's pharmaceutical department.”	The UK programme is fully compliant with the directive.	
“The balance between theoretical and practical training shall, in respect of each subject, give <u>sufficient importance to theory to maintain the university character of the training.</u> ”	The UK programme is fully compliant with the directive.	
Directive annex	How does / will this directive annex affect pharmacy E&T?	If you wish to expand your answer, please add your comments below. Do you consider the directive annex valid? If not how would you change it?
V.6. PHARMACIST 5.6.1. <i>Course of training for pharmacists</i> 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.	The UK programme is fully compliant with the directive.	It is of questionably validity. It gives no indication of depth of study or curricular balance. It is dated and gives insufficient recognition to clinical practice as a pharmacist including medical ethics, diagnosis, prescribing and therapeutics.

The UK pharmacy education and training scheme





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