



Master of Pharmacy
degree (MPharm)

Kingston University

Report of a reaccreditation event

April 2018

Event summary and conclusions

<i>Provider</i>	Kingston University
Course	Masters of Pharmacy degree (MPharm) and Foundation Degree in Pharmaceutical and Chemical Sciences (FDPCS)
Event type	Reaccreditation
Event date	10-11 April 2018
Accreditation period	2017/18 – 2020/21
Outcome	<p>Approval with conditions</p> <p>The accreditation team agreed to recommend to the Registrar of the General Pharmaceutical Council that the MPharm degree and the Foundation Degree in Pharmaceutical and Chemical Sciences delivered by Kingston University should be reaccredited for a period of three years, subject to two conditions and one recommendation.</p> <p>In setting a shortened period of accreditation, the team recognises that this is a period of change for Kingston University and for the Department of Pharmacy, and that some changes are outside the control of the University. The main factors contributing to the team's decision are</p> <ul style="list-style-type: none"> - the transformational period being undertaken by the University; - the move of the delivery of Foundation Degree in Pharmaceutical and Chemical Science from South Thames College to the University; - the introduction of additional measures to improve the performance of Kingston MPharm graduates in the GPhC's registration assessment. <p>Additionally, during the course of the meetings, the team heard a number of other ideas and plans for the introduction of new elements into the curriculum, as well as procedures relating to the Foundation Degree.</p> <p>The team will also require a copy of the final business plan that reflects the financial details of the MPharm, OSPAP and the Foundation Degree once this has been validated by the PVC in July. The team requires this to be sent from the PVC or a senior executive officer to ensure that the GPhC is in possession of the most up-to-date information regarding sustainability of the accredited courses.</p>
Conditions	

	<ol style="list-style-type: none"> 1. The University must undertake good character and health checks as part of the initial admissions process. This is because good character checks are not being undertaken until year 2 of the MPharm degree, after patients and the public have been exposed to students; health checks currently rely on self-declaration. The team recognised that the School stated that that this currently did not pose a problem; however, this process is out of step with current admissions practice and the Department cannot be fully confident that students and/or patients are not being put at risk. This is to meet standard 1.1h, 4.2d and 4.2e and must be introduced before the admission of the next cohort of students. 2. The Department must review its selection processes to ensure that they are fair and equitable. This is because the applications and the interviewing of students is being applied inconsistently across all of the programmes. This is to meet standard 4.3. This must be implemented before admission of the next cohort of students.
Standing conditions	Please refer to Appendix 1
Recommendations	The School should review and develop a clear and coherent assessment strategy for the MPharm degree to ensure confidence that the students meet the standard 10 outcomes. While recognising that a range of assessments methods is in place and is going to be introduced, it is unclear as how these link together coherently. The team heard from the University that a variety of changes is being implemented and encourages the School to ensure that this develops into an overarching, clear strategy; this relates to standard 5.7.
Registrar decision	<p>Following the event, the provider submitted a response to the conditions of reaccreditation, and the accreditation team agreed they had been met satisfactorily.</p> <p>The Registrar of the GPhC accepted the team's recommendation and approved the reaccreditation of the programmes for a further period of 3 years</p>
Key contact provider	Professor Chris Cairns, Head of Department of Pharmacy, Kingston University
Accreditation team	<p>Professor Ian Marshall (Team leader), Emeritus Professor of Pharmacology, University of Strathclyde</p> <p>Professor Larry Gifford (Academic), Emeritus Professor, Keele University School of Pharmacy</p> <p>Dr Katie Maddock (Academic), MPharm Director of Learning and Teaching, Keele School of Pharmacy</p> <p>Miss Raminder Sihota (Pharmacist), Senior Manager and Professional Development, Boots UK</p> <p>Miss Rosaline Pollard (NQ Pharmacist), Clinical Pharmacist, Worthing Hospital</p> <p>Mrs Fiona Barber (Lay), Independent Member, Leicester City Council</p>

GPhC representative	Ms Joanne Martin, Quality Assurance Manager, GPhC
Rapporteur	Professor Brian Furman, Emeritus Professor of Pharmacology, University of Strathclyde

Introduction

Role of the GPhC

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

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

The powers and obligations of the GPhC in relation to the accreditation of pharmacy education are legislated in the Pharmacy Order 2010. For more information, visit:

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

Background

The MPharm degree at Kingston University is provided by the Department of Pharmacy ('the Department'), part of the School of Pharmacy and Chemistry, within the Faculty of Science, Engineering and Computing; the programme became fully accredited in June 2008. The MPharm programme is delivered in partnership with St George's University of London (SGUL). In addition to the MPharm, Kingston University provides the Foundation Degree in and Chemical Sciences (FDPCS – the Foundation Degree), a GPhC-accredited pharmacy foundation degree; an accredited pharmacy foundation degree is a two-year, full-time course which includes the content of year 1 of an accredited MPharm degree combined with practical work and pharmacy placements. Successful completion of a such a degree exempts a student from the requirement to complete year 1 of the University's accredited MPharm degree; accordingly, to meet the GPhC requirements, pharmacy foundation degrees must deliver the learning outcomes of year 1 of a University's accredited MPharm. In 2009, Kingston University, in partnership with Merton College (which merged with South Thames College in 2010), received accreditation of the Foundation Degree for a period of three academic years. Subsequently, the GPhC agreed to extend the accreditation of the University's Foundation Degree for a period of one year, to fall into line with the date when reaccreditation of the University's MPharm degree was due (2012-2013 academic year), so that the two programme could be reaccredited at the same time; a joint reaccreditation event took place in May 2013. On that occasion, the team agreed to recommend to the Registrar of the General Pharmaceutical Council that the Foundation Degree in Pharmaceutical and Chemical Sciences (FDPCS) be reaccredited for a period of six years with no conditions. The team also agreed to recommend to the Registrar of the General Pharmaceutical Council that the MPharm degree should be reaccredited for a period of six years; however, the team stated that there should be a maximum student intake of 140 to prevent the unplanned increases in student intake that had occurred in 2009 and 2012, which the team considered to result in a significant strain on resources. The team's recommendation to the Registrar was also subject to two conditions; these were -

- i. The University was required to seek derogation from the academic regulations in the area of compensation and condonation; the team viewed that the regulation permitting students to

progress with one module that had been failed at 35% was potentially unsafe for a degree that is professional and leading to further professional healthcare training. To meet this condition, a highly restricted compensation scheme was introduced; this permitted a minimal amount of true compensation, that is a small deficit in one assessment could be compensated both within the module to gain a pass mark and across the other three modules, although the two modules ('Pharmacy Law, Ethics and Practice'; 'Effective Decision Making for Pharmacy Practice'), which include a substantial proportion of law and ethics cannot be compensated under any circumstances.

- ii. The University was required to articulate a strategy to ensure that the MPharm degree curriculum included practical experience that increased year on year; such practical experience was required to include off-site placements, and simulation, as well as using patients, carers and other healthcare professionals in-class. The team considered the placement provision where students were permitted to organise their own placement experience to be outside the management and quality assurance of the University. To meet each of the elements in this condition, a strategy was presented to the GPhC, which not only introduced more practical experience but developed it further with time. An improved QA system for placements was introduced and IPE has been developed so that there is now at least one IPE activity in each year.

Following the interim practice visit in 2016, the team set one condition and made one recommendation. The condition stipulated that the Department was required to recruit additional staff in line with its business plan, on the understanding that the student numbers do not exceed the numbers planned; this would bring the staff/student ratio into line with what was understood at the initial accreditation. As part of this condition, the Department was required to submit an approved business plan with confirmation from the relevant authority that this was current and up-to-date; the GPhC also required formal notification from the relevant University authority that the staff appointments were approved by the University. To meet this condition, a business plan was submitted to the GPhC in August 2016 and several new appointments were made, including a Professor of Medicinal and Pharmaceutical Chemistry, a Lecturer in Clinical Pharmaceutics and five part-time (1.9 FTE) Teaching Fellows in clinical/practice. The team recommended that out-of-date material and outdated labelling software be removed and substituted with up-to-date material; the Department addressed the software issue and removed and discarded the out of date material, apart from a set of archive materials for reference.

A joint reaccreditation event was scheduled for 10-11 April 2018 to review both the Kingston University MPharm degree ('MPharm') and the Foundation Degree in Pharmaceutical and Chemical Sciences ('Foundation Degree') against the GPhC's education standards.

Key findings

Standard 1: Patient and public safety

Criterion 1.1.h is not met and is subject to a condition. All other criteria relating to this standard are met.

There are systems in place to ensure that students do not jeopardise patient safety; these include appropriate supervision and monitoring, and allowing students only to do tasks for which they are competent, as well as having established mechanisms and procedures to deal with fitness to practise. During induction, MPharm and FDPCS students attend a session dealing with fitness to practise and the GPhC's Standards for Pharmacy Professionals; the session also addresses the students' obligations and responsibilities as pharmacy students and future pharmacists. The students sign a self-declaration that they will abide by these principles and standards throughout the course and are also asked to declare any issues that would impair their fitness to practise, such as undeclared police cautions or illness; they provide an annual self-declaration confirming their continued compliance with the GPhC Standards for

Pharmacy Professionals and must state any changes that may have occurred with regard to their fitness to practise status. Near the beginning of the second year, all students are subjected to an enhanced Disclosure and Barring Service (DBS) check; the reason for undertaking this only in the second year is because the students from the Foundation Degree join the MPharm at that point. There are no occupational health checks, awareness of students' health status depending entirely on their self-declarations. Anything adverse identified in the DBS check or annual health declarations would be referred to the Fitness to Practise subcommittee for review. Prior to undertaking their first placement students are briefed on professional behaviour and reminded about issues of patient confidentiality and safety; these matters are reinforced later in the course in preparation for other placements. On clinical placements, the placement tutor provides an assessment of the student's professional behaviour, with any reports of poor or inappropriate behaviour being investigated and, where required, dealt with through fitness to practise procedures. Students are supervised in their interactions with patients, and the activities progress from learning by observation in the first two years through to learning through practise in the third and final years. In each year, there are assessments that determine professional competence; these include key patient safety and risk criteria, and these must be passed in order for students to progress or to graduate. In these assessments, serious incidents that might lead to patient harm may result in failure and removal from the programme. While understanding the Department's reason for undertaking DBS checks only in the second year, and acknowledging the view that the lack of occupational health checks currently did not pose a problem, the team agreed that the Department's procedures were out of step with current admissions practice across the sector; the Department therefore could not be fully confident that students and/or patients are not being put at risk. Therefore, the team imposed a condition (see condition 1) that the University must undertake good character and health checks as part of the initial admissions process; this is to meet criterion 1.1.h.

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

All criteria relating to this standard are met.

There are systems in place to monitor, review and evaluate entry requirements, the quality of teaching, learning and assessment, and of placements and other practice learning opportunities, appraisal and feedback systems for students, and supervision requirements, as well as educational resources and capacity. The monitoring, review, and development of the MPharm programme are undertaken using the standard Kingston University quality framework, and are managed primarily through the Pharmacy Board of Studies. All modules, including those delivered at SGUL are subject to Kingston University regulations. Quality assurance begins at module level and includes peer observation of teaching, moderation of coursework assessments and of examination papers, comments and input from external examiners, feedback on teaching obtained through the Student Staff Consultative Committee (SSCC), 'Early Module Feedback' completed by student course representatives, and end-of-module feedback obtained through student evaluation questionnaires. This information is used to prepare a Module Enhancement Plan (MEP) which each module team completes as part of the annual monitoring process. These MEPs contribute to Course Enhancement Plans which are discussed at the Board of Study and are used to prepare a Department Enhancement Plan (DEP) Summary; the DEP Summary is considered by the Faculty Education Committee which is attended by the University's Deputy Academic Registrar (Quality, Examinations & Timetabling) who prepares a report summarising the key issues, themes and risks, which is then considered at University level and presented to the Senate.

Community pharmacy placements in years 1 and 2 are organised by the University, while students organise their own community placements between years 2 and 3 and years 3 and 4. Hospital placements are organised by the University at one of the School's NHS partners. All placements are at hospitals that are accredited for preregistration training and/or postgraduate pharmacist training. Quality assurance of all community pharmacy placements depends on visits from members of staff who consider the suitability of the premises in terms, for example, of pharmacy workflow, the facilities, the services offered, and whether the pharmacy is approved for training pre-registration students; for self-

organised placements, students are provided with a list of approved pharmacies but may themselves identify others, which are then subjected to the appropriate checks. Pharmacies are revisited every four years unless there is a problem, such as a high turnover of pharmacists. After each placement, feedback is obtained both from the students and the providers using questionnaires, and students also meet with members of academic staff to discuss the placements and describe their experiences; where negative feedback is obtained about a placement, it may be removed from the list.

Patient feedback in course development has been used in the past, although it is not currently used in a formal way. The Department considers that the pharmacists and doctors who are members of staff across the Department and SGUL can inform course development through their knowledge of what is happening in the world of practice. Student input has contributed to improving the course, including changes that have been made to its teaching and assessment.

Standard 3: Equality, diversity and fairness

Both criteria relating to this standard are met.

The University collects data to monitor equality and diversity among staff and students; these data are used to identify key strengths and areas of weakness, which are then used in setting the University's priorities relating to its equality, diversity and inclusion strategy. Identified areas of improvement include addressing some pay gaps, increasing the proportion of academic females who are in professorial roles, and reducing the BME attainment gap. The student population in the MPharm is diverse with more than 65% female, and the proportion of students from black and ethnic minority (BME) backgrounds at around 52%; there is a much higher proportion of BME students on the FDPCS. The strategy and action plan demonstrate an embedded approach to training in equality and diversity. Staff receive sessions on equality and diversity and new staff members are introduced to equality and diversity in induction events. The University also has an equality and diversity online training resource. Services are available for students with dyslexia and other disabilities, and reasonable arrangements are made for such students to facilitate their studies. If a student's disability has fitness to practise implications, then the student will be advised and supported following an anonymous review of his/her case, taking appropriate advice from the Dyslexia and Disability Service and any other relevant authorities. Students learn about equality and diversity issues, relating to, for example, sexuality, ethnicity, and religion, primarily in workshops. Consideration of ethical dilemmas and clinical cases generate a huge amount of discussion around these and other issues, such as HIV and post-exposure prophylaxis, as well as emergency hormonal contraception and the role of community pharmacist in such matters. Students learn that the provision of service by pharmacists should not be affected by personal beliefs, with everybody being treated in the same way.

Standard 4: Selection of students

Criterion 4.2.d, 4.2.e are not met and are subject to a condition (condition 1); criterion 4.3 is not met and is also subject to a condition (condition 2). All other criteria relating to this standard are met.

The selection criteria and selection processes for the MPharm and FDPCS, as well as course details, are made available to prospective students through various means, including the University website, Faculty/School open days and course leaflets. The School also makes a number of visits to local schools and colleges to promote all its courses. The entry qualifications include A-levels and a range of others such as BTEC, but many students enter the MPharm via the Foundation Degree, or by transferring from other degrees within the University, such as the BSc in Pharmaceutical Sciences. The stated A-level tariff required for admission is ABB, but a minority of entrants achieve this, with the percentage doing so decreasing progressively over the last few years; for example, while 36% of entrants achieved these grades in 2013/14 and 2014/15, this dropped to 22% in 2016/17 and only 13% in 2017/18. Although students are required to declare convictions at application (see also standard 1), they are not required to

undertake a Disclosure and Barring Service (DBS) check for admission; these DBS checks are carried out at the beginning of the second year in preparation for clinical placements in the second year and placements in years 3 and 4, as well as for work-based projects. The reason for this timing is that students from the Foundation Degree join the programme in the second year. Occupational health checks are not undertaken and students must make a self-declaration on their health status on admission and annually thereafter, as well as declaring their vaccination status before embarking on hospital placements. While the Department believes that this is satisfactory, because students have little exposure to patients in the first year, and subsequent placements are short with students not being taken into high-risk areas, the team agreed that the Department's procedures were out of step with current admissions practice; thus, the Department could not be fully confident that students and/or patients are not being put at risk. Therefore, the team imposed a condition (see condition 1) that the University must undertake good character and health checks as part of the initial admissions process; this is to meet criteria 4.2.d and 4.2.e.

Prospective MPharm students are invited for interview. Interviewing is undertaken during the main admissions cycle, where all students are interviewed, but not all students are interviewed for entry through clearing; most applicants through clearing have already been interviewed during the main admissions cycle. At interview, applicants are expected to demonstrate competence, and where this is unclear they may still be offered a place but with higher grades being demanded. Foundation Degree applicants are not interviewed until they progress to the MPharm. The team was told that the interview process comprises an introductory talk followed by an individual calculations test and then a group interview, in which groups of applicants work together to produce a presentation and then present this as a group in front of a number of staff members and students. In this presentation, applicants are evaluated, for example, on their values, delivery, and teamwork; applicants must each contribute to the presentation, as well as identifying themselves to the audience. However, if applicants do not engage with this process, they are still offered a place, although with the demand of higher grades. Passing the numeracy test is an essential requirement, and applicants failing this test are not made an offer. The team agreed that inconsistencies in the use of interviews, such as interviewing only some applicants at clearing, and the fact that applicants not performing well were still offered a place based on a higher A-level tariff, did not provide confidence that the selection criteria were being applied fairly. Accordingly, the team imposed a condition (condition 2) that the Department must review its selection processes to ensure that they are fair and equitable; this is to meet criterion 4.3.

Standard 5: Curriculum delivery and student experience

All criteria relating to this standard are met.

The MPharm programme was revised in 2013 to meet the GPhC standards. Each of the first three years of the programme comprises four, 30-credit modules; these modules each run throughout the year. In contrast, year 4 comprises two, 30-credit modules in the first part of the year, followed by the 60-credit 'Research Methods and Project' module. Each year includes a zero-credit 'Academic and Professional Skills Portfolio'. The course starts with basic building blocks; science and practice become increasingly integrated, and material becomes increasingly complex, through the years. Integration of science and practice is achieved through teaching around particular diseases, with all material relevant to that disease being incorporated, including chemistry, physiology, pharmacology, immunology, pharmaceuticals, pharmacokinetics, and clinical aspects. Integrated learning is facilitated by frequent scenario-based workshops, appropriate signposting by members of staff, and interaction with other healthcare professionals, as well as by weekly visits to SGUL, where students receive lectures from clinicians. The Foundation Degree in Pharmaceutical and Chemical Sciences (FDPCS) comprises four modules in year 1 and six modules in year 2, with students being required to pass a specified four of these year 2 modules in order to progress to the second year of the MPharm. Professional standards are inculcated at an early stage, including within the Foundation Degree, being introduced at induction and emphasised every year; the role of the pharmacist is emphasised throughout. Students engage with patients from first year, where they meet expert patients and interview them about their conditions and state of health.

They also meet patients on placements, and there are interactions with patients on their visits to SGUL. Patient contact builds progressively, starting with meeting uncomplicated patients in community pharmacy in year 1, with increasing patient exposure and more complex patients being met in later years; second year placements are mostly observational, while in the third year, after preparation in a simulated ward environment, students interact with patients in the wards during their hospital placements. Consistency of experience across community placements is achieved through a workbook that details the tasks that must be undertaken, with tasks becoming more complex in successive years. Students now have inter-professional learning in each year, for example, discussing ethical issues with nursing and paramedic students in the first year, looking at drug charts and discussing diseases and therapeutics with medical students in the second year, and working with nursing students in a simulated ward environment in the final year.

The assessments are undergoing extensive changes; these have been driven first by the University's Academic Framework, which permits a maximum of three assessments in a module, and second by the Kingston University graduates' performance in the GPhC Registration Assessment, which has dropped over the past two years to a pass-rate of around 60%. Within the MPharm programme, there has been an overall reduction in the number of assessments in each module, although each module includes practical assessments and some in-module tests such as mini-quizzes, case presentations, group assignments, and oral presentations to encourage continual revision. There is a synoptic OSCE and a synoptic calculations assessment at the end of the final year, both of which must be passed for the MPharm to be awarded; a synoptic OSCE and calculations assessment at each of years 1, 2, and 3 feed forward to these final year assessments. Due to the integrated nature of the clinically-themed modules in the third year, and to discourage compartmentalisation of learning, the single synoptic paper, which must be passed for the student to progress to the final year, replaces the end of module examinations. Feedback on assessments is provided within three weeks and students are notified when feedback will be available. Students must pass examinations and coursework elements in each module, as well as passing the synoptic OSCE, the synoptic calculations, and the zero-credit 'Academic and Professional Skills Portfolio' in each year. Students are allowed a maximum of two attempts at synoptic assessments/OSCEs in years 1, 2, and 3 and three attempts at this assessment in the final year; only very limited compensation is permitted and resit opportunities are restricted.

Standard 6: Support and development for students

The single criterion relating to this standard is met.

Each student has a personal tutor, whom they meet four times a year, either individually or as a group; the tutor is the first point of contact for advice and help, for example, when students are struggling with their caring responsibilities, or are having financial problems. Tutors deal with all issues, including assisting students with matters such as interview technique and drafting CVs, but can also refer students to the appropriate person or service. The tutor system allows the identification of students who are not engaging with programme; such students can be referred for additional support. Meeting with tutors is required a part of the students' 'Academic & Professional Skills Portfolios', which require completion of a number of tasks. All members of staff dealing with placements are pharmacists, and all personal tutors meet regularly as a group to discuss common issues; non-pharmacist members of staff are developed by other staff members trained in this role.

In light of the poor performance of the University's graduates in the GPhC's Registration Assessment, changes are being made to provide additional support for graduates undergoing pre-registration training. Pre-registration experience is currently supported by an induction talk on the Oriel system, and a mock registration assessment, as well as by the personal tutor system. A Facebook group commenced in the current academic year and there will be an Oriel practice in May 2018. The Department has considered students' requests for further support relating to the types of questions used in the Registration Assessment, although these have become better embedded in the MPharm. Graduates had also requested structured educational support and material to compensate for lack of dedicated, structured

study time during their pre-registration training, as well as yearly calculation tests, practice calculations and support for time management. The Department views the level 6 synoptic assessments as good preparation for the final year OSCE, and considers that this will then feed forward to improved performance the Registration Assessment.

Standard 7: Support and development for academic staff

All criteria relating to this standard are met.

The University requires all teaching staff, including those who are part-time, to have a teaching qualification; this is achieved through members of staff achieving Fellowships of the Higher Education Academy (FHEA). New staff members without a teaching qualification undertake an 'Introduction to Teaching and Learning' (ILT) course, from which they build their portfolios to apply for Fellowships. All staff members either have a postgraduate diploma, or have achieved, or are working towards achieving Fellowship of the HEA. The University has a Learning and Teaching Enhancement Centre (LTEC) the role of which is to enhance staff members' teaching and learning practice. In addition to running the HEA-accredited framework that provides the teaching qualification, it also supports continual professional development through this framework to Senior and Principal Fellow level, as well as providing a range of other teaching and learning support through a number of programmes. These programmes are supported by regular School- and Faculty-based sessions on teaching and learning development. The University and Faculty run a number of professional development meetings, covering a range of subjects from management to presentation of current research. The School has at least one away day each year for staff development, and runs a series of research colloquia over the year with speakers from within the School and from other institutions. The mandatory annual staff performance, development and appraisal scheme is designed to assist staff members with their personal and professional development. There is now a formal peer-observation scheme whereby an individual's teaching is observed by other members of academic staff who have undertaken specific training in that role. Overall, staff workloads in the Department of Pharmacy are high, due to a high level of student contact in practical classes, tutorials and workshops. However, the staff work effectively as a team in sharing this workload. Teaching loads are discussed annually, and a rebalancing occurs if required; 20% of staff time is allowed for staff development and research.

Standard 8: Management of initial education and training

Both criteria relating to this standard are met.

The Department is part of the School of Life Sciences, Pharmacy and Chemistry, which is one of three schools within the Faculty of Science, Engineering and Computing (SEC), the others being the School of Computer Science and Mathematics, and the School of Engineering, Natural and Built Environments. The Dean, Vice Dean, Heads of Schools, and the Finance Business Partner form the Faculty Leadership Team (FLT). Key decisions, which are informed by key policy decisions made by the Senior Management Team, regarding all aspects of faculty business are made via FLT. Directives and initiatives from the FLT are discussed at School Management Group meetings, where School policy and action plans are determined. The School Management Group is chaired by the Head of School, and comprises the Heads of Departments, the School Director of Learning and Teaching, and the School Director for Research and Enterprise. Important decisions regarding the pharmacy courses course always require the approval of the Head of the Department of Pharmacy, who is responsible for promulgating and implementing these decisions within the Department. Monthly Department of Pharmacy staff meetings are held to disseminate information, including University decisions, as well as professional developments; these staff meetings develop and agree strategy, policies and procedures and address current problems. The Pharmacy Board of Studies, which meets three times a year, is the formal body that approves academic

business, while the Assessment Boards have the responsibility for approving student marks and progress; these boards are all chaired by the Head of Department of Pharmacy. The MPharm programme and FDPCS are each led by a Course Director. Assessment, quality management and determination of progression and awards are conducted within the Department of Pharmacy. Although the MPharm degree is awarded by Kingston University under its own regulations, it is delivered through a partnership with St George's University of London (SGUL), with seven modules at levels 5 and 6 being jointly taught; all of these modules are jointly led by staff members in each institution. This aids the clinical focus of the degree with a substantial content being delivered by clinicians who are current practitioners and this delivery uses the experiences and expertise of SGUL staff gained through the delivery of the MBBS degree; there is some co-teaching alongside MBBS students and specialist lecturers from SGUL and St George's hospital also contribute to MPharm teaching. There is a specific MPharm lead at SGUL as well as a course administrator. Two modules are led by SGUL staff, and SGUL staff are members of the Boards of Study, Assessment Boards, and Fitness to Practise Committee, as well as participating in the SSCC and being involved in assessment, planning of modules, and course development through teaching team meetings.

Standard 9: Resources and capacity

All criteria relating to this standard are met.

Financial planning is undertaken annually but covers the following three years, with plans undergoing iterative refinement until being agreed and signed off each July by the Dean, who is the budget holder. The Faculty contributes 52% of its income to the Centre, retaining 48%, and with all non-pay income devolved to the School; the central contribution covers costs of physical and virtual infrastructure, running the library, student services, and professional support services such as HR and finance, as well as University restructuring costs. However, the business plan presented in the documentation raised serious doubts about the sustainability of the MPharm programme. This was because it showed large and variable deficits from the current academic year onwards, associated with a marked increase in central costs and a reduction in income. Subsequent clarification through the production of an updated business plan provided some reassurances about the support for the MPharm programme. This revised plan demonstrated a net, albeit progressively declining, surplus until 2022/23; this surplus remains in the Faculty and can be used at the Dean's discretion to provide additional support for the MPharm programme if required. The revised plan incorporated fees for OSPAP students and an anticipated increased income as a result of charging FDPCS students the full fee of £9250 following the transfer of this degree from South Thames College to the University (see below). While having substantial cash reserves, the University is currently going through a transformational process which increases total current expenditure, for example, on HR support, resulting in the institution as a whole having a deficit. However, the team was told that this is transient and that the University balance sheet will become positive by 2021; moreover, the Faculty has a financial surplus, having recruited above target last year and thus the Faculty is sustainable until the University's financial position turns around. In order to adjust costs, the top-heavy University administrative structures are being streamlined, and the University has closed a number of courses in its large Faculty of Humanities; this has incurred short-term costs. While STEM subjects remain strong, the University has discontinued its geology programme, and has downsized the mathematics provision with the closure of one or two specialised courses, as well as making some changes in engineering; however, the team was assured that none of these changes has affected, or will affect, the School of Life Sciences, Pharmacy and Chemistry or the Department of Pharmacy. Currently, the Foundation Degree is delivered partly at South Thames College but the University intends transferring the programme to be taught entirely in house from September 2018; this is part of a strategic plan to move all foundation teaching to within the University. While considerable work has been undertaken relating to this transfer, significant work remains to be done; this includes development of a departmental business plan to resource the programme, identification of the academic staff needed to deliver the appropriate modules, and addressing the legal implications of the transfer of staff from South Thames. The uncertainties surrounding the restructuring of the University, together with the transfer of the Foundation Degree, contributed to the team's decision to recommend reaccrediting the

MPharm for only three years.

The current staff/student ratio is 19.2:1 and the staff includes 19 GPhC registered pharmacists, as well as two who were previously registered, and six staff members who are overseas qualified pharmacists; the team at SGUL has three registered medical practitioners. A range of visiting lecturers from community, hospital, regulatory and industrial backgrounds provide teaching related to current practice.

The resources available to the students include the Learning Resource Centre, providing over 450 study places, including places for individual or group study, and approximately 180 networked computers, as well as access to numerous books and journals in both hard copy and electronic format. Similar resources are also available at SGUL, with students having full access to the SGUL library. Students have access to networked computer facilities throughout the KU campuses and at SGUL. The Department has access to a wide range of well-equipped lecture theatres and teaching rooms of various sizes, as well as teaching and research space laboratories, a dedicated pharmacy practice suite, a clinical skills laboratory, and a small aseptic preparation room; the School also utilises the School of Nursing's simulation suite, which is a 10-bed hospital ward facility which is fully fitted with modern healthcare equipment.

Standard 10: Outcomes

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

The team scrutinised the learning outcomes by discussions with the teaching staff. The outcomes selected for discussion in depth were 10.2.1.e, 10.2.3.c, 10.2.4.a, 10.2.5.b, and 10.2.5.g (see appendix 2). Having discussed the selected five outcomes with the staff, and having scrutinised the documentation relating to these and to the other outcomes, the team was confident that all 58 outcomes are met at the appropriate levels.

Indicative syllabus

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

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

Appendix 1 - Standing conditions

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

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

Appendix 2 – Standards

GPhC standards for the initial education and training of pharmacists

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

Standard 1: Patient and public safety

1. **There must be clear procedures to address concerns about patient safety arising from pharmacy education and training. Concerns must be addressed immediately.**
 - 1.1 There must be effective systems in place to ensure that students *and trainees*:
 - 1.1.a do not jeopardise patient safety;
 - 1.1.b only do tasks for which they are competent, sometimes under supervision;
 - 1.1.c are monitored and assessed to ensure they always practise safely. Causes for concern should be addressed immediately;

- 1.1.d have access to support for health, conduct and academic issues;
- 1.1.e must not be awarded an accredited degree *or pass pre-registration training* if they might pose a risk to patients or the public;
- 1.1.f understand what is and what is not professional behaviour and are familiar with the GPhC's *standards for pharmacy professionals (2017)*;
- 1.1.g understand what fitness to practise mechanisms apply to them. All schools of pharmacy must have fitness to practise procedures to deal with student causes for concern;
- 1.1.h undergo required health and good character checks;
- 1.1.i understand that it is an offence to impersonate a pharmacist. Pharmacists are registrants of the GPhC.

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

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

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

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

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

4. Selection processes must be open, fair and comply with relevant legislation. Processes must ensure students 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 must deliver the outcomes in Standard 10. Most importantly, curricula must ensure students 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.
 - 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.

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 to develop as learners and professionals.

Standard 7: Support and development for academic staff

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.

Standard 8: Management of initial education and training

7. 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. 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. 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

Standard 10: Outcomes

10.1 Expectations of a pharmacy professional

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

10.2 The skills required in practice

10.2.1 Implementing health policy

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

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

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

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

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

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

10.2.4 Working with patients and the public

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

10.2.5 Maintaining and improving professional performance

Learning outcome	MPharm
10.2.5.a Demonstrate the characteristics of a prospective professional pharmacist as set out in relevant codes of conduct and behaviour	Does
10.2.5.b Reflect on personal and professional approaches to practice	Does
10.2.5.c Create and implement a personal development plan	Does
10.2.5.d Review and reflect on evidence to monitor performance and revise professional development plan	Does
10.2.5.e Participate in audit and in implementing recommendations	Knows how

10.2.5.f Contribute to identifying learning and development needs of team members	Knows how
10.2.5.g Contribute to the development and support of individuals and teams	Knows how
10.2.5.h Anticipate and lead change	Knows how

Appendix 3 – Indicative syllabus

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

A1.1 How medicines work

Therapeutics

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

Applied Physical, Chemical and Biological sciences

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

Pharmacology, pharmacokinetics & pharmacodynamics

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

Pharmaceutical technology including manufacturing & engineering science

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

Formulation and material science

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