Reaccreditation of a Master of Pharmacy degree course (MPharm)

University of Hertfordshire

Report of a reaccreditation event, 11-13 June 2013

Introduction

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). 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.

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’.

Background

As part of the Royal Pharmaceutical Society of Great Britain’s accreditation process for new MPharm provisions, a Step 7 visit to the University took place on 24 February 2009. As a result of the first part of the Step 7 accreditation event, the accreditation team made two separate judgements:

1. whether or not the School had met the criteria for providers delivering a new MPharm degree; and
2. whether or not the School had met the criteria for an established provider delivering an existing MPharm degree.

The team agreed that both sets of criteria had been met. Consequently, the team agreed to recommend to the Society’s Education Committee that the University should be permitted to progress from the process for the accreditation of a new MPharm degree to the process for the accreditation of an existing MPharm. This meant that
the University of Hertfordshire delivered a fully accredited MPharm, subject to a confirmatory visit to the Final Honours Board meeting in June 2009, which took place subsequently. The accreditation team recommended to Education Committee that the University should be accredited as an MPharm provider for a full period of five years. There were no conditions or recommendations.

Subsequent to a reorganisation of the University structure, the University’s MPharm degree is delivered by the Department of Pharmacy, formerly the School of Pharmacy, which is one of the four disciplines within the new School of Life and Medical Sciences.

Documentation

The provider submitted submission documentation to the GPhC in line with agreed timescales and a pre-visit took place at the University of Hertfordshire on 10 May 2013. During the pre-visit the schedule of meetings and timings for the reaccreditation event were confirmed.

The event

The event began with a private meeting of the accreditation team and GPhC representatives on 11 June 2013. The remainder of the event took place on site at the University of Hertfordshire on 12-13 June 2013 and comprised a series of meetings with staff and students of the University and included a tour of the University facilities.

Accreditation team

The GPhC’s accreditation team (‘the team’) comprised:

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<thead>
<tr>
<th>Name</th>
<th>Designation at the time of accreditation event</th>
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<tbody>
<tr>
<td>Mr Peter Curphey</td>
<td>Accreditation team leader, Community Pharmacy Consultant</td>
</tr>
<tr>
<td>Prof Anthony Smith</td>
<td>Accreditation team member (Academic), Vice Provost (Education), University College London</td>
</tr>
<tr>
<td>Prof Larry Gifford</td>
<td>Accreditation team member (Academic), Former Dean, School of Pharmacy, University of Manchester</td>
</tr>
<tr>
<td>Mr Ian Smith</td>
<td>Accreditation team member (Pharmacist), Community Pharmacist and Teacher-practitioner, University of Manchester</td>
</tr>
<tr>
<td>Ms Raminder Sihota</td>
<td>Accreditation team member (Pharmacist), Head of Professional learning and Development, Boots UK</td>
</tr>
<tr>
<td>Mrs Sylvia Hikins</td>
<td>Accreditation team member (Lay), Non-executive Director and Vice Chair, Mersey Regional Ambulance Service Trust</td>
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along with:

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<tr>
<th>Name</th>
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<tr>
<td>Ms Joanne Martin</td>
<td>Quality Assurance Manager (Education), General Pharmaceutical Council</td>
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*attended pre-visit meeting on 10 May 2013

Declaration of potential conflicts of interest

No potential conflicts of interest were declared.

The team also met a group of 13 students comprising 3 from Year 1, 2 from Year 2, 3 from year 3, 3 from Year 4, along with 2 pre-registration trainee graduates.

Meeting the accreditation standards

<table>
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<th>Accreditation team’s commentary</th>
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<tr>
<td><strong>Standard 1 – Patient and public safety</strong></td>
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<tr>
<td>There must be clear procedures to address concerns about patient safety arising from initial pharmacy education and training. Concerns must be addressed immediately.</td>
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<tr>
<td>The Department of Pharmacy operates a system to ensure students do not jeopardise patients’ safety. The process starts prior to students being admitted to the programme, during the admissions process, and throughout the four years of the programme. To ensure patient safety in Year 1 students undertake pre-visit seminars to discuss behaviour, confidentiality and Health &amp; Safety issues in relation to the Code of Conduct for Pharmacy Students. This is also repeated in Year 2 prior to their visits. Students undergo pre-placement preparation tutorials in order to clarify the Code of Conduct, their responsibilities, and their expected tasks. Concerns about students are channelled through the Fitness to Practise Procedures of the School of Life and Medical Sciences. Each student signs the Code of Conduct for Pharmacy Students. Responsibility for safety is further inculcated both in the practice and laboratory environments. During placements students are supervised directly for half of their time, spending the other half working independently to complete specific placement tasks. Mentors ensure that students are not left alone in direct contact with patients, and must be contactable by the student at all times. It is made clear to students that the GPhC Code of Conduct for Pharmacy Students applies in all settings. Students do not pass the modules unless critical elements are consistently achieved in all years. During the dispensing, extemporaneous, numeracy competency, aseptic and OSCPE assessments there are critical elements that must be passed to ensure patient safety. Students interviewed described teaching and learning in the area of ethical dilemmas to meet patients from including considerations around abortion, contraception and drugs in sport; this was described as bordering on a study of philosophy. Students also appreciated the opportunity of meeting patients from a range of backgrounds; this encouraged them to develop their communication skills.</td>
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In this respect, students also told the team that they considered it valuable that the groups for small-group teaching were changed every year, giving them the opportunity to work with a range of fellow students.

**The team was satisfied that all criteria to meet this standard will be met**

| **Standard 2 – Monitoring, review and evaluation of initial education and training** | The pharmacy provision is now offered by a Department of Pharmacy in the School of Life and Medical Sciences. The Department structure has four core disciplines which comprise: Pharmaceutics, Drug Delivery and Toxicology; Pharmaceutical Chemistry and Analysis; Pharmacy Practice and Public Health; Clinical Pharmacy and Therapeutics. The Head of Department is assisted by the Programme Tutor, the Year and Module Leads to ensure the smooth running and development of the MPharm Programme. Admissions Policies, Regulations and Procedures are within the MPharm Programme Specification which is the responsibility of the MPharm Programme Committee. The Admissions Tutor for the MPharm Programme is responsible to the Head of Department who in turn is responsible to the Dean of School for the management of student admissions. The MPharm Admissions Tutor works in close liaison with the Head of the Student Centre to enable the University’s Admissions Service to admit students under the guidelines within the framework agreed between them.

The Department of Pharmacy operates a quality assurance process for its placement sites, for both the site and tutor. Each site undergoes an accreditation procedure every 3 years. Sites must submit a standardised approval form with details of the environment, services provided, staffing, access to computer facilities and an agreement that they take on the responsibility for the Health & Safety of the student.

**The team was satisfied that all criteria to meet this standard will be met** |

| **Standard 3 – Equality, diversity and opportunity** | All newly appointed lecturing staff are required to attend the University's Induction and pass the Continuing Professional Academic Development (CPAD) Programme in which equality and diversity issues are addressed. The Department has a diverse staff mix and also a diverse student mix and hence there is experience in working with cultural issues; this was described as a benefit of working in the Department. Specific staff can support others in working with culturally sensitive issues such as head dress in laboratories. There is experience of managing equality and diversity issues with, for example, examination timetabling, special needs and learning agreements, as well as with the use of learning and teaching approaches. All examination scripts are marked anonymously. Contemporaneous completion of the on-line module is also a requirement for existing staff undertaking appraisal awareness and skills training and for those undertaking training for staff recruitment and selection. |

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General Pharmaceutical Council, MPharm reaccreditation report
University of Hertfordshire, 11-13 June 2013
### Standard 4 – Selection of students and trainees

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.

The entry requirements are stated on the University website. This includes a list of the academic tariffs and a statement to the effect that all offers will also be subject Disclosure Barring Service (DBS) and health checks. The level of competition for places has increased since the introduction of the programme and there has also been an increase in entry standards. The standard entry requirements for A-Level entry have increased from a minimum entry tariff of 260 points in 2005 to 340 in 2013. For 2013/14, the required full UCAS tariff is 340 points including GCE A2-Level chemistry at grade B and at least one other science (Maths, Physics, Biology or Psychology) at A2-Level grade B. Anyone completing 3 A-levels only is required to achieve ABB (including A2-level chemistry and another science). The offer-acceptance conversion rate had decreased over the last 4 years from 48% to 27%. The team was told that in the last recruitment round around 60 students were accepted through Clearing, the majority being described as high-performing students. Application were said to be down by 5% in the current recruitment round and it was anticipated that around the same number of students would be recruited through Clearing. The team was told that recruitment was buoyant across the School and hence there would be no pressure from the School for the department to increase MPharm numbers. The Head of Department clarified that the target was 135 Home/EU students plus 10 international/ELQ students, reducing to an overall 120 in two years. He explained that the Department had considered reducing the intake more quickly but that it had been decided to phase the reduction. The Pharmacy admissions team receives specific training on the University’s selection and admission policies and practices, including equality and diversity training.

The team was satisfied that all criteria to meet this standard will be met.

### Standard 5 – Curriculum delivery

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 practice safely and effectively.

The stated objectives are to create a balanced programme that integrates science and professional practice; for staff to teach effectively in an integrated curriculum; to develop a rigorous assessment programme that balances formative and summative measures; and to establish and maintain an active research community to ensure teaching is informed by research. The existing programme has been subject to continual review through annual monitoring and modification. Several times during the meetings staff members expressed the view that the original programme was capable of meeting the new GPhC standards and that the new programme represented a development of the original programme rather than a de novo programme. The philosophy of the programme involves integration of science and practice using a variety of teaching methods, assessments and feedback. These are modelled on a spirally integrated approach to curriculum design in which elements of the course build on previously learned material and application in the professional setting. The approach had been to utilise larger (30-credit) modules than had been used in the original programme. In considering the level of integration in the programme, the team noted that staff members referred on numerous occasions to the signposting associated with the programme. The team also noted that despite the clear evidence from the small sub-group meetings that staff members from the different areas of pharmacy were aware of each other’s teaching and were communicating well, there remained a strong sense of identity with their own subject areas in that staff members described themselves in terms...
of their subject area. The team agreed that there was evidence that the GPhC outcomes would be met (see commentary to Standard 10 below) and also agreed that there was sufficient evidence of integration to satisfy this criterion. Nevertheless, the team noted the still-remaining strong sense of subject area identity and the frequent use of signposting in the teaching team’s description of the inter-relationships between modules. As a result, the team would encourage the Department to continue to enhance and refine the degree of integration of the programme.

Practical experience of working with patients, carers and other healthcare professionals starts from the beginning of the programme with a practice visit, interviews with patients who have chronic conditions and case studies on minor ailments and exercises in the simulated pharmacy. Pharmacy students learn together with students from a range of other health and social care professions including midwives, nurses, dieticians, paramedics, physiotherapists, radiographers and social workers. The team was told that contact with medically-qualified staff is organised through GPs coming in to the department to teach clinical assessment, supported by simulation of interactions with medical personnel. In the first two years, students undertake one-day work visits to hospital and community pharmacies and the pharmaceutical industry. In the third year a one week placement is undertaken in either hospital or community pharmacy. In the year 3 inter-professional learning module students experience visits by a range of patients and their carers. Students interviewed told the team that the interprofessional learning sessions helped to generate respect for other professions and to reduce the dangers of hierarchy in health provision. The team welcomed the inclusion of a substantial element of interprofessional learning with students of other healthcare professions early in the programme but noted that students had no interaction with medical students. Also, the team noted that the interprofessional learning modules were restricted to years 1 and 3 and therefore did not represent a year-on-year increase in such provision. The team would encourage the Department to continue its efforts to incorporate more interprofessional learning in the programme and certainly to extend it to Years 2 and 4 but recognises the use of simulation IPE in both year 2 and 4.

Each learning outcome is mapped to assessment methodology. Assessment has been informed by feedback from graduates of the programme. Each module summative assessment was said to be preceded by a formative assessment. For laboratory classes students are required to make an entry for each class but the first ones are formatively marked as a guide for students who have to write a final summative report on the group of laboratory classes. All competency assessments are marked on a pass/fail basis. Staff members told the team that the Department has reduced problems with students failing calculations as students now realised the importance of numeracy skills, which are now barriers to progression in all but the first year, and worked hard to improve such skills. Students told the team that feedback improves as the programme progresses. Students described feedback as being timely with a standard 4-week time limit; students are informed if feedback is likely to be delayed along with reasons. The team welcomed the Department’s efforts over the years to develop a more robust approach to progression regulations, particularly in view of the University’s graduates’ relatively weak performance in the GPhC registration assessment.
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<th><strong>Standard 6 – Support and development for students and trainees</strong></th>
<th>The team was satisfied that all criteria to meet this standard will be met</th>
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<tr>
<td>Students and trainees must be supported to develop as learners and professionals during their initial education and training.</td>
<td>Students’ views on the MPharm Programme are primarily received through the Pharmacy Programme Committee, which is responsible for agreeing and monitoring any changes to the Programme. The membership of the Committee includes 3-4 student representatives from each year of the programme, all staff teaching on the Pharmacy Programme, technical staff, and stakeholder representatives. Student representatives contribute to the meeting by discussing issues raised by their peers relating to the organisation of the modules. Students told the team that student liaison meetings are held twice per semester and the outcomes are fed into the Programme Committee. The team was told that serious issues are dealt with quickly and that the student representatives provide feedback to their constituencies. The team was also told that teachers inform students of feedback issues that emerged in the previous year and how these were dealt with. Students told the team that their representatives had been involved in the discussions about and planning for the new MPharm programme. There had also been student representation at the internal validation of the programme.</td>
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<th><strong>Standard 7 – Support and development for academic staff and pre-registration tutors</strong></th>
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<td>Anyone delivering initial education and training should be supported to develop in their professional roles.</td>
<td>The University has a policy of a maximum of 14 staff members within any line management group. As a result, the pharmacy practice staff members are organised into two groups, clinical and practice. Line managers are responsible for ensuring that all staff members have a realistic workload proportional to their contracted hours of work and commensurate with their experience. Workload is monitored using a Score card system. Line managers are also involved in the planning of the mentorship scheme for staff. An Induction Programme is mandatory for all new staff, and takes the form of structured central and local induction. New staff induction includes an online Health and Safety module, an online Equality and Diversity module, as well as compulsory Equality and Diversity training. Local induction is performed with a mentor and a senior member of staff and provides the orientation to the programmes of research and education within the Department.</td>
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<th><strong>Standard 8 – Management of initial education and training</strong></th>
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<td>Education and training must be planned and maintained through transparent processes which must show who is responsible for what at each stage</td>
<td>The Dean of the School of Life Sciences is directly accountable through the Deputy Vice Chancellor to the Vice Chancellor (VC). The Head of the Department of Pharmacy is accountable for the delivery of the Business Plan of the Department of Pharmacy to the Dean. The Head of Department has executive responsibility for the strategic direction and operational delivery of the MPharm Programme. In context of the MPharm Degree the key staff members are: Programme Tutor, Lead for Clinical Developments, Programme Administrator, Module Leaders and Year Leads, as well as the Lead for Fitness to Practise and the admissions team. The Department holds regular stakeholder meetings that include public and patient’s representatives. The patient representatives were described as highly involved in the development of the Department and programme.</td>
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The team was satisfied that all criteria to meet this standard will be met

| **Standard 9 - Resources and capacity** | Budgets are set in agreement with the Deputy Vice Chancellor and the Director of Finance based on the School of Life and Medical Sciences Strategic Plan and Business Plan at an annual budget and target setting meeting. The team noted that the income figures in two of the submitted tables revealed a large increase in income between 2011/12 and 2012/13 from around £5.5M to around £7.4M and did not understand the basis of the figures. It was explained that the figures reflected partially an increase in student numbers but that the major factor was a contribution from large research overheads. The team would encourage the University to produce more transparent accounting figures in any subsequent documentation. The team was also concerned at the lack of accuracy of and inconsistencies in the presentation of the plans for student recruitment discussed previously. However it was clarified in meetings with the Head of School and senior staff members that business planning operates on a strategic business unit model. The business plan starts in February and ends in June. Consequently there are several iterations. The difference in the tables was due to updates at each stage. The team were satisfied that the process therefore appeared to be robust in light of this confirmation. Overall in the Department there are 50 academic staff members, including 29 holding a PhD. Twenty four of the staff members are pharmacists. Seven members of staff are teacher-practitioners. There are four professors and the holder of the Chair in Clinical Pharmacology & Therapeutics is medically qualified. It was stated that there is now a reasonable balance of subject expertise but that the balance is monitored on a yearly basis. As the department is planning to increase the proportion of clinical teaching, there are plans to appoint a principal lecturer in clinical practice and a Professor of Pharmacy Practice and Health Services. The team was told that the appointment of the professor was not just to address teaching issues but that with the previous Head of the Department moving out of the Department to become the Dean a new figurehead was required to drive research in the area. All staff members undergo annual appraisals which are linked to their professional development. All staff members have the opportunity to apply for regularly offered secondments to the Learning and Teaching Institute. This allows them to develop academic research portfolios. Teacher-practitioners and visiting lecturers are encouraged to become full-time when the opportunity arises. |
| **Standard 10 - Outcomes** | In order for the team to review how the course ensures that students meet the required learning outcomes at the correct level, and that the science and practice elements of the course are fully integrated, the team met with teaching staff in two parallel integrated-outcomes sessions. The team identified ten learning outcomes and six themes to scrutinise in detail during these sessions; and each was discussed in detail with the science and practice staff present. The documentation and further evidence provided by staff during the meetings provided sufficient evidence to suggest that all outcomes would be delivered at the appropriate level. |
The team was content 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.

**Summary and conclusions**

The accreditation team agreed to recommend to the Registrar of the General Pharmaceutical Council that the University of Hertfordshire should be reaccredited to provide an MPharm degree for a further period of six years, with a practice visit to take place in three years.

The team drew the attention of the Department to the standing condition that all approved providers must notify the GPhC of any significant changes to the MPharm degree.

As a result of this event, a private record and a public report will be prepared and sent to the University for it to comment on matters of factual accuracy. Once agreed by the Registrar, both documents will be sent to the University for its records and the report, along with a formal response from the University, will be posted on the Council’s website for the duration of the accreditation period. The full record and report includes other comments from the team and the Registrar regards the record and report in its entirety as its formal view on provision. Providers are required to take all comments into account as part of the reaccreditation process.

The team’s recommendations are not binding on the Registrar, who may accept, modify or reject them. Also, the accreditation team’s feedback is confidential until it has been ratified by the Registrar of the General Pharmaceutical Council but it may be shared with staff and students internally.

**Standing condition of accreditation:**

These are the conditions which will apply in all circumstances of degree accreditation:

1. The school or department of pharmacy always seeks approval from the General Pharmaceutical Council for curriculum amendments and always at least informs the General Pharmaceutical Council of significant changes to pharmacy undergraduate student numbers or resources for their teaching, learning support and assessment, including any change from internal to teaching, learning and assessment from outside the school or department;
2. The school or department of pharmacy produces and submits to the General Pharmaceutical Council annually requested data on student numbers and progression and degree awards;
3. The school or department of pharmacy produces and submit to the General Pharmaceutical Council annually requested information about the extent of human and physical resources it enjoys for the delivery and support of the degree course;

4. The school or department of pharmacy or the university makes students and potential students aware of the existence and Internet address where they can view the General Pharmaceutical Council’s summary reports of degree accreditation exercises, main actions therefrom and of the timetable for future accreditation exercises.

The Pharmacy Order 2010 states:
Part 5 Education, training and acquisition of experience and continuing professional development, Information to be given by institutions or other providers, 46. ...

(3) Whenever required to do so by the Council, any institution or other provider to which this article applies must give to the Council such information and assistance as the Council may reasonably require in connection with the exercise of its functions under this Order.

(4) Where an institution or other provider refuses any reasonable request for information made by the Council under this article, the Council may, in accordance with article 47 (‘Refusal or withdrawal of approval of courses, qualifications and institutions’), refuse to approve or withdraw approval from, any course of education or training, qualification, test or institution or other provider to which the information relates.

It is a requirement of accreditation that institutions or other providers provide the GPhC proactively and in a timely manner with any information which is, or has the potential to be, material to the delivery of an accredited course. This includes, but is not limited to: changes in staffing, changes in funding, and/or substantial changes in curriculum or delivery.


Caution: Preregistration and employment as a pharmacist:

- In respect of all students, successful completion of an accredited course in not a guarantee of a placement for a pre-registration year or of future employment as a pharmacist.

Following the above reaccreditation event, the Head of Education and Registration policy on behalf of the Registrar of the General Pharmaceutical Council agreed with the accreditation team’s recommendation and approved the University of Hertfordshire MPharm degree for reaccreditation a further period of 6 years. Reaccreditation will take place in six academic years’ time, with an interim practice visit in three academic years’ time (2015-16).
Appendix 1 – Standards for the initial education and training of pharmacists

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 Code of Conduct for Pharmacy Students (2010) Standards of conduct, ethics and performance (2010);
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 & 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 tutors 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 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 facilities 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
10.1 Learning outcome

<table>
<thead>
<tr>
<th>Learning outcome</th>
<th>MPharm</th>
<th>Pre-reg</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.1.a Recognise ethical dilemmas &amp; respond in accordance with relevant codes of conduct and behaviour</td>
<td>Shows how</td>
<td>Does</td>
</tr>
<tr>
<td>10.1.b Recognise the duty to take action if a colleague’s health, performance or conduct is putting patients or public at risk</td>
<td>Knows how</td>
<td>Knows how</td>
</tr>
<tr>
<td>10.1.c 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</td>
<td>Does</td>
<td>Does</td>
</tr>
<tr>
<td>10.1.d Apply the principles of clinical governance in practice</td>
<td>Knows how</td>
<td>Does</td>
</tr>
<tr>
<td>10.1.e Demonstrate how the science of pharmacy is applied in the design and development of medicines and devices</td>
<td>Shows how</td>
<td>Knows how</td>
</tr>
<tr>
<td>10.1.f Contribute to the education and training of other members of the team, including peer review and assessment</td>
<td>Shows how</td>
<td>Does</td>
</tr>
<tr>
<td>10.1.g Contribute to the development of other members of the team through coaching and feedback</td>
<td>Knows how</td>
<td>Shows how</td>
</tr>
<tr>
<td>10.1.h Engage in multidisciplinary team working</td>
<td>Knows how</td>
<td>Does</td>
</tr>
<tr>
<td>10.1.i Respond appropriately to medical emergencies, including provision of first aid</td>
<td>Knows how</td>
<td>Shows how</td>
</tr>
</tbody>
</table>

10.2 The skills required in practice

10.2.1 Implementing health policy

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

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

<table>
<thead>
<tr>
<th>MPharm</th>
<th>Pre-reg</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Identify and employ the appropriate diagnostic or physiological testing techniques in order to promote health</td>
<td>Knows how</td>
</tr>
<tr>
<td>b. Identify inappropriate health behaviours and recommend suitable approaches to interventions</td>
<td>Shows how</td>
</tr>
<tr>
<td>c. Instruct patients in the safe and effective use of their medicines and devices</td>
<td>Shows how</td>
</tr>
<tr>
<td>d. Analyse prescriptions for validity and clarity</td>
<td>Shows how</td>
</tr>
<tr>
<td>e. Clinically evaluate the appropriateness of prescribed medicines</td>
<td>Shows how</td>
</tr>
<tr>
<td>f. Provide, monitor and modify prescribed treatment to maximise health outcomes</td>
<td>Shows how</td>
</tr>
<tr>
<td>g. Communicate with patients about their prescribed treatment</td>
<td>Shows how</td>
</tr>
<tr>
<td>h. Optimise treatment for individual patient needs in collaboration with the prescriber</td>
<td>Shows how</td>
</tr>
<tr>
<td>i. Record, maintain and store patient data</td>
<td>Shows how</td>
</tr>
<tr>
<td>j. 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.</td>
<td>Shows how</td>
</tr>
</tbody>
</table>

### 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

<table>
<thead>
<tr>
<th>MPharm</th>
<th>Pre-reg</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.2.3.a. Ensure quality of ingredients to produce medicines and products</td>
<td>Knows how</td>
</tr>
<tr>
<td>10.2.3.b. Apply pharmaceutical principles to the formulation, preparation and packaging of products</td>
<td>Shows how</td>
</tr>
<tr>
<td>10.2.3.c. Verify safety and accuracy utilising pharmaceutical calculations</td>
<td>Does</td>
</tr>
<tr>
<td>10.2.3.d. Develop quality management systems including maintaining appropriate records</td>
<td>Shows how</td>
</tr>
<tr>
<td>10.2.3.e. Manage and maintain quality management systems including maintaining appropriate records</td>
<td>Shows how</td>
</tr>
<tr>
<td>10.2.3.f. Procure and store medicines and other pharmaceutical products working within a quality assurance framework</td>
<td>Knows how</td>
</tr>
<tr>
<td>10.2.3.g. Distribute medicines safely, legally and effectively</td>
<td>Knows how</td>
</tr>
<tr>
<td>10.2.3.h. Dispose of medicines safely, legally and effectively</td>
<td>Knows how</td>
</tr>
<tr>
<td>10.2.3.i. Manage resources in order to ensure work flow and minimise risk in the workplace</td>
<td>Knows how</td>
</tr>
<tr>
<td>10.2.3.j. Take personal responsibility for health and safety</td>
<td>Does</td>
</tr>
</tbody>
</table>
### 10.2.3 Learning outcomes

<table>
<thead>
<tr>
<th>Learning outcome</th>
<th>MPharm</th>
<th>Pre-reg</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.2.3.k. Work effectively within teams to ensure safe and effective systems are being followed</td>
<td>Knows how</td>
<td>Does</td>
</tr>
<tr>
<td>10.2.3.l. Ensure the application of appropriate infection control measures</td>
<td>Shows how</td>
<td>Does</td>
</tr>
<tr>
<td>10.2.3.m. Supervise others involved in service delivery</td>
<td>Knows how</td>
<td>Does</td>
</tr>
<tr>
<td>10.2.3.n. Identify, report and prevent errors and unsafe practice</td>
<td>Shows how</td>
<td>Does</td>
</tr>
<tr>
<td>10.2.3.o. Procure, store and dispense and supply veterinary medicines safely and legally</td>
<td>Knows how</td>
<td>Knows how</td>
</tr>
</tbody>
</table>

### 10.2.4 Working with patients and the public

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

### 10.2.5 Maintaining and improving professional performance

<table>
<thead>
<tr>
<th>Learning outcome</th>
<th>MPharm</th>
<th>Pre-reg</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Demonstrate the characteristics of a prospective professional pharmacist as set out in relevant codes of conduct and behaviour</td>
<td>Does</td>
<td>Does</td>
</tr>
<tr>
<td>b. Reflect on personal and professional approaches to practice</td>
<td>Does</td>
<td>Does</td>
</tr>
<tr>
<td>c. Create and implement a personal development plan</td>
<td>Does</td>
<td>Does</td>
</tr>
<tr>
<td>d. Review and reflect on evidence to monitor performance and revise professional development plan</td>
<td>Does</td>
<td>Does</td>
</tr>
<tr>
<td>e. Participate in audit and in implementing recommendations</td>
<td>Knows how</td>
<td>Shows how</td>
</tr>
<tr>
<td>f. Contribute to identifying learning and development needs of team members</td>
<td>Knows how</td>
<td>Does</td>
</tr>
<tr>
<td>g. Contribute to the development and support of individuals and teams</td>
<td>Knows how</td>
<td>Does</td>
</tr>
</tbody>
</table>
Indicative syllabus

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 pharmaceutics, 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)