



Master of Pharmacy  
degree (MPharm)

De Montfort University  
Report of a reaccreditation event  
May 2018

## Event summary and conclusions

<b>Provider</b>	De Montfort University
<b>Course</b>	Masters of Pharmacy degree (MPharm)
<b>Event type</b>	Reaccreditation
<b>Event date</b>	23-24 May 2018
<b>Accreditation period</b>	2017/18 – 2023/24
<b>Outcome</b>	Approval. The accreditation team agreed to recommend to the Registrar of the General Pharmaceutical Council (GPhC) that the MPharm degree provided by De Montfort University should be reaccredited for a further period of six years, with an interim event to take place in three years.
<b>Conditions</b>	There were no conditions
<b>Standing conditions</b>	Please refer to Appendix 1
<b>Recommendations</b>	No recommendations were made
<b>Registrar decision</b>	Following the event, the Registrar of the GPhC accepted the accreditation team's recommendation and approved the reaccreditation of the programme for a further period of 6 years.
<b>Key contact (provider)</b>	Dr Jon Waterfield, Associate Professor in Pharmacy Practice and Pharmacy Programme Leader
<b>Accreditation team</b>	<p>Mr Peter Curphey (Team leader), Pharmacy consultant</p> <p>Dr Larry Gifford, (Academic), Emeritus Professor, Keele University School of Pharmacy</p> <p>Professor Anthony Smith, (Academic), Vice - Provost Education and Student Affairs, University College London</p> <p>Ms Gail Fleming, (Pharmacist), Head of Pharmacy, Health Education England (London and South East)</p> <p>Mrs Samantha Amos, (Newly qualified pharmacist), Senior Clinical Pharmacist, Maidstone and Tunbridge Wells NHS Trust</p> <p>Mrs Fiona Barber (Lay member), Independent Member, Leicester City Council</p>
<b>GPhC representative</b>	Ms Joanne Martin, Quality Assurance Manager, GPhC
<b>Rapporteur</b>	Ian Glendenning Marshall, Emeritus Professor of Pharmacology, University of Strathclyde; Proprietor, Caldarvan Research (Educational and Writing Services)

<b>Observers</b>	<p>Ms Christine Walker (Observer), Recently registered member in training</p> <p>Mr Alastair Paterson (Observer), Pre-registration trainee member in training</p>
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## Introduction

### Role of the GPhC

The General Pharmaceutical Council (GPhC) is the statutory regulator for pharmacists and pharmacy technicians and is the accrediting body for pharmacy education in Great Britain. The GPhC is responsible for setting standards and approving education and training courses which form part of the pathway towards registration for pharmacists. The UK qualification required as part of the pathway to registration as a pharmacist is a GPhC-accredited Master of Pharmacy degree course (MPharm). This reaccreditation event was carried out in accordance with the GPhC's 2011 MPharm Accreditation Methodology and the course was reviewed against the GPhC's 2011 education standards 'Future Pharmacists: Standards for the initial education and training of pharmacists'.

The GPhC's right to check the standards of pharmacy qualifications leading to annotation and registration as a pharmacist is the Pharmacy Order 2010. It requires the GPhC to 'approve' courses by appointing 'visitors' (accreditors) to report to the GPhC's Council on the 'nature, content and quality' of education as well as 'any other matters' the Council may require.

The powers and obligations of the GPhC in relation to the accreditation of pharmacy education are legislated in the Pharmacy Order 2010. For more information, visit: <http://www.legislation.gov.uk/uksi/2010/231/contents/made>

### Background

The MPharm degree at De Montfort University is delivered by the Leicester School of Pharmacy, which, along with three other Schools, forms part of the Faculty of Health and Life Sciences. The School teaches two other undergraduate degrees, the BSc (Hons) Pharmaceutical and Cosmetic Science, which is not recognised for registration purposes by the General Pharmaceutical Council, and the BSc (Hons) Forensic Science. In addition to the undergraduate degrees, the School offers a taught Masters in Pharmaceutical Biotechnology and Quality by Design; these supplement the post-graduate distance learning clinical pharmacy programmes for pharmacists. The last full accreditation visit took place in March 2012 at which the accreditation team agreed to recommend to the Registrar of the General Pharmaceutical Council that the MPharm degree delivered at the University should be reaccredited for a full period of 6 years. There were no conditions or recommendations, and the team agreed that the exceptional inter-professional education opportunities, the introduction of Individual Skills Evaluation and Development (ISED) as an innovative tool for providing diagnostic and formative feedback, and the level of engagement with service users and patients in the stakeholder groups represented strengths of the provision. An interim visit took place in January 2015 at which the accreditation team examined the progress made in meeting the Education and Training Standards and was confident that these were still being met. The team recognised that the School continued to meet the standards of education and training of the GPhC and also recognised the tremendous efforts made so far. The team expressed confidence that the School would continue to develop towards its goal of producing DMU graduates that were fit for the profession of pharmacists. The team encouraged the School to continue with its plans to address the levels of student feedback and student engagement that had started to be implemented.

## Documentation

Prior to the event, the provider submitted documentation to the GPhC in line with the agreed timescales. The documentation was reviewed by the accreditation team and it was deemed to be satisfactory to provide a basis for discussion.

## Pre-visit

In advance of the main visit, a pre-visit meeting took place at De Montfort University on 24 April 2018. The purpose of the pre-visit meeting was to prepare for the event, allow the GPhC and the University to ask any questions or seek clarification, and to finalise arrangements for the visit.

## The event

The event began with a private meeting of the accreditation team and GPhC representatives on 23 May 2018. The remainder of the event took place onsite at De Montfort University on 23-24 May 2018, and comprised a series of meetings with staff and students of the University.

## Declarations of interest

Ms Martin declared that her husbands' superintendent pharmacist is the Professor of Pharmacy Practice at the University. She indicated that her involvement in the visit had been approved by both the GPhC and the University.

## Key findings

### Standard 1: Patient and public safety

**All criteria relating to this standard are met (See Appendix 2 for criteria).**

Once enrolled on the programme students will be required to complete an annual declaration of good character and of health. Students will be observed for safe practice during the pharmacy practice small group practical teaching events in all of the therapeutic modules. These sessions will have a high level of supervision, and will provide opportunities for immediate remedial action to be taken in the event of unsafe practice being observed. Patient safety issues will be clearly highlighted to students in feedback sessions that relate to criterion-referenced practical exercises. The level of supervision during placements will be adjusted according to the level of experience of the student. As a general principle the level of supervision will be decreased as the student develops more skills and their competence increases; students confirmed that they were treated increasingly as adults as the programme progressed. The students will be introduced to the concepts of professionalism at the beginning of the course and these standards, qualities and behaviours will be referred to across all years and embedded in the programme of study and personal development. Students told the team that the professionalism of the teaching staff, including the teacher-practitioners, set an excellent example of professionalism. Students are required to report any incident or change in health which might impact on their fitness to practise as a pharmacy student in a timely manner to their year co-ordinator. If any issues arise as a result of these procedures, the Head of School, Programme Leader and Head of Pharmacy Practice decide whether a student should be referred to the School's Fitness to Practise (FTP) procedure. The Faculty FTP Lead appoints an investigator who will then present the findings of their investigation to a FTP panel, which includes a senior pharmacist who has not been involved in the referral of the student to FTP. During an FTP investigation any timetabled off-campus placement activity or patient contact will be suspended until the outcome of the case is known. The team was told that whistleblowing is discussed in

the curriculum and that, as a general rule, cases are only taken forward if the person making the complaint is prepared to identify themselves, but that anonymity could be maintained in sensitive cases.

## Standard 2: Monitoring, review and evaluation of initial education and training

### All criteria relating to this standard are met.

The MPharm programme leader is responsible for the management and delivery of the programme and does this in conjunction with year co-ordinators and module leaders. The year co-ordinators work closely with the programme leader and module leaders to ensure that the programme is delivered efficiently and act as a point of contact for students. Module leaders coordinate the efforts of the module teams. The Department of Academic Quality oversees the University quality assurance processes with the aim of enhancing the learning opportunities made available to all students and to assure quality and standards. The University approach to managing academic quality is devolved to ensure that it takes place as close to programme level as possible and involves all stakeholders with a role in managing quality. The major vehicle for providing lines of accountability within the School to feed into the Faculty/University quality assurance processes is the MPharm Programme Management Board (PMB) which meets four times annually and has student representatives from each year group. The programme has quality assurance procedures in place for the annual monitoring, review and evaluation of teaching, learning and assessment, a cyclic process that is recorded at module and programme level annually via the Module Enhancement Plans (MEP) and the annual Programme Appraisal and Enhancement (PAE) document. The programme undergoes Periodic Review every 5 years and was last scrutinised in March 2016 alongside the School's postgraduate pharmacy provision. The percentage pass rate in the GPhC Registration Examination has exceeded the average national pass rate by 2 to 4% for the last 2 cohorts sitting the assessment. The community pharmacy placements are co-ordinated by a member of the practice team who has developed strong links with local community pharmacies and pharmacists over a number of years. During their community placements the students are supervised by mentors who are pharmacists who are normally pre-registration tutors and/or have at least two years community pharmacy experience. The team learned of a relatively informal process involving visits and discussion to assure the quality of the community pharmacy placements. The delivery of the hospital clinical visits is co-ordinated by a senior hospital teacher-practitioner under the supervision of the Head of Pharmacy Practice. All students are supervised by experienced hospital pharmacists who are either teacher-practitioners seconded to the School or who have previously shadowed a teacher-practitioner supervising clinical visits. The GP clinical visits which involve clinical trainers are co-ordinated by a senior lecturer and a hospital teacher-practitioner under the supervision of the Head of Pharmacy Practice. The students are supervised by staff members that have had experience in Primary Care, community pharmacy or teacher-practitioners seconded to the School. A senior GP or primary care pharmacist is also engaged with these visits and supervision of students.

## Standard 3: Equality, diversity and fairness

### All criteria relating to this standard are met.

The MPharm programme has been selected as one of the programmes to take part in a Black Asian and Minority Ethnic (BAME) project, with the University having been named as one of a group of six higher education institutions and one college of further education to be funded by the Higher Education Funding Council for England (HEFCE) to tackle the BAME attainment gap. The aim of the group is to help to increase the number of students from black and minority ethnic backgrounds who achieve good honours degrees, by raising aspirations and creating role models. At programme level monitoring data is collected from students on enrolment and discussed at the January Pharmacy Management Board (PMB) annually. The team was told that 97 percent of the MPharm students are from a BAME background and hence that the School is fully conversant with issues around diversity. The University also collects, analyses and publishes its data on enrolment, achievement and retention of students against the characteristics of age, disability, gender and race/ethnicity. Equality and diversity is introduced and assessed in the first year of the programme as part of the students' Preparing for Practice (1)

Professional Portfolio submission; and supported by an on-line training via Blackboard. Staff training is provided by the HR Training and Development team which runs a number of training sessions and workshops for staff on equality and diversity.

#### **Standard 4: Selection of students *and* trainees**

##### **All criteria relating to this standard are met.**

The School of Pharmacy adheres to the University's admissions policy, with all staff required to undertake and pass the University's mandatory online 'equality and diversity essentials', 'safeguarding essentials' and 'Safe and Supported' training programmes. Admissions criteria are described on the University and UCAS websites and in an abridged form in the University prospectus. All MPharm offers are subject to a satisfactory declaration of good character, a satisfactory enhanced DBS check and, if appropriate, a satisfactory certificate of good conduct from the student's home country. At the beginning of the academic year, students will be required to complete a self-declaration of good health form. Students will self-assess their physical and mental wellbeing and declare any condition which may affect or impact on their ability to study and practise as a pharmacy student. The UCAS tariff for entry in the 2018/2019 academic session is 128 points: equivalent to ABB at A level including Chemistry and a specified Science subject (Biology; Maths; Physics; Psychology) at grade B or above. The third A level may be in a non-science subject or replaced by AS levels, which must be taken at the same sitting as the A levels. However, the team noted that a minority of entrants achieve the tariff score. The team also learned of the use of a preferential acceptance policy in which applicants that make the School's programme their first choice are offered a conditional place requiring two grades below the tariff. All applicants are invited to and must pass a selection event or selection interview. The selection/ interview process assesses communication, information processing, values and judgement and numeracy, and is in line with the principles of values-based recruitment.

#### **Standard 5: Curriculum delivery and student experience**

##### **All criteria relating to this standard are met.**

The School plans to introduce a new MPharm programme from September 2018 with a proposed new curriculum based on 2 x year-long, 60-credit modules and 1 x non-credit bearing Professional Portfolio module at each level. In Year 1 there is a multidisciplinary Introduction to Pharmacy module, with all of the remaining 60-credit modules in the first three years based on therapeutic themes. The introduction of larger modules allows the inclusion of a range of disciplines within the same module so that the content includes different disciplinary approaches and is drawn together in case-based problems and practice-based scenarios that require the student to draw on and apply the most appropriate knowledge in order to develop the professional skills required for future practice. Students told the team that the Head of School had organised focus groups and an away day that had allowed student input to the design of the new programme; students agreed that introducing an integrated approach from the outset of the programme would be a significant improvement over the existing approach in which students find difficult the integrated approach introduced later in the curriculum. Students also agreed that the professionalism of the teaching staff, including the teacher-practitioners, set them an excellent example in terms of the development of professional behaviours and attitudes. The teaching and learning sessions will be delivered in a way that promotes integrated learning and contextualisation of material with reference to the top three levels of Harden's integration ladder; multi-disciplinary, inter-disciplinary and trans-disciplinary. Year 1 of the programme is based on a multi-disciplinary model and as the programme progresses there is a move through to inter-disciplinary and trans-disciplinary integration. In the first year there is the recognition that not all students enter the course with A-level Biology so there is a need to ensure that all students have the required knowledge and understanding of biological sciences in order to proceed with an applied and integrated approach to learning. In Years 2 and 3 the programme moves towards a more inter-disciplinary approach, with foundation knowledge in place across a variety of disciplines and with some experience of multidisciplinary integrated teaching and learning activities. In the final year the programme uses a more transdisciplinary model of integration where students are immersed in a practising situation and are linking different elements in order to demonstrate

competence. Students are allocated the subject of their final year research project at the end of Year 3 and spoke highly of the level of supervisor support during the completion of the project. The team also heard of the DMU FrontRunners scheme that allows students to undertake paid vacation work in a University research environment. The zero-credit Professional Portfolio modules in each year of the programme are designed to facilitate student-centred integration of the curricula, and require students to take a holistic view of the year by reviewing the outcomes for each module and discussing these with their personal tutor as part of a self-audit. A series of practical objective structured clinical exercises (OSCEs) throughout the programme allows students to utilise their integrated knowledge of pharmaceutical sciences, therapeutics and professional practice in a practical setting. The team was told that since the last accreditation visit there had been a continued development of the School's escutcheon of interprofessional learning (IPL) which students told the team was greatly valued. Thus, a regional Interprofessional Education (IPE) strategy is a DMU Faculty agreement with the Centre for Medicine, University of Leicester, DMU and the University of Leicester Medical School that annually prepares over 2,000 learners for the professions of medicine, nursing and midwifery, speech and language therapy, psychology, operating theatre practitioners, social work, audiology and pharmacy. Interprofessional learning is used at every level of the current MPharm programme and will continue to be so in the new programme. First-year students will be introduced to the concept of interprofessional education in workshops which involve team-working and collaborative practice to explore what is meant by team-working in health and social care. The School IPE strategy ensures a minimum of four IPE events in a student's journey through the programme. Practical experience through placements in community, hospital and general medical practice increases year on year, starting in the first semester of Year 1 when students will take part in a simulated community pharmacy observational visit using the DMU CUBE, an immersive audio visual learning space to prepare students for their community pharmacy placement visit in the second semester, leading to eight and a half days of placement activity in Year 4. Students told the team that the hospital placements were very well organised by the School teacher-practitioners but that there was an inevitable variation in the quality of the community pharmacy placements. The School plans to extend the current pilot GP enhanced placement scheme, which students greatly value, to all students in Year 4 of the new programme. The DMU Universal Design for Learning aims to provide an equal learning experience for every DMU student and is based on three principles; flexible ways of learning, flexible study resources, and flexible ways of testing, with the last-named informing the overall approach to assessment. Central to the University approach is the limitation to three summative assessments per module. Consultation with both pharmacist and student stakeholders has emphasised the importance of OSCE assessments within the new programme for students to respond to clinical situations and apply their underpinning knowledge; this was confirmed by students interviewed. Students also considered that the increased amount of patient contact in the new programme would bring substantial benefits; this was emphasised by a DMU graduate pre-registration trainee. The programme has specific regulations that take precedence over University general regulations; each year must be passed before commencement of the next level of study, all modules must be passed and each component of assessment must be passed individually in all modules of the course, and there are no compensation arrangements between modules within the programme. Students interviewed considered the assessment regimen to be fair. Assessments that measure skills essential to safe and effective practice will have a higher pass mark. Thus, pharmaceutical calculation assessments within the Preparing for Practice Professional Portfolio modules will have a pass mark of 70%; all OSCE practical examinations will have a pass mark of 50%, and students will not be able to pass the OSCE assessments if they are deemed to have caused patient harm or demonstrated unsafe practice. The team questioned the final year pass level of 40% but was assured that students must pass all elements and not to have shown any unsafe practice. The team learned that the new programme will be rolled in a year at a time, and that any first year students on the existing programme failing to progress to Year 2 after a resit attempt will be offered the choice of an extraordinary resit opportunity in October 2018 to progress to Year 2, or to re-start their studies by joining the first cohort of students in Year 1 of the new programme. Students interviewed told the team that the student body was content with this plan which it considered to be fair.

## Standard 6: Support and development for students *and* trainees

**All criteria relating to this standard are met.**

The School operates a Personal Tutor system and each new entrant will be assigned a personal tutor from amongst the academic staff in the programme team. Students interviewed spoke highly of the approachability of teaching staff and praised the personal tutor system. Students also appreciated the lecture-capture system which allowed them to reflect on the lecture material. The team was told that the role of the personal tutor will become more important when the new programme is introduced. Thus, although the student can approach their personal tutor for advice of any kind, either pastoral or academic, tutors will now have four compulsory timetabled meetings with tutees in relation to the development of students' Personal Development Plans which will be assessed within the Preparing for Practice Professional Portfolio modules. Students will be expected to discuss their progress with their personal tutor periodically throughout their time in the School. The Personal Tutor system will be augmented by four Year Co-ordinators, who are the module leaders for the Preparing for Practice Portfolio modules and who will be responsible for overseeing the progress of their respective year group as a whole, along with the Programme Leader. Students will also receive support from their fellow students in the form of a peer mentoring scheme which gives students an opportunity to encourage and support students in lower levels of the course. A designated member of academic staff has the role of Pre-registration Tutor. In the beginning of the third year of the programme the Pre-registration Tutor and the regional Pre-Registration Facilitator will provide an overview of the pre-registration year which addresses the GPhC requirements, how the training develops in the three sectors of pharmacy and the Oriel pre-registration application system. The School has introduced recently a bespoke student wellbeing programme designed to help students deal with the stress of being a student on a highly demanding programme, developed and introduced in 2015/16 in collaboration between the student counselling and coaching team and an academic member of staff as a result of her research into pharmacy student wellbeing. The wellbeing programme involves integration of a coaching programme of workshops into the pharmacy timetable.

**Standard 7: Support and development for academic staff and pre-registration tutors**

**All criteria relating to this standard are met.**

All new members of academic staff are required to complete at least the Postgraduate Certificate in Learning and Teaching in Higher Education and established members of staff are encouraged to obtain HEA Professional Recognition through the University Define system. All new members of staff are allocated a mentor who is responsible for assisting in compiling the probationary reports. New members of staff spoke highly of the support offered to develop both their teaching and research profiles within the School. Each member of academic staff is allocated an appraiser who is either at Professor or Associate Professor level that has attended a training event to equip them for this role. The School uses a peer observation scheme to help with staff development and identifying good teaching practice. In some cases, new staff members observe more experienced staff to aid them in developing their own teaching. On other occasions staff who are acting as mentors observe staff undertaking the Postgraduate Certificate in Higher Education. The Group Leads provide direct operational support for the academics related to their group. Some groups have a split research and educational lead and in such cases the respective person offers the support and mentoring related to their areas. The Group Leads are in turn supported by the Head and Associate Heads of School who will meet with them as issues arise but also on a regular informal basis. Currently there are three Teacher Fellows within the School who have been recognised by the University for excellence in teaching and who also provide a resource for pedagogic research and development. In terms of workload, the University uses a figure of 1569 hours (*pro rata*) to guide workload allocation across the whole working year. The planning is managed using Staff Workload Planner, a software system that imports teaching data taken from the timetabling system. In effect, teaching duties are based on a maximum face-to-face contact with students of approximately 440 hours per academic year, including time for meeting with personal tutees and project supervision. Staff members told the team that they appreciated the increased transparency resulting from the workload model and spoke highly of the collegiate nature of the School and of the support from colleagues. The

team was told that the module leaders on the new programme will differ from those on the existing programme to ensure an equitable distribution of workload.

## Standard 8: Management of initial education and training

### All criteria relating to this standard are met.

The Faculty of Health and Life Sciences comprises four Schools; Nursing and Midwifery, Pharmacy, Allied Health Sciences and Applied Social Sciences. The Pro Vice Chancellor/Dean chairs a biweekly meeting comprising of each of the Heads of School as well as other Faculty Managers, Faculty Executive Committee terms of reference. In this way the Schools have a defined route of communication and accountability to the University in particular related to resources, policy and strategy. The Pro Vice Chancellor/Dean has 30% of his time allocation to his role as a Pro Vice Chancellor and sits on the University Executive Board. The Vice Chancellor holds regular meetings with all of the Heads of Schools and Departments where they can raise specific issues. The School has a hierarchical management structure, with the Head of School having overarching responsibility for the management of all staff and the allocation of teaching and other duties. He is supported by staff with management and leadership roles. There are four sections within the School; Pharmacy Practice, Pharmaceuticals, Biological Sciences which encompasses Pharmacology/ Microbiology and Natural Products, and Forensic and Physical Sciences which encompasses Pharmaceutical Chemistry and Forensic Science. All Section Leaders are on the School Executive Committee (SEC) and are joined by the Research Lead and Teaching and Learning Lead, who is also the Chair of the School Learning and Teaching Group and the Programme Management Board. There are two Associate Heads of School, who as well as being section leads are responsible for the management of teaching, research and administration workloads. The MPharm programme leader is responsible for the management and delivery of the programme and does this in conjunction with year co-ordinators and module leaders. The Head of Pharmacy Practice has overall responsibility of the strategic organisation and management of placements which involves liaison with key stakeholders to maintain and develop the placement. Since the last accreditation the hospital and community placements have been increased and the activities that students undertake has been developed, GP practice placements have been introduced into the final year and enhancement placements, including in prisons and care homes, will be introduced into all years in the new degree. The major vehicle for providing lines of accountability within the School to feed into the Faculty/University quality assurance processes is the MPharm Programme Management Board (PMB); any changes to the course template or module templates are discussed at, and must be approved by, the PMB. The PMB has student representatives from each year group as members. The Board receives reports from the Student Voice meeting, formerly the Staff Student Consultative Committee, and also direct feedback from the student representatives.

## Standard 9: Resources and capacity

### All criteria relating to this standard are met.

Resource allocation is made at Faculty level by a formula based on previous and anticipated activity. A budget outline for each School is made in Spring for the following academic year. The business plan for the MPharm is based on a current target number of 160 entrants. The team noted that the plan included an apparent increase in the number of overseas students, but was told that these students are already in the system and that the increased numbers represented the students feeding through the years and being supplemented by a moderate recruitment of overseas students. The business plan indicated that the School is stable financially, with income from fees and grants which shows sustainability. Contribution to the University centre is steady at around 48% and the MPharm is viewed as making a positive financial contribution to the University's finances. The team noted that the forecast for beyond the present year did not take into account any form of inflation of either income or costs, but was told that prediction of salary increases and the level of student fees is virtually impossible in the present political climate. Students told the team that the MPharm programme is well resourced, with a supportive subject librarian, excellent databases, multiple copies of required textbooks and a very useful virtual learning environment. The School is located in the Hawthorn Building, the teaching laboratories,

many of the research laboratories, and most of the staff offices are located on the first, second and third floors of the building, ensuring that the School is a geographically cohesive entity. The MPharm is mainly taught in the Hawthorn Building, Edith Murphy House and Hugh Aston Building. Clinical pharmacy teaching additionally involves ward rounds in the local hospitals of the University Hospitals of Leicester NHS Trust and working with patients in GP surgeries. The venues for Inter-professional Education (IPE) are varied, reflecting the fact that students attend IPE learning events with students from other HCPs, with some of these events held at Leicester University which is within walking distance of the DMU campus. The School has an academic staff of 59.0 FTE, plus vacancies for a Reader/Professor in Pharmacy Practice and a Lecturer/Senior Lecturer in Analytical/Bioanalytical Chemistry. 57.8 FTE are funded by the University, the other 1.2 FTE, comprising the Boots Teacher-Practitioner (0.4 FTE, with 0.2 FTE funded by Boots), and the East Midland Regional Hospital Pre-registration Facilitator (1 FTE) are funded externally. This provides a student to staff ratio of approximately 18 to 1 for the MPharm, close to the norm for the sector. The teaching provided by the School is supplemented by modest amounts of teaching from other areas of the University. Thirty one pharmacists are employed by the School, 13 of these are employed full-time with the other 18, equivalent to 8.3 FTE, having substantive part-time contracts. In addition, all the teacher-practitioners are pharmacists. Within the pharmacy practice team there are members of staff who, although experienced practitioners, do not have a Masters level qualification and are mentored for the supervision of student projects whereby, in the first year of their appointment, anyone new to supervising a student project will jointly supervise a project with an experienced member of the team. Integration of science academics and their discipline into a pharmacy context has increased as the programme has become more integrated, the new programme will involve science academics consistently demonstrating the relevance of their discipline to pharmacy and delivering it in a pharmaceutical context.

### Standard 10: Outcomes

**The team was satisfied that all 58 outcomes relating to Standard 10 are delivered at the appropriate level.**

The satisfaction of the learning outcomes was sampled in the outcomes meeting in which the accreditation team sampled four of the GPhC learning outcomes with a selection of “knows how”, “shows how” and “does” levels of achievement, and their assessment.

### Indicative syllabus

**The team was satisfied with the School's use of the Indicative Syllabus to inform its curriculum**

The team agreed that the MPharm degree met the requirements of Directive 2005/36/EC of the European Parliament and of the Council on the recognition of professional qualifications for the initial education and training of pharmacists.

## Appendix 1 - Standing conditions

The following are standing conditions of reaccreditation and apply to all providers:

1. The record and report include other comments from the team, and providers are required to take all comments into account as part of the accreditation process. The provider must confirm to the GPhC that required amendments have been made.
2. The provider must respond to the definitive version of the record and report within three months of receipt. The summary report, along with the provider's response, will be published on the GPhC's website for the duration of the accreditation period.
3. The provider must seek approval from the GPhC for any substantial change (or proposed change) which is, or has the potential to be, material to the delivery of an accredited course. This includes, but is not limited to:
  - a. the content, structure or delivery of the accredited programme;
  - b. ownership or management structure of the institution;
  - c. resources and/or funding;
  - d. student numbers and/or admissions policy;
  - e. any existing partnership, licensing or franchise agreement;
  - f. staff associated with the programme.
4. The provider must produce and submit to the GPhC on an annual basis:
  - a. requested data on student numbers and progression and degree awards;
  - b. requested information about the extent of human and physical resources it enjoys for the delivery and support of the degree course.
5. The provider must make students and potential students aware that successful completion of an accredited course is not a guarantee of a placement for a pre-registration year or of future employment as a pharmacist.
6. The provider must make students and potential students aware of the existence and website address where they can view the GPhC's accreditation reports and the timetable for future accreditations.
7. Whenever required to do so by the GPhC, providers must give such information and assistance as the GPhC may reasonably require in connection with the exercise of its functions. Any information in relation to fulfilment of these standing conditions must be provided in a proactive and timely manner.

## Appendix 2 – Standards

### GPhC standards for the initial education and training of pharmacists

NB. Information that is shaded grey or shown in grey italics is only applicable to providers offering a 5-year MPharm degree with intercalated periods of pre-registration training.

#### Standard 1: Patient and public safety

1. **There must be clear procedures to address concerns about patient safety arising from pharmacy education and training. Concerns must be addressed immediately.**
  - 1.1 There must be effective systems in place to ensure that students *and trainees*:
    - 1.1.a do not jeopardise patient safety;
    - 1.1.b only do tasks for which they are competent, sometimes under supervision;
    - 1.1.c are monitored and assessed to ensure they always practise safely. Causes for concern should be addressed immediately;

- 1.1.d have access to support for health, conduct and academic issues;
- 1.1.e must not be awarded an accredited degree *or pass pre-registration training* if they might pose a risk to patients or the public;
- 1.1.f understand what is and what is not professional behaviour and are familiar with the GPhC's *standards for pharmacy professionals (2017)*;
- 1.1.g understand what fitness to practise mechanisms apply to them. All schools of pharmacy must have fitness to practise procedures to deal with student causes for concern;
- 1.1.h undergo required health and good character checks;
- 1.1.i understand that it is an offence to impersonate a pharmacist. Pharmacists are registrants of the GPhC.

## Standard 2: Monitoring, review and evaluation of initial education and training

### 2. The quality of pharmacy education and training must be monitored, reviewed and evaluated in a systematic and developmental way.

- 2.1 There must be systems and policies in place covering:
  - 2.1.a information about roles and responsibilities and lines of accountability;
  - 2.1.b university information on:
    - 2.1.b.i entry requirements;
    - 2.1.b.ii the quality of teaching, learning and assessment;
    - 2.1.b.iii the quality of placements and other practice learning opportunities;
    - 2.1.b.iv appraisal and feedback systems for students *and trainees*;
    - 2.1.b.v supervision requirements;
    - 2.1.b.vi educational resources and capacity;

These must be monitored, reviewed and evaluated systematically. When an issue is identified it must be documented and dealt with promptly.

  - 2.1.c *pre-registration tutors evaluating trainees. To do this, tutors must have access to reliable evidence about a trainee's performance. Tutors must be competent to assess the performance of trainees;*
  - 2.1.d *the quality and development of pre-registration tutors*

## Standard 3: Equality, diversity and fairness

### 3. Initial pharmacy education and training must be based on principles of equality, diversity and fairness. It must meet the requirements of all relevant legislation.

- 3.1 Systems and policies for capturing equality and diversity data. Concerns should be documented, addressed and disseminated;
- 3.2 Strategies for staff training in equality and diversity

## Standard 4: Selection of students *and trainees*

### 4. Selection processes must be open, fair and comply with relevant legislation. Processes must ensure students *and trainees* are fit to practise at the point of selection. Selection includes recruitment and admissions.

- 4.1 Selection process must give applicants the information they need to make an informed application.
- 4.2 Selection criteria must be explicit. They should include:
  - 4.2.a meeting academic and professional entry requirements;
  - 4.2.b meeting English language requirements appropriate to MPharm degree study.

Guidelines issued by English language testing bodies should be followed to ensure that admissions language requirements are appropriate;

- 4.2.c meeting numeracy requirements;
  - 4.2.d taking account of good character checks, such as Criminal Records Bureau (CRB)/Disclosure Scotland checks;
  - 4.2.e passing health checks (subject to reasonable adjustments being made). Health checks could include self-evaluations and/or evaluations by healthcare professionals;
  - 4.2.f recognising prior learning, where that is appropriate.
- 4.3 Selectors should apply selection criteria fairly. They should be trained to do this. Training should include equality and diversity matters

## Standard 5: Curriculum delivery and the student experience

**5. The curriculum for MPharm degrees *and the pre-registration scheme* must deliver the outcomes in Standard 10. Most importantly, curricula must ensure students *and trainees* practise safely and effectively. To ensure this, pass criteria must describe safe and effective practice.**

- 5.1 Curricula must be integrated.
- 5.2 Curricula must be progressive, dealing with issues in an increasing more complex way until the right level of understanding is reached.
- 5.3 An MPharm must be delivered in an environment which places study in a professional and academic context and requires students to conduct themselves professionally. *Pre-registration training must be delivered in a professional environment which requires trainees to conduct themselves professionally.*
- 5.4 An MPharm must be delivered in an environment informed by research. This means that whether or not all staff are engaged in research, their teaching must be informed by research.
- 5.5 An MPharm degree teaching and learning strategy must set out how students will achieve the outcomes in Standard 10. Learning opportunities must be structured to provide:
  - 5.5.a an integrated experience of relevant science and pharmacy practice;
  - 5.5.b a balance of theory and practice;
  - 5.5.c independent learning skills.
- 5.6 The MPharm degree curriculum must include practical experience of working with patients, carers and other healthcare professionals. Practical experience should increase year on year.
- 5.7 There must be a clear assessment strategy for the MPharm degree. Assessment methods must measure the outcomes in Standard 10.
- 5.8 The MPharm degree assessment strategy should include:
  - 5.8.a diagnostic assessments;
  - 5.8.b formative assessments;
  - 5.8.c summative assessments;
  - 5.8.d timely feedback.
- 5.9 Academic regulations must be appropriate for a degree that is both academic and professional and may lead to further professional training. As a general principle, all assessments must be passed. This means that condonation, compensation, trailing, extended re-sit opportunities and other remedial measures should be extremely limited, if they are permitted at all. MPharm degree academic regulations may be more stringent than university norms. This may include higher than usual pass marks for assessments demonstrating knowledge and skills essential to safe and effective pharmacy practice.
- 5.10 Marking criteria must be used for all assessments and all pass criteria must reflect safe and effective practice.
- 5.11 Patient safety must be paramount in assessments: any evidence of an assessment demonstrating unsafe practise must result in failure.

- 5.12** *A pre-registration training plan must describe how the learning outcomes for pre-registration will be delivered.*
- 5.13** *A pre-registration training plan must describe all assessments, including tutor evaluations and tutor sign-offs.*

### **Standard 6: Support and development for students *and* trainees**

- 6. Students *and* trainees must be supported to develop as learners and professionals during their initial education and training.**
- 6.1** A range of mechanisms must be in place to support students *and* trainees to develop as learners and professionals.

### **Standard 7: Support and development for academic staff *and* pre-registration tutors**

- 7. Anyone delivering initial education and training should be supported to develop in their professional roles.**
- 7.1.** There must be a range of mechanisms in place to support anyone delivering initial education and training to develop in their role.
- 7.2.** Induction programmes are provided for and university staff as appropriate. This should include induction programmes for non-pharmacists working on MPharm degrees.
- 7.3.** Everyone involved in delivering the curriculum should have:
- 7.3.a** effective supervision;
  - 7.3.b** an appropriate and realistic workload;
  - 7.3.c** effective personal support;
  - 7.3.d** mentoring;
  - 7.3.e** time to learn;
  - 7.3.f** continuing professional development opportunities.
- 7.4.** *Tutors should have an identified source of peer support.*

### **Standard 8: Management of initial education and training**

- 8. Initial pharmacist education and training must be planned and maintained through transparent processes which must show who is responsible for what at each stage.**
- 8.1.** All education and training will be supported by a defined management plan with:
- 8.1.a** a schedule of responsibilities
  - 8.1.b** defined structures and processes to manage the delivery of education and training

### **Standard 9: Resources and capacity**

- 9. Resources and capacity are sufficient to deliver outcomes.**
- 9.1** There must be:
- 9.1.a** robust and transparent mechanisms for securing an appropriate level of resource for delivering an accreditable MPharm degree;
  - 9.1.b** sufficient staff from relevant disciplines to deliver the curriculum to students *and* trainees. Staff must be appropriately qualified and experienced. The staffing profile must include:
    - 9.1.b.i** sufficient numbers of pharmacists – registrants of the GPhC – with experience of teaching in higher education to ensure that an MPharm

- degree can produce students equipped to enter pharmacist pre-registration training in Great Britain.
- 9.1.b.ii** sufficient numbers of pharmacists to act as tutors and professional mentors at university *and in pre-registration*. Not all personal tutors must be pharmacists.
  - 9.1.b.iii** pharmacists who are leaders in the profession and in their university, who can influence university policy relevant to pharmacy
  - 9.1.b.iv** non-pharmacist academics who can influence school and university policy relevant to pharmacy
  - 9.1.b.v** staff who are sufficiently experienced to supervise research. It would be unusual for anyone to supervise research at a particular level unless they had researched to that level or beyond. New research supervisors must be mentored and signed off as being fit to supervise after a period of mentoring
  - 9.1.b.vi** science academics who understand the relevance of their discipline to pharmacy and deliver their area of expertise in a pharmaceutical context
  - 9.1.b.vii** academic pharmacists and other experienced MPharm degree staff who are able to act as mentors to non-pharmacist colleagues
- 9.1.c** *pre-registration tutors who meet the GPhC's standards for pre-registration tutors;*
- 9.1.d** career pathways in universities for all staff teaching on MPharm degrees, including pathways for practice staff
  - 9.1.e** clear lines of authority and responsibility for the strategic organisation and day-to-day management of placements
  - 9.1.f** training and ongoing support for all non-pharmacists involved in the delivery of MPharm degrees which must help them understand:
    - 9.1.f.i** help and understand the relevance of their work to pharmacy
    - 9.1.f.ii** how to deliver their area of expertise in a pharmaceutical context
  - 9.1.g** appropriate learning resources
  - 9.1.h** accommodation and learning resources that are fit for purpose
  - 9.1.i** *pre-registration premises which meet the GPhC's standards for pre-registration premises*

## Standard 10: Outcomes

### 10.1 Expectations of a pharmacy professional

Learning outcome	MPharm	Pre-reg
<b>10.1.a</b> Recognise ethical dilemmas & respond in accordance with relevant codes of conduct and behaviour	<b>Shows how</b>	<i>Does</i>
<b>10.1.b</b> Recognise the duty to take action if a colleague's health, performance or conduct is putting patients or public at risk	<b>Knows how</b>	<i>Knows how</i>
<b>10.1.c</b> Recognise personal health needs, consult and follow the advice of a suitably qualified professional, and protect patients or public from any risk posed by personal health	<b>Does</b>	<i>Does</i>
<b>10.1.d</b> Apply the principles of clinical governance in practice	<b>Knows how</b>	<i>Does</i>
<b>10.1.e</b> Demonstrate how the science of pharmacy is applied in the design and development of medicines and devices	<b>Shows how</b>	<i>Knows how</i>
<b>10.1.f</b> Contribute to the education and training of other members of the team, including peer review and assessment	<b>Shows how</b>	<i>Does</i>
<b>10.1.g</b> Contribute to the development of other members of the team through coaching and feedback	<b>Knows how</b>	<i>Shows how</i>
<b>10.1.h</b> Engage in multidisciplinary team working	<b>Knows how</b>	<i>Does</i>

<b>10.1.i</b>	Respond appropriately to medical emergencies, including provision of first aid	<b>Knows how</b>	<i>Shows how</i>
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## 10.2 The skills required in practice

### 10.2.1 Implementing health policy

Learning outcome	MPharm	Pre-reg
<b>10.2.1.a</b> Promote healthy lifestyles by facilitating access to and understanding of health promotion information	<b>Shows how</b>	<i>Does</i>
<b>10.2.1.b</b> Access & critically evaluate evidence to support safe, rational & cost effective use of medicines	<b>Shows how</b>	<i>Knows how</i>
<b>10.2.1.c</b> Use the evidence base to review current practice	<b>Shows how</b>	<i>Does</i>
<b>10.2.1.d</b> Apply knowledge of current pharmacy-related policy to improve health outcomes	<b>Knows how</b>	<i>Shows how</i>
<b>10.2.1.e</b> Collaborate with patients, the public and other healthcare professionals to improve patient outcomes	<b>Knows how</b>	<i>Shows how</i>
<b>10.2.1.f</b> Play an active role with public and professional groups to promote improved health outcomes	<b>Knows how</b>	<i>Knows how</i>
<b>10.2.1.g</b> Contribute to research & development activities to improve health outcomes	<b>Knows how</b>	<i>Knows how</i>
<b>10.2.1.h</b> Provide evidence- based medicines information	<b>Shows how</b>	<i>Does</i>

### 10.2.2 Validating therapeutic approaches and supplies prescribed and over-the-counter medicines

Learning outcome	MPharm	Pre-reg
<b>10.2.2.a</b> Identify and employ the appropriate diagnostic or physiological testing techniques in order to promote health	<b>Knows how</b>	<i>Shows how</i>
<b>10.2.2.b</b> Identify inappropriate health behaviours and recommend suitable approaches to interventions	<b>Shows how</b>	<i>Does</i>
<b>10.2.2.c</b> Instruct patients in the safe and effective use of their medicines and devices	<b>Shows how</b>	<i>Does</i>
<b>10.2.2.d</b> Analyse prescriptions for validity and clarity	<b>Shows how</b>	<i>Does</i>
<b>10.2.2.e</b> Clinically evaluate the appropriateness of prescribed medicines	<b>Shows how</b>	<i>Does</i>
<b>10.2.2.f</b> Provide, monitor and modify prescribed treatment to maximise health outcomes	<b>Shows how</b>	<i>Does</i>
<b>10.2.2.g</b> Communicate with patients about their prescribed treatment	<b>Shows how</b>	<i>Does</i>
<b>10.2.2.h</b> Optimise treatment for individual patient needs in collaboration with the prescriber	<b>Shows how</b>	<i>Does</i>
<b>10.2.2.i</b> Record, maintain and store patient data	<b>Shows how</b>	<i>Does</i>
<b>10.2.2.j</b> Supply medicines safely and efficiently, consistently within legal requirements and best professional practice. NB This should be demonstrated in relation to both human and veterinary medicines.	<b>Shows how</b>	<i>Does</i>

### 10.2.3 Ensuring safe and effective systems are in place to manage risk inherent in the practice of pharmacy and the delivery of pharmaceutical services

Learning outcome	MPharm	Pre-reg
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<b>10.2.3.a</b> Ensure quality of ingredients to produce medicines and products	<b>Knows how</b>	<i>Shows how</i>
<b>10.2.3.b</b> Apply pharmaceutical principles to the formulation, preparation and packaging of products	<b>Shows how</b>	<i>Shows how</i>
<b>10.2.3.c</b> Verify safety and accuracy utilising pharmaceutical calculations	<b>Does</b>	<i>Does</i>
<b>10.2.3.d</b> Develop quality management systems including maintaining appropriate records	<b>Shows how</b>	<i>Shows how</i>
<b>10.2.3.e</b> Manage and maintain quality management systems including maintaining appropriate records	<b>Shows how</b>	<i>Does</i>
<b>10.2.3.f</b> Procure and store medicines and other pharmaceutical products working within a quality assurance framework	<b>Knows how</b>	<i>Does</i>
<b>10.2.3.g</b> Distribute medicines safely, legally and effectively	<b>Knows how</b>	<i>Does</i>
<b>10.2.3.h</b> Dispose of medicines safely, legally and effectively	<b>Knows how</b>	<i>Does</i>
<b>10.2.3.i</b> Manage resources in order to ensure work flow and minimise risk in the workplace	<b>Knows how</b>	<i>Shows how</i>
<b>10.2.3.j</b> Take personal responsibility for health and safety	<b>Does</b>	<i>Does</i>
<b>10.2.3.k</b> Work effectively within teams to ensure safe and effective systems are being followed	<b>Knows how</b>	<i>Does</i>
<b>10.2.3.l</b> Ensure the application of appropriate infection control measures	<b>Shows how</b>	<i>Does</i>
<b>10.2.3.m</b> Supervise others involved in service delivery	<b>Knows how</b>	<i>Does</i>
<b>10.2.3.n</b> Identify, report and prevent errors and unsafe practice	<b>Shows how</b>	<i>Does</i>
<b>10.2.3.o</b> Procure, store and dispense and supply veterinary medicines safely and legally	<b>Knows how</b>	<i>Knows how</i>

#### 10.2.4 Working with patients and the public

<b>Learning outcome</b>	<b>MPharm</b>	<b>Pre-reg</b>
<b>10.2.4.a</b> Establish and maintain patient relationships while identifying patients' desired health outcomes and priorities	<b>Shows how</b>	<i>Does</i>
<b>10.2.4.b</b> Obtain and record relevant patient medical, social and family history	<b>Shows how</b>	<i>Does</i>
<b>10.2.4.c</b> Identify and employ the appropriate diagnostic or physiological testing techniques to inform clinical decision making	<b>Knows how</b>	<i>Shows how</i>
<b>10.2.4.d</b> Communicate information about available options in a way which promotes understanding	<b>Shows how</b>	<i>Does</i>
<b>10.2.4.e</b> Support the patient in choosing an option by listening and responding to their concerns and respecting their decisions	<b>Shows how</b>	<i>Does</i>
<b>10.2.4.f</b> Conclude consultation to ensure a satisfactory outcome	<b>Shows how</b>	<i>Does</i>
<b>10.2.4.g</b> Maintain accurate and comprehensive consultation records	<b>Shows Does</b>	<i>Does</i>
<b>10.2.4.h</b> Provide accurate written or oral information appropriate to the needs of patients, the public or other healthcare professionals	<b>Shows how</b>	<i>Does</i>

#### 10.2.5 Maintaining and improving professional performance

<b>Learning outcome</b>	<b>MPharm</b>	<b>Pre-reg</b>
<b>10.2.5.a</b> Demonstrate the characteristics of a prospective professional pharmacist as set out in relevant codes of conduct and behaviour	<b>Does</b>	<i>Does</i>
<b>10.2.5.b</b> Reflect on personal and professional approaches to practice	<b>Does</b>	<i>Does</i>

<b>10.2.5.c</b> Create and implement a personal development plan	<b>Does</b>	<i>Does</i>
<b>10.2.5.d</b> Review and reflect on evidence to monitor performance and revise professional development plan	<b>Does</b>	<i>Does</i>
<b>10.2.5.e</b> Participate in audit and in implementing recommendations	<b>Knows how</b>	<i>Shows how</i>
<b>10.2.5.f</b> Contribute to identifying learning and development needs of team members	<b>Knows how</b>	<i>Does</i>
<b>10.2.5.g</b> Contribute to the development and support of individuals and teams	<b>Knows how</b>	<i>Does</i>
<b>10.2.5.h</b> Anticipate and lead change	<b>Knows how</b>	<i>Shows how</i>

## Appendix 3 – Indicative syllabus

It is expected that education providers will use the indicative syllabus to develop a detailed programme of study which will enable pharmacists to meet the learning outcomes.

### A1.1 How medicines work

#### Therapeutics

- Routes of administration
- New therapeutic advances
- Infection control
- Complementary therapies
- Clinical therapeutic uses of drugs

#### Applied Physical, Chemical and Biological sciences

- Sources and purification of medicinal substances
- Physicochemical characteristics of drugs and biological systems
- Thermodynamics and chemical kinetics
- (Bio)Analytical principles and methods
- Drug design and discovery
- Cell and molecular biology
- Biochemistry
- Genetics
- Microbiology
- Immunology
- Pharmaceutical chemistry
- Drug identification
- Drug synthesis

#### Pharmacology, pharmacokinetics & pharmacodynamics

- Contraindications, adverse reactions and drug interactions
- ADME
- Prediction of drug properties
- Pharmacogenetics and pharmacogenomics
- Drug and substance misuse
- Clinical toxicology and drug-over-exposure
- Molecular basis of drug action
- Metabolism

#### Pharmaceutical technology including manufacturing & engineering science

- Biotechnology
- Manufacturing methods
- Quality assurance processes
- Sterilisation and asepsis
- Environmental control in manufacturing

#### **Formulation and material science**

- Materials used in formulations and devices
- Biopharmaceutics, developmental pharmaceuticals, pre-formulation and formulation studies
- Design and standardization of medicines
- Microbiological contamination
- Contamination control
- Product stability
- Medical devices

### **A1.2 How people work**

#### **Normal & abnormal structure & function**

- Nutrition
- Physiology
- Pathology
- Infective processes

#### **Sociology**

- Social and behavioural science

#### **Health psychology**

- Health promotion
- Disease prevention
- Behavioural medicine

#### **Objective diagnosis**

- Differential diagnosis
- Symptom recognition
- Diagnostic tests

#### **Epidemiology**

- Aetiology and epidemiology of (major) diseases

### **A1.3 How systems work**

#### **Healthcare management**

- Public health
- Organisations: NHS, DH, govt priorities
- Other professionals
- Health care systems

#### **Evidence-based practice**

- Health information systems/ resources
- Health policy and (pharmaco)economics

#### **Professional regulation**

- Legislation

- Professional ethics and fitness to practise
- Sale and supply of medicines
- CPD
- Political and legal framework

#### **Medicines regulation**

- Evaluation and regulation of new drugs and medicines
- Pharmacopoeial specifications and biological standards
- Medicines licensing
- Product quality, safety and efficacy
- The supply chain
- Packaging, labelling and patient information

#### **Clinical governance**

- SOPs
- Research methodology / research ethics
- Risk & quality management
- Good manufacturing/dispensing practice
- Good clinical practice
- Health policy, clinical and science research methods

#### **Clinical management**

- Disease management
- Chronic medicines management
- Medicines use review
- Care planning

#### **Workplace Regulation**

- Health & Safety
- Sexual boundaries
- Independent Safeguarding Authority
- Data protection
- FOIA
- Consumer protection incl. complaints procedures

### **A1.4 Core and transferable skills**

#### **Professionalism**

#### **Research and research methods**

#### **Critical appraisal**

- Audit and learning from errors

#### **Problem solving**

- Study skills
- Team-working skills

#### **Clinical decision making**

- Leadership skills

#### **Accurate record keeping**

**Reflective practice (incl. continuing professional development)**

**Effective communication**

- Interpersonal skills
- Medical terminology

**Interpret & interrogate clinical data**

**Analyse & use numerical data**

**Pharmaceutical numeracy**

**Technological literacy**

**A1.5 Attitudes and values**

**See the GPhC *Code of Conduct for pharmacy students (2010)* and *Standards of conduct, ethics and performance (2010)***