Master of Pharmacy degree (MPharm) taught in part overseas (2+2)

University of Reading Malaysia
Report of a step 2 accreditation event
May 2017
## Event summary and conclusions

<table>
<thead>
<tr>
<th>Provider</th>
<th>University of Reading Malaysia</th>
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<tr>
<td>Course</td>
<td>Masters of Pharmacy degree (MPharm) taught in part overseas (2+2)</td>
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<tr>
<td>Event type</td>
<td>Accreditation</td>
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<td>Step</td>
<td>2</td>
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<td>Event date</td>
<td>24-25 May 2017</td>
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<td>Accreditation period</td>
<td>Working towards accreditation: next visit due 2017/18</td>
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<td>Outcome</td>
<td>Approval with conditions</td>
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<td>The accreditation team agreed to recommend to the Registrar of the General Pharmaceutical Council (GPhC) that the University of Reading should be permitted to move from step 2 to step 3 of the accreditation process for new MPharm degrees, subject to one condition</td>
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<tr>
<td>Conditions</td>
<td>The University must organise the MPharm managerial structure to ensure there is appropriate capacity, resource allocation and financial autonomy.</td>
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<td>The GPhC requires a School of Pharmacy to deliver an MPharm as a single entity irrespective of geographical location.</td>
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<td>This is to meet standard 8.1 a and b; 9.1a and 9.1.b.iii</td>
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<td>The GPhC visiting team at Step 3 will assess if this condition is met</td>
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<td>Standing conditions</td>
<td>Please refer to Appendix 1</td>
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<td>Recommendations</td>
<td>No recommendations were made</td>
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<td>Registrar decision</td>
<td>Following the event, the Registrar of the GPhC accepted the accreditation team’s recommendation and approved the progression of the programme from step 2 to step 3 of the GPhC’s accreditation process subject to meeting one condition. The accreditation will visit at Step 3 to review if the condition is met.</td>
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<tr>
<td>Key contact (provider)</td>
<td>Dr Samantha Weston, Head of Pharmacy Malaysia</td>
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<tr>
<td>Accreditation team</td>
<td>Professor Andrew Husband, Team Leader, Head of School of Pharmacy, University of Newcastle</td>
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<td></td>
<td>Professor Barrie Kellam, Academic, Professor of Medicinal Chemistry, University of Nottingham</td>
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<td></td>
<td>Dr Adam Todd, Academic, Senior Lecturer in Pharmacy Practice,</td>
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</tbody>
</table>
Durham University
Ms Gail Fleming, Pharmacist, Head of Pharmacy, Health Education England (London and South East)
Mr Owen Wood, Pharmacist – recently registered, Humanitarian Pharmacy Advisor, Save the Children UK
Ms Leonie Milliner, Lay, Chief Executive, Association for Nutrition

GPhC representative
Ms Joanne Martin, Quality Assurance Manager, GPhC

Rapporteur
Professor Ian Marshall, Emeritus Professor of Pharmacology, University of Strathclyde; Proprietor, Caldarvan 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 accreditation event was carried out in accordance with the GPhC’s 2011 MPharm Accreditation Methodology and the course was reviewed against the GPhC’s 2011 education standards ‘Future Pharmacists: Standards for the initial education and training of pharmacists’.

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

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 Department of Pharmacy (also known as Reading School of Pharmacy - RSoP), part of the School of Chemistry, Food and Pharmacy (SCFP) at the University of Reading (UoR) graduated its first students from its accredited MPharm degree in 2009. In 2012, the Department approached the GPhC to discuss its intention to develop a 2+2 MPharm degree in the newly-established EduCity in Johor Bahru, Malaysia. In 2013, the GPhC visited the University to learn of the progress with this development. An outcome of this meeting was to split the Step 1 accreditation process into two parts. This entailed a preliminary visit in Spring 2014 for the University to set out its vision and strategy and for the accreditation team to view the progress on building and facilities. Part 2 of Step 1 would take place in 2015 when the programme was more developed and ready to admit students. It was also agreed that the target date for the first intake of students would be January 2016, in order to accommodate any potential adjustments required as a result of the Part 1 accreditation visits. The University also planned to instigate a non-GPhC-accredited BPharm
programme running alongside the proposed MPharm.

At the Step 1, Part 1 visit which took place on 6 May 2014, the then accreditation team agreed that the University of Reading should be permitted to move from Step 1, Part 1 to Step 1, Part 2 of the accreditation process for new MPharm degrees delivered in part overseas. The team agreed that developments were at an appropriate stage given the decision not to admit students until January 2016. The accreditation team requested further information from the provider in advance of the Step 1, Part 2 visit, including an updated business plan to show the MPharm separate from the BPharm, and to reflect the move from year-long staff induction visits to more intensive 2-3 week visits, and an English translation of accreditation documentation supplied for the Part 1 visit. The accreditation team informed the provider that for the Step 1, part 2 visit, the programme must be ‘student-ready’ with everything in place for Year 1 and plans for Year 2 well developed, and that, in the meantime, any recruitment material produced for the 2+2 programme must make it absolutely clear that the provider was working towards accreditation.

The Step 1, Part 2 visit took place on 22-23 October 2015 when the accreditation team agreed to recommend to the Registrar of the General Pharmaceutical Council that the 2+2 MPharm degree planned at the University of Reading should proceed from Step 1 to Step 2 of the accreditation process. This meant that the University may enrol students on to the programme subject to the necessary requirements being met for the Malaysian authorities. There were no conditions or recommendations. In granting this provisional accreditation the team shared with the University an observation that the main concern was the lack of clarity around the business plan, particularly with the synergy between the BPharm and proposed MPharm 2+2 degree programmes. The team recognised an area of strength as the outstanding building and facilities at the University of Reading Malaysia.

**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 by teleconference on 27 April 2017. The purpose of the pre-visit meeting was to prepare for the event, allow the GPhC and the University to ask any questions or seek clarification, and to finalise arrangements for the visit.

**The event**

The event began with a private meeting of the accreditation team and GPhC representatives on 24 May 2017. The remainder of the event took place onsite at University of Reading Malaysia on 24-25 May 2017, and comprised a series of meetings with staff and students of the University and included a tour of the University facilities.

**Declarations of interest**

Professor Kellam declared that he had been external examiner for the University of Reading MPharm between 2008 and 2012.

Professor Husband declared that Dr Todd and himself were moving shortly to the University of Newcastle School of Medicine which is collaborating with the University of Reading Malaysia on IPE.
Key findings

Standard 1: Patient and public safety

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

Students entering Part 1 of the MPharm 2+2 programme at UoRM are introduced to the GPhC Student Code of Conduct in Week 1 of the programme with regular references to the Code and UK professional issues throughout Part 1 of the course. The UK and Malaysian codes are very similar and students have not experienced difficulties in coming to terms with the demands of UK professionalism. Examples given, relating to equality and diversity, illustrated that the GPhC Standards and the Malaysian Code were in close agreement. In addition, the new GPhC Standards for Pharmacy Professionals are being used to help develop professionalism, and are being mapped onto the Malaysian Code of Conduct. An area highlighted as potentially problematic was that of raising concerns, but it was emphasised that students would be able to discuss any such issues in confidence with members of the teaching staff.

There is specific teaching on dealing with medication errors, standard operating procedures, and students are encouraged to reflect on their own performance.

Students, despite potentially never having been to the UK, have all signed up to the UK Code of Conduct and have had the University Fitness to Practice (FTP) policy explained to them. The FTP procedures at UoRM are the same as those in the UK. In the case of any potential FTP issue the UoRM School will start the FTP process by investigating the issue; in the case of a decision to refer to the FTP process, the case would then be dealt with by the UK FTP system by SKYPE.

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

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

Within the Reading School of Pharmacy a number of roles and responsibilities are delegated by Head of Section, UoRM and the Head of Department, UK, to academic staff. The Pharmacy Section, UoRM follows UK policies and procedures closely. Thus, the Pharmacy Department follows University guidelines in defining roles and responsibilities for key teaching and learning leadership positions including Head of Department/Section, School Director of Teaching and Learning, Senior Tutor, Examinations Officer, Admissions Tutor, Personal Tutors, Programme Director and Programme Lead, and Module Convenors and Module Leads. Roles and responsibilities are shared across the two campuses, with Module Convenors (UK) and Module Leads (Malaysia) working collaboratively to ensure equivalence in delivery of teaching, assessment, moderation and feedback to students. Roles and responsibilities of Module Convenors and Module Leads, Programme Directors and Programme Leads, and the Academic Director for Teaching and Learning (similar to the Teaching & learning Dean role on the UK campus) have been defined and ratified by University Board for Teaching and Learning (UBTL) and are reflected across all disciplines delivering at UoRM.

The University of Reading Centre for Quality Support and Development has worked closely with UoRM to develop quality assurance (QA) processes that cover all aspects of QA management and enhancement across both campuses. All policies have been ratified by University Board of Teaching and Learning (UBTL). UoRM is subject to Malaysian Qualification Agency (MQA) requirements, which map to those outlined by the QAA in the UK. All programmes to be delivered in Malaysia must submit documentation outlining their planned delivery, resource, admissions and staffing strategy prior to receiving Provisional Accreditation. This accreditation is provisional on visits to both UK and Malaysian campuses and facilities and RSOP Malaysia underwent a successful Malaysian Pharmacy Board and MQA visit in March 2016, receiving official approval documents in April 2016, and Approval to Deliver from the Ministry of Higher Education (MoHE) in August 2016.
Standard 3: Equality, diversity and fairness

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

There are three areas of focus with respect to equality and diversity at UoRM where there might be expected to be differences in attitudes from those prevailing in the UK: promoting human rights, instilling NHS values, and supporting person-centred care. The experience of the teaching staff has been that they had found fewer difficulties than might have been expected, including open discussions involving students without any apparent potential problem areas. The Student Code of Conduct was said to put matters of equality and diversity into perspective, and that this had been enhanced by the new GPhC Professional Standards for Pharmacists. Students are introduced to UK definitions which were said to be very similar to those in Malaysia. Staff members undertake mandatory Equality and Diversity training every three years and all staff have complied with this requirement.

Standard 4: Selection of students and trainees

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

The entry criteria for the MPharm 2+2 in Malaysia are essentially the same as those pertaining in the UK. Although the published entry criteria of BBB at A-level for entry to the Malaysian-taught degree are lower than the ABB published criteria for the UK, the team was told that applicants offering BBB in the UK are accepted. Although the selection and interview process is different from that in the UK, it was the aim to make the two processes equivalent. The interview process at UoRM allows for the exploration of personal and NHS values. All teaching staff at UoRM will be involved in interviewing candidates with the recently appointed staff members being trained by shadowing the UoRM Head of Pharmacy and the UK-registered pharmacist lecturer during interviews. UoRM has determined that the currently lowest accepted IELTS score of 5.5 is too low and that the overall score in future will be required to be 6.5 with no element at lower than 6, but students interviewed showed a good command of spoken English and talked confidently. Applicants for the programme are required to provide a Certificate of Good Conduct and Character which must be updated annually thereafter at some stage during the first two years of their study at UoRM, although placement providers in Malaysia have no requirement for such checks and hence they have not been put in place for the first cohort. Students transferring to the UK will be helped by teaching staff to apply for an Enhanced Disclosure and Barring Service (DBS) check as soon as they arrive in the country but will also have proof of good conduct certification from Malaysia. Malaysian students generally have more comprehensive immunisation records than UK students applying to enter the UK degree although 2+2 MPharm students will be tested for tuberculosis when they arrive at the UK campus.

UoRM expects to have a second cohort of 20 students on the 2+2 MPharm starting in September 2017. Applications in Malaysia are made at a considerably later stage than occurs in the UK, with the result that the main round of advertising had just started at the time of the visit, and offers to fill places are made very late in the season. Already the 2+2 MPharm has received 21 applications, 6 of which have been offered a place. A new Director of Marketing with local knowledge and experience has recently been appointed by UoRM, and it is expected that they will be useful in converting offers into student places on the degree. There is a regional strategy for Johor and the rest of Malaysia and there is not much student movement between the regions.
**Standard 5: Curriculum delivery and student experience**

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

The Reading MPharm has been fully accredited and subject to an interim visit at the UK campus some 3 months ago. Hence, the team did not explore the structure and content of the programme in any great detail, but rather concentrated on its delivery in Malaysia. However, in short, the programme consists of 12 large, integrated modules that reduce compartmentalisation of learning, aligned from Year 2 onwards with therapeutic areas with a focus on patient-centred care. The School has also introduced a personal academic development (PAD) portfolio, which students are required to maintain and which is assessed in year 3 by oral examination. There are placement and experiential learning opportunities including IPE, enhanced support for reflective learning and academic development aided by the PAD portfolio, and with a focus on team-working skills and interprofessional learning. The Malaysian delivery is organised to take place one week behind the UK equivalent, thus allowing any necessary changes to be made for the benefit of the Malaysian students. All lectures are released on Blackboard a week in advance with the same content in the UK and Malaysia but with different platforms of the VLE. Podcasts of lectures are made available and teaching staff from the UK act in a flying faculty role, teaching a block in their area of speciality, generally in the basic sciences.

Part 1 of the programme is made up of 3 modules with an emphasis on diagnostic and formative assessment and feedback to promote independent learning rather than learning simply to obtain a good mark. Students confirmed that there is good linkage between the modules and that, despite the fact that they had not had the chance to meet and talk with patients, they are referred to in lectures, and the students felt confident that they would be able to communicate with patients when they got the chance later in the programme. Part 2 is made up of 4 modules, three on therapeutics and medicines optimisation and one on patient-centred pharmacy. The approach in Part 2 is more integrated than that in Part 1 and includes a fully integrated medicine design project and practical classes, with the intended outcome that students will acquire core pharmacy concepts and the ability to integrate scientific and practice concepts. Staff members indicated that they had had sufficient time to prepare their teaching, have had the opportunity to visit the UK campus and to talk with UK-based teaching staff. Module leads (UoR) and module convenors (UoRM) collaborate in discussions on the development and future enhancement of the programme and whenever discussions take place in the UK then the potential impact of any change on the provision at UoRM is considered.

There is a research seminar series that has had the benefit of international speakers. Students told the team that they regularly attend the seminars and cited examples of seminars on snake toxins and diagnostic testing as having been informative and enjoyable. In addition, students interview staff members about their research interests as part of their portfolio. The eventual plan is to encourage some UK-based students to conduct their research projects in Malaysia although this has not yet proved possible until UoRM has invested in more research equipment and the UoRM element of the MPharm degree has been fully accredited. However, during the tour of the building the paucity of research equipment was noted, but the team learned that UoRM intended to invest in research equipment for pharmacy, an investment to be matched by a contribution from the UK School. The Provost told the team that the PDR process for staff examines all of a staff member’s skills including student support and research for promotion purposes, and the Pro-Vice Chancellor for Teaching and Learning told the team in a later additional meeting that it was the ambition of the University to grow activity within the existing impressive building but that it was necessary to start with the teaching as part of a 3-5 year programme of development of the UoRM campus before a significant research programme could be started. He agreed that it was important that students experience some exposure to research but thought it was unlikely to be high-end research in the early years of the development of the campus.

Placement visits, internally-supervised by UK-registered pharmacists, are made to private and government hospitals, and to a community pharmacy, coupled with cross-campus reflective activity using Blackboard Collaborate. In Part 2 there will be two half-day visits to hospital pharmacy and a 1-day community pharmacy placement. There are Memoranda of Understanding in place for quality assurance
purposes, augmented by student feedback, and a UK-registered pharmacist is closely involved to indicate to students the similarities and differences in practice between Malaysia and the UK. There is not a system of teacher-practitioners in Malaysia and it is not anticipated that such a system will be introduced; rather placements will be co-supervised by members of teaching staff who will provide feedback. Students have been able to talk to pharmacy staff during placements and have had the systems and roles explained to them, but have not yet had the opportunity to speak with patients. In Part 2 students will not be accompanied by teaching staff but it is likely that a training session will be run for the on-site preceptors. Any expansion of student numbers and the requirement for longer placements should be catered for by a planned expansion of the community pharmacy business. Hospital visits will take place in a small local hospital and the University is working to develop links with a larger government hospital. Blackboard Collaborate allows students to discuss their experiences of placement visits online.

There have been two events that have involved stakeholder input, including one some 2 years ago that asked what employers are seeking in a pharmacy graduate in Malaysia as it is anticipated that most graduates will return to the country; at that meeting it transpired that the same employability skills were desired as those pertaining in the UK.

There are eleven interprofessional education (IPE) events across the four years of the provision including IPE events organised in collaboration with Newcastle University Medical School (NUMed) which has a campus on the Educity site at Johor Bahru and which, like UoRM, teaches its programme in a UK context. There are two IPE sessions in Part 1, one on multidisciplinary teamworking, supporting equality and diversity in healthcare provision with NUMed students, and the second, with students from Monash University, on meeting service users. In Part 2 there will be three IPE sessions. Student feedback indicated that the IPE sessions held thus far which are facilitated by UK–registered pharmacists had been well-received by pharmacy and medical students alike. Students told the team that they had enjoyed the IPE sessions and particularly learning how to cooperate with doctors and how to deal with patients.

There are integrated coursework and examination assessments with an emphasis on diagnostic and formative learning, with integrated case study-based assessments. These include horizontally and vertically integrated inter-modular assessments with a science to practice emphasis. Examinations are identical at the two sites, with questions written jointly by staff at both sites. The timing of written examinations is arranged in order to guarantee cotemporaneous sitting. The longer examinations in practical skills are not taken contemporaneously, but are equivalent in nature. The students’ PAD Portfolio, consisting of 5 sections, including clinical knowledge, is assessed through Parts 1 to 3. Finally, there will be synoptic examinations in Parts 3 and 4. The PAD portfolio is designed to foster the integration of cognate disciplines, encourage independent learning, support development of professional practices, guide reflective practice and self-development, with a major assessment of students’ clinical knowledge, CPD and engagement in Part 3. Quality assurance of the programme includes examination and assessment scrutiny and moderation, the latter performed in the UK on scanned copies of student work.

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

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

The team was told that because of the small numbers of students on the programme currently, it had been relatively easy to look after the students’ needs thus far. There is a personal tutor system that mirrors the UK equivalent that has helped to support students with methods of teaching and learning that are new to many Malaysian students, but the team was told that students have adapted quickly to UK methods of delivery and now have a more relaxed relationship with teaching staff.

In terms of the transition to the UK at the end of Part 2, UK staff members have visited UoRM, taught the Malaysian students, and continue to provide Blackboard Collaborate tutorials, allowing the students to become familiar with personnel who will teach them when they arrive in the UK. The students’ personal
tutors in the UK will be assigned to UoRM students early in Part 2 and personal tutors at UoRM will maintain contact informally with their tutees when they are in the UK as the record-keeping will be transferred to the UK system. In addition, there has been a Blackboard Collaborate session linking UK and UoRM students to reflect on placement and IPE experiences. Students told the team that they were not worried about the transfer to the UK and that their parents were all prepared financially for the move and its costs. On arrival in the UK there will be a 2-week transition period for UoRM students during which they will visit community and hospital pharmacies, attend taught sessions on prescription assessment and medicines supply using the different software systems used in the UK teaching, and spend time with UK student buddies. Students will be supported by a staff member from UoRM who will travel to the UK to be available for the students’ arrival. Funding has been provided by the University to support a 0.3 FTE post to explore any transition issues. The team was told that the 2+2 MPharm students tended to be very quiet, so the teaching staff had spent a lot of time working on their confidence and communication skills, and was putting thought into the composition of groups when the students transferred to the UK as the small cohort of 11 students will be joining a UK cohort of around 150 students.

The quality assurance of the provision includes the incorporation of the student voice through module evaluation and placement feedback, feedback from the SSLC, peer review of teaching and an element of stakeholder input, although the latter pertains mainly to the UK.

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

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

Probationary targets for newly appointed staff members are agreed in consultation with the UK, plus potential targets to allow for promotion. Career development in teaching and research is facilitated by Personal Development Reviews (PDRs), with financial support being made available for research and scholarly activities. There has been an induction programme for new members of UoRM teaching staff, who have been able to spend time on the Reading campus in the UK, allowing them to contextualise the differences between Malaysian and UK practice in pharmacy, including visiting both hospital and community pharmacies in the UK. The team was told that staff had been recruited to Pharmacy at UoRM on the understanding that there would be an initial 2-year period of very hard work until the element of the MPharm programme delivered in Malaysia had become established and before new staff members were in post.

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

Criteria 8.1.a and 8.1.b are not met and are subject to a condition.

Academic staff members at UoRM report to the Head of the Reading School of Pharmacy Malaysia. The Head reports to the Malaysia campus Academic Director of Teaching and Learning, who in turn reports to the campus CEO/Provost. The Provost then reports directly to the Vice Chancellor of the University of Reading in the UK. The team found this line management unusual in that the Head of Pharmacy in Malaysia, an executive role, is also the Academic Director of Teaching and Learning, an advisory role, and that although the line manager of the Head of Pharmacy in Malaysia is the Provost rather than the Head of the UK School of Pharmacy, the latter conducts the Personal Development Reviews for staff teaching in Malaysia. The team also found it unusual that the Provost does not report to an academic body such as an academic senate, but rather directly to the Vice Chancellor. The Pro-Vice Chancellor for Teaching and Learning told the team in an additional meeting that UoRM was an adjunct to the UK university like other international units and that although the Provost reported directly to the Vice Chancellor, the operation of the UoRM campus also came under the aegis of the Pro-Vice Chancellor for Teaching and Learning. Given that the GPhC requires a School of Pharmacy to deliver an MPharm as a single entity irrespective of geographical location, the team agreed that it should be a **condition** of accreditation that...
the University must organise the MPharm managerial structure to ensure there is appropriate capacity, resource allocation and financial autonomy. The University must provide quarterly updates to the GPhC to demonstrate progress towards meeting this condition.

**Standard 9: Resources and capacity**

Criteria 9.1.a and 9.1.b.iii are not met and are subject to a condition. The team was satisfied that all other criteria relating to this standard will be met.

The University plans to introduce a 4-year, non-GPhC accredited MPharm with a more Malaysian focus, designated as 4+0, which will be delivered in parallel with the 2+2 MPharm but with separate examinations, particularly in law and practice. This 4+0 degree will provide a potential route for students unable to transfer to the UK part of the 2+2 programme, although students in the current cohort told the team that they all intended to transfer to the UK for the final two years of the 2+2 degree. The University is also developing a 3-year BSc in Pharmaceutical Science for Industry which is currently undergoing the approval processes in the UK campus. All three degrees will have essentially common first and second years, and recruitment to the 4+0 degree will be limited only by the facilities available. It is envisaged that eventually the number of 4+0 students will exceed that on the 2+2 degree programme.

The business plan development is income-led, based on the best estimate of students enrolling; this is informed by 5-year forecasting for the University based on market research and alignment to government statements with respect to higher education. Budget costs included in the business plan submitted exclude central campus costs such as IT. A draft risk assessment taking account of, for example, changes in the political arena, retention of staff, recruiting students, etcetera, was considered by the University UK Risk Management Group, and approved by the local operating company (RUMAL Board). Potential failure to gain programme approval was stated to have become a lower risk now that support has been received from the Malaysian Pharmacy Board and the Ministry of Higher Education.

Given that the UK iteration of the programme has been fully accredited, the main purpose of the visit was to ascertain the sustainability of the programme at the Malaysian campus. The University regards sustainability as a campus-wide objective, with original planning based on an intake of 20-30 students onto the 2+2 MPharm degree, but expects that the planned 4-year (4+0) MPharm which would only be limited in terms of student numbers by the facilities would be helpful in ensuring sustainability of the 2+2 MPharm. One of the issues raised at the Step 1, Part 2 visit had been the potential transfer of students unable to afford to continue their studies in the UK onto the 4-year MPharm, but the University is establishing a means-tested award to cover the difference between the fees involved in going to the UK campus to complete the 2+2 degree or remaining in Malaysia to complete the 4-year MPharm; the team was also told that any such awards would be granted on a competitive basis.

As at the previous Step 1, Part 2 visit, the team identified serious errors in the submitted business plans pertaining to student intake and numbers. Given the Provost and Chief Operating Officer’s assurances that sustainability was a campus-wide issue, and that the necessary resources would be made available to Pharmacy, the business plan was not explored in any detail. Differences in the management structures at the UK and Malaysian campuses included the UK School of Pharmacy having financial autonomy whereas at UoRM financial matters are controlled across the whole of the campus, with the Head of the UK School having no input to financial matters relating to Pharmacy at UoRM. The team’s concerns were not about finance but about the Heads of Pharmacy having influence in the institution and particularly the Head of the UK School not having influence over matters relating to Pharmacy at UoRM and with the Head of Pharmacy at UoRM reporting to the Provost rather than to the Head of the UK School. As a result of the team’s concerns, and the fact that the GPhC requires a School of Pharmacy to deliver an MPharm as a single entity irrespective of geographical location, the team agreed that it should be a condition of accreditation that the University must organise the MPharm managerial structure to ensure there is appropriate capacity, resource allocation and financial autonomy. The University must provide quarterly updates to the GPhC to demonstrate progress towards meeting this condition.
Standard 10: Outcomes

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

The team examined in detail five of the GPhC outcomes, namely 10.1.a (Recognise ethical dilemmas and respond in accordance with relevant codes of conduct), 10.1.e (Demonstrate how the science of pharmacy is applied in the design and development of medicines and devices), 10.1.f, (Contribute to the education and training of other members of the team, including peer review and assessment) 10.2.1.d (Apply knowledge of current pharmacy-related policy to improve health outcomes) and 10.2.2.g (Communicate with patients about their prescribed treatment). For each of the five outcomes scrutinised in detail, the evidence provided by discussions with staff, along with other evidence provided with the documentation, gave the team confidence that these outcomes will be met at the required level. The team expressed confidence that all other outcomes will be met similarly. This view was supported by the documented material for each of the other outcomes which had also been scrutinised by the team. Thus, the team was confident that Standard 10 will be met, although this standard will be revisited at future steps in the accreditation process.

Indicative syllabus

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

The team agreed that the MPharm degree met the requirements of Directive 2005/36/EC of the European Parliament and of the Council on the recognition of professional qualifications for the initial education and training of pharmacists.
Appendix 1 - Standing conditions

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

1. The record and report include other comments from the team, and providers are required to take all comments into account as part of the accreditation process. The provider must confirm to the GPhC that required amendments have been made.

2. The provider must respond to the definitive version of the record and report within three months of receipt. The summary report, along with the provider’s response, will be published on the GPhC’s website for the duration of the accreditation period.

3. The provider must seek approval from the GPhC for any substantial change (or proposed change) which is, or has the potential to be, material to the delivery of an accredited course. This includes, but is not limited to:
   a. the content, structure or delivery of the accredited programme;
   b. ownership or management structure of the institution;
   c. resources and/or funding;
   d. student numbers and/or admissions policy;
   e. any existing partnership, licensing or franchise agreement;
   f. staff associated with the programme.

4. The provider must produce and submit to the GPhC on an annual basis:
   a. requested data on student numbers and progression and degree awards;
   b. requested information about the extent of human and physical resources it enjoys for the delivery and support of the degree course.

5. The provider must make students and potential students aware that successful completion of an accredited course is not a guarantee of a placement for a pre-registration year or of future employment as a pharmacist.

6. The provider must make students and potential students aware of the existence and website address where they can view the GPhC’s accreditation reports and the timetable for future accreditations.

7. Whenever required to do so by the GPhC, providers must give such information and assistance as the GPhC may reasonably require in connection with the exercise of its functions. Any information in relation to fulfilment of these standing conditions must be provided in a proactive and timely manner.

Appendix 2 – Standards

GPhC standards for the initial education and training of pharmacists

NB. Information that is shaded grey or shown in grey italics is only applicable to those wishing to offer 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 Code of Conduct for Pharmacy Students (2010) Standards of conduct, ethics and performance (2010);
1.1.g understand what fitness to practise mechanisms apply to them. All schools of pharmacy must have fitness to practise procedures to deal with student causes for concern;
1.1.h undergo required health and good character checks;
1.1.i understand that it is an offence to impersonate a pharmacist. Pharmacists are registrants of the GPhC.

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

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

2.1 There must be systems and policies in place covering:
2.1.a information about roles and responsibilities and lines of accountability;
2.1.b university information on:
   2.1.b.i entry requirements;
   2.1.b.ii the quality of teaching, learning and assessment;
   2.1.b.iii the quality of placements and other practice learning opportunities;
   2.1.b.iv appraisal and feedback systems for students and trainees;
   2.1.b.v supervision requirements;
   2.1.b.vi educational resources and capacity;
These must be monitored, reviewed and evaluated systematically. When an issue is identified it must be documented and dealt with promptly.
2.1.c pre-registration tutors evaluating trainees. To do this, tutors must have access to reliable evidence about a trainee’s performance. Tutors must be competent to assess the performance of trainees;
2.1.d the quality and development of pre-registration tutors

Standard 3: Equality, diversity and fairness

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

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

Standard 4: Selection of students and trainees

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

4.1 Selection process must give applicants the information they need to make an informed application.
4.2 Selection criteria must be explicit. They should include:
   4.2.a meeting academic and professional entry requirements;
4.2.b meeting English language requirements appropriate to MPharm degree study. Guidelines issued by English language testing bodies should be followed to ensure that admissions language requirements are appropriate;

4.2.c meeting numeracy requirements;

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

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

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

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

Standard 5: Curriculum delivery and the student experience

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

5.1 Curricula must be integrated.

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

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

5.4 An MPharm must be delivered in an environment informed by research. 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

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

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

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

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

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

<table>
<thead>
<tr>
<th>Learning outcome</th>
<th>MPharm</th>
<th>Pre-reg</th>
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</table>

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

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

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

10.2.5 Maintaining and improving professional performance

<table>
<thead>
<tr>
<th>Learning outcome</th>
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<th>Pre-reg</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.2.5.a Demonstrate the characteristics of a prospective professional pharmacist as set out in relevant codes of conduct and behaviour</td>
<td>Does</td>
<td>Does</td>
</tr>
<tr>
<td>10.2.5.b Reflect on personal and professional approaches to practice</td>
<td>Does</td>
<td>Does</td>
</tr>
</tbody>
</table>
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)