Module Details

Module Title	Integrated Pharmacy Science and Practice
Module Code	PHA5015-G
Academic Year	2024/5
Credits	120
School	School of Pharmacy and Medical Sciences
FHEQ Level	FHEQ Level 5

Contact Hours

Type	Hours
Directed Study	800
Laboratories	50
Lectures	90
Clinical Placement	105
Practical Classes or Workshops	150
Tutorials	5

Availability

Occurrence	Location / Period
BDA	University of Bradford / Academic Year

Module Aims

To enable students to integrate the core knowledge, practical and clinical skills, together with the professional attributes and behaviours that students developed in stage 1 of the programme to:

- Develop and apply understanding of various aspects of body systems from physiological, pathological, therapeutic, legal, ethical and clinical perspectives to provide safe, effective care.
- Further develop the professional skills, attitudes and behaviours required of a future pharmacist.
- Support themselves and others in their learning and development.

Outline Syllabus

Understanding the module's aims, learning outcomes and the approach to teaching and assessment. Continue to implement learning needs analysis using self and peer assessment; skills logs, evidence collection, reflection and action planning, making use of the Gibbs structured model, working towards the Entrustable Professional Activities (EPAs). Preparation for and engagement in Clinical Placements.

Pathophysiology and pharmacology in health and acute and long-term conditions of the major body systems; recognising signs and symptoms of disease and the difference between major and minor health conditions in the main body systems and organs; drugs used to treat these conditions: including the medicinal chemistry, mechanisms of action, pharmacokinetic and pharmacodynamic considerations; comparing strengths and weaknesses of drug delivery systems for optimum medication efficacy in the patient being treated.

Development of communication and consultation skills: taking a history; diagnostic skills; developing a 'responding to symptoms' strategy to manage self-limiting conditions; the diagnostic and monitoring tests for the conditions (and drugs) covered, including those for genetic disorders in single genes. Person-centred consultations; communication needs relating to ethnicity, race and religion (including key religious festivals/practices/restrictions, other religious and cultural considerations in healthcare) and gender (including differences in communication between women and men, gender preferences in consultations, overcoming gender cisnormativity); shared-decision making taking into account the individual's health beliefs, health needs of different people/communities and health inequalities. Written communication: interpretation of and recording in patient documentation systems, including justification of decisions. Peer assessment and feedback: giving and receiving constructive feedback.

Roles and responsibilities in interdisciplinary teams; understanding the patient's journey; social care providers; role of different health care providers; who you need to collaborate with, why and how (including use of the Situation, Background, Assessment, Recommendation (SBAR) tool). Theory and practice of processing multiple-item prescriptions for commonly prescribed medicines used to treat or prevent common conditions affecting the body systems; advising patients about their usage; promoting healthy behaviours; introduction to motivational interviewing; establish person-centred goals in relation to their lifestyle; educate people on disease-prevention; the pharmacist's role in sustainable healthcare; carbon literacy and the effect of climate change on people's health; antimicrobial stewardship.

Clinical and ethical reasoning: identifying problems and proposing solutions taking into consideration the whole patient; medical models of ethics, decision making based on moral code; evidence-based practice (EBP) as a tool to support clinical reasoning: principles of EBP; characteristics of a research study and trial design concepts; defining a research question (PICO); how to categorise quality of evidence in order to critically assess and evaluate gathered information; using EBP in implementation and review of the intervention strategy in light of additional information; using NICE guidance and formularies and their impact on treatment options. Seven steps to safe prescribing; reducing risk of, identifying and managing medicines-related problems (adverse drug reactions, interactions and contraindications); understanding prescribing and dispensing errors and how to minimise them. Audit, the PDSA cycle, service improvement and research as tools for developing quality. Introduction to developing as a leader and manager; resilience in the context of pharmacy practice; learning from what didn't go well; NHS Values and applying for Foundation Training.

Development of mathematical skills including determining the amount/number to supply, displacement values, multi-step calculations and private prescription pricing.

Learning Outcomes	
Outcome Number	Description
01	Demonstrate effective and empathic communication with a variety of people in multiple settings.
02	Understand the theories of leadership and management and that of motivational interviewing and demonstrate these skills with peers, healthcare colleagues and the general public to reach shared decisions.
03	Demonstrate cultural competency and an inclusive approach by taking a holistic view when dealing with near-life scenarios in the classroom.
04	Demonstrate the ability to offer a range of solutions for any given problem.
05	Understand the reasons for safe and effective use of medicines and devices including common side effects, interactions and issues. Demonstrate the ability to use appropriate reference sources to inform their decision-making process and the subsequent advice provided.
06	Demonstrate the professional values, attitudes and behaviours expected of a Stage 2 Pharmacy student at all times, including the ability to take responsibility for professional judgements and decisions, considering health, safety, law and ethics.
07	Apply the principles of evidence-based practice, benefit and risk and use these to solve scientific and clinical problems in the classroom.
08	Demonstrate competent and consistent application of the processes involved in the legal, safe and efficient procurement, supply, prescribing, administration and safe disposal of medicines in a clinical/practice setting.
09	Accurately perform pharmaceutical calculations, with the addition of determining the amount/number to supply, displacement values, multi-step calculations and private prescription pricing.
10	Explain the scientific principles relating to the discovery, design, development, formulation, preparation, packaging, quality assurance and disposal of medicines and devices, while accounting for sustainability and environmental concerns.
11	Explain the scientific principles relating to chemistry, physiology, pharmacology, genomics and clinical therapeutics to ensure the safe and effective prescribing, use and monitoring of health, medicines and devices.
12	Complete a learning needs assessment, identify gaps in knowledge, reflect upon your development and create an action plan to proactively address your needs. Keep up to date with scientific developments and new technologies and be able to explain how they can assist in improving clinical outcomes and patient safety, in the classroom.
13	Take responsibility for all their actions. Understand the need for all pharmacy service provision to be safe, accurate and appropriate. Know the boundaries of their knowledge and refer to an appropriate senior colleague when necessary.
14	Apply the principles of clinical and information governance in relation to gaining consent, prescribing, supply, record keeping, safeguarding and management of people?s personal data, in simple near-life scenarios.
15	Contribute to the implementation of local and national health and social care polices to promote healthy lifestyles and public health.
16	Demonstrate an awareness of the principles of pharmacovigilance and effective patient monitoring in the management of care and how this can improve health outcomes and minimise risk, in classroom tasks.

Outcome Number	Description
17	Demonstrate, in a classroom setting, effective clinical assessment skills, to support the most appropriate course of action for minor ailments or when recommending over the counter treatment, using a holistic approach and encouraging a shared decision-making process.
18	Develop and manage performance of self to maintain and improve the quality of care.
19	Apply the concept of resilience to personal performance. Demonstrate resilience and flexibility, and apply effective strategies to manage multiple priorities, uncertainty, complexity and change. Reflect upon your development to identify and proactively address your learning needs. Support the learning and development of others.
20	Further develop research and scientific dissemination skills in both oral and written format by demonstrating the ability to satisfactorily perform a structured literature review and an audit.

Learning, Teaching and Assessment Strategy

Students will develop the knowledge, understanding and skills necessary to meet the learning outcomes of the module through the programme's instructional learning and teaching strategy, Team-Based Learning (TBL), as outlined in more detail in the Programme Specification. Activities will be based in a range of settings including classroom settings (workshops), laboratories and the clinical skills suite, providing opportunities to practise skills.

Development of mathematical manipulation skills for increasingly complex pharmaceutical calculations will be developed via taught workshop sessions, with additional resources provided to further aid students in meeting this learning outcome. Acquisition of clinical and communication skills will be enhanced through working in a simulated clinical environment with simulated / real patients. Taught sessions (lectures, workshops and clinical skills sessions) will prepare students for Clinical Placements, followed by a workshop-style post-placement debrief discussion.

Resources for self-directed study will be provided for students which will include: guided reading to support completion of TBL Study Packs, with signposting to additional sources of information to help students learn about where to find and how to use relevant information; preparation for taught sessions including RAPs, Application Exercises, workshops, laboratory sessions and prescription processing/ clinical skills sessions.

Students will be supported to develop a clear understanding of the module assessment criteria and how the teaching and learning opportunities will help them to achieve these, as outlined in more detail in the Programme Specification. Following taught sessions to support the development of knowledge and skills required to understand and undertake research and a quality assurance project, including provision by the Subject Librarian, students will be allocated a supervisor to support them in developing their independent research skills, with group and one to-one support sessions.

Students are assessed via a range of assessments, including both individual and team assessments.

1: A long loop assessment, taken at the start of the year, is used to integrate and synthesise knowledge from the previous stage. Students are then assessed through a number of closed book individual Readiness Assurance Tests (iRATs) throughout the academic year. On completion of the iRAT assessment, students form their pre-assigned teams (5-7 students) and retake the assessment as a team (tRAT). Once all of the answers have been collated, students receive instant in-class feedback from the academic expert. In subsequent sessions, teams of students will apply their new knowledge to a number of open book formative and summative Application Exercises (AEs), including role plays, problem-solving and laboratory experiments. Formative and summative peer assessment of team members will be used to develop and assess team-working.

2: An e-portfolio will collect the student's evidence of meeting the minimum threshold in each stage for working towards the Entrustable Professional Activities. This will become a clear record of the student's employability skills and how they have developed over the programme:
- Skills logs will be used throughout the academic year to allow students to show their learning towards meeting the minimum threshold (pass/fail) for a pre-defined range of tasks, for example, dispensing.
- Evidence collation sheets (ECS): Students will collect and electronically record evidence of development across the professional competencies.
- Reflection and action planning: students will complete two full reflective cycles based on specified elements of their professional development. They will submit their reflection and action plan for feedback; they will then provide evidence of acting on the feedback and their action plan, completing the reflective cycle.

3 and 4: Research and quality assurance skills, including written and oral communication of students' findings, are assessed by an audit report and a written report with accompanying oral presentation.

5: Pharmaceutical calculations will be examined in the semester 1 exam period of each year; students MUST PASS the stage calculations examination at 70%, in line with the patient safety implications of performance in this area.

6 and 7: At the end of the academic year, summative assessment of learning outcomes is through a written examination and clinical assessment. An opportunity for formative assessment and feedback is provided for all elements of assessment. To pass the module, students will need to demonstrate a pass standard of 40% in the module overall and MUST ALSO achieve at least 40% (70% in calculations) in each of the elements of assessment (except the TBL component).

Mode of Assessment

Type	Method	Description	Weighting
Summative	Team-Based Learning Assessment	SUMMATIVE 1: TBL - iRAT 10%; tRAT 5%; AE 5%; peer assessment 5%; long loop 5%. RESIT 1: 1000-words reflection 30%	30%
Summative	Coursework - Portfolio/e-portfolio	SUMMATIVE 2A: Skills Log (PASS/FAIL, MUST PASS)	0%
Summative	Coursework - Portfolio/e-portfolio	SUMMATIVE 2B: Evidence collation sheets with SLICE score (PASS AT 40%, MUST PASS)	5%
Summative	Coursework - Written	SUMMATIVE 2C: 3000-words Reflection and action planning (PASS AT 40%, MUST PASS)	15%
Summative	Coursework - Written	SUMMATIVE 3: 1000-words Audit report (PASS AT 40%, MUST PASS)	5%
Summative	Presentation	SUMMATIVE 4A: 10-minutes Power Point presentation (PASS AT 40%, MUST PASS)	2%
Summative	Coursework - Written	SUMMATIVE 4B: 1500-word written report (PASS AT 40%, MUST PASS)	3%
Summative	Examination - Closed Book	SUMMATIVE 5: Calculations examination (PASS AT 70%, MUST PASS) at end of Semester 1	0%
Summative	Clinical Assessment	SUMMATIVE 6: 45-minutes Communication and Consultation skills assessment (PASS AT 40%, MUST PASS)	10%
Summative	Examination - Closed Book	SUMMATIVE 7: MCQs, EMQs and short answer questions (PASS AT 40%, MUST PASS) at end of year	30%
Formative	Team-Based Learning Assessment	FORMATIVE 1: Team-based Learning with in-class formative feedback	N/A
Formative	Coursework - Written	FORMATIVE 2: Formative feedback and supported discussion on reflection.	N/A
Formative	Presentation	FORMATIVE 4: Formative discussion of poster presentation format/structure.	N/A
Formative	Examination - Closed Book	FORMATIVE 5: Mock calculations exam with formative feedback session	N/A
Formative	Clinical Assessment	FORMATIVE 6: Mock Communication and Consultation Skills assessment (30-minutes) with formative feedback session	N/A
Formative	Online MCQ Examination	FORMATIVE 7: Mock exam MCQ/EMQ and short-answer questions, with formative feedback session	N/A

Reading List

To access the reading list for this module, please visit https://bradford.rl.talis.com/index.html