General
Pharmaceutical
Council

Reaccreditation of a Master of Pharmacy degree course (MPharm)

University of Strathclyde

Report of a reaccreditation event, 12-14 February 2014 and 8-9 May 2014

Introduction

The General Pharmaceutical Council (GPhC) is the statutory regulator for pharmacists and pharmacy technicians and is the accrediting body for pharmacy education in Great Britain. The GPhC is responsible for setting standards and approving education and training courses which form part of the pathway towards registration for pharmacists. The UK qualification required as part of the pathway to registration as a pharmacist is a GPhC-accredited Master of Pharmacy degree course (MPharm). The GPhC's right to check the standards of pharmacy qualifications leading to annotation and registration as a pharmacist is the *Pharmacy Order* 2010. It requires the GPhC to 'approve' courses by appointing 'visitors' (accreditors) to report to the GPhC's Council on the 'nature, content and quality' of education as well as 'any other matters' the Council may require.

This reaccreditation event was carried out in accordance with the GPhC's 2011 MPharm Accreditation Methodology and the course was reviewed against the GPhC's 2011 education standards 'Future Pharmacists: Standards for the initial education and training of pharmacists'.

Background

The University of Strathclyde has offered pharmacy courses since receiving its Royal Charter in 1964. The current MPharm degree is managed and delivered by the Strathclyde Institute of Pharmacy and Biomedical Sciences (SIPBS). The University of Strathclyde was accredited in 2008 to offer the first two years of its accredited degree in Kuala Lumpur, Malaysia, as a collaborative venture with the International Medical University (IMU). Following the initial accreditation, the reaccreditation of 2+2 MPharm degrees must fall in line with the reaccreditation of the UK programme; the 2+2 programme was therefore due for reaccreditation in 2011-12, alongside the UK programme. The GPhC's usual process for reaccreditation involves a full reaccreditation visit to both the UK and overseas sites. As the University of Strathclyde's 2+2 course had been accredited in 2008, following a full overseas visit, it was agreed that it would be disproportionate to revisit the Malaysian site as part of the reaccreditation process in 2011-2012. A reaccreditation event was therefore held at the University of Strathclyde in Glasgow in February 2012 to review both the UK MPharm and the 2+2 MPharm delivered in collaboration with IMU Malaysia.

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The outcome of the 2012 event was to reaccredit the University of Strathclyde to provide an MPharm degree in Glasgow and as a 2+2 programme in Malaysia for a period of two years, subject to meeting three conditions. These were:
1. To embed in staff training, adhere to and teach the Equality Act 2010, in order to meet Standard 3.2. The University submitted a strategy for meeting this condition to the GPhC by the deadline of 1 August 2012. This was approved by the GPhC.
2. To reformulate the content and structure of the curriculum to demonstrate a fully integrated MPharm degree, in order to meet standards 5.1, 5.2 and 5.5. Integration was to be demonstrated to the accreditation team which would visit the University in early 2014.
3. To develop a practice teaching, inter-professional learning (IPL) and public-patient involvement (PPI) strategy which must strengthen and integrate placements, in-class practice teaching, IPL and meaningful patient involvement, in order to meet standard 5.6. The University submitted a strategy for meeting this condition to the GPhC by the deadline of 1 May 2012. This was approved by the GPhC.

In late 2013 the University of Strathclyde informed the GPhC that they would be closing their 2 + 2 MPharm programme, with the last intake of students in January 2014. This was because the employment and pre-registration landscape had significantly changed in Scotland so that overseas graduates could no longer be confident of gaining a pre-registration training place. It was noted that, in response to condition 2 (above) a new curriculum had been developed and rolled out from September 2014 for students joining the UK programme at that time. However, students on the 2+2 programme would be studying the curriculum that was reviewed in 2012, with additional experiential activities. The 2012 programme would also continue to be delivered in the UK to students who had first registered before September 2014. The GPhC reminded the University that accreditation would need to cover both the UK and Malaysian sites, and both the 2012 and 2014 curricula, until the last cohort of students on the 2012 programme had left the University.

A reaccreditation event was subsequently scheduled for February 2014 in Glasgow and May 2014 in Kuala Lumpur. The outcome of this event is detailed within this record.

Documentation

The provider submitted documentation to the GPhC in line with agreed timescales and a pre-visit for the UK event took place at the University of Strathclyde on 14 January 2014. During the pre-visit the schedule of meetings and timings for the UK part of the reaccreditation event were confirmed and the GPhC requested that two documents be submitted for the UK event, and requested that a separate submission be made for the Malaysia event

A pre-meeting for the visit to the Malaysia provision took place on 18 March 2014. During the pre-visit the schedule of meetings and timings for the Malaysian part of the reaccreditation event were confirmed and the GPhC requested that two further pieces of information be submitted before the visit.

The event

The UK event began with a private meeting of the accreditation team and GPhC representatives on 12 February 2014. The remainder of the UK event took place on site at the University of Strathclyde on 13 and 14 February 2014, and comprised a series of meetings with staff and students of the University.

Accreditation team

The GPhC's accreditation team for the UK visit ('the UK team') comprised:

Name	Designation at the time of accreditation event
Mr Peter Curphey*	Accreditation team leader, Community Pharmacy Consultant
Mr Javaad Ayub	Accreditation team member (Newly Registered Pharmacist), Medical Affairs Manager, Guerbet Laboratories Solihull
Professor Bill Dawson	Accreditation team member (Pharmacist), Director, Bionet Ltd
Dr Linda Hakes	Accreditation team member (Pharmacy representative), Vice President, Senior Global Project Leader, UCB Biosciences GmbH
Ms Sylvia Hikins	Accreditation team member (Lay), Management Consultant, Non-Executive Director and Vice-Chair, UC24 Ltd
Dr Andy Husband	Accreditation team member (Academic), Dean of Pharmacy, Durham University
Professor Chris Langley	Accreditation team member (Academic), Professor of Pharmacy Law and Practice and Deputy Head of School, Aston University
Miss Raminder Sihota	Accreditation team member (Pharmacist),) Senior Professional Learning and Development Manager, Boots

along with:

Name	Designation at the time of visit
Ms Joanne Martin *	Quality Assurance Manager (Education), General Pharmaceutical Council
Mrs Jane Smith	Rapporteur, Director of Qualifications and Standards, British Psychological Society
Dr Paul Grassby	Observer, Head of Pharmacy, University of Lincoln
Miss Rosaline Kennedy	Observer, Clinical Pharmacist, Worthing Hospital

*attended pre-visit meeting on 14 January 2014

The team also met a group of 25 students comprising two from 2nd year, six from 3rd year and 17 from 4th year. Five of the 3rd and 4th year students were from the 2+2 programme. The students were volunteers who had responded to an e-mail asking for student availability on the dates of the visit.

Declaration of potential conflicts of interest

Dr Andy Husband recorded that he had hosted a visit to his School from representatives of the MPharm team at the University of Strathclyde. This was noted by the UK team but was not considered to be a conflict of interest.

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The Malaysia event began with a private meeting of the accreditation team and GPhC representatives on 8 May 2014. The remainder of the Malaysia event took place on site at IMU on 8 and 9 May 2014, and comprised a series of meetings with staff of the University of Strathclyde and IMU, and with students on the 2+2 programme.

Accreditation team

The GPhC's accreditation team for the Malaysia visit ('the Malaysia team') comprised:

Name	Designation at the time of accreditation event
Mr Peter Curphey*	Accreditation team leader, Community Pharmacy Consultant
Mr Mark Brennan	Accreditation team member (Pharmacist), Executive Director and Senior Lecturer, Pharmacy Law, Ethics and Practice, Keele University
Professor Brenda Costall	Accreditation team member (Academic), Professor of Neuropharmacology, former Head of School of Pharmacy, University of Bradford
Dr Andrew Husband	Accreditation team member (Academic), Dean of Pharmacy, Durham University
Ms Leonie Milliner	Accreditation team member (Lay), Chief Executive, Association for Nutrition
Professor Anthony Smith	Accreditation team member (Academic), Vice-Provost (Education), University College London

along with:

Name	Designation at the time of visit
Ms Joanne Martin *	Quality Assurance Manager (Education), General Pharmaceutical Council
Mrs Jane Smith	Rapporteur, Director of Qualifications and Standards, British Psychological Society

*attended pre-visit meeting on 18 March 2014, along with Mr Damian Day, Head of Education and Registration Policy, General Pharmaceutical Council

The team also met a group of 18 students studying on the 2+2 MPharm programme, comprising eight from 1st year and ten from 2nd year.

Declaration of potential conflicts of interest

There were no declarations of potential conflicts of interest.

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Meeting the accreditation standards

	Accreditation team's commentary
Standard 1 – Patient and public safety There must be clear procedures to address concerns about patient safety arising from initial pharmacy education and training. Concerns must be addressed immediately.	The team was satisfied that students were made aware of the GPhC's *Code of Conduct for Pharmacy Students* (2010) and *Standards of conduct, ethics and performance (2010)* and that appropriate procedures were in place to ensure students practised safely. Fitness to practise processes were appropriate and students were had an understanding of the importance of acting professionally at all times. **The team was satisfied that the nine criteria to meet this standard were met.**
Standard 2 – Monitoring, review and evaluation of initial education and training The quality of pharmacy education and training must be monitored, reviewed and evaluated in a systematic way.	The team heard about progress made with involving patients in the MPharm course and suggested that the provider consider inviting patients to sit on the Board of Examiners and on admissions panels, as was the case in some Medical Schools. The UK team was told that students on the current programme had been involved in developing the new course, so they had an understanding of the changes being made, and the reasons for them. Students confirmed that this was the case and stated that they were already benefitting from some of the changes. For example they had more IPL and placement opportunities, and also benefitted from the closer working between members of staff. The Malaysia team was satisfied that placements on the 2+2 programme had been introduced and received information about the quality assurance of these placements to ensure their equivalence with UK pharmacy practice was maintained. **The team was satisfied that the two criteria to meet this standard were met.**
Standard 3 – Equality, diversity and opportunity Initial pharmacy education and training must be based on principles of equality, diversity and fairness. It must meet the requirements of all relevant legislation.	The UK team asked how the new Equality and Diversity strategy had benefitted staff and students, and how it had been embedded in the curriculum. The provider acknowledged that there had been a culture change over the past 18 months, with a much more formalised approach to equality and diversity now in place. The Equality Act 2010 was introduced to students in Week 1 and was underlined throughout the course. The team noted that staff and students in both the UK and Malaysia were required to complete online equality and diversity training. The team asked how students on the 2+2 programme were prepared for transfer to the UK, in terms of understanding the

	different legal and cultural equality and diversity frameworks. The provider explained that lecturers from the UK visited IMU and some IMU staff had studied in the UK, so students were made aware of the differences between Malaysia and the UK in this context. **The team was satisfied that the two criteria to meet this standard were met.**
Standard 4 – Selection of students and trainees Selection processes must be open, fair and comply with relevant legislation. Processes must ensure students and trainees are fit to practise at the point of selection. Selection includes recruitment and admissions.	The team was satisfied that selection processes and procedures were fair, robust and appropriate. In a discussion about English language entry criteria, the team informed the provider that an EU Directive coming into force in 2016 would place a requirement on the GPhC to assure the language competency of pharmacists before they were registered. The GPhC's intention was to relate this competency to the MPharm qualification. The provider may therefore wish to review its IELTS criteria in the light of that Directive. At the Malaysia event, the team noted that there were seven students in 1st Year who had yet to sit their IELTS test. The provider explained that these students had conditional offers, and their places on the course would only be continued if they achieved the required IELTS scores before June 2014. **The team was satisfied that the eight criteria to meet this standard were met.**
Standard 5 – Curriculum delivery The curriculum for MPharm degrees and the pre-registration scheme must deliver the outcomes in Standard 10. Most importantly, curricula must ensure students and trainees practice safely and effectively.	The UK team explored the new MPharm curriculum in detail with the provider and was satisfied that it was integrated, spiral in nature and informed by research. The aim of the course was to produce graduates who were experts in medicines from drug development to the patient, but who were also confident and competent with an understanding of the impact of wider socio-economic factors, and of the importance of continuing professional development. Students at Strathclyde and at IMU confirmed that the current course was already benefitting from some of the changes and was now much more integrated, especially in the early years of the programme. The team was pleased with the level of integration evident on the new programme. However, they were conscious of the fact that the current programme would continue to be taught for several years. It was noted that some changes had already been made to this programme, and this process should continue. Written details of further improvements made to the current course should be provided to the GPhC before the start of the 2014-15 academic year. The emphasis on students learning for themselves decreased the workload for staff as there were fewer lectures. Students also appreciated this reduction in the number of lectures and were more engaged as a consequence. There would also be a

	reduced assessment load as the new assessment strategy was rolled out.
	The team received information on placement and inter-professional learning opportunities, and on patient involvement in the course. The team was pleased to note that placements were now very much an integral part of the course both in the UK and in Malaysia. Students on placement had some compulsory and some optional tasks, to take into account the fact that not all placements offered the same experiences. Students were also encouraged to reflect on their placements in groups, in recognition of the fact that they would all have different experiences. The tasks were always linked to what was being taught in the programme at the time, for example, looking at minor ailments in the first year. Placement experience in the new curriculum increased year on year to 80 hours in the final year, when students would spend a whole week on placement in both November and February.
	The Malaysia team asked how the provider addressed the differences between UK and Malaysian pharmacy practice, so that students on the 2+2 programme were not disadvantaged. The provider reported that in the first two years of the course, the community placements focused on OTC medicines and responding to symptoms, and in these areas there was significant overlap between practice in the two countries. When students transferred to Glasgow, they would be introduced to the UK context, but would already have the generic skills and knowledge gained from years the first two years to support them. There were also frequent visits of staff and students from Glasgow to IMU, so students on the 2+2 programme were made aware of the UK context while in Malaysia, both formally (in classes) and informally (in discussion with staff and UK students). Students confirmed that this was the case in their meeting with the Malaysia team.
	In terms of inter-professional learning, links had been built with dental students in Glasgow and further work was being done to build links with medicine and nursing students. At IMU, students had opportunities to work with students of other healthcare professions on health promotion activities.
	The team asked how the assessment strategy for the new programme had been designed, with a focus on how it supported students in their transition from school to independent learning. Staff told the provider that the assessment strategy was designed to support the learning process, with an emphasis on continuous assessment so that staff could monitor and support students. The strategy was designed to test evidence-based learning.
	The team had noted some comments from external examiners about the lack of clear marking schemes and a perceived generosity of marks. The provider confirmed that examinations were now produced much earlier in the year, and examiners now received a standard answer for all examination questions. The provider was clear that assessments and marking, although creative and being more attuned to the individual student experience, were also rigorous.
	The assessments had been blue-printed throughout the programme, mapping the assessment to the required

knowledge/skill and to the relevant GPhC learning outcome(s). Staff confirmed that they all had sight of the external examiners' reports, and actions in response were currently agreed at the MPharm Management Group. In future the reports would go to the relevant class team for a response. Staff also reported that marks were carefully analysed at the end of the marking process and any outliers and anomalies were reviewed.

The Malaysia team noted that the assessment strategy for the 2+2 programme mirrored that in Strathclyde and asked how the provider ensured that assessments were of an equivalent level. The provider explained that assessments were set by IMU staff but were approved by Strathclyde. IMU staff used the Strathclyde module descriptors and learning outcomes, and indeed much of the teaching material at IMU was based on that provided by Strathclyde. External examiners were shared across the Strathclyde MPharm and the 2+2 programme, so there was external confirmation of the equivalence of the assessments.

The team was impressed with the providers enthusiasm for the new assessment strategy and suggested that as much of the good work as possible should be used to benefit students on the current course, as well as those studying the revised curriculum. In particular, the blue-printing of assessments to outcomes should be carried out for the current course, as well as for the new.

The feedback provided to students on their coursework had been improved with the introduction of factorized grade descriptors, which provided marks in a range of identified areas or topics, building to an overall mark for the piece of work. This gave students more information on their areas of strength and weakness, which would be discussed with their Personal Development Advisor (PDA).   Meetings with PDAs would be timetabled from 2014-15, to take place in Weeks 2, 5 and 11 (to coincide with the publication of exam results) and in Semester 2. The team was pleased to note this, as students currently on the course reported that meetings with their PDA were not timetabled and consequently did not happen regularly. Some students felt that their PDA did not know them well enough to provide accurate references at the end of the programme. The team suggested that meetings with PDAs should be timetabled for all students with immediate effect.

The team asked for clarification of the arrangements for students failing to progress on the current course, who would not be able to take a year out for resits and re-join the programme at a later date. The provider explained that a student in the first year of the course and failing to progress would, provided they were suitably qualified, be allowed to join the new programme from the beginning in September 2014. Students in other years failing to progress would be dealt with on a case by case basis. The intention was that students with up to 40 credits of failed modules would be allowed to trail these failures and resit the following year, with early resits arranged if appropriate. Students with more than 40 credits of failure would be required to transfer to the BSc Pharmaceutical Sciences. The provider confirmed that these were purely interim arrangements, and trailing of failed modules would not be permitted on the new programme.

	The team was satisfied that the sixteen criteria to meet this standard were met.
Standard 6 – Support and development for students and trainees Students and trainees must be supported to develop as learners and professionals during their initial education and training.	The team was satisfied that students were supported in their learning and development and asked that best practice from the new course, especially in terms of timetabled meetings with PDAs, the blue-printing of assessments, and the development of IPL opportunities be rolled out to students on the current programme from the 2014-15 academic year. Written details of all further improvements made to the current course should be provided to the GPhC before the start of the 2014-15 academic year. **The team was satisfied that the one criterion to meet this standard was met.**
Standard 7 – Support and development for academic staff and pre-registration tutors Anyone delivering initial education and training should be supported to develop in their professional roles.	The team noted that staff were moving from knowledge-based teaching to competency-based teaching and training and asked if appropriate arrangements were in place to support this change. The provider informed the team that staff were enthusiastic about the change and were already applying their own learning to the current programme. There were benefits to staff in working much more as part of a team; they had a better understanding of the course as a whole and were able to help and support each other, with more flexibility about which member of staff delivered which element of the course. Teaching staff confirmed that they had developed insight beyond the area of their expertise; non-pharmacists reported that they had a much improved understanding of the role of the pharmacist which was helpful both in their teaching and in their role as PDAs. The team asked if the move to a more competency-based and integrated curriculum would increase workload for staff. The provider confirmed that the workload model was being reviewed, and would take teaching, administration and research into account. It was anticipated that the move to 120 credits per year (from the current 150), coupled with a lighter assessment load and better use of assessments (e.g. of electronically marked multiple choice questions for the knowledge classes) would give staff appropriate workloads. Teaching staff confirmed that they were encouraged to develop and that there was a good range of training and development programmes available to them at the University. Staff at IMU confirmed that they were also well-supported and had opportunities to attend conferences and workshops. **The team was satisfied that the eight criteria to meet this standard were met.**

| Standard 8 – Management of initial education and training

Education and training must be planned and maintained through transparent processes which must show who is responsible for what at each stage | The team was satisfied that the MPharm was planned and maintained through transparent processes showing who was responsible for what at each stage. The Malaysia team was told that there were strong links between Strathclyde and IMU and that staff worked well together. Staff at IMU had contributed to the redevelopment of the MPharm curriculum and, although the 2+2 programme would not be continued beyond the current cohorts of students, there were plans to continue the close working relationship in the future.

The team was satisfied that the two criteria to meet this standard were met. |
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| **Standard 9- Resources and capacity**

Resources and capacity are sufficient to deliver outcomes. | The team was satisfied that the resources made available to the MPharm programme at Strathclyde were sufficient to enable the provider to deliver the required learning outcomes. The Malaysia team noted that there were no UK-registered pharmacists on the staff at IMU. However, several members of staff had been trained in the UK and so had the relevant knowledge and understanding of the UK context.

Non-pharmacist staff reported that, due to the team-led approach to the new curriculum, they had a much improved understanding of the role of the pharmacist which was helpful both in their teaching and in their role as PDAs. They had been given opportunities to visit pharmacies so that they could relate to their students' placement experiences.

The team was satisfied that the fourteen criteria to meet this standard were met. |
| **Standard 10 - Outcomes** | The team scrutinised the learning outcomes in discussions with the teaching staff in integrated outcomes meetings at both the UK and Malaysia visits. Rather than examining each of the 58 outcomes in these sessions, a selection of outcomes was chosen for detailed discussion. The University of Strathclyde and IMU staff members were unaware of the outcomes to be discussed until the start of the meeting.

The outcomes selected in the UK were 10.1e, 10.1f, 10.2.1e, 10.2.1g, 10.2.2f, 10.2.3f, 10.2.4a, 10.2.5c and 10.2.5e and the outcomes selected in Malaysia were 10.1a, 10.1e, 10.1f, 10.2.1a, 10.2.2c, 10.2.3a, 10.2.3l and 10.2.5a. Additional outcomes were covered in discussions addressing the various Standards 1-9 and by the team's scrutiny of the documentation.

For each of the outcomes scrutinised in detail, the evidence provided by the discussions with the staff gave the team confidence that these outcomes would be met at the required level, and the team was confident that all other outcomes would be similarly met. This view was supported by the documented material for each of the other outcomes, which had also been scrutinised by the teams. |

	The team was satisfied that the 58 learning outcomes to meet this standard will be met.
Indicative Syllabus	The team was content with the School's use of the Indicative Syllabus to inform its curriculum.
	The team agreed that the MPharm degree met the requirements of Directive 2005/36/EC of the European Parliament and of the Council on the recognition of professional qualifications for the initial education and training of pharmacists

Summary and conclusions

The accreditation team agreed to recommend to the Registrar of the General Pharmaceutical Council that the University of Strathclyde should be reaccredited to provide an MPharm degree for a further period of six years, with a practice visit to take place in three years. No conditions were set and no recommendations were made.

The accreditation team was satisfied that the IMU component of the 2+2 MPharm degree met the required conditions imposed at the accreditation event in 2012 and agreed to recommend to the Registrar of the General Pharmaceutical Council that the 2+2 programme should be reaccredited until the transfer of the final cohort of students (January 2014 intake) to Strathclyde.

Standing condition of accreditation:

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

1. The school or department of pharmacy always seeks approval from the General Pharmaceutical Council for curriculum amendments and always at least informs the General Pharmaceutical Council of significant changes to pharmacy undergraduate student numbers or resources for their teaching, learning support and assessment, including any change from internal to teaching, learning and assessment from outside the school or department;
2. The school or department of pharmacy produces and submits to the General Pharmaceutical Council annually requested data on student numbers and progression and degree awards;
3. The school or department of pharmacy produces and submits to the General Pharmaceutical Council annually requested information about the extent of human and physical resources it enjoys for the delivery and support of the degree course;
4. The school or department of pharmacy or the university makes students and potential students aware of the existence and Internet address where they can view the General Pharmaceutical Council's summary reports of degree accreditation exercises, main after- actions therefrom and of the timetable for future accreditation exercises.

The *Pharmacy Order* 2010 states:

Part 5 Education, training and acquisition of experience and continuing professional development, Information to be given by institutions or other providers, 46. …

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

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

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

Reference: http://www.legislation.gov.uk/uksi/2010/231/contents/made

Caution: Preregistration and employment as a pharmacist:

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

Following the above reaccreditation events, the Registrar of the General Pharmaceutical Council agreed with the accreditation team's recommendation and approved the reaccreditation of the University of Strathclyde MPharm degree delivered in the UK for a further period of 6 years. Reaccreditation will take place in six academic years' time (2019/2020), with an interim visit in three academic years' time (2016/2017).

The Registrar agreed with the accreditation team's recommendation and approved the University of Strathclyde MPharm 2+2 delivered in collaboration with International Medical University (IMU), Malaysia to be reaccredited until transfer of the final cohort of students (January 2014 intake) to Strathclyde.

Appendix 1 – Standards for the initial education and training of pharmacists

[Note: The parts of the standards shown in grey italics are applicable only to those offering a 5-year MPharm degree with integrated 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 *Code of Conduct for Pharmacy Students* (2010)*Standards of conduct, ethics and performance* (2010);

    1.1.g   understand what fitness to practise mechanisms apply to them. All schools of pharmacy must have fitness to practise procedures to deal with student causes for concern;

    1.1.h   undergo required health and good character checks;

    1.1.i   understand that it is an offence to impersonate a pharmacist. Pharmacists are registrants of the GPhC.

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

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

2.1 There must be systems and policies in place covering :

    2.1.a   information about roles & responsibilities and lines of accountability;

    2.1.b   university information on:

        2.1.b.i   entry requirements;

        2.1.b.ii   the quality of teaching, learning and assessment;

        2.1.b.iii   the quality of placements and other practice learning opportunities;

        2.1.b.iv   appraisal and feedback systems for students and trainees;

        2.1.b.v   supervision requirements;

        2.1.b.vi   educational resources and capacity;

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

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

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

Standard 3 – Equality, diversity and fairness

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

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

3.2 strategies for staff training in equality and diversity

Standard 4 – Selection of students *and trainees*

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

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

4.2   Selection criteria must be explicit. They should include:
   4.2.a   meeting academic and professional entry requirements;
   4.2.b   meeting English language requirements appropriate to MPharm degree study. Guidelines issued by English language testing bodies should be followed to ensure that admissions language requirements are appropriate;
   4.2.c   meeting numeracy requirements;
   4.2.d   taking account of good character checks, such as Criminal Records Bureau (CRB)/Disclosure Scotland checks;
   4.2.e   passing health checks (subject to reasonable adjustments being made). Health checks could include self-evaluations and/or evaluations by healthcare professionals;
   4.2.f   recognising prior learning, where that is appropriate

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

Standard 5 – Curriculum delivery and the student experience

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

5.1   Curricula must be integrated.

5.2   Curricula must be progressive, dealing with issues in an increasing more complex way until the right level of understanding is reached.

5.3   An MPharm must be delivered in an environment which places study in a professional and academic context and requires students to conduct themselves professionally. *Pre-registration training must be delivered in a professional environment which requires trainees to conduct themselves professionally.*

5.4   An MPharm must be delivered in an environment informed by research. This means that whether or not all staff are engaged in research, their teaching must be informed by research.

5.5   An MPharm degree teaching and learning strategy must set out how students will achieve the outcomes in Standard 10. Learning opportunities must be

structured to provide:

    5.5.a   an integrated experience of relevant science and pharmacy practice;

    5.5.b   a balance of theory and practice;

    5.5.c   independent learning skills.

5.6   The MPharm degree curriculum must include practical experience of working with patients, carers and other healthcare professionals. Practical experience should increase year on year.

5.7   There must be a clear assessment strategy for the MPharm degree. Assessment methods must measure the outcomes in Standard 10.

5.8   The MPharm degree assessment strategy should include:

    5.8.a   diagnostic assessments;

    5.8.b   formative assessments;

    5.8.c   summative assessments;

    5.8.d   timely feedback.

5.9   Academic regulations must be appropriate for a degree that is both academic and professional and may lead to further professional training. As a general principle, all assessments must be passed. This means that condonation, compensation, trailing, extended re-sit opportunities and other remedial measures should be extremely limited, if they are permitted at all. MPharm degree academic regulations may be more stringent than university norms. This may include higher than usual pass marks for assessments demonstrating knowledge and skills essential to safe and effective pharmacy practice.

5.10 Marking criteria must be used for all assessments and all pass criteria must reflect safe and effective practice.

5.11 Patient safety must be paramount in assessments: any evidence of an assessment demonstrating unsafe practise must result in failure.

5.12 A pre-registration training plan must describe how the learning outcomes for pre-registration will be delivered.

5.13 A pre-registration training plan must describe all assessments, including tutor evaluations and tutor sign-offs.

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

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

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

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

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

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

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

7.3. Everyone involved in delivering the curriculum should have:
    7.3.a   effective supervision;
    7.3.b   an appropriate and realistic workload;
    7.3.c   effective personal support;
    7.3.d   mentoring;
    7.3.e   time to learn;
    7.3.f   continuing professional development opportunities.

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

Standard 8 – Management of initial education and training

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

8.1. All education and training will be supported by a defined management plan with:
    8.1.a   a schedule of responsibilities
    8.1.b   defined structures and processes to manage the delivery of education and training

Standard 9 – Resources and capacity

9.   Resources and capacity are sufficient to deliver outcomes.

9.1   There must be:

9.1.a   robust and transparent mechanisms for securing an appropriate level of resource for delivering an accreditable MPharm degree;

9.1.b   sufficient staff from relevant disciplines to deliver the curriculum to students *and trainees*. Staff must be appropriately qualified and experienced. The staffing profile must include:

9.1.b.i   sufficient numbers of pharmacists – registrants of the GPhC – with experience of teaching in higher education to ensure that an MPharm degree can produce students equipped to enter pharmacist pre-registration training in Great Britain.

9.1.b.ii   sufficient numbers of pharmacists to act as tutors and professional mentors at university *and in pre-registration.* Not all personal tutors must be pharmacists.

9.1.b.iii   pharmacists who are leaders in the profession and in their university, who can influence university policy relevant to pharmacy

9.1.b.iv   non-pharmacist academics who can influence school and university policy relevant to pharmacy

9.1.b.v   staff who are sufficiently experienced to supervise research. It would be unusual for anyone to supervise research at a particular level unless they had researched to that level or beyond. New research supervisors must be mentored and signed off as being fit to supervise after a period of mentoring

9.1.b.vi   science academics who understand the relevance of their discipline to pharmacy and deliver their area of expertise in a pharmaceutical context

9.1.b.vii   academic pharmacists and other experienced MPharm degree staff who are able to act as mentors to non-pharmacist colleagues

9.1.c   pre-registration tutors who meet the GPhC's standards for pre-registration tutors.

9.1.d   career pathways in universities for all staff teaching on MPharm degrees, including pathways for practice staff

9.1.e   clear lines of authority and responsibility for the strategic organisation and day-to-day management of placements

9.1.f   training and ongoing support for all non-pharmacists involved in the delivery of MPharm degrees which must help them understand:

9.1.f.i   help and understand the relevance of their work to pharmacy

9.1.f.ii   how to deliver their area of expertise in a pharmaceutical context

9.1.g   appropriate learning resources

9.1.h   accommodation and facilities that are fit for purpose

9.1.i   pre-registration premises which meet the GPhC's standards for pre-registration premises

Standard 10 - Outcomes

10.1 Expectations of a pharmacy professional

Learning outcome	MPharm	Pre-reg
10.1.a Recognise ethical dilemmas & respond in accordance with relevant codes of conduct and behaviour	**Shows how**	*Does*
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**	*Knows how*
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**	*Does*
10.1.d Apply the principles of clinical governance in practice	**Knows how**	*Does*
10.1.e Demonstrate how the science of pharmacy is applied in the design and development of medicines and devices	**Shows how**	*Knows how*
10.1.f Contribute to the education and training of other members of the team, including peer review and assessment	**Shows how**	*Does*
10.1.g Contribute to the development of other members of the team through coaching and feedback	**Knows how**	*Shows how*
10.1.h Engage in multidisciplinary team working	**Knows how**	*Does*
10.1.i Respond appropriately to medical emergencies, including provision of first aid	**Knows how**	*Shows how*

10.2 The skills required in practice

10.2.1 Implementing health policy

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

	MPharm	Pre-reg
g. Contribute to research & development activities to improve health outcomes	**Knows how**	*Knows how*
h. Provide evidence- based medicines information	**Shows how**	*Does*

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

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

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**	*Shows how*
10.2.3.b. Apply pharmaceutical principles to the formulation, preparation and packaging of products	**Shows how**	*Shows how*
10.2.3.c. Verify safety and accuracy utilising pharmaceutical calculations	**Does**	*Does*
10.2.3.d. Develop quality management systems including maintaining appropriate records	**Shows how**	*Shows how*
10.2.3.e. Manage and maintain quality management systems including maintaining appropriate records	**Shows how**	*Does*
10.2.3.f. Procure and store medicines and other pharmaceutical products working within a quality assurance framework	**Knows how**	*Does*
10.2.3.g. Distribute medicines safely, legally and effectively	**Knows how**	*Does*

		Knows how	Does
10.2.3.h.	Dispose of medicines safely, legally and effectively	**Knows how**	*Does*
10.2.3.i.	Manage resources in order to ensure work flow and minimise risk in the workplace	**Knows how**	*Shows how*
10.2.3.j.	Take personal responsibility for health and safety	**Does**	*Does*
10.2.3.k.	Work effectively within teams to ensure safe and effective systems are being followed	**Knows how**	*Does*
10.2.3.l.	Ensure the application of appropriate infection control measures	**Shows how**	*Does*
10.2.3.m.	Supervise others involved in service delivery	**Knows how**	*Does*
10.2.3.n.	Identify, report and prevent errors and unsafe practice	**Shows how**	*Does*
10.2.3.o.	Procure, store and dispense and supply veterinary medicines safely and legally	**Knows how**	*Knows how*

10.2.4 Working with patients and the public

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

10.2.5 Maintaining and improving professional performance

Learning outcome	MPharm	*Pre-reg*
a. Demonstrate the characteristics of a prospective professional pharmacist as set out in relevant codes of conduct and behaviour	**Does**	*Does*
b. Reflect on personal and professional approaches to practice	**Does**	*Does*
c. Create and implement a personal development plan	**Does**	*Does*

d. Review and reflect on evidence to monitor performance and revise professional development plan	**Does**	*Does*
e. Participate in audit and in implementing recommendations	**Knows how**	*Shows how*
f. Contribute to identifying learning and development needs of team members	**Knows how**	*Does*
g. Contribute to the development and support of individuals and teams	**Knows how**	*Does*
h. Anticipate and lead change	**Knows how**	*Shows how*

Indicative syllabus

A1.1 How medicines work

Therapeutics

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

Applied Physical, Chemical and Biological sciences

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

- Drug identification
- Drug synthesis

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

Pharmaceutical technology including manufacturing & engineering science
- Biotechnology
- Manufacturing methods
- Quality assurance processes
- Sterilisation and asepsis
- Environmental control in manufacturing

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

A1.2   How people work

Normal & abnormal structure & function
- Nutrition
- Physiology
- Pathology
- Infective processes

Sociology
- Social and behavioural science

Health psychology
- Health promotion
- Disease prevention
- Behavioural medicine

Objective diagnosis
- Differential diagnosis
- Symptom recognition
- Diagnostic tests

Epidemiology
- Aetiology and epidemiology of (major) diseases

A1.3 How systems work

Healthcare management
- Public health
- Organisations: NHS,DH, govt priorities
- Other professionals

- Health care systems

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

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

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

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

Clinical management
- Disease management
- Chronic medicines management

- Medicines use review
- Care planning

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

A1.4 Core and transferable skills

Professionalism

Research and research methods

Critical appraisal
- Audit and learning from errors

Problem solving
- Study skills
- Team-working skills

Clinical decision making
- Leadership skills

Accurate record keeping

Reflective practice (incl. continuing professional development)

Effective communication
- Interpersonal skills
- Medical terminology

Interpret & interrogate clinical data

Analyse & use numerical data

Pharmaceutical numeracy

Technological literacy

A1.5   Attitudes and values

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

General Pharmaceutical Council, MPharm reaccreditation report
University of Strathclyde, 12-14 February and 8-9 May 2014

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