Master of Pharmacy degree (MPharm); Integrated 5-year Programme

Keele University
Report of a step 1 accreditation event
June 2017
## Event summary and conclusions

<table>
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<th>Provider</th>
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<td><strong>Course</strong></td>
<td>Masters of Pharmacy degree (MPharm); Integrated 5-year programme</td>
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<td><strong>Event type</strong></td>
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<td><strong>Step</strong></td>
<td>1</td>
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<td><strong>Event date</strong></td>
<td>7-8 June 2017</td>
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<td><strong>Accreditation period</strong></td>
<td>Working towards accreditation: next visit due 2017/18</td>
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<td><strong>Outcome</strong></td>
<td>The accreditation team agreed to recommend to the Registrar of the General Pharmaceutical Council that the 5-year integrated pre-registration MPharm degree proposed at the Keele University should be permitted to progress from step 1 to step 2 of the MPharm accreditation process subject to one condition.</td>
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<tr>
<td><strong>Conditions</strong></td>
<td>The University must produce assessment criteria for each of the major placements in order to provide clarity in terms of the expectations for student achievement within each of the major placements. There must be a process to ensure consistency of assessment between Healthcare Practitioner Tutors and between major placement blocks. This is to meet standard 5.7, 5.10 and 5.13; The deadline to meet this condition is 31 July 2017. The team recognised that some aspects of this 5-year MPharm degree are still in development and therefore will return for the step 2 visit in the next academic year (2017/18) to review progress.</td>
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<td><strong>Standing conditions</strong></td>
<td>Please refer to Appendix 1</td>
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<td><strong>Registrar decision</strong></td>
<td>Following the event, the provider submitted a response to the condition of accreditation, and the accreditation team agreed it had been met satisfactorily. The Registrar of the GPhC accepted the team’s recommendation and approved the progression of the programme from step 1 to step 2 of the GPhC’s accreditation process.</td>
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<td><strong>Key contact (provider)</strong></td>
<td>Dr Katie Maddock, MPharm Course Director</td>
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<tr>
<td><strong>Accreditation team</strong></td>
<td>Professor Andrew Husband (Team leader) MPharm Programme Director and Professor of Pharmacy Education, Durham University  &lt;br&gt; Professor Jane Portlock (Team member - Academic) Professor of Pharmacy Postgraduate Education, University of Sussex  &lt;br&gt; Mrs Karen Pitchford (Team member - Academic) Senior Teaching Fellow in Pharmacy Law and Practice, Aston University  &lt;br&gt; Professor Barrie Kellam (Team member - Academic) Professor of</td>
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**Keele University, 7-8 June 2017**
**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 (MPharm) degree course. This accreditation 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.


**Background**

The MPharm programme at the University of Keele is delivered by the School of Pharmacy, one of four Schools in the Faculty of Health. The programme achieved final accreditation by the Royal Pharmaceutical Society of Great Britain, the accrediting body at that time, in May 2010 and was reaccredited for a full period of six years by the GPhC in 2014. On that occasion the reaccreditation was subject to one condition which required the School to produce a definitive resource plan to reflect the expansion of the pharmacy provision at Keele; while the team accepted the Head of School’s assurances that these developments were to support the sustainability of the MPharm degree, it was essential for these plans and the resources to be clear and transparent and to reflect a realistic workload for the academic staff. This condition was subsequently met, following which the School informed the GPhC of its intention to introduce a 5-year MPharm programme in which pre-registration training would be integrated with the academic provision. The process for accrediting an integrated, five-year degree built upon an established, accredited four-year programme, comprises four steps, with steps 3 and 4 normally taking place respectively in years 4 and 5 of the programme; the completion of step 4 will also require GPhC representatives to attend the examination board at the end of year 5. Accordingly, a step 1 visit took place in June 2017 and the following is a record of that event.
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 Keele University on 15 May 2017. 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 7 June 2017. The remainder of the event took place on site at Keele University on 08 June 2017, and comprised a series of meetings with staff of the University.

Declarations of interest

Professor Portlock was external examiner for postgraduate taught courses from 2011 to 2014. Professor Watson stated that NES had a contract with Professor Chapman and that there was an ongoing agreement involving agreement involving the CE centres (CPPE, WCPPE and NHS Education for Scotland). The team agreed that these did not represent conflicts of interest.

Key findings

Standard 1: Patient and public safety

The team was satisfied that all criteria relating to this standard will be met. (See Appendix 2 for criteria)

The School has effective systems in place to ensure that students do not jeopardise patient safety. Students are developed as professionals whose first priority is to protect the public and learn what constitutes professional behaviour. Learning is initially in a safe environment where there is no risk to patients; here pharmacy practice and clinical skills are learned through role play, including with simulated patients played by actors. From the beginning of the programme, where they first meet patients, students are made aware of issues around fitness to practise, and of the need to abide by the GPhC’s Code of Conduct for Pharmacy Students (2010), recently replaced (May 2017) by the Standards for Pharmacy Professionals. Teaching covers in detail the nature and application of professionalism in relation to patient safety. Before meeting patients, and before all placements, students are briefed thoroughly on how to communicate and interact with them; students are made aware of their boundaries and the importance of only undertaking tasks in which they are competent. While students are in contact with patients or members of the public, for example, in community pharmacy or on hospital wards, they are appropriately supervised at all times by pharmacists. In the early stages of the programme, placements are purely observational, and students do not make decisions about patients’ care, or provide them with advice. As the course progresses, students increase their involvement in undertaking tasks; these tasks become increasingly complex across the major placements (pre-registration training placements) in years 4 and 5. During these major placements, students will be under the full supervision of a pre-registration tutor. There are established mechanisms whereby students can raise concerns, as well as mechanisms for tutors to raise concerns about a student’s
performance. The School has established a series of standard operating procedures relating to management of all placement activities. Practical skills, especially in relation to pharmacy practice and clinical skills, are assessed using summative, competency-based assessments and students who pose any risk to patients or the public will not be allowed to graduate with an MPharm degree.

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

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

The School of Pharmacy is based within the Faculty of Medicine and Health Sciences. The MPharm course is governed by the Undergraduate Programmes Course Committee (UPCC), which reports to the School Learning and Teaching Committee; this in turn reports to the Faculty Learning and Teaching Committee, which reports to the corresponding committee at University level. Quality of teaching, learning and assessment is evaluated using questionnaires, feedback from the Staff Student Liaison Committee, and input from a panel of four external examiners, who evaluate the quality of assessment through approval of examination papers, review of student work and participation in examination boards. Each September, the School must submit a Curriculum Annual Review and Declaration (CARD) report to the Faculty Learning and Teaching Committee; this report summarises the student profile, student evaluations of the course, programme changes, and curriculum development. Every five years the School is subject to an internal quality assurance review. The 5-year integrated MPharm programme has been developed through close collaboration with stakeholders, including patient representatives and national and local pharmacy employers. In addition to placements in community and hospital pharmacy in the early years, students on the 5-year integrated MPharm will undertake major (pre-registration training) placements in each of years 4 and 5; these will comprise two 13-week placements in year 4 and a 26-week placement in the second half of year 5. There will be a service level agreement in place for each of the placement providers, and students will have honorary contracts. The quality of these placements will be assured through pre-placement checks to ensure their suitability, as well as through monthly audit visits by the School’s Quality Assurance Coordinators; during these visits, the QACs will meet both tutors and students to discuss student progress. Random visits will also take place to ensure that the students are undergoing the appropriate training. Tutors will all be registered pharmacists and will be required to meet both GPhC and NHS standards. A training programme will be provided for all tutors; this will include training for workplace-based assessments, as well as training in IT and in equality and diversity.

**Standard 3: Equality, diversity and fairness**

The team was satisfied that both criteria relating to this standard will be met.

The University has an Equality and Diversity Strategy which sets out five key priorities covering promotion and communication of the commitment to equality and diversity, fostering awareness and understanding of equality and diversity, use of data to review policies and procedures, optimising the student experience, and promoting and maintaining a positive staff experience. Data on equality and diversity collected from all enrolling students are analysed in detail so that changes to policies and practices can be made if anomalies are discovered. All staff members within the University undertake mandatory equality and diversity training as part of their induction upon employment, with biennial mandatory updates thereafter. Major placement providers will already have equality and diversity training in place; there is an expectation that all pre-registration tutors will have undertaken this training and will be required to do so before they are allowed to supervise students on placement. Students will also be required to undertake this training. The University’s equality and diversity standards will be mapped to, and articulated with, those of the provider organisations.
Standard 4: Selection of students and trainees

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

The admission and selection processes for the 5-year programme will be exactly the same as for the standard 4-year MPharm. The entry requirements are publicly available on the University website, which also contains a comprehensive description of the course, its content and the methods of assessment. In addition to possession of appropriate academic qualifications, including minimum standards in English and mathematics, students must undergo an enhanced DBS check and must comply with the occupational health requirements of the placement providers. All applicants meeting the required criteria for entry onto the 5-year integrated MPharm degree are invited for interview either in person or, in the case of international students, in their home countries by telephone or Skype, although applicants from Hong Kong or Brunei are interviewed face-to-face. Interviews are designed to ensure that applicants are committed to the profession and can communicate effectively, as well testing applicants’ ability to think through patient-orientated ethical problems. These interviews are conducted by members of staff accompanied by current MPharm students; staff and students who conduct interviews all receive training. Once admitted to the programme, students will be allocated to major placements without a further selection process; this allocation will be subject to meeting academic and professional standards, with an extensive focus on language and communication skills, and failure to meet these standards will result in students reverting to the 4-year programme. The allocation will be made with prospective providers during the placements in years 1 and 2, during which tutors will get to know the students. Placement providers will work with the University to match students to those tutors who can give the best support.

Standard 5: Curriculum delivery and student experience

Criteria 5.7, 5.10 and 5.13 are not met and are subject to a condition. The team was satisfied that all other criteria relating to this standard will be met.

The course comprises single 120-credit modules in each of the five years of study. Within these modules teaching is organised into cycles or blocks, each of which covers a number of subject themes in which material is delivered in a way that integrates the pharmaceutical sciences with the practice of pharmacy. Stage 1 allows students to develop their understanding of the relevance of, and links between, each of the pharmaceutical disciplines and the knowledge of a practising pharmacist; this is further developed with more complex concepts at stage 2. Stage 3 covers evidence-based medicine, basic research methods and complex patient groups, leading into a consideration of disease such as clinical infections, cardiovascular disease, central nervous system conditions and endocrine disease, these being expanded upon in stages 4 and 5 which will also include musculoskeletal disease and palliative care. The teaching of public health, law, ethics and practice and core prescribing skills will run throughout the academic years alongside the therapeutic blocks. Integrated case-based learning will be used as the primary learning methodology within stage 3, thus developing the students’ independent learning skills, while most learning in stages 4 and 5 will be based upon a ‘study day’ model based on an electronic package for each therapeutic area; this will contain resources, links to external resources, formative exercises, with electronic discussion groups being used to answer questions and give feedback. Each study day will consist of a flipped classroom session with all members of the integrated teaching team, a student-led teaching session and an integrated TRIPSE (tripartite problem solving exercise). Assessments across the programme include multiple choice questions, integrated examinations, synoptic assessments and coursework, and there will be final, time-limited, competency-based assessment covering the whole course; each student will be required to complete a professional development portfolio in each year of their studies. The ‘learning through practice’ programme will allow students to participate in community and hospital placements across the course, and students will also undertake interdisciplinary learning with students of nursing, midwifery, medicine and physiotherapy. The major placements in years 4 and 5 will be based on a training plan drawn up in conjunction with the stakeholders; these training plans will be mapped to all GPhC Pre-registration Performance Standards to
ensure that these will be met by the students over the course of their three major placements, which will be in community pharmacy, although there are plans to expand these to include, for example, hospital pharmacy and GP practices; these placements will use a detailed workbook in which the competencies will be defined, along with the evidence needed for sign-off by the tutors. The first major placement will take place from October to December in year 4, followed by a period of academic study, with the second placement taking place between July and September of the same year. Stage 5 commences with academic study from October to December and ends with the final, 26-week major placement. The two 13-week placement blocks will be structured so that discrete aspects of practice, such as medicines information and technical services can be covered, with the possibility of students having choice about the aspects to be included; the final, 26-week placement will focus on clinical aspects. The students’ portfolios will document the evidence for meeting the standards and this will be moderated through the embedded quality assurance process (see standard 2); this moderation will include the tutor sign-off at 13, 26 and 39 weeks. There was a lack of clarity as to how students would pass the first two placements where some performance standards had not been fully met, and the criteria for satisfactory/unsatisfactory performance had not been defined. The School acknowledged that a measure of satisfactory performance will be needed and this has not yet been determined. This lack of clarity led to the imposition of a condition that the University must produce assessment criteria for each of the major placements in order to provide clarity in terms of the expectations for student achievement within these placements; there must be a process to ensure consistency of assessment between Healthcare Practitioner Tutors and between major placement blocks.

Standard 6: Support and development for students and trainees

The team was satisfied that the one criterion relating to this standard will be met.

There is a comprehensive support system for students, who each have a personal tutor, this tutor remaining the same throughout the whole course. The main function of the personal tutor is to provide appropriate pastoral care, but functions also include monitoring of attendance and the provision of feedback on assessment performance. The School operates an ‘open door’ policy for all students, so that students may seek advice or assistance from any member of staff throughout the teaching day. Additionally, at stages 1 and 2, each student is allocated a professional mentor (who is not their personal tutor) who will assist students with their professional development portfolios, guiding them through the process of reflection and self-development. The School also operates a ‘buddy’ system, whereby first year students are each allocated a fourth year buddy, and stage 2 students a stage 3 buddy; this provides peer support in academic and personal matters. The University provides extensive support for students, including through the Student Support and Development Services. The Keele Learning Environment (the KLE), which is the virtual learning environment, is both a repository for teaching materials and reading lists, and an active teaching tool, as well as being used to post careers information and advice, along with links to appropriate support and information services. The Keele University website also provides comprehensive student support materials. The School operates a Professional Activity Credit (PAC) system which awards credits for engagement with their personal tutors and participating in the buddy system, as well as for participation in activities out with their studies, such as holding committee positions in University societies, volunteering as a Keele Mentor or with Keele Nightline, or working as a Student Ambassador. The PAC scheme is a pass/fail assessment with students required to achieve incrementally increasing totals of PACs each year. While on their major placements, students remain registered as students and will have the full range of support mechanisms; this includes the allocation of a University tutor who will work with the placement tutor to support the student. Regular meetings between the university tutor, the placement tutor and the student will take place at the placement site along with monthly study days hosted in the School of Pharmacy. This will provide multiple opportunities for students to meet with their university tutors on a face-to-face basis. Further contact via email, webinar or Skype will also be provided. Students will receive regular feedback from both their placement tutor and their university tutor on their progress towards meeting the GPhC performance standards. On their return from the major placements, students’ re-entry to the University will be facilitated by transition tutors. The mechanisms for monitoring student performance and reporting any
problems while on placement include systems that allow students or personal tutors to make contact urgently or privately with the School. Urgent problems can also be identified by telephone or e-mail. Regular visits by the Quality Assurance Coordinators (QAC) and their meetings with students and tutors will readily identify problems that can then be addressed.

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

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

The University operates a Staff Performance Review and Enhancement (SPRE) programme for all members of staff; this process, coordinated by Deans and Directors, provides regular and structured opportunities to explore support and development needs and to explain how these will be provided. The scheme also supports ongoing communication, feedback and dialogue between managers and their staff about everything relevant to a member of staff and his/her role. There is an induction programme which all new members of staff are expected to attend. New members of academic staff must also complete the Teaching and Learning in Higher Education Programme (TLHEP), which focuses on teaching, learning, and assessment; it encourages integration of scholarship, research and/or professional activities with their teaching and allows them to evaluate reflectively the effectiveness of their own practice, and continue their own professional development, while contributing to a learning community of teachers. This course is delivered by the Learning and Professional Development Centre (LPDC) over a 12-month period and successful completion entitles participants to become Fellows of the Higher Education Academy. The programme also provides a platform on which candidates can build their continuing professional development. The LPDC supports all staff and postgraduate researchers in their learning and development through the provision of a range of courses and workshops. All major placement tutors will undertake mandatory induction training provided by the School of Pharmacy; this will include training in workplace-based assessment training. Each new member of staff is allocated a teaching mentor from within the School; these mentors assist their mentees in integrating their subject matter into the pharmacy curriculum, as well as observing teaching sessions, tutorials and assessment exercises undertaken by the trainee. Effective management within the School is achieved by ensuring that line managers are responsible for no more than 6 FTE members of staff; placement tutors will be line managed within their organisational structures, with input from the School of Pharmacy quality assurance team. One function of line-managers is addressing staff workload, which is undertaken using a detailed workload allocation model. Although the proposed new programme will undoubtedly increase the staff workload, the effect will be mitigated because additional staff members have already been recruited in anticipation.

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

The team was satisfied that both criteria relating to this standard will be met.

The School of Pharmacy is one of four schools and three research institutes within the Faulty of Medicine and Health Sciences. The Head of School chairs the Management Board. The Undergraduate Course Committee (UGCC), which reports to the School Learning and Teaching Committee, and in turn to the Management Board, meets at least once per semester to agree course changes, receiving feedback from the Staff Student Liaison Committee (SSLC). For each year of the programme, there is an academic year lead whose responsibilities include the production of examination papers for each stage of the course. Completed examination papers are reviewed by the School’s Examination Paper Board and then sent to the panel of four external examiners for further scrutiny and an overview of balance of content and difficulty. All external examiners attend the main MPharm Examination Board held in June, and at least one attends the reassessment Examination Board in September; they are given an opportunity to review not only completed examination scripts but examples of all coursework.

Learning through practice (LTP) activities form a key part of MPharm students’ learning experience and the School has built excellent relationships with stakeholder groups resulting in the availability of a rich
pool of LTP activities to the students. While community pharmacy placements in year 1 are arranged by the School, students at stages 2-3 are required to arrange their own. Stage 3 hospital LTP experiences are teaching sessions run by Keele Academic Clinical Educators (ACEs) in one of the three NHS Trusts. These LTP experiences are attached to a series of competencies outlined in the LTP handbooks; students are provided with LTP workbooks for each activity that they undertake and in community pharmacy these must be signed, dated and stamped with the official community pharmacy stamp to be validated. Students must achieve a defined average score in each competency to pass the Professional Development Strand in stage 3. Feedback forms are provided that are completed by both the ACE and the student for each session and these must be submitted as part of the Professional Activity Credit (PAC) process. The three major placements in stages 4 and 5 will be organised and supervised by the quality assurance staff within the LTP team. Attendance will be monitored via an electronic reporting system, allowing the School to identify any unauthorised absences early and deal with these appropriately.

**Standard 9: Resources and capacity**

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

The Head of School of Pharmacy has sole responsibility for the financial resources within the School. Resources for the MPharm are allocated according to School business plans which are prepared in a common format and to a timetable determined by the Deputy Vice Chancellor. Subsequent use of School reserves and balances must be authorised by the Director of Finance of the University before any expenditure is incurred, so that cash flow consequences can be managed. Monthly accounts are provided for planning and operational purposes. The Faculty accountant regularly updates the Head of School and the School Business Manager on progress against the business plan. The Head of School reports all perceived and new risks relating to the School’s activities to the Deputy Vice Chancellor through the Dean of the Faculty of Medicine and Health Sciences. The forecast budget shows that the funding is at an appropriate level to deliver an MPharm degree, now and into the future. The proposed programme was developed to mitigate the loss of overseas students on the 4-year MPharm as a result of changes in Home Office regulations on visa requirements. Overseas students registering for a 5-year MPharm programme, incorporating the pre-registration training component of the programme, will be eligible for a 5-year student visa under Home Office regulations. In anticipation of this development the School has recruited a Learning through Practice (LTP) team, comprising academic staff, tutors and administrators, in addition to five Academic Clinical Educators who supervise clinical teaching during hospital visits. Additional costs associated with the LTP programme accrue from the fees paid to the community pharmacies to cover training expenses; accordingly, the fee charged for students on the 5-year programme has been increased to cover these costs, resulting in a differential cost for overseas students on the 5-year programme compared with those on the standard 4-year course, which has been market-tested. Recruitment of students onto the 5-year programme will not result in a net increase in student numbers, as numbers on other programmes will be reduced proportionately. Overall, there are 32.4 FTE members of academic staff, of whom 20 are GPhC registrants, leading to a staff/student ratio of approximately 13.5:1; the academic staff body is supported by a team of administrators and three IT staff. The school also has a rich pool of sessional staff including Honorary Professors and other experts representing the wider NHS, pharmaceutical industry, and healthcare provision in the UK. The current staffing level and level of resource will be sufficient to run both MPharm programmes and any increase in student numbers will result in the recruitment of additional members of staff. The resources for delivering the programme include a well-stocked library, with a significant investment in electronic texts and resources such as Medicines Complete, and extensive IT facilities. The School has well-equipped teaching laboratories, as well as facilities for clinical teaching using computer-generated patients, and for teaching anatomy and chemistry using virtual 3D models.
**Standard 10: Outcomes**

The outcomes relating to Standard 10 were not tested at step 1 but will be considered at the step 2 visit.

**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 accreditation 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

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 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. 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 practice 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

<table>
<thead>
<tr>
<th>Learning outcome</th>
<th>MPharm</th>
<th>Pre-reg</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.1.a</td>
<td>Recognise ethical dilemmas &amp; respond in accordance with relevant codes of conduct and behaviour</td>
<td>Shows how</td>
</tr>
<tr>
<td>10.1.b</td>
<td>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>
</tr>
<tr>
<td>10.1.c</td>
<td>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>
</tr>
<tr>
<td>10.1.d</td>
<td>Apply the principles of clinical governance in practice</td>
<td>Knows how</td>
</tr>
<tr>
<td>10.1.e</td>
<td>Demonstrate how the science of pharmacy is applied in the design and development of medicines and devices</td>
<td>Shows how</td>
</tr>
<tr>
<td>10.1.f</td>
<td>Contribute to the education and training of other members of the team, including peer review and assessment</td>
<td>Shows how</td>
</tr>
<tr>
<td>10.1.g</td>
<td>Contribute to the development of other members of the team through coaching and feedback</td>
<td>Knows how</td>
</tr>
<tr>
<td>10.1.h</td>
<td>Engage in multidisciplinary team working</td>
<td>Knows how</td>
</tr>
<tr>
<td>10.1.i</td>
<td>Respond appropriately to medical emergencies, including provision of first aid</td>
<td>Knows 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>10.2.1.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>10.2.1.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>10.2.1.c Use the evidence base to review current practice</td>
<td>Shows how</td>
<td>Does</td>
</tr>
<tr>
<td>10.2.1.d Apply knowledge of current pharmacy-related policy to improve health outcomes</td>
<td>Knows how</td>
<td>Shows how</td>
</tr>
<tr>
<td>10.2.1.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>10.2.1.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>10.2.1.g Contribute to research &amp; development activities to improve health outcomes</td>
<td>Knows how</td>
<td>Knows how</td>
</tr>
<tr>
<td>10.2.1.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

<table>
<thead>
<tr>
<th>Learning outcome</th>
<th>MPharm</th>
<th>Pre-reg</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.2.2.a Identify and employ the appropriate diagnostic or physiological testing techniques in order to promote health</td>
<td>Knows how</td>
<td>Shows how</td>
</tr>
<tr>
<td>10.2.2.b Identify inappropriate health behaviours and recommend suitable approaches to interventions</td>
<td>Shows how</td>
<td>Does</td>
</tr>
<tr>
<td>10.2.2.c Instruct patients in the safe and effective use of their medicines and devices</td>
<td>Shows how</td>
<td>Does</td>
</tr>
<tr>
<td>10.2.2.d Analyse prescriptions for validity and clarity</td>
<td>Shows how</td>
<td>Does</td>
</tr>
<tr>
<td>10.2.2.e Clinically evaluate the appropriateness of prescribed medicines</td>
<td>Shows how</td>
<td>Does</td>
</tr>
<tr>
<td>10.2.2.f Provide, monitor and modify prescribed treatment to maximise health outcomes</td>
<td>Shows how</td>
<td>Does</td>
</tr>
<tr>
<td>10.2.2.g Communicate with patients about their prescribed treatment</td>
<td>Shows how</td>
<td>Does</td>
</tr>
<tr>
<td>10.2.2.h Optimise treatment for individual patient needs in collaboration with the prescriber</td>
<td>Shows how</td>
<td>Does</td>
</tr>
<tr>
<td>10.2.2.i Record, maintain and store patient data</td>
<td>Shows how</td>
<td>Does</td>
</tr>
<tr>
<td>10.2.2.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>
<td>Does</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>Learning outcome</th>
<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>
<td>Shows how</td>
</tr>
<tr>
<td>10.2.3.b Apply pharmaceutical principles to the formulation, preparation</td>
<td>Shows how</td>
<td>Shows how</td>
</tr>
</tbody>
</table>
and packaging of products

<table>
<thead>
<tr>
<th>Learning outcome</th>
<th>MPharm</th>
<th>Pre-reg</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.2.3.c Verify safety and accuracy utilising pharmaceutical calculations</td>
<td>Does</td>
<td>Does</td>
</tr>
<tr>
<td>10.2.3.d Develop quality management systems including maintaining appropriate records</td>
<td>Shows how</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>
<td>Does</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>
<td>Does</td>
</tr>
<tr>
<td>10.2.3.g Distribute medicines safely, legally and effectively</td>
<td>Knows how</td>
<td>Does</td>
</tr>
<tr>
<td>10.2.3.h Dispose of medicines safely, legally and effectively</td>
<td>Knows how</td>
<td>Does</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>
<td>Shows how</td>
</tr>
<tr>
<td>10.2.3.j Take personal responsibility for health and safety</td>
<td>Does</td>
<td>Does</td>
</tr>
<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>10.2.4.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>10.2.4.b Obtain and record relevant patient medical, social and family history</td>
<td>Shows how</td>
<td>Does</td>
</tr>
<tr>
<td>10.2.4.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>10.2.4.d Communicate information about available options in a way which promotes understanding</td>
<td>Shows how</td>
<td>Does</td>
</tr>
<tr>
<td>10.2.4.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>10.2.4.f Conclude consultation to ensure a satisfactory outcome</td>
<td>Shows how</td>
<td>Does</td>
</tr>
<tr>
<td>10.2.4.g Maintain accurate and comprehensive consultation records</td>
<td>Shows</td>
<td>Does</td>
</tr>
<tr>
<td>10.2.4.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>10.2.5.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>10.2.5.b Reflect on personal and professional approaches to practice</td>
<td>Does</td>
<td>Does</td>
</tr>
<tr>
<td>10.2.5.c Create and implement a personal development plan</td>
<td>Does</td>
<td>Does</td>
</tr>
</tbody>
</table>
10.2.5.d  Review and reflect on evidence to monitor performance and revise professional development plan  
Does  

10.2.5.e  Participate in audit and in implementing recommendations  
Knows how  
Shows how  

10.2.5.f  Contribute to identifying learning and development needs of team members  
Knows how  
Does  

10.2.5.g  Contribute to the development and support of individuals and teams  
Knows how  
Does  

10.2.5.h  Anticipate and lead change  
Knows how  
Shows how  

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 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
- Pharmacopeial 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)