



Master of Pharmacy
degree (MPharm)

University of Bradford

Report of a reaccreditation event

February 2018

Event summary and conclusions

Provider	University of Bradford
Course	Masters of Pharmacy degree (MPharm)
Event type	Reaccreditation
Event date	14-15 February 2018
Accreditation period	2017/2018 – 2023/2024
Outcome	Approval The accreditation team agreed to recommend to the Registrar of the General Pharmaceutical Council (GPhC) that the MPharm degree provided by the University of Bradford should be reaccredited for a further period of six years.
Conditions	There were no conditions
Standing conditions	Please refer to Appendix 1
Recommendations	No recommendations were made
Strengths	The outstanding team work demonstrated by the institutional leadership, senior team, staff and students. It was clear that colleagues in this school work in close partnership creating a strongly collegiate culture.
Registrar decision	The Registrar of the GPhC accepted the team's recommendation and approved the reaccreditation of the programme for a further period of 6 years.
Key contact (provider)	Dr Julie Morgan, School Director of Studies and Deputy Head of School
Accreditation team	Professor Stephen Denyer (Team leader), Pro Vice-Chancellor (Education and Student Experience), University of Brighton Professor Chris Langley (Academic), Professor of Pharmacy Law & Practice and Head of the School of Pharmacy, Aston University; Associate Dean, Taught Programmes, School of Life and Health Sciences. Dr Adam Todd (Academic), Pharmaceutical Public Health, School of Pharmacy, Newcastle University Ms Gail Curphey (Pharmacist), Pharmacy Consultant Professor Bill Dawson (Pharmacist), Chief Executive, Bionet Ltd Mr Javaad Ayub (Pharmacist – recently registered) Medical Affairs Manager, Guerbet Laboratories, Solihull

	Professor Dorothy Whittington (Lay member), Emeritus Professor of Health Psychology, University of Ulster and Non-Executive Director of the Business Services Organisation, Northern Ireland Health and Social Care
GPhC representative	Ms Joanne Martin, Quality Assurance Manager, GPhC
Rapporteur	Ian Marshall, Emeritus Professor of Pharmacology, University of Strathclyde; Proprietor, Caldaran Research (Educational and Writing Services)

Introduction

Role of the GPhC

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

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

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

Background

The University of Bradford offers two variations of an MPharm degree; a 4-year course consisting of 4 years of continuous study (continuous MPharm) and a 5-year course which consists of the same material as in the 4-year MPharm but delivered over 5 years and including two blocks of intercalated pre-registration training (Sandwich MPharm). Both 4-year and 5-year versions of the MPharm were reaccredited by the GPhC in the 2011/12 academic year and accreditation was granted for the full 6 years, subject to one condition and an interim visit after 3 years. The condition was that the University must develop a meaningful IPL and PPI strategy to strengthen the curriculum. The team recognised there was some patient involvement and IPL throughout the planned programme but this needed to increase year on year and be articulated in a strategy (this relates to Standard 5). The accreditation team also made a recommendation that the University should review its staffing provision, with a view to making transitional arrangements to ensure sufficient staff resource during the development and implementation of the new curriculum 2012 (this relates to Standard 9). The team recognised an area of strength being

significantly improved facilities with future planned development, and the clear support provided for the students which the team heard from them was appreciated.

In line with the accreditation methodology, an interim visit was conducted in February 2015 at which the accreditation team agreed that it was confident that the GPhC's initial education and training standards would be met. There were no additional conditions or recommendations as a result of this interim visit and the judgement made by the GPhC's visiting accreditation team in 2012 stood.

This is the report of a reaccreditation visit taking place at the University on 14-15 February 2018.

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 the University of Bradford on 22 January 2018. The purpose of the pre-visit meeting was to prepare for the event, allow the GPhC and the University to ask any questions or seek clarification, and to finalise arrangements for the visit.

The event

The event began with a private meeting of the accreditation team and GPhC representatives on 14 February 2018. The remainder of the event took place onsite at the University of Bradford on 14-15 February 2018 and comprised a series of meetings with staff and students of the University and included a tour of the University facilities.

Declarations of interest

There were no declarations of interest.

Key findings

Standard 1: Patient and public safety

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

The documentation stated that patient safety is emphasised throughout the programme. The School has in place appropriate safeguarding arrangements to protect patients from potential harm as a result of initial pharmacy education. In Stage 1, during the induction period, students are apprised of the need for DBS and occupational health checks, student regulations, disciplinary matters, behaviour, the student code of conduct, fitness to practise issues, timekeeping and attendance. The MPharm programme learning, teaching and assessment strategy has been designed to ensure that, where concerns regarding a student's ability to practise safely are identified, they are given appropriate corrective feedback and opportunity to demonstrate safe practice. If appropriate safe practice is subsequently not demonstrated

via (re-)assessment, such students will not be able to progress on the programme and/or not permitted to come into contact with the public. Applicants are made aware that offers of places on the MPharm programme are subject to satisfactory health and good character checks. Professionalism is being developed with the use of an Entrustable Professional Activities (EPA) approach designed to demonstrate competency; this consists of a large series of small manageable tasks that students can demonstrate and build evidence to show that larger activities are being achieved successfully. Codes of conduct with reference to guidance, the law, and ethical and moral decision-making are introduced early in the programme. There are six NICE Student Champions in place who explain the purpose of NICE to their peers and how it can support student learning. Students interviewed spoke in a professional manner about the responsibility of being pharmacy students.

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

All criteria relating to this standard are met.

Monitoring, review and evaluation of the programme is carried out in a standard university manner. Each of the modules, and components of modules, and their assessments have been reviewed annually and revised as part of the routine quality assurance and enhancement processes, which include analysis of student outcomes and feedback from students, staff and external examiners. The School has worked with a range of students studying at every stage on the programme to review and make suggestions for redesign; thus, student representatives from all years of the programme have been members of the MPharm Review Steering Group which led and oversaw the MPharm programme review and development of the new 2018 curriculum. As part of this process, consultations have been made with and feedback taken from academic and administrative staff and a wide range of external stakeholders, including patient and public representatives, employer representatives, alumni and third (voluntary) sector representatives. The School participates in the University system of peer-supported review of teaching practice which includes training for both reviewers and reviewees. The short placements in Stages 1 to 3 are overseen and quality assured by the School with workbooks being used to aid consistency in approach and experience; the 6-month pre-registration placements in the sandwich pathway take place in premises, and with trainers, approved by the GPhC, but the School has a template training plan if required for adaptation by the training location.

Standard 3: Equality, diversity and fairness

All criteria relating to this standard are met.

The documentation stressed that there has been a long history of engagement with equality and diversity issues within the institution and that the University has made strenuous efforts to promote equality in relation to the implementation of all its policies and practices, including the appointment of a Professor of Diversity. The School has recently appointed an Equality and Diversity Lead, to lead on the equality and diversity agenda. The University Dignity and Respect Policy outlines the process to be followed when there are any concerns in relation to equality and diversity issues, which initially involves local resolution with support of Human Resources, Student Advisors or Dignity and Respect Contact Persons where needed. Where there are concerns about a student's engagement, behaviours or academic performance that are a result of impairment, underlying health or mental health difficulty, the University Health, Wellbeing and Fitness to Study Policy is followed in the first instance, to encourage early intervention and active collaboration between all staff in managing situations where there are concerns regarding a student's fitness for study and to ensure that the University has provided the student with appropriate, proportionate and reasonable support to enable them to complete their studies. The MPharm student cohort for the last academic year contained 93% Black and Minority Ethnic, 12% with a disability and 11% mature students. The School has an active recruitment strategy in order to maintain the number of high quality applicants and widen its demographics, with year-on-year increases in visits undertaken nationally to schools and colleges. In this respect the School noted that applicants from a white British background are under-represented for the MPharm programme (7% last

year), but believes that the MPharm admissions team's strategy of visits to schools and colleges will redress this imbalance over time. As part of their induction each year, all MPharm students are briefed on equality and diversity issues. Students are assigned to a TBL team for all modules for the whole of the academic year and assignment is non-random, to ensure gender and age balance, and balance between local, national and international students within each team, enabling students to learn with and from peers with different backgrounds. An analysis of module pass rates at the first attempt showed no systematic differences in performance amongst students from white or BME backgrounds or those declaring a disability or not; it was conjectured that this gratifying lack of difference in performance could be due to the TBL method of learning with its lack of time limits for assessment helping with inclusivity. All new University staff members are required to complete the Diversity in the Workplace e-Learning module within three months of appointment. This training was updated in 2016 and all existing staff members were required to complete this updated training in 2016, including passing a short assessment based on the module. Staff members are also required to undertake a refresher of this training every three years. Voluntary e-Learning on Unconscious Bias is also available to all employees. Additionally, early in the programme, Stage 1 students receive lectures on diversity and respect.

Standard 4: Selection of students *and* trainees

All criteria relating to this standard are met.

The normal entry route is by offering three GCE Advanced-level subjects, one of which must be chemistry or biology with a second science subject chosen from physics, mathematics, psychology, chemistry or biology. The third subject can be a non-science subject (excluding general studies and critical thinking). Applicant interviewers include student members who are trained in interview techniques. The standard offer is 128 points (ABB, with an A in a science subject). The team was told that the School considered that the changing profile of the modern pharmacist and current biological- and disease-based emphasis of the MPharm programme no longer demands mandatory A-level chemistry entry. Students who are admitted onto the programme without A-Level chemistry are supported by offering additional tutorial support; the team was told that the additional support had not reduced the overall level of chemistry required to complete the programme, but rather the opposite, and that the School would continue to monitor the progress of such students. Candidates with qualifications equivalent or superior to GCE Advanced level are considered, and in the case of mature applicants, relevant experience may be taken into account. In each case it will be the attainment in chemistry and/or biology that will be the principal factor. The target in 2018/19 is for 115 home/EU students and 15 overseas students starting Stage 1 Pharmacy for the first time, with an aim to increase cohort size to 150 within the next 5 years. As part of the University's strategy on widening participation, in 2015/16 applicants that did not meet the School's entry tariff but with a BCC A-level minimum could enter a Clinical Sciences Foundation Year programme which includes subjects representing a route to undergraduate pharmacy study. Approximately 60% of the Foundation Year programme has transferred to the Year 1 of the MPharm; those transferring into the 2016-17 Year 1 of the MPharm performed better than students admitted with standard A-level qualifications. Together with a small number of internal transfers from other cognate programmes in the Faculty of Life Sciences, transferring students make up some 20% of the Stage 1 students on the MPharm programme.

Standard 5: Curriculum delivery and student experience

All criteria relating to this standard are met.

The MPharm programme can be studied on a 4-year (continuous) pathway or a 5-year (intercalated/sandwich) pathway that includes two six-month pre-registration training periods. The two pathways contain common taught modules and identical learning outcomes, with the exception of the 5-year pathway learning outcome relating to meeting pre-registration training competencies. The two six-month pre-registration training periods are treated as non-credit bearing modules, which must be satisfactorily completed in order to graduate. Students are admitted on a particular pathway and may not usually change pathways (beyond Stage 1) unless there are exceptional circumstances. Prior to the 2012

accreditation a new MPharm curriculum was introduced, with an integrated spiral curriculum and learning based around the principles of flipped-classroom and team-work, defined as team-based learning (TBL). The TBL is designed to increase students' independent learning skills. The programme is integrated across the science and practice elements, with teaching on the programme being delivered by staff with different backgrounds and specialities in collaboration. The curriculum has now been further developed, delivered, evaluated and refined, driven by the staff experience of teaching by TBL, feedback from students and external examiners, and from stakeholder and employer members of an external advisory board. Changes include further revision to the Interprofessional Learning (IPL) Strategy to strengthen the approach and meet the 2012 accreditation condition. Similarly, there is also an enhanced Patient and Public Involvement (PPI) strategy for the programme, linked to the local community, developed in partnerships with Bradford Council and student stakeholders. The School intends to implement a revised programme, MPharm Curriculum 2018 (C2018) from the 2018-19 academic year, with the introduction of two 90-credit integrated modules in Stages 2 and 3 with the aim of better integrating knowledge across multiple body systems, and to streamline the number of units of teaching, defined as sub-sets of modules, from 74 to 48 across the programme, reducing complexity for staff and students alike. There is also an enhanced prominence of the Developing Professional Practice modules, which have replaced the previous Capability Framework, running throughout the programme, to enhance their vertical and horizontal integration with other modules, providing improved scaffolding and signposting relevance to students, strengthening learning outcomes and rationalising assessments. Students interviewed felt that the previous Capability Framework that they had experienced was separate from the other modules making up the programme and had not therefore appreciated its relevance until towards the end of the programme or starting pre-registration training. However, although students recognised the high demands of TBL, they appreciated that the approach helped the development of their studying and learning; all were extremely enthusiastic about the approach. In addition to the changes in the programme, in light of student and external examiner feedback, the degree award algorithm has been amended from 100% weighting of Stage 4, to weight earlier Stages of the programme; Stages 1/2/3/4: Weighting 0%/10%/20%/70%. For the future awards would be made according to the standard undergraduate honours classification scheme.

The science in Stage 1 in C2018 is being further strengthened via the re-weighting of Stage 1 modules. The curriculum was originally developed to be coherent, to integrate topics which are developed through a spiral curriculum, with foundations being laid in Stage 1 and developed further in Stages 2 and 3 based on a body systems approach and in Stage 4 with a patient-centred approach. Assessment in Stage 1 is at module level and in Stages 2-4 the assessment is predominantly Stage-based synoptic assessment, including by MCQs, EMQs and OSCEs, to encourage students to integrate learning from all parts of their programme, with the majority of the learning outcomes assessed in the final year (Stage 4). Additionally, the retention of material from stage to stage is tested at the outset of each stage by a long-loop test on material from the previous stages. The volume of summative coursework assessment has been reduced to ensure that the programme assessment volume aligns closely with the University guidance and reduces fragmentation of assessment whilst maintaining and enhancing a robust approach to coherent end-of module and end-of Stage summative assessments. Students demonstrate meeting the EPAs in their PebblePad portfolio, supporting mapping to professional development frameworks, which they are able to carry with them after graduation. There is not a formal research project, but research methodology is covered in the Developing Professional Practice modules, in the application exercises, and in student-selected components ("Student Selected Assignments" in the Developing Professional Practice" modules and the "Pharmacy Special Studies" Stage 4 module) of the programme. It was emphasised that many students undertake and publish on research projects in the summer vacation and that staff members discuss their research in their teaching.

The School has continued with the same number of placements in the first three stages of the programme; 2 days in community pharmacy and 1 day in hospital pharmacy, with an additional 2 days in community pharmacy in Stage 4, along with a day in a GP practice and a half day optional specialist visit available to some students. The team recognised that the placement provision was at the lower end of the spectrum for the sector, but students interviewed indicated that the placement experience was

valuable, and the School considered that the provision was adequate. Students are briefed before the placements and there is a debriefing session after the event. The team was told that the main problems associated with the placement programme have been related to location and travel, plus there are always issues relating to the balance between observation and hands-on experience at different locations.

In terms of interprofessional learning the accreditation team learned that such learning is embedded within each Stage of the programme and is included in the TBL packs and application exercises. In Stage 1 the emphasis is on the roles and responsibilities of the pharmacy team, working with pharmacy technician students; there is also a patient safety conference with University of Leeds medical and health sciences students. In Stage 2 the emphasis moves to working with other healthcare professions, including a workshop with Clinical Sciences students on interpreting clinical test results. In Stage 3 the focus is on patient safety including a safe prescribing workshop with medical students, along with a pain workshop with physiotherapy and sports science students. Sandwich students interviewed opined that they received sufficient interprofessional learning to undertake the first of their periods of pre-registration training. In Stage 4 medicines optimisation is the focus, studied with medical students in GP practices. Patient involvement occurs in all years of the programme using the virtual town, Bradton, and simulated patients. This is augmented by students meeting real patients and carers in the classroom, and community engagement activities in conjunction with Bradford Council. The team recognised the potential benefit that the latter collaboration would bring to both students and the local community.

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

All criteria relating to this standard are met.

The submission stated that the University is committed to working in partnership with students to develop its learning and teaching practice and environment. Student involvement in quality assurance is a key part of this and fundamental to ensuring that enhancement is genuinely student-focused. The induction period for new MPharm students includes introduction to all the support services available through the University. A number of diagnostic exercises are undertaken during the induction period, which includes dyslexia/dyspraxia/dyscalculia screening and language screening for overseas students. Additionally, students attend sessions on the expectations of the programme and professionalism. These activities are followed through into the Developing Professional Practice modules where students are also given a diagnostic calculations test. The results of the screening are fed back directly to students, and referrals to appropriate agencies for support are made where necessary. The team was told that the MPharm Fit to Sit examinations policy had not reduced the number of student appeals but had made such appeals easier to resolve. It was stressed that the iRAT and tRAT tests of the TBL approach will flag up problems early so that remedial action can be taken. Various sources of feedback are used to determine the quality of teaching and assessment, and to elucidate the level of support that is available to students to enhance their learning experience, including feedback from relevant MPharm committees, stage evaluation questionnaires, module evaluations, National Student Survey feedback, progression and achievement statistics, programme annual monitoring and Staff Student Liaison Committee (SSLC); the team heard several examples of improvements in the provision emanating from the SSLC. There is a Peer Assisted Learning Scheme in which more senior students from higher stages of the programme assist more junior students in timetabled sessions with their knowledge and understanding of the taught material. The team was aware that the Personal Academic Tutor (PAT) system was crucial to the support of students with six timetabled meetings per academic year, and that the PATs having substantial responsibilities towards their tutees. As an adjunct to the PAT scheme, the School runs a triage scheme to ensure that student problems are dealt with timeously. Students interviewed told the team that there was an inevitable variation in the level of support offered with less engagement from PATs not directly involved in the MPharm, but that, in general, communication with staff members was easy and that enquiries were usually responded to immediately. Students spoke highly of the supportiveness and helpfulness of staff.

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

All criteria relating to this standard are met.

The School uses the University's long-standing Performance Review and Career Development Scheme to provide a structured framework for the review and development of staff through an annual performance review involving self-assessment, feedback, review of progress against objectives set the previous year, setting objectives for the following year and identification of development activities and/or follow-up action. There is a strong commitment to staff development within the School with weekly meetings to discuss issues, plus a commitment to the Athena Swan charter and inclusivity. All new staff members have a mentor and line manager, and are introduced to the concept of TBL initially by observation and shadowing, before beginning to co-teach the methodology. Staff members considered the workload model to be fair and balanced, allowing individuals to contribute to different teaching teams and to have time to pursue their research. Initiatives within the School include Team Leader meetings in which all staff who line manage other staff meet on a monthly basis to review workload and performance. The line manager of the four teacher-practitioners meets with them as a group every month; their University and clinical practice line managers liaise and work together, so that there are consistent approaches and open lines of communication between all parties. It was emphasised that part-time staff members, including teacher-practitioners have the same access to the University support and development services as do the full-time staff members. Eighty one percent of the staff members are Fellows (or Associate Fellows) of the Higher Education Academy or working towards HEA or postgraduate certificate qualifications.

Standard 8: Management of initial education and training

All criteria relating to this standard are met.

The Head of School, who reports to the Dean of the Faculty of Life Sciences, has overall responsibility for the students, the programmes run from the School and for working with the Dean and senior management within the governance structures of the University to secure the budget, infrastructure and staffing within the School for programme delivery and successful student outcomes. The Director of Studies is also the Deputy Head of School and is responsible for the School's programmes meeting the QA and programme enhancement requirements of the University and, for the MPharm, of the GPhC. The MPharm Programme Leader has overall responsibility for planning and delivery of the programme, working within the School and Faculty LTC and the University's Programme Leaders' Forum. The MPharm programme is managed by MPharm Programme Management and Enhancement Committee. The Director of Practice Learning is responsible to the MPharm Programme Leader for effective delivery of the work-based learning placements and the six-month pre-registration training periods which are part of the 5-year intercalated pathway. The Director of Student Support and Engagement is responsible for delivery of the personal academic tutor system, with the roles of personal academic tutor defined by the University. The Director of Student Support and Engagement has special responsibility for students with significant health issues, and coordinates with University support services to define Learner Support Profiles for students with particular needs, that are then supported under the direction of the MPharm Programme Leader. The Director of Marketing and Admissions leads an admissions and marketing team and has overall responsibility for MPharm admissions including the interview process as well as the web profile of the School. Day-to-day responsibility for the pre-registration training periods on the sandwich programme is taken by the Lecturer in Practice Learning, supported by the Central Placements Administration team. The pre-registration training periods are intercalated not integrated, with the students as employees of the pharmacies and therefore bound by employment legislation and company policies.

Standard 9: Resources and capacity

It was explained to the team that, as a result of a University re-structuring exercise to benefit from more synergies and learning from strong areas of the institution, the School had expanded in 2017 and had been re-named the School of Pharmacy and Medical Sciences, with additional courses in Clinical Sciences, Physician Associate Studies and MSc degrees in Cancer Drug Discovery, Cancer Pharmacology, and Drug Discovery and Safety Pharmacology. This had been accompanied by an increase in research activity including the establishment of a Digital Health Enterprise Zone to model future healthcare provision, an NIHR Patient Safety Translational Research Centre, and a HEFCE Catalyst Award to develop TBL in other programmes within the University and at other institutions. The School budget is part of the overarching Faculty Budget, agreed by the Dean and the University Senior Management Team. The budget to the School is set by the Dean working with the Faculty Finance Manager on the basis of the predicted income and the Faculty and School plans. Budget requests originate from the Head of School on an annual basis, advised by the School Leadership Board and staff, including technical staff. The School considers the programme to be appropriately resourced, supported by the University and sustainable. Currently there are eighty academic staff members in the School (60.1 FTE, 0.2FTE vacancy) of whom sixty-three (46.9 FTE) have a direct involvement in the MPharm through providing teaching to sessions, acting as personal academic tutors, plus five teaching technicians. The student to staff ratio for 2016-17 was estimated to be 16.2:1. All academic staff members are engaged with the research and knowledge transfer agenda, at all stages of development. Thirty-six staff members (21FTE, 45%) that are involved in the MPharm have a pharmacy qualification and thirty-three (18FTE, 41%) are GPhC-registered. To encourage integration, the School does not formally recognise individual disciplines in its structures other than in some post titles. Certain disciplines are clustered within the five research areas, but with a deliberate mix of different disciplinary backgrounds in the organisation of teaching teams to ensure integration. The School's four teacher-practitioners work under service-level agreements with their principal employers. There are also six Clinical Teachers in Primary Care Pharmacy, pharmacists in practice who are employed for 15 days per year in the School on permanent University contracts, to support interprofessional learning in GP practices and practical assessments. Administrative and technical staff members are funded from the Faculty of Life Sciences budget; it was explained that although administrative support is now centralised and funded at University level, it remains physically the same as previously with much operational management conducted at local level. For the sandwich pathway all pre-registration training periods are in training premises approved by the GPhC and the pre-registration tutors meet the GPhC requirements. Tutors are encouraged to attend or complete additional training, which is available locally, and to agree to standards set by HEE for their pre-registration recruitment and selection process. Staff members are all accommodated in locations on the University main campus, in the Richmond and Norcroft Buildings and the Institute of Cancer Therapeutics, with a mixture of single and shared offices. Small meeting rooms are available in all locations and staff members are located as closely as possible to their research activities. The team visited one of the three newly-commissioned TBL suites, and the simulation suite of rooms equipped with state-of-the art facilities. Additionally, the team was able to visit the impressive new research/teaching facilities that the School has recently benefited from in the Digital Health Enterprise Zone Academic. All facilities visited were of an extremely high standard.

Standard 10: Outcomes

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

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

Indicative syllabus

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

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

Appendix 1 - Standing conditions

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

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

Appendix 2 – Standards

GPhC standards for the initial education and training of pharmacists

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

Standard 1: Patient and public safety

1. There must be clear procedures to address concerns about patient safety arising from pharmacy education and training. Concerns must be addressed immediately.

1.1 There must be effective systems in place to ensure that students *and trainees*:

- 1.1.a do not jeopardise patient safety;
- 1.1.b only do tasks for which they are competent, sometimes under supervision;
- 1.1.c are monitored and assessed to ensure they always practise safely. Causes for concern should be addressed immediately;
- 1.1.d have access to support for health, conduct and academic issues;
- 1.1.e must not be awarded an accredited degree *or pass pre-registration training* if they might pose a risk to patients or the public;
- 1.1.f understand what is and what is not professional behaviour and are familiar with the GPhC's *standards for pharmacy professionals (2017)*;
- 1.1.g understand what fitness to practise mechanisms apply to them. All schools of pharmacy must have fitness to practise procedures to deal with student causes for concern;
- 1.1.h undergo required health and good character checks;
- 1.1.i understand that it is an offence to impersonate a pharmacist. Pharmacists are registrants of the GPhC.

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

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

2.1 There must be systems and policies in place covering:

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

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

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

2.1.d *the quality and development of pre-registration tutors*

Standard 3: Equality, diversity and fairness

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

3.1 Systems and policies for capturing equality and diversity data. Concerns should be documented, addressed and disseminated;

3.2 Strategies for staff training in equality and diversity

Standard 4: Selection of students *and* trainees

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

4.1 Selection process must give applicants the information they need to make an informed application.

4.2 Selection criteria must be explicit. They should include:

4.2.a meeting academic and professional entry requirements;

4.2.b meeting English language requirements appropriate to MPharm degree study. Guidelines issued by English language testing bodies should be followed to ensure that admissions language requirements are appropriate;

4.2.c meeting numeracy requirements;

4.2.d taking account of good character checks, such as Criminal Records Bureau (CRB)/Disclosure Scotland checks;

4.2.e passing health checks (subject to reasonable adjustments being made). Health checks could include self-evaluations and/or evaluations by healthcare professionals;

4.2.f recognising prior learning, where that is appropriate.

4.3 Selectors should apply selection criteria fairly. They should be trained to do this. Training should include equality and diversity matters

Standard 5: Curriculum delivery and the student experience

5. The curriculum for MPharm degrees *and* the pre-registration scheme must deliver the

outcomes in Standard 10. Most importantly, curricula must ensure students *and trainees* practise safely and effectively. To ensure this, pass criteria must describe safe and effective practice.

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

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

6. Students *and trainees* must be supported to develop as learners and professionals during their initial education and training.

6.1 A range of mechanisms must be in place to support students *and trainees* to develop as learners and professionals.

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

7. Anyone delivering initial education and training should be supported to develop in their professional roles.

7.1. There must be a range of mechanisms in place to support anyone delivering initial education and training to develop in their role.

7.2. Induction programmes are provided for and university staff as appropriate. This should include induction programmes for non-pharmacists working on MPharm degrees.

7.3. Everyone involved in delivering the curriculum should have:

7.3.a effective supervision;

7.3.b an appropriate and realistic workload;

7.3.c effective personal support;

7.3.d mentoring;

7.3.e time to learn;

7.3.f continuing professional development opportunities.

7.4. *Tutors should have an identified source of peer support.*

Standard 8: Management of initial education and training

8. Initial pharmacist education and training must be planned and maintained through transparent processes which must show who is responsible for what at each stage.

8.1. All education and training will be supported by a defined management plan with:

8.1.a a schedule of responsibilities

8.1.b defined structures and processes to manage the delivery of education and training

Standard 9: Resources and capacity

9. Resources and capacity are sufficient to deliver outcomes.

9.1 There must be:

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

Standard 10: Outcomes

10.1 Expectations of a pharmacy professional

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

10.2 The skills required in practice

10.2.1 Implementing health policy

Learning outcome	MPharm	Pre-reg
10.2.1.a Promote healthy lifestyles by facilitating access to and understanding of health promotion information	Shows how	<i>Does</i>
10.2.1.b Access & critically evaluate evidence to support safe, rational & cost-effective use of medicines	Shows how	<i>Knows how</i>
10.2.1.c Use the evidence base to review current practice	Shows how	<i>Does</i>

10.2.1.d Apply knowledge of current pharmacy-related policy to improve health outcomes	Knows how	<i>Shows how</i>
10.2.1.e Collaborate with patients, the public and other healthcare professionals to improve patient outcomes	Knows how	<i>Shows how</i>
10.2.1.f Play an active role with public and professional groups to promote improved health outcomes	Knows how	<i>Knows how</i>
10.2.1.g Contribute to research & development activities to improve health outcomes	Knows how	<i>Knows how</i>
10.2.1.h Provide evidence- based medicines information	Shows how	<i>Does</i>

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

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

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

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

10.2.4 Working with patients and the public

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

10.2.5 Maintaining and improving professional performance

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

Appendix 3 – Indicative syllabus

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

A1.1 How medicines work

Therapeutics

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

Applied Physical, Chemical and Biological sciences

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

Pharmacology, pharmacokinetics & pharmacodynamics

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

- Molecular basis of drug action
- Metabolism

Pharmaceutical technology including manufacturing & engineering science

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

Formulation and material science

- Materials used in formulations and devices
- Biopharmaceutics, developmental 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)*