



University of East Anglia

LTC13D090 Appendix iv

LEARNING & TEACHING SERVICE

FULL COURSE PROPOSAL FORM

(taught programmes only)

for **NEW COURSES** and
COURSE AMENDMENTS
with **RESOURCE IMPLICATIONS**

Please refer to the course proposal Procedure and Guidance CP-2013 to complete this or any other course proposal form: to ensure the correct form is being used; for information on early considerations and timescales; for general guidance on the course approval process; and for notes on completing the form.

Course Title(s)		new course? <i>note 1</i>		If no, please give existing course code	
Integrated Master of Pharmacy		Y	N	Y	
School(s) of study & Faculty					
School of Pharmacy (PHA), Faculty of Science (SCI)					
Proposer & proposer's school					
Professor David Wright (PHA)					
Proposed start date (of new course or of changes)					<i>note 2</i>
September 2014 – students to move from year 2 to year 3 of new degree					
This proposal requires: <i>note 3</i>		Prior approval by Council		Y	N
		Prior approval by LTC		Y	N

This form is in 5 parts:

- Part 1 Summary and Rationale
- Part 2 Business Case
- Part 3 Academic Case including Programme Specification
- Part 4 Key Information Set (KIS) data
- Part 5 Approvals and Notification

The initiator is responsible for completing parts 1-4

UEA LEARNING & TEACHING SERVICE

FULL COURSE PROPOSAL

Part 1 SUMMARY AND RATIONALE

Course One				
S1	a	SCHOOL(S) OF STUDY	PHA	
<i>note S1c</i>	b	FACULTY or FACULTIES	SCI	
	c	JOINT COURSE? (ie owned/taught by more than one School)	YES	
			NO √	
	d	NAME OF COURSE DIRECTOR (Home School)	Professor David Wright	
	e	NAME OF DEPUTY COURSE DIRECTOR (partner School, for Joint Courses only)		
S2 <i>note S2a</i>	a	COURSE TITLE	Integrated Master of Pharmacy	
<i>note S2b</i>	b	COURSE CODE		
<i>note S2c & S2d</i>	c	AWARD	MPharm	
	d	EXIT AWARD(S) AND TITLE(S)	BSc Pharmaceutical Science	
	e	FULL/PART-TIME (please specify)	Full time	
	f	LOCATION (UEA Norwich, UEA London, Distance Learning)	UEA Norwich	
	g	AVAILABLE FROM:	September 2014	
S3 <i>note S3a</i>	a	PROFESSIONAL AWARD (if any)		
	b <i>note S3b</i>	ACCREDITING/VALIDATING BODY (if relevant)	General Pharmaceutical Council (GPhC)	
		Website (URL)	http://www.pharmacyregulation.org/	
		Date when accreditation/validation may take place	Summer 2014	
S4 <i>note S4</i>	LEVEL	Sub-degree (e.g. Cert. Dip.)		
		Undergraduate		
		Integrated Masters	√	
		Masters		
		Other postgraduate (please specify)		
S5 <i>note S5a</i>	a	DURATION (years or months)	5 years	

<i>note</i> S5b	b	MODE OF ATTENDANCE (full-time, part-time, distance, other)	Full-time		
S6 <i>note</i> S6	PLACEMENT(S)/WORK-BASED LEARNING REQUIRED		YES	√	NO
			If YES, does this conform with the UEA's code of practice on placements?		
S7 <i>note</i> S7	RELEVANT SUBJECT BENCHMARK STATEMENT(S)		Pharmacy http://www.qaa.ac.uk/Publications/InformationAndGuidance/Pages/Subject-benchmark-statement--Pharmacy.aspx		
S8 <i>note</i> S8	ENTRY REQUIREMENTS		BAA (Minimum B in Chemistry) or equivalent		
S9	JACS Subject Level Code(s) To be completed by the Planning Office following approval of the Business Case				
S10	UCAS ADMISSION CODE / COURSE CODE To be completed by the Planning Office following approval of the Business Case		B230		
S11 <i>note</i> S11	FURTHER INFORMATION available via...				
S12	COURSE HIGHLIGHTS (for publication in University Prospectus / Website / other publicity) NB Please include employability prospects/career possibilities				
<i>note</i> S12	100% Employability 95% Student satisfaction No.1 for Pharmacy Guardian League Tables 2014				

****Please copy and paste the above table for additional (related) courses****

S13	RATIONALE FOR PROPOSAL
<i>note</i> S13	Please explain why you are proposing this/these new course(s) or these course amendments, and why this proposal is being offered at this time. See guidance notes for further indication of what to include in this section.
	<ul style="list-style-type: none"> • This proposal is to maintain our current number of international students. • A competitor is offering an integrated degree and applicants are selecting that course preferentially to our non-integrated degree • Creating a 5 year degree enable international students to access pre-registration training and registration as pharmacists as they remain students throughout. • The proposal allows for current year 1 and 2 students to move across to this degree, starting year 3 of the new programme from September 2014. • The new course will utilise several modules from the existing 4 year MPharm, and include two 6 month pre-registration placements. • The course is designed to enable current teaching to be maximally utilised and thereby minimise the requirement for additional teaching • The course has been designed considering the guidance provided by the GPhC that the teaching and placements must be 'integrated'.

The proposed structure is detailed below:

Year	Semester 1	Semester 2
1	Life sciences chemistry	
	Cells, physiology and pharmacology	
	Physical Pharmacy 1	
	Foundations in Pharmacy Practice	
2	Drug design and mechanisms of drug action	
	Industrial Pharmacy	
	Neurophysiology, synaptic pharmacology and endocrinology	
	Introduction to the practice of pharmacy	
3	Evidence based care of cardiovascular and renal disease	
	Therapeutic approaches to gastro-intestinal disease and cancer	
	Applied immunology and infectious diseases	
	Integrating patient care through pharmacy	
4	Placement 1	Special topics (20)
		CT5: Neurology and mental health (20)
		Pharmaceutical leadership and management (20)
5	Research Project (40)	Placement 2
	Clinical and pharmaceutical management in practice (20)	

Year 1 and 2 remain unchanged from existing MPharm

At the end of year 2 students will undertake an additional communication skills assessment to ensure they have adequate ability to communicate effectively in English in a workplace where they will have direct patient contact.

Year 3

- 'Integrating patient care through pharmacy' module amended for integrated degree students - Current literature review in preparation for final year project removed and replaced with preparation for 'Pre-registration placement 1' module – Including a 2 week mini placement

Year 4

- New 60 credit module (Pre-registration placement 1)
- Special topics for integrated degree students will involve selecting one exam based topic from the 4 currently available, plus receiving 10 credits of teaching based on pre-registration placement 1 experience.
- Pharmaceutical leadership and management – students will cover the majority of the materials alongside students undertaking the 4 year MPharm. In this module they will additionally be required to undertake the literature review ahead of their year 5 research project. This will be instead of the business case which is currently in the current module.

Year 5

- 40 credit project. Conference presentation removed.
- 20 credit 'Clinical and pharmaceutical management in practice' – students to develop a business case for a pharmaceutical service. In addition a team based approach will be used to tackle complex scenarios covering a wide range of issues which can be encountered as a practicing pharmacist and requires the application of knowledge from the entire course to date.
- New 60 credit module (Pre-registration placement 2)

	<ul style="list-style-type: none">• The students will be supported on pre-registration placements by a series of study days run by the university, and as part of this their work will be reviewed to ensure that they are progressing satisfactorily.• The student's advisor will visit them between weeks 6 and 10 of each placement to ensure everything is satisfactory and the student is making good progress with their tutor.• All placement tutors will attend training provided by the University and be provided with a handbook as part of the quality assurance processes to be in place.• Tutors supervising students within placement 1 will be expected to provide a hand over report to be utilised by tutors receiving the same student in placement 2.
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UEA LEARNING & TEACHING SERVICE

FULL COURSE PROPOSAL

Part 2 BUSINESS CASE

note BC

BC1	ACADEMIC AND RECRUITMENT STRATEGY	Consult with HOS, Faculty Dean, PLN, ARM (including Admissions)	
BC1.1	How does the proposal fit with the University's Corporate Plan?		
<i>note BC1.1</i>	<p>PHA continued strong undergraduate recruitment is vital to maintaining a vibrant and viable School, and its contributions to UEA's mission and ambitions. In particular, this proposed degree will support UEA's Corporate Plan in areas such as:</p> <ol style="list-style-type: none"> 1. Recruiting high quality students (ABB+), with an average tariff in 405 in 13/14 2. Highly motivated and satisfied students, as evidenced in the NSS (ranked 5th against mainstream universities in 2013) 3. High-quality teaching as evidenced by high student retention and 80% of student gaining good honours (provisional October 2013) <p>Internationalisation is a concomitant of UEA's commitment to pursuing academic excellence. This proposal takes advantage of the School's reputation by attracting high quality international students in line with UEA's corporate plan.</p>		
BC1.2	Proposed Recruitment Strategy		
<i>note BC1.2</i>			
BC1.3	Partnership and commercial sensitivity		
<i>note BC1.3</i>	Has this proposal, in outline, been approved by the Partnerships Office?	YES	
		NO	X
	Please paste their comments below		

BC2 <i>note BC2</i>	MARKET RESEARCH	Consult with Market Research team	
BC2.1	What other and type of institution offers identical and/or similar courses in the UK?		
	<p>Currently only two UK Universities offer a MPharm with integrated pre-registration training, Bradford and Nottingham.</p> <p>The traditional 4 year MPharm is currently available at 29 universities across the UK</p>		
BC2.2	Are there any likely international competitors? (Please give brief details)		
	No, a UK degree is the primary route to registration as a pharmacist with the GPhC		

BC2.3 <i>note</i> BC2.3	What is the annual number of applicants currently applying nationally for similar courses, and what are the entry requirements for these competitor courses?	
	Bradford: ABB at A Level Nottingham: AAB at A level	
BC2.4	What is the evidence for current and future demands for the course from · potential students? · employers (public services, private sector, the professions etc)	
	A consultation has been held with current year 1 and 2 students. Consultations have also been held with key employers, with local NHS hospital trusts, community pharmacy multiples and local independent pharmacy managers all demonstration an interest in being involved in the programme by offering placements to students.	
BC2.5	Can current and projected demand be met from existing provision?	
	Nationally:	Only 2 schools of pharmacy offer similar degrees, Bradford and Nottingham
	Regionally:	No existing provision in the region for this degree
BC2.6	Where is/what are the competitive advantage(s) for UEA?	
	UEA are located geographically distant from the other 2 schools of pharmacy currently offering a 5 year integrated MPharm. This degree will be highly attractive to international students wishing to undertake pharmacy training in the UK. Current visa requirements restrict their eligibility to undertake pre-registration training (a requirement to register as a pharmacist) unless their salary is in excess of £21,000 which is currently not available to a large proportion of trainees. Undertaking the integrated degree where the pre-registration placements are undertaken whilst a student will enable them to complete this and register as a pharmacist upon graduation.	

BC3 <i>note</i> BC3	MARKET DEMAND AND RECRUITMENT	Consult with Careers and Employability team
BC3.1	What graduate career opportunities may be available?	
	Upon graduation students will be eligible to register with the GPhC	
BC3.2	Who (externally) has been consulted about the proposals (e.g. Professional Associations, employers' groups, PSRBs)?	
	INTO have expressed a desire for the school to develop an integrated degree as they noted both a large number of their students selected our competitor in preference to UEA last year and a reduction in applications to INTO with a future plan to study pharmacy.	

BC4 <i>note</i> BC4	STUDENT NUMBERS AND TUITION FEES	Consult with HOS, PLN, Faculty Dean, FFM
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BC4.1	Student Numbers				
a	Proposed student target intake	number			
<i>note</i> BC4.1a	Full Time (Home/EU)				
	Full Time (International)	35			
	Part Time (Heads)				
	Distance Learning (Heads)				
	Minimum viable intake (full times equivalents)				
	Maximum viable intake (full times equivalents)				
b	Are the student numbers:				
<i>note</i> BC4.1b	a) available via redistribution within the School? <i>Consult the Head of School</i>	YES	√	NO	
	b) available via redistribution with the Faculty? <i>Consult the Dean of Faculty</i>	YES		NO	√
	c) additional numbers required? <i>Consult the Planning Office (PLN)</i>	YES		NO	√
	Please give a summary of how your answers to a), b) and c) above will be achieved.				
	Students currently in year 1 and 2 have been consulted and to date (12/03/14) approximately 8 students per year have demonstrated an interest in transferring to the integrated programme.				
BC4.2	Tuition Fees				
	Please select the relevant fee schedule:				
	a) Standard Home/EU/International	√			
	b) Full-cost <i>Please consult with FFM</i>				
	c) Other <i>Please provide brief details</i>				

BC5	IMPACT		
BC5.1 <i>note</i> BC5.1	EQUALITY AND DIVERSITY	Consult with Equality & Diversity Manager and Widening Participation team	
a	Does the course and/or School cover a subject area(s) which traditionally attract(s) a very specific or narrow student profile?	YES	
		NO	√
b	If yes, what steps will be taken to attract non-traditional students to the course/School? (Aspects to consider include: age, disability, ethnicity (home and international), gender, sexual orientation, religion and belief, and socio-economic group.)		
c	Will students undertake placements/ come into direct contact with vulnerable groups as part of their study? If so, will a CRB be required?		

	Yes, students will undertake placements from year 1 of the degree, and will be required to undertake CRB and complete the necessary occupational health checks as is required for entry onto existing MPharm. Additional declarations maybe required at individual training sites when students undertake their pre-registration training placements.		
BC 5.2 <i>note</i> BC5.2	CURRENT STUDENTS AND/OR APPLICANTS		
a	Have School SSLCs been consulted regarding this proposal? If YES, what has been their input/response?	YES	
		NO	√
b	Will any current students or applicants be affected by this proposal?	YES	√
		NO (go to 5.3)	
	Students currently in year 1 and 2 of the MPharm will be given the opportunity to transfer to the new integrated 5 year degree. All are free to continue with the standard 4 year MPharm.		
c	Evidence of consultation of current students and written consent obtained		
	Please briefly describe what consultation has taken place and what responses there have been. Is there full support from all members of the relevant student cohort(s)?		
	All international students in years 1 and 2 were invited to a presentation from the head of school explaining the proposal, what it would mean for them and asked to respond with an expression of interest. Currently approximately 8 students per year have expressed an interest.		
d	Informing applicants		
	What arrangements have been made (for informing applicants who may be affected by any change(s)? Written notification, including advice about any alternative options that may be given, must be sent to applicants holding unconditional/conditional firm or conditional insurance offers.		
	This course will be made available to relevant new students accepted onto the MPharm, they will have the option to transfer to the integrated programme or continue on the standard 4 year degree.		
BC5.3 <i>note</i> BC5.3	ACADEMIC STAFF	Consult with HOS, Dean of Faculty	
	What is the impact / what are the resource implications of the proposal on academic staff?		
a	Please give an indicative number of <u>additional</u> teaching hours required within the school to deliver the new course/changes to the course in any one year		80
b	Is a new discipline or specialism being introduced that requires a new appointment?	YES	
		NO	√
c	Are new appointments required to meet any additional hours?	YES	√
		NO	
d	If yes to either b or c above, how many of what type (eg Teaching and Scholarship, Teaching and Research) and at what level?		
	ATS 0.4 FTE, Placements Co-ordinator 0.5 FTE Gr 5		
e	What is the source of funding for new academic staff?		
	The additional international fees for the extra year		

f	Are there any implications outside the sponsoring School/s e.g. service teaching, by other Schools of Studies?		
	No		
g	Are any other teaching adjustments required? For example, will new modules be introduced, other modules withdrawn or combined?		
	Yes We will need two new 60 credit 'Placements' modules and one 20 credit module 'Clinical and pharmaceutical management in practice'. The latter 'new module' will largely derived from an existing module. We will additionally need to make minor amends to three current modules		
BC5.4 <i>note</i> <i>BC5.4</i>	COURSE RATIONALISATION	Consult with HOS, Dean of relevant Faculties, PLN	
a	DO ANY SIMILAR COURSES ALREADY EXIST AT UEA?	YES	√
		NO	
	If YES, please specify Course name, UCAS Code(s) / Course codes		
	Master of Pharmacy, MPharm, B230		
b	IS/ARE ANY COURSE(S) TO BE CLOSED TO NEW APPLICANTS AS PART OF THIS PROPOSAL?	YES	
		NO	√
	If YES, please specify Course name, UCAS Code(s) / Course codes and date from which course(s) is to be withdrawn?		
c	Please give an indicative number of teaching hours <u>released</u> within the school in any one year by the closure of the courses listed above		

BC6	PHYSICAL RESOURCES		
BC6.1 <i>note</i> <i>BC6.1</i>	What new or additional facilities and /or equipment are required for the delivery of this course?		
a	Classroom and study facilities	No	
b	Computer equipment	No	
c	Other equipment	No	
d	Consumables	No	
BC6.2	What additional books/journals/electronic resources other than those already available will be required year by year until steady state is reached?		
	None – students require the same resources as those utilised in the current 4 year MPharm		
BC6.3	Are there any other special arrangements on which this course proposal will depend? (E.g. placements, year abroad).	YES	√
		NO	
	If Yes, please give details of likely costs/whether appropriate agreements are in place/have to be drawn up?		
	Students will be require to undertake two six-month placements. Potential placement providers have been consulted. Contracts not yet finalised.		
BC6.4	Are there any start-up costs (e.g. any initial publicity	YES	√

	and promotion?)	NO	
	If yes, please give details:		
	A budget has been set aside in the school to enable recruitment of sufficient placement providers.		

BC7 <i>note</i> BC7	IMPACT / RESOURCE IMPLICATIONS FOR OTHER UNIVERSITY SERVICES		
COMPLETION OF THIS SECTION TO BE COORDINATED BY LEARNING AND TEACHING SERVICE (LTS) COORDINATOR			
Please circulate Parts 1 & 2 to the following for their comments (if any). Comments to be returned within 10 working days.			
<i>note</i> BC7	What is the impact of the proposal on support staff and resources in the office for which you are responsible?		
Date of circulation:	15 April 2014		
BC7.1	Dean of Students (DOS)		
BC7.2	Deputy Dean of Students (accommodation)		
	Under current guarantees, all first year undergraduates (including those on integrated Masters degrees) are guaranteed accommodation in their first year unless their homes are within 12 miles of the University. Please note that overseas fee paying students are no longer guaranteed accommodation for the duration of their course unless they began their courses in or before September 2012. Linda Shepherd, Deputy Dean of Students, 23/04/2014		
BC7.3	Director of Information Services (ISD)		
BC7.4	Director of Library Services (LIB)		
BC7.5	Careers Manager (CCEN)		
BC7.6	Head of Learning & Teaching Service (LTS)		
	The main reason for this course is to give international students the opportunity to do their pre-reg year as an integrated two-placement part of their IM degree. Is the course <i>only</i> open to international students, and if so, is this discriminatory? Would we turn down requests from home/EU students? Is there an issue with the new taught modules specific to this course only having international students studying on them? I note that there is provision for a 'Placements Co-ordinator 0.5 FTE Gr 5'. Although it is good to see recognition of the additional administrative support required, the		

	<p>grading may not be quite right or fit in with our current structures. I would expect that 0.5 FTE Grade 4 support would be adequate, and in line with the current placement support provided by LTS.</p> <p>It looks like current Year Two students would move to Year 3 of the programme in September 2014-5, subject to their passing the additional English communication assessment (how is this set up?), and Year 3 would include an additional 2-week mini placement. At what point would the finances be released for LTS to appoint a 0.5 FTE Grade 4 Admin Assistant to support this programme and start working on the placements?</p> <p>In the past the regulations have not permitted study away from the University in the last year of study. This proposal has a placement in the last six months of study. There may be problems ensuring satisfactory completion in time for the Final Board of Examiners to consider, so the students can attend Congregation. (The proposal states that the placement is 'six months').</p> <p>There may be other comments on the placement proposal, including its assessment/ reassessment, when we are invited to comment on the Academic Case.</p> <p>Caroline Sauverin, Head of LTS, 16/4/14</p>
BC7.7	Head of Admissions (ARM)
BC7.8	Director of Planning Office (PLN)
	<p>I do not anticipate there being significant impacts on the Planning Office as a result of this proposal. We will need to be kept closely informed when students transfer to the new programme to ensure that the student number planning models reflect the correct data and to ensure that any impacts to the student record are minimised.</p> <p>Please liaise with Peter Courridge regarding the student numbers and fees. I am not clear from the above information what is proposed in respect of fees for the two placement periods. Is the expectation that the students will continue to pay full fees during placement periods? If so, this will need to be clearly communicated to students at all stages of the process from application onwards to ensure that they fully understand the benefits they continue to receive from the University. We frequently get complaints from students on placements that they do not see how we justify the fee we charge and it is key that this is clearly documented and delivered to all students during their placement period. I am assuming that the plan will not be to show these students as studying on a semester in industry (which would attract 25% of the standard fee) but if this is the case please advise.</p> <p>Ian Callaghan, Director of Planning. 27 April 2014.</p>
BC7.9	Any other service or department
<i>note</i> BC7.9	

BC8	ADDITIONAL COMMENTS
COMPLETION OF THIS SECTION TO BE COORDINATED BY LEARNING AND TEACHING SERVICE (LTS) COORDINATOR	
Please circulate Parts 1 & 2 to the following for their comments (if any). Comments to be returned within 10 working days.	
<i>note</i> BC8	Is there anything further to add to the proposal from the perspective of your service and expertise?

Date of circulation:	15 April 2014
BC8.1	Market Research Manager (on Section BC2)
BC8.2	Careers Manager (on Section BC3)
BC8.3	Equality & Diversity Manager (on Section BC5.1)
BC8.4	Director of Planning Office (PLN) (on full Business Case)
	<p>No additional comments other than to reiterate those above:</p> <ol style="list-style-type: none"> 1. clear information on the fees proposals; 2. clear information on the forecast student numbers to ensure that the financial plans match expectations. <p>Ian Callaghan, Director of Planning. 27 April 2014.</p>
BC8.5	Faculty Finance Manager (on full Business Case)
<i>note</i> BC8.5	<p>As this programme will replace the current course offering for International UG students, the only additional fee income would be from the additional year of taught registration. However, this will flow through one year after additional direct costs are likely to start being incurred. As such, we will not be able to support the appointment of an academic lead (0.4 ATS3) and Placement Coordinator (0.5 GR5) until the first full years cohort impacts on new year 5 student numbers. Assuming that this be in 2015/16, appointment of any new staff would be in August 2019. If all existing International applicants for 2014/15 entry are converted to the new degree, or if sufficient existing student already enrolled in the MPharm are moved onto the new degree pathway, then these appointments could be made a year or two earlier.</p>

BC9	PROPOSER'S RESPONSE TO COMMENTS IN BC7 & BC8 ABOVE
<i>note</i> BC9	<p>In response to BC 7.6: The course is primarily aimed at international students as the issue with gaining a pre-registration placement at the end of the 4 year MPharm is connected with visa's, It would not be attractive to home students as they have no restrictions on gaining a pre-registration place, which they are paid to complete and this proposal would mean they no longer are paid for training and have to pay an additional years fees. The Pharmacy qualification is under review nationally, with a decision on likely potential for a full integrated degree being required for accreditation due in June 2014. We would appreciate further advice from the University on how best to handle this challenging issue, especially as home fees would not be sufficient to cover the expense of the integrated pre-registration placement.</p> <p>With respect to the Grade 5 Placement co-ordinator, we feel this is appropriate due to the higher level of support required for the extended placements and the need to support the quality assurance processes required by the GPhC.</p> <p>The English assessment was a demand of potential placement hosts, for the 2014/15 academic year this will take place in semester 1 of year 3 with all students being offered a formative assessment before the summative. The year 3 course is largely unchanged so students will not be disadvantaged. Consultation are ongoing with</p>

	<p>potential placement hosts for year 3 mini placements, however the arrangements are yet to be finalised, the next stakeholder meetings are scheduled for June and July 2014.</p> <p>Final 6 month placement in semester 2, students will be able to be assessed at final exam board, this pass/fail component requires a satisfactory 39 week progress review from the tutor which would be completed in April, a portfolio review by the university and OSCE to be completed in the exam period.</p> <p>In response to BC7.8 Full fees will be payable during placement periods and this will be clearly communicated to students and planning office.</p>
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UEA LEARNING & TEACHING SERVICE

FULL COURSE PROPOSAL

Part 3 ACADEMIC CASE (including Programme Specification)

AC1	COURSE MANAGEMENT INFORMATION				
AC1.1	REGULATORY FRAMEWORK (please tick all that apply)				
	Undergraduate Regulations (including Integrated Masters)				√
	Postgraduate Taught Regulations				
	Graduate Diplomas				
	PGCE				
AC1.2a	Is the course as a whole assessed on a pass/fail basis?	YES		NO	√
AC1.2b	Are any modules assessed on a pass/fail basis?	YES	√	NO	
AC1.2c	If so, how many modules and what is the credit volume for each module?				
	2 x 60 credit work placements				

AC2 <i>note AC2.1</i>	YEAR WEIGHTINGS AND PROGRESSION REQUIREMENTS (For undergraduate or integrated masters courses only)				
	Please select only from the permitted options - see UG/PGT regulations				
Stage <i>Note AC2.2</i>	Level	Year of course	Weightings	Progression requirement	Exit Award <i>Note AC2.3</i>
Stage 0	Level 3				
Stage 1	Level 4	1		Pass all modules	
Stage 2	Level 5	2	20%	Pass all modules	
Year Abroad / in Industry		4/5		Pass all modules	
Stage 3	Level 6	3	30%	Pass all modules	BSc (Pharm science)
Stage M	Level 7	4/5	50%		

AC3	BOARD OF EXAMINERS				
AC3.1	Is there an existing Board of Examiners?	YES	√	NO	
AC3.2a	If YES, which existing board will be responsible for the course?	PHA			
AC3.2b	If NO, please enter details for new board of examiners				

	Are any new external examiner(s) required?	YES	<input type="checkbox"/>	NO	<input checked="" type="checkbox"/>
AC3.3b	If yes, how many?				

PS	PROGRAMME SPECIFICATION
<i>note</i> <i>PS</i>	This part of the form will serve a dual purpose. Please read the guidance note carefully before completing

PROGRAMME SPECIFICATION FOR AN AWARD OF THE UNIVERSITY OF EAST ANGLIA

Course name	Route code <i>note S2b</i>	Year
Integrated Master of Pharmacy		

NOTE: Whilst the University will make every effort to offer the modules listed, changes may sometimes have to be made for reasons outside the University's control (e.g. illness of a member of staff) or because of low enrolment or sabbatical leave. Where this is the case, the University will endeavour to inform students.

PS1 COURSE PROFILE*note PS1*

YEAR 1 profile				Level	This column will be deleted prior to publication
				4	
Module Code (TBA if not known)	Compulsory? - or name of Option range	Credits	Module Title	Teaching period, eg Sem 1, Year-long	New / amended / existing
PHA-4004Y	Compulsory	20	Cells,physiology and pharmacology	Year long	Existing
PHA-4001Y	Compulsory	35	Foundations in pharmacy practice	Year long	Existing
PHA-4003Y	Compulsory	30	Life sciences chemistry	Year long	Existing
PHA-4002Y	Compulsory	35	Physical Pharmacy	Year long	Existing

PS1 COURSE PROFILE - *continued**note PS1*

YEAR 2 profile				Level	This column will be deleted prior to publication
				5	
Module Code (TBA if not known)	Compulsory? - or name of Option range	Credits	Module Title	Teaching period, eg Sem 1, Year-long	New / amended / existing
PHA-5001Y	Compulsory	35	Drug design and mechanisms of drug action	Year long	Existing
PHA-5003Y	Compulsory	35	Industrial pharmacy	Year long	Existing
PHA-5002Y	Compulsory	25	Introduction to the practice of pharmacy	Year long	Existing
PHA-5004Y	Compulsory	25	Neurophysiology, synaptic pharmacology and endocrinology	Year long	Existing

PS1 COURSE PROFILE - <i>continued</i>	<i>note PS1</i>
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YEAR 3 profile				Level	This column will be deleted prior to publication
				6	
Module Code (TBA if not known)	Compulsory? - or name of Option range	Credits	Module Title	Teaching period, eg Sem 1, Year-long	New / amended / existing
PHA-6001Y	Compulsory	30	Therapeutic approaches to gastrointestinal disease and cancer	Year long	Existing
PHA-6003Y	Compulsory	30	Applied immunology and infectious diseases	Year long	Existing
PHA-6004Y	Compulsory	30	Evidence based care of cardiovascular and renal disease	Year long	Existing
TBA (PHA-6002aY)	Compulsory	30	Integrating patient care through pharmacy	Year long	New

PS1 COURSE PROFILE - <i>continued</i>	<i>note PS1</i>
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YEAR 4 profile				Level	This column will be deleted prior to publication
				7	
Module Code (TBA if not known)	Compulsory? - or name of Option range	Credits	Module Title	Teaching period, eg Sem 1, Year-long	New / amended / existing
TBA	Compulsory	60	Pre-registration placement 1 (PRP1)	6 month sem 1	New
PHA-7003Y	Compulsory	20	Special topics	Sem 2	Existing
PHA-7001Y	Compulsory	20	Neurology and mental health	Sem 2	Existing
TBA	Compulsory	20	Pharmaceutical leadership and management (PLM)	Sem 2	New

PS1 COURSE PROFILE - <i>continued</i>	<i>note PS1</i>
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YEAR 5 profile				Level	This column will be deleted prior to publication
				7	
Module Code (TBA if not known)	Compulsory? - or name of Option range	Credits	Module Title	Teaching period, eg Sem 1, Year-long	New / amended / existing
TBA	Compulsory	40	Research project (RP)	Sem 1	New
TBA	Compulsory	20	Clinical and pharmaceutical management in practice (CPMP)	Sem 1	New
TBA	Compulsory	60	Pre-registration placement 2 (PRP2)	6 months, sem 2	New

PS2 MAPPING LEARNING OUTCOMES

note PS2

Mapping learning outcomes – please list learning outcomes and enter module code against assessment type YEAR 1 learning outcomes	Assessment type								
	Essay	Lab report	Course test	Exam	Project/Dissertation/Report	Oral Presentation	Assessment of practice	Objective structured pharmaceutical exam (OSPE)	Portfolio
Describe the basics of atomic theory, electronic structure and bonding. Recognise and explain the importance of molecular shape and structure. Describe the mechanistic details of a range of relevant reactions. Describe a range of basic synthetic techniques for the preparation of pharmaceutically relevant molecules.			PHA 4003Y 1 hour						
Demonstrate basic analytical laboratory skills (documentation, weighing, measuring, working with solids and liquids, precision and accuracy) and accurately perform volumetric analysis (various titrations). Describe the theory and practical application of spectroscopic methods of analysis (infra-red, UV/VIS, polarimetry).		PHA 4003Y 5 Reports							
Describe the structure and properties of amino acids and proteins, lipids and membranes, saccharides and carbohydrates and RNA and relate these to the functions of enzymes, cellular membranes and glycoproteins.				PHA 4003Y 2 hour					
Describe the different roles of the pharmacist and the main policies and regulatory frameworks related to the practice of pharmacy. Describe the drug discovery and regulation process. Describe the history and current structure of the NHS and the different health economic mechanisms for making decisions regarding resource allocation within the NHS. Describe the public health agenda and the location and roles of different healthcare professionals within this. Define compliance, adherence and concordance and describe how they are measured and classified. Differentiate between evidence based medicine & non-evidence based medicine and describe the causes of iatrogenic disease. Describe the processes involved in conducting a clinical audit. Describe the common causes of medication errors.				PHA 4001Y 2 hour					
Demonstrate basic oral presentation, inter-professional and intra-profession team working skills. Demonstrate the concept of continuing professional									PHA 4001Y

development and reflective practice. Complete a pharmacy placement workbook									
Demonstrate an ability to perform basic pharmaceutical calculations and mental arithmetic			PHA 4001Y 40 mins Pass/ Fail						
Use the British National Formulary (BNF) to answer simple clinical questions regarding suitability of medicines with respect to dosages, common cautions and contra-indications. Demonstrate the basics of interpreting a prescription and dispensing it appropriately using a computerised system. Describe the information needed to counsel a patient on a simple prescription.								PHA 4001Y 2 hours	
Apply and interpret simple statistical analyses.						PHA 4001Y Audit			
Competently perform standard scientific mathematical calculations. In the context of pharmaceutical science explain the principles of thermodynamics, discuss fundamental solution and colloid science and how the physico-chemical sciences are used to formulate conventional liquid and semi-solid pharmaceutical products taking into account patient and drug-related factors. Explain (pseudo)-zero-order and (pseudo)-first order kinetics and correctly analyse simple kinetic data. Explain the salient features of GMP and the principles of liquid and semi-solid product testing, including rheology. Correctly interpret simple product testing data.			PHA 4002Y 1 hour	PHA 4002Y 2 hour					
Demonstrate competence at manufacturing small scale products suitable to be administered to a patient.								PHA 4002Y Pass /Fail	
Describe the fundamental cellular structure, function and biochemistry of cells, the principles of molecular biology, genetics in diseases, and the application of human genomics and biotechnology in medicine. Describe at a basic level inter- and intra-cellular signalling processes in cells, receptors and their ligands/drugs, the physiology of the major organ systems and the basic principles of pharmacology.			PHA 4004Y 1 hour	PHA 4004Y 2 hour					
Other: please give details									

PS2 MAPPING LEARNING OUTCOMES - continued

note PS2

Mapping learning outcomes – please list learning outcomes and enter module code against assessment type YEAR 2 learning outcomes	Assessment type								
	Essay	Lab report	Course test	Exam	Project/ Dissertation/ Report	Oral Presentation	Assessment of practice	Objective structure pharmaceutic al exam	Portfolio
Describe and explain the main elements of drug design and synthetic techniques. Demonstrate practical skills commonly used to obtain drug compounds, including chemical synthesis and enzyme assisted synthesis. Provide a basic overview of the routes to drug moieties from a variety of biological and chemical sources.		PHA 5001Y 4 reports							
Explain the molecular pharmacology of drug action and the main mechanisms by which drugs interact with cellular components. Describe fundamental pharmacokinetic processes (i.e. absorption, distribution, metabolism and excretion) from a qualitative and a quantitative perspective. Describe and predict (utilising the chemical structure) the major mechanisms of drug metabolism.			PHA 5001Y 2 hours						
Explain the role of analysis in identification and purity assessment in relation to both compounds and processes and describe the different spectroscopic techniques, UV, IR and NMR. Demonstrating a basic ability to interpret spectroscopic data.				PHA 5001Y 2 hours					
Demonstrate good oral presentation, inter-professional and intra-professional team working skills. Demonstrate the concept of continuing professional development and reflective practice. Apply the Cambridge Calgary model of consultation to patient counselling. Complete a pharmacy placement workbook									PHA 5002Y
Demonstrate an ability to competently perform one step pharmaceutical calculations using mental arithmetic.			PHA 5002Y 40mins Pass/ Fail						
Describe the parts of the Medicines Act 1968 relevant to pharmacy and the professional standards expected of a pharmacist outlined by the GPhC. Describe the consumer and data protection acts. Outline the terms of				PHA 5002Y 2 hours					

service within the NHS relevant to pharmacists. Describe methods of risk management and systems of governance. Describe the different approaches used to perform basic service evaluations. Describe the concept of health literacy and its impact on health inequalities									
Demonstrate how to supply medicines, controlled under the Medicines Act legally, accurately and safely. . Utilize the Drug Tariff to endorse prescriptions efficiently.								PHA 5002Y 1.5 hours	
Apply and interpret basic parametric and non-parametric data comparisons and correlation.					PHA 5002Y service evaluation				
Explain the physico-chemical principles underpinning solid dosage form design. Describe the manufacturing processes used to produce different types of solid oral dosage forms on a large and small scale. Explain the physico-chemical and engineering principles underpinning controlled-release technologies. Describe pharmaceutical packaging and how this is selected for individual products. Explain the principles of stability testing for pharmaceutical products and correctly interpret data associated with product performance. Describe the different classes of micro-organisms, with particular reference to those micro-organisms of significance to the manufacture of sterile pharmaceutical products and human diseases. . Describe basic elements of medical microbiology. Interpret pharmacokinetic data and its relation to therapeutic outcome of treatment.			PHA 5003Y 1 hour	PHA 5003Y 2 hours					
Describe how solid oral dosage forms are tested to ensure product compliance with regulatory requirements. Interpret a drug's physico-chemical data and predict optimum solid oral dosage formulation strategies for that drug.					PHA 5003Y Tableting exercise practical report	PHA 5003Y Group presentation of report			
Discuss the principles of sterile facilities design, control and operation. Explain the different methods of sterilisation and correctly interpret mathematical data relating to sterilisation and sterility testing. Explain the fundamentals of formulation of sterile pharmaceutical products.					PHA 5003Y Sterile product practical report				

<p>Describe the physiology of peripheral nervous system including the special senses, the ionic mechanisms underlying the action potential, the physiology of skeletal and smooth muscle and the pharmacology of the peripheral nervous system (PNS). Describe the synapse and know how drugs act at autonomic synapses to modify function of major organ systems. Cite the major neurotransmitters of the peripheral nervous system and receptor classification. Explain the pharmacology of drugs which affect the peripheral nervous system. Predict both the desired and undesired effects of peripheral nervous system active pharmacotherapy. Describe the physiology of the endocrine system and the major diseases affecting it and the epidemiology and aetiology of major diseases involving the endocrine system and their treatment. Explain the importance of structure-activity relationships of steroids. Explain the pharmacology of drugs used in the treatment of disorders of the endocrine system</p>			<p>PHA 5004Y 60 mins</p>	<p>PHA 5004Y 2 hours</p>					
<p>Review the pharmaceutical care of patients prescribed therapies for major diseases of the endocrine system, recommend suitable drug, dose and formulation alternatives and their appropriate monitoring based on current evidence based guidance. Recommend and design appropriate sexual health strategies for delivery through pharmacy.</p>			<p>PHA 5004Y 2 hour open book</p>						
<p>Other: please give details</p>									

PS2 MAPPING LEARNING OUTCOMES - continued	<i>note PS2</i>
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Mapping learning outcomes – please list learning outcomes and enter module code against assessment type YEAR 3 learning outcomes	Assessment type								
	Essay	Lab report	Course test	Exam	Project/ Dissertation/ Report	Oral Presentation	Assessment of practice	Objective structured Pharmaceutical Exam	Portfolio
Demonstrate very good oral presentation and inter-professional and intra-professional team working skills. Apply the Cambridge Calgary model of consultation to patient medication history taking, responding to symptoms, patient counselling and medicines use reviews. Utilise enhanced counselling techniques to improve medicines taking behaviours. Demonstrate effective written communication. . Demonstrate the concept of continuing professional development and reflective practice. Complete a pharmacy placement workbook									PHA 6002aY
Demonstrate how to supply medicines according to UK legislative framework for both humans and animals. Consider ethical decisions utilising an appropriate decision making framework. Describe suitable interventions for working with difficult patients. Describe the main factors that influence human behaviour and the theoretical models which to relate behaviour to attitudes and beliefs. Describe how human behaviour models are applied in the treatment of addiction and the implementation of health promotion and concordance. Demonstrate how to optimise teams using basic management tools e.g. team building, performance management, delegation and appraisal. Identify training needs for different members of a team and strategies for addressing them. Describe the processes involved in preventing errors using root cause analysis				PHA 6002aY 2 hours					
Demonstrate an ability to competently perform multiple step pharmaceutical calculations using mental arithmetic			PHA 6002aY 40mins Pass/ Fail						
Demonstrate an ability to supply medicines within the UK medicines legislature for both animals and humans legally, ethically and safely.							PHA 6002aY		

Demonstrate reflection on preparation placement for pre-registration training and the ability to produce a detailed professional development plan	PHA 6002a 1000 word reflection + PDP								
Critique basic health services research Perform appropriate descriptive and inferential statistical analysis associated with randomised controlled trials and service evaluations			PHA 6004Y 3 hours (course test)						
Describe the physiology of the heart, vascular and renal system Describe the epidemiology, aetiology and pathophysiology of hypertension, coronary heart disease, heart failure, arrhythmias, stroke, acute and chronic renal disease and gout, and select the most appropriate treatment for these diseases. Describe and utilise the tools used to assess cardiovascular risk Describe the mechanisms of action and in conjunction with the chemical and physical aspects of drugs know and understand the rationale for the safe and effective therapeutic use of drugs commonly used in the treatment of cardiovascular, cerebrovascular, and renal diseases. Identify and recommend appropriate pharmaceutical and non-pharmaceutical interventions for the treatment and prevention of cardiovascular, cerebrovascular, renal, and gout				PHA 6004Y 2 hours (exam)					
Identify and recommend appropriate pharmaceutical and non-pharmaceutical interventions for the treatment and prevention of cardiovascular, cerebrovascular, renal, and gout			PHA 6004Y 2 hours (care plan)						
Explain the mechanisms of antibiotic and antiviral action Describe the molecular design and mode of action of different classes of antibiotic, antifungal & antiviral drugs Describe and explain the pathophysiology, epidemiology and aetiology of infectious disease e.g. bacterial, viral, fungal, and protozoal mediated infectious diseases.			PHA 6003Y 2 hours (course test)						

<p>Identify and recommend appropriate pharmaceutical and non-pharmaceutical interventions for the treatment and prevention of common bacterial, viral and fungal infections Select the most appropriate over the counter treatment and advice for common self-limiting minor ailments of the skin and respiratory system</p>									
<p>Explain how the immune system works and its association with diseases, their treatment and prevention Distinguish the different epidemiology, aetiology and pathophysiology of respiratory diseases like asthma and COPD Using knowledge of the mechanism of action and pharmacology and current evidence based national guidelines select and identify the most appropriate treatments for common diseases of the immune system, RA, asthma, COPD and skin diseases. Critically appraise the prescribed management and monitoring of patients with common diseases of the immune system, including asthma, RA, COPD, skin and hypersensitivity reactions and recommend suitable alternative courses of action. Distinguish the different epidemiology, aetiology and pathophysiology of diseases of the skin and recommend appropriate interventions for the treatment of the diseases Identify non-pharmacological interventions which will effect disease progression and treatment, like smoking cessation. Explain the function of devices commonly used to deliver drugs in respiratory diseases and describe novel therapeutic approaches used in diseases affecting the immune system</p>				<p>PHA 6003Y 2 hours</p>					
<p>Debate the cause and effect of the treatments for common infections</p>					<p>PHA 6003Y Poster present ation</p>				
<p>Other: please give details</p>									

PS2 MAPPING LEARNING OUTCOMES - continued

note PS2

Mapping learning outcomes – please list learning outcomes and enter module code against assessment type YEAR 4 learning outcomes	Assessment type								
	Essay	Lab report	Course test	Exam	Project/ Dissertation/ Report	Oral Presentation	Assessment of practice	Other	Other
Develop professional competencies required of an early stage trainee pharmacist							PRP1. Tutor sign-off. Portfolio review.		
Demonstrate reflection of professional development and future development planning	PRP 1 3000 word reflection								
Critically appraise pharmaceutical research. Locate the importance and relevance of their research area.					PLM Lit review/pr otocol for project				
Respond appropriately to complex professional dilemmas demonstrating sound judgement and reasoning processes in a range of contexts. Implementation of error risk reduction strategy learning from previous errors				PLM 2 hours					
Demonstrate a depth of learning in selected areas founded upon lecture material and considerably extended by personal research.				PHA 7003Y 2 hours					
Demonstrate an awareness of complex clinical situations and current guidelines for patient care						PHA 7003Y 2 Care planning presentations			
Describe the anatomy and physiology of the central nervous system. Describe and understand the role of the major neurotransmitters of the CNS, their receptor classification and their pharmacology. Describe the epidemiology, aetiology, pathophysiology and pharmacology of neurodegenerative diseases, migraine and mechanisms of pain and				PHA 7001 Y 2 hours					

<p>nausea/vertigo, psychiatric illness, mental illness and the current problems and dilemmas in treating mental illness. Describe mechanisms of action of the drugs most commonly used over the counter and on prescription for pain, migraine, nausea/vertigo, neurodegenerative diseases, and anaesthesia, how this relates to their therapeutic use side effects, cautions and contra-indications. Describe appropriate non-pharmaceutical interventions for treatment of pain, migraine, nausea and vertigo. Describe the mechanisms of action of drugs used in psychiatry and epilepsy, and how this relates to the rationale for their therapeutic use, side effects, cautions and contra-indications. Cite the relevant recommendations for the treatment of neurodegenerative diseases and for use of drugs used in management of pain, control of vomiting, migraine and anaesthesia, epilepsy and mental health disorders, including schizophrenia, anxiety, depression and bipolar disorder from National Service Frameworks (NSFs), National Institute of Clinical Excellence (NICE) treatment guidelines and any other relevant publications. Develop a systematic understanding of the current knowledge and a critical awareness of mental illness and the current problems and dilemmas in treating mental illness</p>								
<p>Critically evaluate the evidence base which underpins the guidelines for the use of drugs acting on the CNS and in conjunction with their physical and chemical aspects, understand the rationale for applying the guidelines taking into account individual patient factors resulting in the most safe and effective use. Demonstrate self-direction in problem solving, and in response to a patient with a complex pathology prepare an appropriate pharmaceutical care plans</p>		<p>PHA 7001 Y 2 hour s care plan s</p>						
<p>Demonstrate an ability to deal with complex case studies systematically and creatively by making sound rational judgements based on the evidence and the individual patient case.</p>	<p>PHA 7001 Y Patient profiles</p>							

Other: please give details

PS2 MAPPING LEARNING OUTCOMES - continued

note PS2

Mapping learning outcomes – please list learning outcomes and enter module code against assessment type YEAR 5 learning outcomes	Assessment type								
	Essay	Lab report	Course test	Exam	Project/ Dissertation/ Report	Oral Presentation	Assessment of practice	Objective structured clinical exam	Other
Demonstrate an ability to self-direct learning and manage time effectively. Demonstrate professionalism during the course of the project by organising regular meetings with supervisor(s), effectively and efficiently identifying when to seek help and guidance and accepting constructive criticism appropriately. Demonstrate an ability to receive guidance on one occasion only and effectively respond to it without need for repetition.							RP Evidence based performance assessment		
Critically appraise pharmaceutical research. Locate the importance and relevance of their research area. Develop a valid and systematic approach to data collection. Effectively analyse, evaluate and present research data. Identify and provide explanations for the main research findings from their data. Critique the results of their research, proposing appropriate explanations, identifying methodological limitations and recommending methodological improvements. Evaluate the implications of their work for future practice or research. Present research findings in a written format that is commensurate with modern scientific practice					RP 3000-5000 word research paper				
Demonstrate an ability to review health services research literature to provide evidence for effectiveness and cost-effectiveness of a service. Evaluate public health needs and identify a suitable pharmacy service to address these. Produce a clinical governance plan for a novel service. Prepare a business case for the purpose of commissioning a pharmacy service.					CPMP 5000 word business case				
Demonstrate an ability to make decisions required in a pharmacy setting considering all aspects of pharmaceutical management including clinical management of patient conditions, staff management and			CPMP 2 hours open book						
Apply the Cambridge Calgary model of consultation to patient medication history taking, patient counselling, responding to symptoms and clinical medication review. Recommend appropriate pharmaceutical management								PRP 2 OSCE	

in different patient groups and care environments									
Develop professional competencies required of a pharmacist by collection of evidence and sign off by pre-registration tutor							PRP 2 Tutor sign-off. Portfolio review.		
Other: please give details									

PS3 PROGRAMME COHERENCE AND FEEDBACK CYCLES*note PS3***PS3.1 learning progression**

How will progression in terms of skills, knowledge and understanding be reflected in the programme between modules in any one year and across the years as students progress through their course of study?

note PS3.1

The course is designed to be fully integrated, both horizontally and vertically.

Vertical integration is achieved through modules requiring knowledge from previous years. From year two all modules have pre-requisite modules. Assessments from year two will assume and require transferral of previous knowledge. Cognate area leads are responsible for ensuring that subject progress in both knowledge and complexity throughout the years.

Horizontal integration is achieved through a number of means. Firstly a year lead ensures horizontal integration by organising yearly meetings between module leaders to ensure that subjects are integrated. Problem based learning utilises scenarios which integrate knowledge within the year. Students are expected to learn approximately 25 new drugs each year and these are covered in all modules. Skills taught within the professional practice modules are practised and used within other modules. Additionally faculty teach across modules to ensure integration.

Learning from pre-registration placement 1 will be integrated back into the degree through a special topic module, where students will be required to discuss and reflect on their experiential learning.

PS3.2 feedback cycle

Please explain how assessments and feedback / feed forward support the coherence of the programme. Comment on number and types of assessment, both formative and summative; the types and format of feedback students will receive; and their sequencing. How will assessments and feedback impact on subsequent modules?

note PS3.2

The school's assessment strategy is in line with current UEA requirements with respect to the provision of feedback and the need for a feed-forward approach.

Feedback will be provided throughout the degree in a similar way to the current MPharm. Each module will provide many opportunities for feedback through a variety of methods including interactive lectures, workshops and drop-in sessions.

Students are provided with opportunities for feedback on all formative assessments ahead of the summative assessment. This will be in a form appropriate to the assessment undertaken.

Group feedback will be provided on all summative assessments (course tests and examinations) and student requiring reassessment will have the opportunity to receive individual feedback.

Students on placements will be required to have regular meetings with their tutor, who will provide feedback on their progress at relevant points.

PS4	EXAMINATIONS	<i>note PS4</i>	
		Written	Practical (e.g. OSCES and OSPES)
How many modules will include an exam element?	15		4
How many hours of exams are there in Stage 0? (if applicable)			
How many hours of exams are there in Stage 1?	8 hours exam + 3 hours 40min C/T		2 hour OSPE
How many hours of exams are there in Stage 2?	8 hours exam + 6 hours 40min C/T		1.5 hour OSPE
How many hours of exams are there in Stage 3?	8 hours exam + 9 hours 40mins C/T		2.5 hour OSPE
How many hours of exams are there in Stage 4? (if applicable)	5 hours + 1 hour C/T		
How many hours of exams are there in Stage 5? (if applicable)	2 hour course test		2 hours 40 mins OSCE
How many hours does the programme (as a whole) include?	29 hours exam + 20 hours course test		8 hours 40 mins

PS5	EQUALITY & WIDENING PARTICIPATION	<i>note PS5</i>
PS5.1	How do the admissions criteria specifically for this course ensure equality of opportunity for all applicants?	
	The admissions process for international students is via interview and grade requirements. Interviews are undertaken by all staff	
PS5.2	What steps have been taken to ensure an inclusive curriculum?	
	As MPharm	
PS5.3	In what ways do learning and teaching and assessment methods ensure inclusivity, reasonable adjustment and equality of opportunity?	
	As MPharm	

PS6	EMPLOYABILITY	<i>note PS6</i>
	How is employability embedded into the delivery of the course?	
	Throughout the course there is a strong emphasis on employability and this is achieved through extensive teaching and appropriate assessment.	
	Students create CVs with extensive guidance in year one.	

Significant support is provided to develop interview techniques.

The school actively supports the students in seeking summer placement experience through a blackboard site.

The school holds a number of appointments which are joint with employers (Boots the Chemist, Lloyds Pharmacy, Norfolk and Norwich University Hospital, Addenbrooke's Hospital and Hellesdon Hospital). The individuals regularly provide individual support to students in seeking employment experiences.

The school has developed a professional skills framework which the students have to engage with every year of the course. At the start of each year they create personal development plans, select one professional skill based on the reflective essay created the year before and one professional skill based on their experiences during the year. The evidence surrounding the development of the skill is placed in their professional portfolio alongside a reflective essay which is assessed at the end of the year.

In response to employer feedback the school actively supports and assesses calculations, consultation and presentation skills from year one until year four.

Objective structured clinical examinations are used in all four years to assess clinical skill development.

The ability of students to create pharmaceutical care plans is assessed in years three and four to ensure that students can adequately apply their clinical knowledge.

Students who undertake this course will complete two six month pre-registration placements with different pharmacy workplace settings. On successful completion of the programme and a professional registration examination students will be able to register with General Pharmaceutical Council to enable practice as a pharmacist.

AC4	MODULE OUTLINES FOR EXISTING COMPULSORY MODULES			
note AC4	Number of existing COMPULSORY modules	12		
	Module outlines attached? (as Appendix 1 to this form)	YES	√	NO

AC5	MINOR CHANGES TO EXISTING MODULES		
note AC5	Please list all existing modules, compulsory and optional, to which you are proposing minor changes		
Module Code	Module Title	Minor changes proposed	

AC6	NEW MODULES	
note AC6	How many new modules are being proposed?	6
Please complete a table AC6.x for each proposed new module		

AC6.1	NEW MODULE		
Module Title	Integrating patient care through pharmacy		
Level	3		
Credit Value	30		
Teaching period, eg Semester 1, Year-long	Year Long		
Likely Module Organiser	Laura Ellis		
Module Type (eg EX/CW/WW/PR etc)			
Does the Module include an Exam? Yes/No	Yes	How long will the exam be? (ie 1, 2 3 hours)	2
Module Marking Scheme (Please tick as appropriate)	Pass/Fail?		Percentage marking? √
Proposed Module Code	PHA 6002aY		

Module Delivery (eg distance-learning campus based, work placement)	Campus based
Brief Description	The module enables students to be able to supply medicines legally, accurately and safely, whilst recognising ethical dilemmas and responding appropriately to them. It provides students with some of the skills required for effective communication, management and leadership and will prepare students for their first period of pre-registration training
Aims / learning outcomes	<p>Learning outcomes By the end of this module students will be expected to be able to:</p> <p>Law</p> <ul style="list-style-type: none"> • Demonstrate how to supply medicines according to UK legislative framework for both humans and animals <p>Ethics/professionalism</p> <ul style="list-style-type: none"> • Demonstrate the concept of continuing professional development and reflective practice • Complete a pharmacy placement workbook • Consider ethical decisions utilising an appropriate decision making framework <p>Communication</p> <ul style="list-style-type: none"> • Demonstrate very good oral presentation and inter-professional and intra-professional team working skills • Apply the Cambridge Calgary model of consultation to patient medication history taking, responding to symptoms, patient counselling and medicines use reviews. • Demonstrate effective written communication. • Describe suitable interventions for working with difficult patients. <p>Pharmaceutical calculations</p> <ul style="list-style-type: none"> • Demonstrate the ability to competently perform multiple step pharmaceutical calculations using mental arithmetic <p>Management</p> <ul style="list-style-type: none"> • Demonstrate how to optimise teams using basic management tools e.g. team building, performance management, delegation and appraisal • Identify training needs for different members of a team and strategies for addressing them <p>Public Health</p> <ul style="list-style-type: none"> • Utilise enhanced counselling techniques to improve medicines taking behaviours • Describe the main factors that influence human behaviour and the theoretical models which to relate behaviour to attitudes and beliefs. • Describe how human behaviour models are applied in the treatment of addiction and the implementation of health promotion and concordance. <p>Medicines Safety</p> <ul style="list-style-type: none"> • Describe the processes involved in preventing errors using root cause analysis

	<p>Pre-registration training</p> <ul style="list-style-type: none"> • Understand the requirements of the GPhC for pre-registration trainees including performance standards. • Describe evidence collection, planning of development and the review process • Undertake a 2 week placement at pre-registration training site <p>Assessment:</p> <ul style="list-style-type: none"> • Portfolio • Exam • Sign-off completion of 2 week placement with reflective essay and PDP
Key Reading (2-5 key texts or resources for targeted Library expenditure/purchase)	<p>Skills for communicating with patients Silverman et al. Radcliffe Medical Press</p> <p>Minor Illness or Major Disease C.Edwards & E.Stilman Pharmaceutical Press</p> <p>British national Formulary & for Children Medicines, Ethics & Practice RPS Pharmaceutical Press</p> <p>Pharmacy Law and Ethics G.Appelbe & J.Wingfield Pharmaceutical Press</p> <p>(These references are all required for current year 3 modules)</p>

AC6.1	NEW MODULE		
Module Title	Pre-registration placement 1		
Level	4		
Credit Value	60		
Teaching period, eg Semester 1, Year-long	Semester 1		
Likely Module Organiser	Laura Ellis		
Module Type (eg EX/CW/WW/PR etc)			
Does the Module include an Exam? Yes/No	No	How long will the exam be? (ie 1, 2 3 hours)	
Module Marking Scheme (Please tick as appropriate)	Pass/Fail?	<input checked="" type="checkbox"/>	Percentage marking?
Proposed Module Code	PHA 7005Y		
Module Delivery (eg distance-learning campus based, work placement)	Work placement		

Brief Description	Students will undertake a 6 month placement in a pharmacy setting where they will follow the GPhC pre-registration training programme under the supervision of a tutor. Students will be required to collect evidence to demonstrate their competence against the GPhC performance standards.
Aims / learning outcomes	<p>By the end of this module students will:</p> <ul style="list-style-type: none"> • Demonstrate sufficient progression in the development of General Pharmaceutical Council performance standards to enable completion within the final six months placement <p>Key performance standards in which the student is expected to demonstrate progression are:</p> <ul style="list-style-type: none"> • Manage self • Manage work • Manage problems • Demonstrate a commitment to quality • Demonstrate ongoing learning and development • Communicate effectively • Work effectively with others • Manage the dispensing process • Provide additional clinical and pharmaceutical services <p>Assessment:</p> <ul style="list-style-type: none"> • 3000 word reflective essay • Portfolio review • Tutor 26 week sign-off
Key Reading (2-5 key texts or resources for targeted Library expenditure/purchase)	<p>Community Pharmacy Rutter Churchill Livingstone</p> <p>Medicines, Ethics & Practice Royal Pharmaceutical Society</p> <p>Pharmacy Law and Ethics G.Appelbe & J.Wingfield Pharmaceutical Press</p> <p>British National Formulary & for Children</p> <p>GPhC Pre-registration training handbook</p>

AC6.1	NEW MODULE		
Module Title	Pharmaceutical leadership and management		
Level	4		
Credit Value	20		
Teaching period, eg Semester 1, Year-long	Semester 2		
Likely Module Organiser	Debi Bhattacharya/Gemma May		
Module Type (eg EX/CW/WW/PR etc)			
Does the Module include an Exam? Yes/No	yes	How long will the exam be? (ie 1, 2 3 hours)	2

Module Marking Scheme (Please tick as appropriate)	Pass/Fail?		Percentage marking?	√
Proposed Module Code	PHA-7004aY			
Module Delivery (eg distance-learning campus based, work placement)	Campus based			
Brief Description	The module and evaluate the management of patients with multiple pharmaceutical needs. Students will be expected to demonstrate leadership and management skills, engage in multidisciplinary team working and demonstrate appropriate communication behaviours with patients and healthcare professionals. Students will also prepare for their research project by conducting a literature review.			
Aims / learning outcomes	<p>By the end of this module students will be expected to be able to:</p> <ul style="list-style-type: none"> • Respond appropriately to complex professional dilemmas which demonstrates sound judgement and reasoning processes in the following contexts: <ul style="list-style-type: none"> • Evaluation of staff needs and application of appropriate motivational methods to improve performance • Evaluation and application of leadership approaches • Negotiation of financial and human resources • Management of pharmaceutical care problems in different patient groups and care environments • Synthesize a literature review appropriate to an area of pharmaceutical research <p>Assessment:</p> <ul style="list-style-type: none"> • Literature review • Written assessment 			
Key Reading (2-5 key texts or resources for targeted Library expenditure/purchase)	<p>Community Pharmacy Rutter Churchill Livingstone</p> <p>Medicines, Ethics & Practice Royal Pharmaceutical Society</p> <p>Pharmacy Law and Ethics G.Appelbe & J.Wingfield Pharmaceutical Press</p> <p>Oxford Handbook of Clinical Medicine R.A.Hope Oxford University Press</p> <p>British National Formulary</p> <p>(These are recommended texts for current year 4 MPharm)</p>			

AC6.1	NEW MODULE		
Module Title	Research project		
Level	5		
Credit Value	40		

Teaching period, eg Semester 1, Year-long		Semester 1	
Likely Module Organiser	Mark Searcy		
Module Type (eg EX/CW/WW/PR etc)			
Does the Module include an Exam? Yes/No	No	How long will the exam be? (ie 1, 2 3 hours)	
Module Marking Scheme (Please tick as appropriate)	Pass/Fail?	Percentage marking?	√
Proposed Module Code	PHA-7002aY		
Module Delivery (eg distance-learning campus based, work placement)	Campus based		
Brief Description	The module is designed to demonstrate to students how the boundaries of pharmaceutical knowledge are advanced through research by demonstrating an expertise in a selected area of pharmaceutical research by designing and implementing a systematic approach to solving a novel and complex pharmaceutical problem		
Aims / learning outcomes	<p>On completion of this module students will be able to:</p> <ul style="list-style-type: none"> • describe how the boundaries of pharmaceutical knowledge are advanced through research • demonstrate expertise or in-depth knowledge in a selected area of pharmaceutical research at the forefront of the academic discipline • prepare a research paper commensurate with journal publication • demonstrate skills associated with best scientific practice • prepare an abstract • Demonstrate an ability to develop and implement a systematic approach to a novel & complex pharmaceutical problem which is at the forefront of pharmaceutical research • Critically appraise pharmaceutical research papers • Critique the results of their research, proposing appropriate explanations, identifying methodological limitations and recommending both methodological improvements together with further work • Present their findings in a written format that is commensurate with modern scientific practice <p>Professional Skills</p> <p>On completion of the course the students will:</p> <ul style="list-style-type: none"> • have developed their critical appraisal skills • have developed their written and oral communication skills • develop mastery in selected areas of pharmaceutical knowledge <p>Assessment:</p> <ul style="list-style-type: none"> • Evidence based performance assessment • 5000 word research paper 		

Key Reading (2-5 key texts or resources for targeted Library expenditure/purchase)	Dependant on area of research
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AC6.1	NEW MODULE		
Module Title	Clinical and pharmaceutical management in practice		
Level	5		
Credit Value	20		
Teaching period, eg Semester 1, Year-long	Semester 1		
Likely Module Organiser	Debi Bhattacharya/Jeremy Sokhi		
Module Type (eg EX/CW/WW/PR etc)			
Does the Module include an Exam? Yes/No	No	How long will the exam be? (ie 1, 2 3 hours)	
Module Marking Scheme (Please tick as appropriate)	Pass/Fail?	Percentage marking?	√
Proposed Module Code	PHA-7006Y		
Module Delivery (eg distance-learning campus based, work placement)	Campus based		
Brief Description	<p>This module utilises all the concepts gained throughout the course to date and further develops the skills required by a pharmacist in practice, with focus on complex patients with multiple conditions in real life situations.</p> <p>utilises student experiences from placement to inform the development of a pharmaceutical business case for the purpose of commissioning a novel pharmacy service</p>		
Aims / learning outcomes	<p>By the end of this module students will be expected to be able to:</p> <p>Respond appropriately to complex professional dilemmas which demonstrates sound judgement and reasoning processes in the following contexts:</p> <ul style="list-style-type: none"> • Preparation of a business case for the purpose of commissioning a novel pharmacy service • Evaluation and application of leadership approaches • Management of complex pharmaceutical care problems in complex patients and different care environments <p>Assessment</p> <ul style="list-style-type: none"> • Business case • 2 hour open book course test 		

Key Reading (2-5 key texts or resources for targeted Library expenditure/purchase)	Community Pharmacy Rutter	Churchill Livingstone
	Medicines, Ethics & Practice	Royal Pharmaceutical Society
	Pharmacy Law and Ethics G.Appelbe & J.Wingfield	Pharmaceutical Press
	Oxford Handbook of Clinical Medicine R.A.Hope	Oxford University Press
	British National Formulary	

AC6.1	NEW MODULE		
Module Title	Pre-registration placement 2		
Level	5		
Credit Value	60		
Teaching period, eg Semester 1, Year-long	Semester 2		
Likely Module Organiser	Laura Ellis		
Module Type (eg EX/CW/WW/PR etc)			
Does the Module include an Exam? Yes/No	No	How long will the exam be? (ie 1, 2 3 hours)	
Module Marking Scheme (Please tick as appropriate)	Pass/Fail?	Yes	Percentage marking?
Proposed Module Code	PHA-7007Y		
Module Delivery (eg distance-learning campus based, work placement)	Work placement		
Brief Description	<p>Students will undertake a 6 month placement in a pharmacy setting where they will follow the GPhC pre-registration training programme under the supervision of a tutor. Students will be required to collect evidence to demonstrate their competence against the GPhC performance standards, at the end of the placement students should reach a satisfactory level where their tutor can sign them as being competent to register as a pharmacist upon passing the GPhC registration assessment.</p>		
Aims / learning outcomes	<p>By the end of this module students will:</p> <ul style="list-style-type: none"> • Demonstrate suitable progression in the development of General Pharmaceutical Council (GPhC) performance standards to enable their tutor to sign them as achieving competence at the end of their placement. • Key performance standards in which the student is expected to demonstrate progression are: 		

	<ul style="list-style-type: none"> • Manage self • Manage work • Manage problems • Demonstrate a commitment to quality • Demonstrate ongoing learning and development • Communicate effectively • Work effectively with others • Manage the dispensing process • Provide additional clinical and pharmaceutical services <p>Assessment</p> <ul style="list-style-type: none"> • OSCE • Portfolio review • Tutor sign-off
Key Reading (2-5 key texts or resources for targeted Library expenditure/purchase)	<p>Community Pharmacy Rutter Churchill Livingstone</p> <p>Medicines, Ethics & Practice Royal Pharmaceutical Society</p> <p>Pharmacy Law and Ethics G.Appelbe & J.Wingfield Pharmaceutical Press</p> <p>British National Formulary & for Children</p> <p>GPhC Pre-registration training handbook</p>

****Please copy and paste the above table for additional new modules****

AC 7 <i>note</i> AC7	DEFINED CHOICE		
<p>How do you envisage 'Defined Choice' working for the course in question? Please specify, for each year of the course, defined choice within the 3 categories of:</p> <ul style="list-style-type: none"> • Programme-specific choice • Enrichment and Employment modules (EEC) • Language choice 			

AC8 <i>note</i> AC8	JOINT COURSES		
	Is the proposed course is a joint course?	YES	

		NO	√
	If YES, how will the student experience be managed?		

AC9	COMMENTS/FEEDBACK FROM EXTERNAL PROFESSIONALS/ BODIES
<i>note</i> AC9	Please provide a summary of external professional feedback received. Append full reports as Appendix 2
<i>note</i> AC9	Please provide a summary of Professional, Statutory or Regulatory Body (PSRB) approval, if appropriate. Append any relevant documents as Appendix 3

AC10	COMMENTS ON ACADEMIC CASE AND PROGRAMME SPECIFICATION
COMPLETION OF THIS SECTION TO BE COORDINATED BY LEARNING AND TEACHING SERVICE (LTS) COORDINATOR	
<i>note</i> AC10	Please circulate Parts 1, 3 & 4 to the following for their additional comments (if any). Comments to be returned to proposer within 10 working days. NB these comments should focus on the <i>ACADEMIC CONTENT</i> of the proposal
Date of circulation:	
AC10.1	Careers Manager (CCEN)

AC10.2	Learning & Teaching Service (LTS) Manager (UG or PGT, as appropriate)
AC10.2	Equality & Diversity Manager (PPE)

AC11	PROPOSER'S RESPONSE TO COMMENTS IN AC9 & AC10 ABOVE
<i>note</i> AC11	

FULL COURSE PROPOSAL**Part 4 KEY INFORMATION SET (KIS) DATA**

KIS	KEY INFORMATION SET data (undergraduate courses only)						<i>Note KIS</i>
KIS1	Quantitative KIS data						<i>Note KIS1</i>
		Year 1	Year 2	Year 3	Year 4	Year 5	
1.1	Percentage of assessment by written exams	72%	69%	73%	33%	8%	
1.2	Percentage of assessment by practical exams	9%	7%	6%	45%	50%	
1.3	Percentage of assessment by coursework	19%	24%	21%	22%	42%	
1.4	Percentage of time in scheduled learning and teaching activities	30%	33%	36%	11%	5%	
1.5	Percentage of time in guided independent study	69%	66%	56%	38%	45%	
1.6	Percentage of time on placements	1%	1%	8%	51%	50%	
KIS2	Professional Accreditation						<i>Note KIS2</i>
2.1	Name of accrediting body (if applicable)						
	General Pharmaceutical Council (GPhC)						
2.2	Please give details, including any memberships, exemptions etc that the award confers. Please also give accrediting body website URL.						
2.3	Is the accreditation dependent on specific module choices? If so, please include URL of web pages where these details are outlined.						

FULL COURSE PROPOSAL

Part 5 APPROVALS AND NOTIFICATION

APPROVALS

Note AP

THIS SECTION WILL BE COORDINATED BY THE SECRETARY TO YOUR FACULTY TEACHING AND LEARNING QUALITY COMMITTEE (FLTQC)				
AP1	APPROVAL OF THE BUSINESS CASE			
	APPROVAL/SIGNATURES	Name	Signature/ evidence of approval	Date
AP1.1	School Director of Learning, Teaching and Quality			
AP1.2	Head of School (on behalf of School Board)			
AP1.3	Dean of Faculty (on behalf of Faculty Executive)			
AP1.4	LTC (if relevant)			
AP1.5	Council (if relevant)			
AP1.6	Reasons for approval being withheld (and by whom)			

AP2	APPROVAL OF THE ACADEMIC CASE			
AP2.1	Head of School	Name	Signature	Date
	Approved:			
	Approved with amendments:			
	Rejected:			
	Comments (if any):			

AP2.2	Faculty Associate Dean (for Faculty LTQC)	Name	Signature	Date
	Approved:			
	Approved with amendments:			
	Rejected:			
	Comments (if any):			
AP2.3	PVC Academic (for LTC)	Name	Signature	Date
	Approved:			
	Approved with amendments:			
	Rejected:			
	Comments (if any):			
Where applicable:				
AP2.4	Secretary to Council	Name	Signature	Date
	Approved:			
	Approved with amendments:			
	Rejected:			
	Comments (if any):			

FULL COURSE PROPOSAL

Note N1				NOTIFICATION OF APPROVAL			
This section should be completed by Faculty FLTQC Secretary once a course proposal has been approved. Its purpose is to ensure that relevant Offices are informed of the approval of course proposals (new courses and course amendments), in accordance with the procedures for course approval.							
FACULTY					SCHOOL		
NEW COURSE?		Y	N	If NO, please enter existing course code			
DEGREE AWARD (e.g. BSc/MA)							
TITLE OF PROGRAMME							
START DATE				LENGTH OF COURSE			
Course Approved by:			Name of Committee Chair			Date of approval	
Faculty Learning and Teaching Quality Committee (FLTQC)							
Learning and Teaching Committee (LTC)							
RELEVANT OFFICE INFORMED? *insert date							
Planning Office		Admissions and Marketing		Learning and Teaching Service		Union of UEA Students	
*		*		*		*	
sis.records@uea.ac.uk		arm.operations@uea.ac.uk		Email the LTS coordinator responsible for the course		union.academic@uea.ac.uk	

Note N1		IMPLEMENTATION ACTIONS	
COURSE NAME		NEW ROUTE CODE	
ACTION		DATE	
COURSE INFORMATION LIVE IN ADMISSIONS			
PROGRAMME SPECIFICATION UPLOADED ONTO WEBSITE			
COURSE PROFILE UPLOADED ONTO SITS			
COURSE CLOSURES COMMENCED (where appropriate)			

Appendix: Module outlines for existing modules

Module Title	Life Sciences Chemistry		
Level	1		
Credit Value	30		
Teaching period, eg. Semester 1, Year-long	Year-Long		
Module Organiser	Paul McDermott & Chris Hamilton		
Module Type (eg. EX/CW/WW/PR etc)	EX		
Does the Module include an Exam? Yes/No	Y	How long will the exam be? (ie 1, 2 3 hours)	2
Module Marking Scheme (Please tick as appropriate)	Pass/Fail?		Percentage marking? <input checked="" type="checkbox"/>
Proposed Module Code	PHA-4003Y		
Module Delivery (eg. distance-learning campus based, work placement)	Campus based		
Brief Description	This module will provide underpinning life sciences chemistry as well as spectroscopic techniques. Students will be instructed in basic analytical laboratory techniques.		
Aims	<p>By the end of this module students will be expected to be able to:</p> <ul style="list-style-type: none"> • Describe the basics of atomic theory, electronic structure and bonding. • Recognise and explain the importance of molecular shape and structure. • Describe the mechanistic details of a range of relevant reactions. • Describe a range of basic synthetic techniques for the preparation of pharmaceutically relevant molecules. • Perform basic analytical laboratory skills (documentation, weighing, measuring, working with solids and liquids, precision and accuracy). • Accurately perform volumetric analysis (various titrations). • Describe the theory and practical application of spectroscopic methods of analysis (infra-red, UV/VIS, polarimetry). • Explain the details of cellular organisation, structure and biochemistry. • Describe the structure, properties and biological functions of amino acids and proteins, lipids and membranes, saccharides and carbohydrates 		

Key Reading (2-5 key texts or resources for targeted Library expenditure/purchase)	<ul style="list-style-type: none">• Essentials of Organic Chemistry - Paul M Dewick, Wiley, ISBN 0-470-01666-3 Semester 2• General Organic and Biological Chemistry - S. H. Stoker, Brooks/Cole, ISBN 0495831468• Pharmaceutical Analysis 2nd Ed., David G. Watson, Elsevier, ISBN: 0443 07445 3 (Library RS 189).
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Module Title	Foundations in Pharmacy Practice		
Level	1		
Credit Value	35		
Teaching period, eg. Semester 1, Year-long	Year-Long		
Likely Module Organiser	James Desborough & Laura Ellis		
Module Type (eg. EX/CW/WW/PR etc)	EX		
Does the Module include an Exam? Yes/No	Y	How long will the exam be? (ie 1, 2 3 hours)	2 hours
Module Marking Scheme (Please tick as appropriate)	Pass/Fail?	Percentage marking?	✓
Proposed Module Code	PHA-4001Y		
Module Delivery (eg. distance-learning campus based, work placement)	Campus based		
Brief Description	This module will provide the underpinning knowledge required for a practising pharmacist		
Aims	<p>By the end of this module students will be expected to be able to:</p> <p>Law, Ethics and Professionalism:</p> <ul style="list-style-type: none"> • Describe the different roles of the pharmacist and the main policies and regulatory frameworks related to the practice of pharmacy • Describe the drug discovery and regulation process • Demonstrate basic oral presentation, inter-professional and intra-professional team working skills. • Demonstrate the concept of continuing professional development and reflective practice • Complete a pharmacy placement workbook • Use the British National Formulary (BNF) to answer simple clinical questions regarding suitability of medicines with respect to dosages, common cautions and contra-indications. • Demonstrate the basics of interpreting a prescription and dispensing it appropriately using a computerised system. • Communication: • Describe the information needed to counsel a patient on a simple prescription <p>Management:</p> <ul style="list-style-type: none"> • Describe the history and current structure of the NHS and the different health and economic mechanisms for making decisions regarding resource allocation within the NHS 		

	<ul style="list-style-type: none"> • Differentiate between evidence based medicine and non-evidence based medicine and describe the causes of iatrogenic disease • Health Services Research: • Describe the processes involved in conducting a clinical audit <p>Public Health:</p> <ul style="list-style-type: none"> • Describe the public health agenda and the location and roles of different healthcare professionals within this • Define compliance, adherence and concordance and describe how they are measured and classified • Calculations: • Demonstrate the ability to perform basic pharmaceutical calculations and mental arithmetic. <p>Statistics</p> <ul style="list-style-type: none"> • Apply and interpret simple statistical analysis <p>Medicines Safety</p> <ul style="list-style-type: none"> • Describe the common causes of medication errors
<p>Key Reading (2-5 key texts or resources for targeted Library expenditure/purchase)</p>	<ul style="list-style-type: none"> • British National Formulary, RPS & BMA Press • Pharmaceutical Practice, Winfield & Richards, Churchill Livingstone

Module Title	Cells, Physiology and Pharmacology		
Level	1		
Credit Value	20		
Teaching period, eg. Semester 1, Year-long	Year-long		
Likely Module Organiser	Dr Vicky Sherwood & Dr Julie Sanderson		
Module Type (eg. EX/CW/WW/PR etc)	EX		
Does the Module include an Exam? Yes/No	Yes	How long will the exam be? (ie 1, 2 3 hours)	2 hours
Module Marking Scheme (Please tick as appropriate)	Pass/Fail?	Percentage marking?	✓
Proposed Module Code	PHA-4004Y		
Module Delivery (eg. distance-learning campus based, work placement)	Campus based		
Brief Description	This module describes cellular processes, functions and signalling and introduces students to the principles of drug-receptor theory.		
Aims	<p>At the conclusion of this module, participants should be able to:</p> <ul style="list-style-type: none"> Describe the fundamental cellular structure, function and biochemistry of cells. Describe the basis of understanding of the principles of molecular biology, genetics in diseases, and the application of human genomics and biotechnology in medicine. Explain inter- and intra-cellular signalling processes in cells. Describe and explain the function of receptors and other protein targets and their interactions with ligands and drugs. Describe the anatomy and physiology of the major organ systems. Discuss the underlying principles of pharmacology in relation the health and have an understanding of the basic principles of drug-receptor theory and pharmacokinetics. 		
Key Reading (2-5 key texts or resources for targeted Library expenditure/purchase)	<ul style="list-style-type: none"> Essential Cell Biology, Bruce Alberts, Garland Sciences, ISBN: 0815334818. Biology. Mader, S.S. 9th edition. McGraw-Hill. Human Physiology. Sherwood, L. 6th edition. Thomson. Rang and Dale's Pharmacology. Rang H.P., Dale, M.M., Ritter, J.M. and Moore, P.K. 6th edition. Churchill Livingstone. How drugs work. Basic pharmacology for healthcare professionals. McGavock, H. Radcliffe Medical Press. 		

Module Title	Physical Pharmacy		
Level	1		
Credit Value	35		
Teaching period, eg. Semester 1, Year-long	Year long		
Likely Module Organiser	Dr Christopher Morris & Dr Andrew Round		
Module Type (eg. EX/CW/WW/PR etc)	WW		
Does the Module include an Exam? Yes/No	Yes	How long will the exam be? (ie 1, 2 3 hours)	2
Module Marking Scheme (Please tick as appropriate)	Pass/Fail?		Percentage marking? <input checked="" type="checkbox"/>
Proposed Module Code	PHA-4002Y		
Module Delivery (eg. distance-learning campus based, work placement)	Campus-based		
Brief Description	This module will provide underpinning physical science and relate this to liquid and semi-solid pharmaceutical formulation.		
Aims	<p>By the end of this module students will be expected to be able to:</p> <ul style="list-style-type: none"> • Perform standard scientific mathematical calculations and manipulations including: logs, exponents, algebra, integration, differentiation. • Explain the principles of thermodynamics and how they apply to pharmaceutical science. • Discuss fundamental solution science and its relevance to formulation science. • Discuss fundamental colloid science and its relevance to formulation science. • Discuss how the physico-chemical sciences are used to formulate conventional liquid and semi-solid pharmaceutical products, including solutions, suspensions, emulsions, creams, ointments, and suppositories, taking into account relevant patient-related and drug-related factors. • Explain (pseudo)-zero-order and (pseudo)-first order kinetics and their relevance to pharmaceutical science. • Correctly analyse simple kinetic data. • Explain the salient features of GMP. • Demonstrate competence at manufacturing on a small scale products suitable to be administered to a patient. • Explain the principles of liquid and semi-solid product testing, including rheology. 		

Key Reading (2-5 key texts or resources for targeted Library expenditure/purchase)	<ul style="list-style-type: none">• Physicochemical Principles of Pharmacy, 3rd Edition, A.T. Florence and D. Attwood, Palgrave. ISBN 0333690818 (Library shelf RS 403).• Pharmaceutics: The science of dosage form design, 2nd edition, M.E. Aulton, Churchill Livingstone. ISBN 0443055173 (Library shelf RS 200).• Principles and Problems in Physical Chemistry for Biochemists, 3rd Edition, N.C. Price, R.A. Dwek, R.G. Ratcliffe and M.R.O Wormald, Oxford University Press. ISBN 0198792816 (Library shelf QD 415).• Essentials of Pharmaceutical Chemistry, D. Cairns, Pharmaceutical Press. ISBN 0853694370 (Library shelf RS 403)• Physical Chemistry for the Life Sciences, P. Atkins and J. de Paula, Oxford University Press. ISBN 0199280959 (Library shelf QD 453.3)
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Module Title	Industrial Pharmacy		
Level	2		
Credit Value	35		
Teaching period, eg. Semester 1, Year-long	Year long		
Likely Module Organiser	Dr Laszlo Fabian & Dr Sheng Qi		
Module Type (eg. EX/CW/WW/PR etc)	WW		
Does the Module include an Exam? Yes/No	Yes	How long will the exam be? (ie 1, 2 3 hours)	2
Module Marking Scheme (Please tick as appropriate)	Pass/Fail?		Percentage marking? <input checked="" type="checkbox"/>
Proposed Module Code	PHA-5003Y		
Module Delivery (eg. distance-learning campus based, work placement)	Campus-based		
Brief Description	This module will provide underpinning solid-state physical science and relate this to solid and aerosol pharmaceutical formulation. Students will be instructed in basic microbiology and the formulation of sterile products. Students will be instructed in dose calculations.		
Aims	<p>By the end of this module students will be expected to be able to:</p> <ul style="list-style-type: none"> • Explain the physico-chemical principles underpinning solid oral dosage form design. • Describe the manufacturing processes used to produce different types of solid oral dosage forms on a large and small scale. • Describe how solid oral dosage forms are tested to ensure product compliance with regulatory requirements. • Interpret a drug's physico-chemical data and predict optimum solid oral dosage formulation strategies for that drug. • Explain the physico-chemical and engineering principles underpinning aerosol dosage form design. • Describe pharmaceutical packaging and how this is selected for individual products. • Explain the principles of stability testing for pharmaceutical products. • Explain the physico-chemical and engineering principles underpinning oral controlled-release technologies. • Correctly interpret data associated with product performance on stability. • Explain the fundamental principles of radiochemistry and radiopharmacy, including how it may be used clinically. • Describe the different classes of micro-organisms, with particular reference to those micro-organisms of significance to the manufacture of sterile pharmaceutical 		

	<p>products.</p> <ul style="list-style-type: none"> • Describe elements of medical microbiology. • Discuss the principles of sterile facilities design, control and operation. • Explain the different methods of sterilisation. • Correctly interpret mathematical data relating to sterilisation and sterility testing. • Explain the fundamentals of formulation of sterile pharmaceutical products. • Describe the use of biotechnology.
Key Reading (2-5 key texts or resources for targeted Library expenditure/purchase)	<ul style="list-style-type: none"> • Physicochemical Principles of Pharmacy, 3rd Edition, A.T. Florence and D. Attwood, Palgrave. ISBN 0333690818 (Library shelf RS 403). • Pharmaceutics: The science of dosage form design, 2nd edition, M.E. Aulton, Churchill Livingstone. ISBN 0443055173 (Library shelf RS 200). • Hugo and Russell's Pharmaceutical Microbiology, Blackwell. ISBN: 0632064676 (Library shelf QR 46.5). • Quality Assurance of Aseptic Preparation Services, A.M. Beaney, Pharmaceutical Press. ISBN: 0853696152 (Library shelf RD 91). • Rules and Guidance for Pharmaceutical Manufacturers and Distributors 2007 (the "Orange Guide"), MHRA, Pharmaceutical Press. ISBN: 9780853697190 (Library shelf RA 401.G7).

Module Title	Introduction to the Practice of Pharmacy		
Level	2		
Credit Value	25		
Teaching period, eg. Semester 1, Year-long	Year long		
Likely Module Organiser	Dr Michael Twigg & Miriam Craske		
Module Type (eg. EX/CW/WW/PR etc)	EX		
Does the Module include an Exam? Yes/No	Yes	How long will the exam be? (ie 1, 2 3 hours)	2
Module Marking Scheme (Please tick as appropriate)	Pass/Fail?		Percentage marking? <input checked="" type="checkbox"/>
Proposed Module Code	PHA-5002Y		
Module Delivery (eg. distance-learning campus based, work placement)	Campus based		
Brief Description	This module introduces pharmacy students to the laws and standards surrounding medicines supply, the processes required to minimise risk and to basic statistical tests underpinning the application of evidence based medicine.		
Aims	<p>By the end of this module students will be expected to be able to:</p> <p>Law, ethics and professionalism:</p> <ul style="list-style-type: none"> Describe the parts of the Medicines Act 1968 relevant to pharmacy and the professional standards expected of a pharmacist outlined by the GPhC Describe the Consumer and Data Protection Acts Demonstrate how to supply medicines, controlled under the Medicines Act, legally, accurately and safely Utilize the Drug Tariff to endorse prescriptions efficiently Demonstrate good oral presentation, inter-professional and intra-professional team working skills Demonstrate the concept of continuing professional development and reflective practice Complete a pharmacy placement workbook <p>Communication:</p> <ul style="list-style-type: none"> Apply the Cambridge Calgary model of consultation to patient counselling <p>Management:</p> <ul style="list-style-type: none"> Outline the terms of service within the NHS relevant to pharmacists <p>Calculations:</p> <ul style="list-style-type: none"> Demonstrate the ability to competently perform one step 		

	<p>pharmaceutical calculations using mental arithmetic</p> <p>Statistics:</p> <ul style="list-style-type: none"> • Apply and interpret basic parametric and non-parametric data comparisons and correlation <p>Health Services Research:</p> <ul style="list-style-type: none"> • Describe the different approaches used to perform basic service evaluations <p>Public Health:</p> <ul style="list-style-type: none"> • Describe the concept of health literacy and its impact on health inequalities <p>Medicines Safety:</p> <ul style="list-style-type: none"> • Describe methods of risk management and systems of governance
<p>Key Reading (2-5 key texts or resources for targeted Library expenditure/purchase)</p>	<ul style="list-style-type: none"> • British National Formulary BMA & Pharmaceutical press • Medicines, Ethics & Practice Royal Pharmaceutical Society Free to student members, available on-line. • Pharmacy Law and Ethics G.Appelbe & J.Wingfield. The Pharmaceutical Press

Module Title	Neurophysiology, Synaptic Pharmacology and Endocrinology		
Level	2		
Credit Value	25		
Teaching period, eg. Semester 1, Year-long	Year long		
Likely Module Organiser	Julie Sanderson & Catherine Heywood		
Module Type (eg. EX/CW/WW/PR etc)	Ex		
Does the Module include an Exam? Yes/No	Yes	How long will the exam be? (ie 1, 2 3 hours)	2
Module Marking Scheme (Please tick as appropriate)	Pass/Fail?		Percentage marking? <input checked="" type="checkbox"/>
Proposed Module Code	PHA-5004Y		
Module Delivery (eg. distance-learning campus based, work placement)	Campus based		
Brief Description	This module explains the peripheral nervous and endocrine systems to students and introduces disease and therapies for major diseases of the endocrine system.		
Aims	<p>By the end of this module students will be able to:</p> <ul style="list-style-type: none"> • Describe the physiology of peripheral nervous system including the special senses, the ionic mechanisms underlying the action potential and the physiology of skeletal and smooth muscle. • Explain the mono-synaptic stretch reflex, describe the pharmacology of the peripheral nervous system (PNS), describe the synapse and understand how drugs act at autonomic synapses to modify function of major organ systems, • Cite the major neurotransmitters of the peripheral nervous system, predict both the desired and undesired effects of peripheral nervous system active pharmacotherapy • Describe comprehensively the epidemiology, aetiology and pathophysiology of major diseases involving the endocrine system. • Explain the pharmacology of drugs used in the treatment of disorders of the endocrine system. • Recognise the importance of structure-activity relationships of steroids and steroid mimics in the design of new drugs. • Explain the pharmacology of drugs used in the treatment of disorders of the endocrine system • Review the pharmaceutical care of patients prescribed therapies for major diseases of the endocrine system, recommend suitable drug, dose and formulation alternatives and their appropriate monitoring based on current evidence based guidance. 		

	<ul style="list-style-type: none">• Recommend and design appropriate sexual health strategies for delivery through pharmacy.
Key Reading (2-5 key texts or resources for targeted Library expenditure/purchase)	<ul style="list-style-type: none">• Human Physiology. Sherwood, L. Thomson.• Pharmacology. Rang H.P., Dale, M.M., Ritter, J.M. and Moore, P.K. Churchill Livingstone.• Clinical Pharmacy and Therapeutics. Walker and Edwards. Churchill Livingstone.

Module Title	Drug design and Mechanisms of Drug Action		
Level	2		
Credit Value	35		
Teaching period, eg. Semester 1, Year-long	Year long		
Likely Module Organiser	Susan Matthews and Zoe Waller		
Module Type (eg. EX/CW/WW/PR etc)	EX		
Does the Module include an Exam? Yes/No	Yes	How long will the exam be? (ie 1, 2 3 hours)	2
Module Marking Scheme (Please tick as appropriate)	Pass/Fail?	Percentage marking?	✓
Proposed Module Code	PHA-5001Y		
Module Delivery (eg. distance-learning campus based, work placement)	Campus based		
Brief Description	This module will provide underpinning medicinal chemistry principles and relate this to drug design, mechanism of action and metabolism. Students will be instructed in basic organic synthesis as well as complimentary spectroscopic techniques.		
Aims	<p>On completion of the module the student will be able to:</p> <ul style="list-style-type: none"> • Understand the main elements of drug design from a medicinal chemistry viewpoint • Understand the molecular pharmacology of drug action • Describe the major mechanisms of drug metabolism • Predict from the chemical structure the likely routes of metabolism • Describe the fundamental pharmacokinetic processes (absorption, distribution, metabolism and excretion) • Have knowledge and understanding of the main synthetic techniques in drug design • Have acquired practical skills commonly used to obtain drug compounds, including chemical synthesis and enzyme assisted synthesis • Have an appreciation of the routes to drug moieties from a variety of biological and chemical sources • Understand the role of analysis in identification and purity assessment in relation to both compounds and processes • Be familiar with the spectroscopic techniques, UV, IR and NMR and have the skills necessary to interpret spectroscopic data 		
Key Reading (2-5 key texts or resources for targeted Library expenditure/purchase)	<ul style="list-style-type: none"> • An Introduction to Medicinal Chemistry, Graham L. Patrick, Third Edition, Oxford University Press, ISBN 0199275009 • Medicinal Chemistry, An Introduction, Gareth Thomas, Wiley, ISBN 0471489352 • Pharmaceutical Analysis, D. G. Watson, Elsevier, ISBN: 		

	<p>044307445</p> <ul style="list-style-type: none">• Essentials of Organic Chemistry - Paul M Dewick, Wiley, ISBN 0-470-01666-3
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Module Title	Therapeutic approaches to gastro-intestinal disease, nutrition and cancer		
Level	3		
Credit Value	30		
Teaching period, eg. Semester 1, Year-long	Year long		
Likely Module Organiser	Maria O'Connell and Mark Searcy		
Module Type (eg. EX/CW/WW/PR etc)	EX		
Does the Module include an Exam? Yes/No	Yes	How long will the exam be? (ie 1, 2 3 hours)	2
Module Marking Scheme (Please tick as appropriate)	Pass/Fail?		Percentage marking? <input checked="" type="checkbox"/>
Proposed Module Code	PHA-6001Y		
Module Delivery (eg. distance-learning campus based, work placement)	Campus based		
Brief Description	This module introduces students to the gastro-intestinal system, cancer and nutrition, the design of molecules to treat cancer and common conditions associated with the gastro-intestinal system, and therapeutic approaches towards their management.		
Aims	<p>By the end of this module students will be expected to be able to:</p> <ul style="list-style-type: none"> • Explain the physiology of the gastrointestinal tract, liver and pancreas • Discuss nutritional assessment and nutritional requirements and propose appropriate nutritional guidance for optimum health, malnutrition and nutritional disorders • Discuss the mechanisms of action and evidence for safe and effective therapeutic use of nutraceuticals commonly used in the prevention and treatment of common diseases and establish and recommend appropriate non-pharmaceutical interventions for the treatment and prevention of common diseases • Explain the aetiology and management of common GI symptoms • Discuss the epidemiology, aetiology and pathophysiology of common GI diseases, liver diseases and malabsorption syndromes, and select the most appropriate treatment for these and describe stoma care • Discuss the mechanism of action and in conjunction with the chemical and physical aspects of drugs evaluate the rationale for the safe and effective therapeutic use of drugs commonly used in the treatment of nutritional and GI diseases • Explain the physic-chemical and engineering principles underpinning oral controlled release and targeted delivery 		

	<p>technologies</p> <ul style="list-style-type: none"> • Explain the process of enteral and parenteral feeding • Develop an understanding of the basic biology of cancer • Explain the principles underlying the mechanism of action of commonly used anti-tumour agents and debate the drawbacks associated with them • Explain the clinical use of these anti-tumour agents and evaluate the drawbacks associated with them • Examine the clinical role of the pharmacist in planning and managing the pharmaceutical care of cancer patients • Discuss the use of radiopharmaceuticals in diagnosis and cancer treatment • Demonstrate effective written communication • Devise an appropriate patient information leaflet for prevention or treatment of GI or nutritional disorders or cancer utilising detailed knowledge of the options available, national guidance and recent advances. • Highlight the relevant recommendations for the treatment of GI diseases and cancer from NSFs, NICE and any other relevant publications
<p>Key Reading (2-5 key texts or resources for targeted Library expenditure/purchase)</p>	<ul style="list-style-type: none"> • Community pharmacy: symptoms, diagnosis and treatment, Rutter P. Edinburgh: Churchill Livingstone Elsevier. ISBN: 0702029955 (Library RA427.9) • Clinical Pharmacy and Therapeutics, Roger Walker, Churchill Livingstone, ISBN: 0443071373 (Library RM 121 WAL).

Module Title	Evidence based care of cardiovascular and renal disease		
Level	3		
Credit Value	30		
Teaching period, eg. Semester 1, Year-long	Year long		
Likely Module Organiser	Catherine Heywood		
Module Type (eg. EX/CW/WW/PR etc)	Ex		
Does the Module include an Exam? Yes/No	Yes	How long will the exam be? (ie 1, 2 3 hours)	2
Module Marking Scheme (Please tick as appropriate)	Pass/Fail?		Percentage marking? <input checked="" type="checkbox"/>
Proposed Module Code	PHA-6004Y		
Module Delivery (e.g. distance-learning campus based, work placement)	Campus based		
Brief Description	This module is designed to enable students to be able to review prescribing for common cardiovascular, renal, conditions utilising current evidence and guidelines. It will also equip them with the ability to critically evaluate health research.		
Aims	<p>By the end of this module students will be expected to be able to:</p> <ul style="list-style-type: none"> • Describe the physiology of the heart, vascular and renal system • Describe the epidemiology, aetiology and pathophysiology of hypertension, coronary heart disease, heart failure, arrhythmias, stroke, acute and chronic renal disease and gout, and select the most appropriate treatment for these diseases. • Describe and utilise the tools used to assess cardiovascular risk • Describe the mechanisms of action and in conjunction with the chemical and physical aspects of drugs know and understand the rationale for the safe and effective therapeutic use of drugs commonly used in the treatment of cardiovascular, cerebrovascular, and renal diseases. • Identify and recommend appropriate pharmaceutical and non-pharmaceutical interventions for the treatment and prevention of cardiovascular, cerebrovascular, renal, and gout • Critique basic health services research • Perform appropriate descriptive and inferential statistical analysis associated with randomised controlled trials and service evaluations 		

Key Reading (2-5 key texts or resources for targeted Library expenditure/purchase)	<ul style="list-style-type: none">• Clinical Pharmacy and Therapeutics. Walker, R. and Whittlesea C. 4th edition. Churchill Livingstone. Pharmacology. Rang, H.P., Dale, M.M., Ritter, J.M. and Moore, P.K. 5th edition. Churchill Livingstone.• Human Physiology: From Cells to Systems. Sherwood, L. 7th edition, Brookes Cole
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Module Title	Applied Immunology and Infectious Diseases		
Level	3		
Credit Value	30		
Teaching period, eg. Semester 1, Year-long	Year long		
Likely Module Organiser	Anja Mueller and Nicola Moore		
Module Type (eg. EX/CW/WW/PR etc)	Ex		
Does the Module include an Exam? Yes/No	Yes	How long will the exam be? (ie 1, 2 3 hours)	2
Module Marking Scheme (Please tick as appropriate)	Pass/Fail?		Percentage marking? <input checked="" type="checkbox"/>
Proposed Module Code	PHA-6003Y		
Module Delivery (eg. distance-learning campus based, work placement)	Campus based		
Brief Description	This module will introduce students to the immune system and the diseases affecting it. They will explore the treatment options available and the guideline for treating infectious diseases and those of the immune system.		
Aims	<p>By the end of this module students will be expected to be able to:</p> <ul style="list-style-type: none"> • Explain how the immune system works and its association with diseases, their treatment and prevention. • Explain the mechanisms of antibiotic and antiviral action. • Describe the molecular design and mode of action of different classes of antibiotic & antiviral drugs. • Distinguish the chemical basis and the mechanism(s) of action(s) of the drugs relating to immune function , infectious diseases, and in conjunction with their chemical and physical aspects, understand the rationale for their safe and effective therapeutic use. • Describe and explain the pathophysiology, epidemiology and aetiology of infectious disease e.g. bacterial, viral, fungal, and protozoal mediated infectious diseases. • Describe and explain the pathophysiology, epidemiology and aetiology of allergic, inflammatory, autoimmune and infectious disease. • Select the most appropriate over the counter treatment and advice for common self-limiting minor ailments of the skin and respiratory system • Differentiate between minor and major illness and select the most appropriate course of action • Using knowledge of the the mechanism of action and pharmacology and current evidence based national 		

	<p>guidelines select and identify the most appropriate treatments for common diseases of the immune system, asthma, COPD and skin.</p> <ul style="list-style-type: none"> • Critically appraise the prescribed management and monitoring of patients with common diseases of the immune system, asthma, COPD and skin and recommend suitable alternative courses of action.
Key Reading (2-5 key texts or resources for targeted Library expenditure/purchase)	<p>Basic Immunology, Abul Abbas, Saunders, Community pharmacy: symptoms, diagnosis and treatment, Rutter P. Edinburgh: Churchill Livingstone Elsevier. Immunity, Anthony DeFranco, Medical microbiology, Patrick R. Murray, Mosby, Clinical Pharmacy and Therapeutics, Roger Walker, Churchill Livingstone,</p>

Module Title	Neurology and mental health		
Level	M		
Credit Value	20		
Teaching period, eg. Semester 1, Year-long	Semester 2		
Likely Module Organiser	Andy Nunney		
Module Type (eg. EX/CW/WW/PR etc)	EX		
Does the Module include an Exam? Yes/No	Yes	How long will the exam be? (ie 1, 2 3 hours)	2
Module Marking Scheme (Please tick as appropriate)	Pass/Fail?		Percentage marking? <input checked="" type="checkbox"/>
Proposed Module Code	PHA-7001Y		
Module Delivery (eg. distance-learning campus based, work placement)	Campus based		
Brief Description	The module introduces students to major diseases of the central nervous system and their therapeutic management.		
Aims	<p>By the end of this module students will be able to:</p> <ul style="list-style-type: none"> • Describe the anatomy and physiology of the central nervous system. • Describe and understand the role of the major neurotransmitters of the CNS, their receptor classification and their pharmacology. • Describe the epidemiology, aetiology, pathophysiology and pharmacology of neurodegenerative diseases, migraine and mechanisms of pain and nausea/vertigo. • Have a comprehensive understanding of the pathophysiology, aetiology of psychiatric illness and a systematic understanding of the current knowledge and a critical awareness of mental illness and the current problems and dilemmas in treating mental illness. • Describe mechanisms of action of the drugs most commonly used over the counter and on prescription for pain, migraine, nausea/vertigo, neurodegenerative diseases, and anaesthesia, how this relates to their therapeutic use side effects, cautions and contra-indications. • Describe appropriate non-pharmaceutical interventions for treatment of pain, migraine, nausea and vertigo. • Describe the mechanisms of action of drugs used in psychiatry and epilepsy, and how this relates to the rationale for their therapeutic use, side effects, cautions and contra-indications. • Cite the relevant recommendations for the treatment of neurodegenerative diseases and for use of drugs used in 		

	<p>management of pain, control of vomiting, migraine and anaesthesia, epilepsy and mental health disorders, including schizophrenia, anxiety, depression and bipolar disorder from National Service Frameworks (NSFs), National Institute of Clinical Excellence (NICE) treatment guidelines and any other relevant publications.</p> <ul style="list-style-type: none"> • Critically evaluate the evidence base which underpins the guidelines for their use and in conjunction with their physical and chemical aspects, understand the rationale for applying the guidelines taking into account individual patient factors resulting in the most safe and effective use. • Develop a systematic understanding of the current knowledge and a critical awareness of mental illness and the current problems and dilemmas in treating mental illness. • To deal with complex case studies systematically and creatively by making sound rational judgements based on the evidence and the individual patient case. • Demonstrate self direction in problem solving, and in response to a patient with a complex pathology prepare an appropriate pharmaceutical care plans.
Key Reading (2-5 key texts or resources for targeted Library expenditure/purchase)	Clinical Pharmacy and Therapeutics. Walker, R. and Whittlesea C. 4 th edition. Churchill Livingstone.

Module Title	Special Topics for Pharmacists		
Level	M		
Credit Value	20		
Teaching period, eg. Semester 1, Year-long	Semester 2		
Likely Module Organiser	Maria O'Connell		
Module Type (eg. EX/CW/WW/PR etc)	EX		
Does the Module include an Exam? Yes/No	Yes	How long will the exam be? (ie 1, 2 3 hours)	2
Module Marking Scheme (Please tick as appropriate)	Pass/Fail?	Percentage marking?	✓
Proposed Module Code	PHA-MFSY		
Module Delivery (eg. distance-learning campus based, work placement)	Campus based		
Brief Description	This module allows the student to specialise in two topics of interest at Master's level.		
Aims	<p>By undertaking this module students will:</p> <ul style="list-style-type: none"> • Develop specialist knowledge in selected topics via self-learning based on the lecture material • Demonstrate a depth of learning in selected areas founded upon lecture material and considerably extended by personal research. 		
Key Reading (2-5 key texts or resources for targeted Library expenditure/purchase)	This module will rely almost entirely on primary reference sources		