University of East Anglia
LEARNING & TEACHING SERVICE

PROGRAMME SPECIFICATION FOR AN AWARD OF THE UNIVERSITY OF EAST ANGLIA

Course name	**Course code** *note PS*	**Year**
Pharmacy MPharm	U1B230402,	2017/18

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.

COURSE SUMMARY

S1	**a**	**SCHOOL(S) OF STUDY**	Pharmacy	
note S1c	**b**	**FACULTY or FACULTIES**	Science	
	c	**JOINT COURSE?** (ie owned/taught by more than one School)	**YES**	
			NO	No
	d	**NAME OF COURSE DIRECTOR** (Home School)	Dr Anja Mueller	
	e	**NAME OF DEPUTY COURSE DIRECTOR** (partner School, for Joint Courses only)		
S2	**a**	**COURSE TITLE**	Pharmacy MPharm	
	b	**COURSE CODE**	U1B230402	
note S2c & S2d	**c**	**AWARD**	**MPharm**	
	d	**EXIT AWARD(S) AND TITLE(S)**	BSc Pharmaceutical Sciences, Diploma of Higher Education, Certificate of Higher Education	
	e	**FULL/PART-TIME (please specify)**	FT	
	f	**LOCATION (UEA Norwich, Distance Learning)**	UEA	
	g	**AVAILABLE FROM:**	September 2013	

S3 *note S3a* *note S3b*	**a**	**PROFESSIONAL AWARD (if any)**	
	b	**ACCREDITING/VALIDATING BODY (if relevant)**	General Pharmaceutical Council (GPhC)
		Website (URL)	http://www.pharmacyregulation.org/
		Date when accreditation/ validation may take place	Feb 2015, next expected 2018

S4a *note S4a*	**LEVEL**	Sub-degree (e.g. Cert. Dip.)	
		Undergraduate	
		Integrated Masters	7
		Masters	
		Other postgraduate (please specify)	
S4b *note S4b*	**FHEQ STATEMENT**	Please detail how the programme meets the relevant qualification descriptor from the Framework for Higher Education Qualifications (FHEQ)	The programme meets FHEQ level 7 as in the final year of study students are required to develop a systematic understanding of knowledge for their allocated research project, conduct an original experiment, using appropriate techniques and methodology before

				critically evaluating their findings. This is assessed primarily in the form of an academic journal article and conference presentation. Students need to utilise their previous knowledge and understanding to make decision in complex and unpredictable situations in assessments such as Objective Structure Clinical Examinations (OSCE) and pharmaceutical care planning. Throughout the degree students are responsible for their own professional development planning and collecting evidence to demonstrate development in key transferable skills through a professional development portfolio.			
S5 *note S5a*	**a**	**DURATION** (years or months)		4 years			
note S5b	**b**	**MODE OF ATTENDANCE** (full-time, part-time, distance, other)		FT			
S6 *note S6*	**PLACEMENT(S)/WORK-BASED LEARNING REQUIRED**			YES	Yes	NO	
				If YES, does this conform with the UEA's code of practice on placements?			Yes

S7 *note S7*	**RELEVANT SUBJECT BENCHMARK STATEMENT(S) and details of how the Programme Specification aligns with these**

2g –BENCHMARKING STATEMENTS: GPhC Outcomes for the initial education and training of pharmacists

10.1 Expectations of a pharmacy professional

Outcomes	**MPharm**	**Pre-reg**
a. Recognise ethical dilemmas and respond in accordance with relevant codes of conduct	**Shows how**	**Does**
b. Recognise the duty to take action if a colleague's health, performance or conduct is putting patients or public at risk	**Knows how**	**Knows how**
c. Recognise personal health needs, consult and follow the advice of a suitably qualified professional, and protect patients or public from any risk posed by personal health	**Does**	**Does**
d. Apply the principles of clinical governance in practice	**Knows how**	**Does**
e. Demonstrate how the science of pharmacy is applied in the design and development of medicines and devices	**Shows how**	**Knows how**
f. Contribute to the education and training of other members of the team, including peer review and assessment	**Shows how**	**Does**
g. Contribute to the development of other members of the team through coaching and feedback	**Knows how**	**Shows how**
h. Engage in multidisciplinary team working	**Knows how**	**Does**
i. Respond appropriately to medical emergencies, including provision of first aid	**Knows how**	**Shows how**

10.2 The skills required in practice

10.2.1 Implementing health policy

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

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

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

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

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

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

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

10.2.4 Working with patients and the public

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

10.2.5 Maintaining and improving professional performance

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

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

S8 *note S8*	**ENTRY REQUIREMENTS**	• A-level Chemistry at grade B or above • Have had a UEA Pharmacy assessment • Passed occupational health check • Passed DBS check
S9	**JACS Subject Level Code(s)** Consult Planning Office	B230
S10	**UCAS ADMISSION CODE / COURSE CODE** Consult Planning Office	
S11 *note S11*	**FURTHER INFORMATION** (web link to further information)	https://www.uea.ac.uk/pharmacy
S12	**COURSE HIGHLIGHTS** (for publication in University Prospectus / Website /HEAR) Include succinct comments about employability, key skills and learning outcomes	
note S12	Key achievements: • First in the National Student Survey (NSS) for Pharmacy 2007 to 2011 and in 2014 • First in the Guardian League table for 2013 • 4th in the Times "Pharmacy and Pharmacology" table 2014 • 94% Pass rate in the GPhC registration assessment in 2013/14 (5th in the UK) • 98% employability • First in the Research Excellence Framework 2014 for Research Outputs Innovative teaching: Our teaching emphasises the integration between science and the practice of pharmacy – and we believe our approach and programme of courses is unique. We incorporate techniques such as Problem Based Learning and reflective practice into our teaching, as well as pharmaceutical care planning, communication and consultation skills; many of these teaching methods were pioneered by our School of Pharmacy, and below is some further information about the many developments we introduced. Problem Based Learning (PBL) PBL presents students with real-life scenarios, so they can learn about a subject through problem solving rather than rote learning. Our students not only gain first-hand experience of real-world challenges, but also develop the skills required to adapt to the work environment. PBL builds team working skills and encourages students to find creative solutions to complex issues.	

	Interprofessional Learning (IPL) Interprofessional Learning (IPL) brings students from our pharmacy degree together with students from nursing, physiotherapy, medicine, midwifery and occupational therapy at UEA. This gives our students experience of the different healthcare professionals working together as a team, improving interdisciplinary communication and encouraging a greater understanding of each other's roles and responsibilities

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

AC2 *note AC2.1*	YEAR WEIGHTINGS AND PROGRESSION REQUIREMENTS (For undergraduate or integrated masters courses only) Please select only from the permitted options - see UG/PGT regulations				
Stage *Note AC2.2*	Level	Year of course	Weightings	Progression requirement	Exit Award *Note AC2.3*
Stage 0	Level 3				
Stage 1	Level 4	One		Pass all Components	Certificate of Higher Education

Stage 2	Level 5	Two	20%	Pass all Components	Diploma of Higher Education
Year Abroad / in Industry					
Stage 3	Level 6	Three	30%	Pass all Components	BSc Pharmaceutical Sciences
Stage M	Level 7	Four	50%	Pass all Components	MPharm

AC3	**BOARD OF EXAMINERS**
AC3.4	EXTERNAL EXAMINERS (see web link below for names, positions and institutions of External Examiners)
	(For Admin use only – to be added by LTS Web Administrator)

Details of all courses currently offered by the University are available at https://www.uea.ac.uk/study/undergraduate/degrees and https://www.uea.ac.uk/study/postgraduate/taught-degrees

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 Clinical(Pharmacy) examination	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				PHA 4001Y 2 hour					

the processes involved in conducting a clinical audit. Describe the common causes of medication errors.									
Demonstrate basic oral presentation, inter-professional and intra-profession team working skills. Demonstrate the concept of continuing professional development and reflective practice. Complete a pharmacy placement workbook.									PHA 4001Y
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 semisolid product testing, including rheology. Correctly interpret simple product testing data.			PHA 4002Y 1 hour	PHA 4002Y 2 hour					
Demonstrate competence at manufacturing on a small scale products suitable to be administered to a patient.							PHA 4002Y Pass /Fail		
Describe the fundamental cellular structure, the processes of cell division, cell – system hierarchy, and the physiology of the major organ systems.			PHA 4004Y 1 hour						
Describe the principles of transcription, translation, DNA replication, mutation and repair, genetics in diseases and the application of				PHA 4004Y					

human genomics and biotechnology in medicine. Describe at a basic level inter and intra-cellular signalling processes in cells, receptors and their ligands/drugs and the basic principles of pharmacology including ADME and drug interactions.				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 Structured Clinical(Pharmacy) examination	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 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				PHA 5002Y 2 hours					
Utilize the Drug Tariff to endorse prescriptions efficiently. Apply the Cambridge Calgary model of consultation to patient medication history taking, patient counselling. Demonstrate effective written communication. Demonstrate an ability to supply medicines within the UK medicines legislature for humans legally, ethically and safely under the Medicines Act								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 oral and aerosol 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 oral 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 the use of biotechnology. Describe basic elements of medical microbiology.			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	PHA 5003Y Group presentation of report			

					practical 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				
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.			PHA 5004Y 100 mins						
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 pharmacology of drugs used in the treatment of disorders of the endocrine system. Explain the importance of structure-activity relationships of steroids. Explain the pharmacology of drugs used in the treatment of disorders of the endocrine system.				PHA 5004Y 2 hours					
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.			PHA 5004Y 2 hour open book						
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 3 learning outcomes**	**Assessment type**								
	Essay	Lab report	Course test	Exam	Project/ Dissertation/ Report	Oral Presentation	Assessment of practice	Objective Structured Clinical(Pharmacy) examination	Portfolio
Demonstrate very good oral presentation and inter-professional and intra-professional team working skills. Demonstrate the concept of continuing professional development and reflective practice. Complete a pharmacy placement workbook.									PHA-6002Y
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 an ability to supply medicines within the UK medicines legislature for both animals and humans legally, ethically and safely.								PHA-6002Y	
Demonstrate an ability to competently perform multiple step pharmaceutical calculations using mental arithmetic			PHA 6002Y 40mins Pass/ Fail						
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				PHA-6002Y					

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									
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)						
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)						
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. Identify and recommend appropriate pharmaceutical and non-pharmaceutical interventions for the treatment and prevention of common bacterial, viral and fungal infections			PHA 6006Y 2 hours (course test)						

Select the most appropriate over the counter treatment and advice for common self-limiting minor ailments of the skin and respiratory system									
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				PHA 6006Y 2 hours					
Debate the cause and effect of the treatments for common infections					PHA 6006Y Poster presentation				
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 the 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 gastrointestinal symptoms, including dysphagia, nausea, constipation and diarrhoea.			PHA 6005Y Course test						

Explain the physico-chemical and engineering principles underpinning oral controlled-release and targeted delivery technologies. 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 clinical uses of radiopharmaceuticals in diagnosis and cancer treatment. Highlight the relevant recommendations for the treatment of gastrointestinal diseases and cancer from National Service Frameworks (NSFs), National Institute of Clinical Excellence (NICE) treatment guidelines and any other relevant publications. Discuss the mechanisms 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 gastrointestinal diseases Discuss the epidemiology, aetiology and pathophysiology of common upper and lower gastrointestinal diseases, liver diseases and malabsorption syndromes, and select the most appropriate treatment for these diseases and describe stoma care.				PHA 6005Y 2 hours					
Critically appraise pharmaceutical research. Locate the importance and relevance of their research area.					PHA-6005Y				
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 4 learning outcomes**	**Assessment type**								
	Essay	Lab report	Course test	Exam	Project/ Dissertation/ Report	Oral Presentation	Assessment of practice	Objective Structured Clinical(Pharmacy) examination	Portfolio
Develop specialist knowledge in selected topics via self-learning based on the lecture material.				PHA 7003Y 2 hour					
Demonstrate a depth of learning in selected areas founded upon lecture material and considerably extended by personal research.					PHA 7003Y				
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 in different patient groups and care environments.								PHA-7002Y	
Respond appropriately to complex professional dilemmas which demonstrates sound judgement and reasoning processes in a range of contexts. Evaluate staff needs and apply appropriate motivational methods to improve performance. Evaluate and apply appropriate leadership approaches in a pharmaceutical context. Consider issues involved in the management of financial and human resources in a pharmaceutical context. Implementation of a error risk reduction strategy learning from previous errors.				PHA-7002Y 2 hour					
Demonstrate excellent oral presentation and inter-professional and intraprofessional team working skills. Demonstrate the concept of continuing professional development and reflective practice. Complete a pharmacy placement workbook.									PHA-7002Y

Demonstrate an ability to competently perform complex pharmaceutical calculations using mental arithmetic.			PHA 7002Y (Pass/Fail)						
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.					PHA-7002Y Business case				
Evaluate the major neurotransmitters of the CNS, receptor classification and their pharmacology. Compare and contrast the epidemiology, aetiology, pathophysiology and pharmacology of psychiatric diseases, bipolar, glaucoma, alcohol and drug addiction, depression, epilepsy, neurodegenerative diseases, migraine and mechanisms of pain and nausea/vertigo. Consider the use/recommendation of the drugs most commonly used over the counter and on prescription for psychiatric diseases, bipolar, glaucoma, alcohol and drug addiction, depression, epilepsy, neurodegenerative diseases, migraine and mechanisms of pain and nausea/vertigo and recognise the evidence base for their use. Analyse and distinguish the mechanisms of action of drugs commonly used in the treatment of psychiatric diseases, bipolar, glaucoma, alcohol and drug addiction, depression, epilepsy, neurodegenerative diseases, migraine and mechanisms of pain and nausea/vertigo and in conjunction with their physical and chemical aspects, understand the rationale for their safe and effective use. Evaluate the potential and utility of non-pharmaceutical interventions for treatment of pain, migraine, nausea / vertigo, alcohol and drug addiction, and depression. Cite the relevant recommendations for the treatment of psychiatric diseases, bipolar, glaucoma, alcohol and drug addiction, depression, epilepsy, neurodegenerative diseases, migraine and mechanisms of pain and nausea/vertigo from National Service Frameworks (NSFs), National Institute of Clinical Excellence (NICE) treatment guidelines and any other relevant publications..				PHA-7001Y 2 hours					
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.			PHA-7001Y						

Demonstrate self-direction in problem solving, and in response to a patient with a complex pathology prepare an appropriate pharmaceutical care plans. 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.									
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.					PHA 7004Y Research paper				
Critically appraise pharmaceutical research. Demonstrate a scientifically robust approach to data collection. Select appropriate data for presentation. Demonstrate an ability to review progress and change direction or approach as appropriate. 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.					PHA 7004Y Research performance				
Present research findings orally for a scientific conference. Demonstrate an ability to present research findings in a concise and critical fashion. Respond effectively and knowledgeably to critical questioning.						PHA 7004Y Research presentation			
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.	

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.

PS4	**EXAMINATIONS**	*note PS4*

	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)	0	0
How many hours of exams are there in Stage 1?	8	2
How many hours of exams are there in Stage 2?	8	2
How many hours of exams are there in Stage 3?	8	2
How many hours of exams are there in Stage 4? (if applicable)	6	2
How many hours of exams are there in Stage 5? (if applicable)	0	0
How many hours does the programme (as a whole) include?	30	8

PS5	**EQUALITY & WIDENING PARTICIPATION**	*note PS5*
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/assessments are undertaken by all applicants and all staff have received training in equality and diversity in addition to specific assessment day training.	
PS5.2	What steps have been taken to ensure an inclusive curriculum?	
	Pharmacy is a health science discipline that is of relevance across all social, gender and ethnic populations and by virtue of this, the curriculum is designed to be inclusive. The curriculum is designed to meet the requirements of the GPhC accreditation where standard 3 states that initial education and training must be based on principles of equality, diversity and fairness. It must meet all requirements of legislation. In terms of teaching and assessment, all examinations and course work are marked	

	anonymously, and a concession has to be obtained for pharmacy projects and portfolios. All students have 2 lectures detailing equality and diversity as part of Foundations in Pharmacy Practice module, and the key concepts of this are revisited during problem based learning scenarios in the Introduction to the Practice of Pharmacy module. Any student who feels that they have been unfairly discriminated against or harassed by another student, can report these concerns and these will be investigated by the Fitness to Practise committee (FTP). Likewise if staff identify any behaviour which is considered to be in breach of the universities equality and diversity policies they will be reported to FTP.
PS5.3	In what ways do learning and teaching and assessment methods ensure inclusivity, reasonable adjustment and equality of opportunity?
	The faculty of the School of Pharmacy have extensive experience dealing with the development of teaching and assessment methodology that ensures inclusivity. By using multiple teaching methods (from lectures through practicals to workshops and to team based learning), we are able to work to the strengths of all of the students rather than those who do not benefit from an entirely didactic or an entirely interactive approach. The use of different assessment methodology, including the extensive use of formative assessment and coursework and in course tests, allows both the faculty and the student to monitor and maintain progress throughout the degree.

PS6	**EMPLOYABILITY**	*note PS6*
	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 (Lloyds Pharmacy, Day Lewis 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 skills 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.

KEY INFORMATION SET (KIS) DATA

PHA Pharmacy (MPHARM) U1B230402

KIS		KEY INFORMATION SET data (undergraduate courses only)					Note KIS
KIS1		Quantitative KIS data					Note KIS1
		Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
1.1	Percentage of assessment by written exams		72	70	83	30	
1.2	Percentage of assessment by practical exams		9	6	4	5	
1.3	Percentage of assessment by coursework		19	24	13	65	
1.4	Percentage of time in scheduled learning and teaching activities		29	32	33	34	
1.5	Percentage of time in guided independent study		70	66	65	64	
1.6	Percentage of time on placements		1	2	2	2	
KIS2		Professional Accreditation					Note KIS2
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.					
		Accredited by the General Pharmaceutical Council (GPhC) in order to progress to pharmacist pre-registration training and then to register as a pharmacist					
2.3		Is the accreditation dependent on specific module choices? If so, please include URL of web pages where these details are outlined.					

UP1	Programme Specification Update Record					
Faculty	SCI		**School**		PHA	
Academic Year	**2014/5**	**2015/6**	**2016/7**	**2017/8**	**2018/9**	**2019/0**
Degree Award (e.g. BSc/MA)	MPharm					
Course Title(s)	**Pharmacy**					
Course Code(s)	**U1B230402**					
Has the KIS data been changed?	**Yes/No**	No				
Course Director sign off	**Name**	Anja Mueller				
	Date					

IM1	IMPLEMENTATION ACTIONS – ADMIN USE ONLY	
ACTION	**DATE**	**Name**
Course Profile updated in Evision (LTS Team Leader)		
Programme Specification placed in shared drive folder (LTS Team Leader)		
Web link to External Examiner information added (LTS Web Administrator)		
Programme Specification uploaded onto website (LTS Web Administrator)		
Planning Office informed of upload of Programme Specification onto website (copy of this page to cams.records@uea.ac.uk) (LTS Web Administrator)		
Programme Specification Code (LTS Team Leader) (SCH/YEAR/Level/Sequence)	SCI15UG001	
Full route code(s) covered by this Programme Specification (LTS Team Leader)	**U1B230402**	