

Part one: Programme Specification

Course record information

Name and level of final award:	Medicinal Plant Science, MSc, PgDip, PgCert The MSc degree is Bologna FQ-EHEA first cycle degree or diploma compatible.
Name and level of intermediate awards:	Postgraduate Diploma Postgraduate Certificate
Awarding body/institution:	University of Westminster
Status of awarding body/institution:	Recognised Body
Location of delivery:	University of Westminster
Language of delivery and assessment:	English
Course/programme leader:	Professor Annie Bligh
Course URL:	
Mode and length of study:	MSc FT (1 year); PT (2 year) PgDip FT (2 semesters); PT (2 year) PgCert FT (1 semester); PT (2 year)
University of Westminster course code:	
JACS code:	
UCAS code:	
QAA subject benchmarking group:	
Professional body accreditation:	
Date of course validation/review:	20 Feb 2014
Date of programme specification:	20 Feb 2014

Admissions requirements

The University will at all times seek to ensure equality of opportunity for all applicants as described in its Admissions policy.

The normal standard of entry is BSc Honours degree at a minimum of a Lower Second (2.2) or equivalent, in Herbal Medicine, Pharmacy, Pharmaceutical Science, Pharmacology, Botany, Horticulture, Biochemistry or related subjects. Competence in written and spoken English language for those whose first language is not English is required to have an overall

IELTS 6.5 (6.0 minimum in each component).

Accreditation of Prior Learning

It may also be possible to have previous learning or experiential learning (work experience) assessed for exemption from part(s) of your course.

Aims of the course

There is a growing market in the use of medicinal plants and natural products, which needs professional expertise to support its quality, analysis and development. The taught MSc Medicinal Plant Science course provides a programme of advanced study for graduates, from pharmacy, horticulture, herbal medicine and biochemical sciences, to equip them for future careers in the pharmaceutical, phyto-pharmaceutical, nutraceutical and cosmeceutical industries and quality assurance of herbal medicine. Through studying medicinal plants from their genesis as plants in a field, to analysing them in a chemical laboratory, the course equips students with a unique perspective and critical understanding of plant medicines. Students also learn their traditional uses and the technical skills to unlock their future potential.

MSc Medicinal Plant Science aims to produce tomorrow's researchers and leaders in development of quality phytomedicines. Students will benefit from internship opportunities in the Medicinal Herbs Quality Research laboratory, and the University's polyclinic dispensary, providing valuable real world practical experience.

Employment and further study opportunities

The course is designed to enhance the skills of graduates with wide-ranging backgrounds in plant, biological, chemical, pharmaceutical and pharmacy related disciplines to pursue a career in research and/or development in the pharmaceutical, phyto-pharmaceutical, nutraceutical and cosmeceutical industries. Graduates may continue in education, entering PhD programmes on traditional uses of medicinal herbs to contemporary research and the evidence base for therapeutic approaches. In addition, the course is also designed to enhance the analytical skills in quality assurance, drug discovery, phyto-pharmacology and toxicology for herbal medicine practitioners. Graduates may find employment in academia or research institutes, as well as management, marketing and development in complementary and alternative healthcare provision.

Learning outcomes

Knowledge and understanding

On successful completion of the course, a student will be able to:

- 1) demonstrate the ability to work critically with theoretical and research-based knowledge at the forefront of medicinal plant science and its context within the wider scientific and health related communities;
- 2) critically review the scientific evidence base of materia medica, medicinal herbs in drug discovery, and quality systems in phyto-pharmaceutical industry;
- 3) process and critically interpret analytical data, formulate conclusions and evaluate with respect to uses of medicinal plants;
- 4) demonstrate originality in the application of knowledge, together with a practical understanding of how techniques of research and enquiry, including ethics evaluation, are used to create and interpret knowledge in current issues and insights

of medicinal plant science.

Specific skills

On successful completion of the course, a student will be able to:

- 1) engage effectively in advanced academic study and evaluation of plant uses in modern and traditional herbal medicine practice;
- 2) explore and explain pharmacognosy in phytotherapy, and its importance in safety and efficacy of herbal medicine;
- 3) critique advanced or novel practical methodologies in the design of quality systems of medicinal herbs;
- 4) engage critically in current technologies in discovery, formulation and manufacture of herbal medicine;
- 5) undertake an independent research project and present findings in a professional format that is clear and coherent to publication standards.

Key transferable skills

On successful completion of the course, a student will be able to:

- 1) explain how a working hypothesis may be devised and tested within the constraints of a pharmaceutical context;
- 2) demonstrate problem solving abilities involving the application of knowledge and/or via information seeking;
- 3) communicate competently to specialist and non-specialist audiences;
- 4) display the interpersonal skills required to work in a scientific, particularly laboratory, based environment or commercial setting;
- 5) demonstrate autonomy by acting as an independent and self-critical learner, managing requirements and undertaking research tasks with minimum guidance.

Learning, teaching and assessment methods

Learning

A key aspect of modern education is the use of technological resources to enhance learning. The University's virtual learning environment (VLE), Blackboard, is one of the primary ways in which technology is used. As students are expected to adopt skills of autonomy and self-directed learning, it is expected that a proportion of the study will be undertaken both on and off site through advanced utilisation of the Blackboard learning environment.

Communication skills will be developed through formative feedback of student work, and analysis of published literature. Use of appropriate technologies pervades all the modules. There is a significant element of independent learning in all modules as well as a limited amount of group work in coursework assignments. Topic presentation in taught modules will be largely evidence-based; areas of current developments in phyto-pharmaceutical industry will be highlighted. Qualitative and quantitative research, and ethics are taught explicitly in the Research Method module, and are also embedded in other taught modules. The research project provides an opportunity to place knowledge gained through the course to develop skills in synthesis, formulation of solutions and critical appraisal of data.

Teaching

A range of teaching methods including formal lectures, seminars, tutorials, practicals and self-directed learning, facilitated peer-group seminars, individual mentoring, poster and oral presentations will be used. Problem-solving and literature analysis exercises will also be included. Research skills are developed through the taught module Research Method, and also through the Research Project modules.

Practical laboratory skills will be taught through hands-on-experience, reflection and trouble shooting in laboratory sessions. Some observation of demonstration material will also be utilised. Problem-based exercises will require exploitation of practical issues in medicinal plants such as quality, drug screening, pharmacology, toxicology, regulations and pharmaceutical analysis.

Assessment

Essential skills in critical thinking, communication, utilising resources effectively, team working and self-management are developed through all assessments. Assessment is in oral or written form, and throughout the course emphasis will be placed on development of both general communication skills and also on the requirements of formal scientific writing. Systematic and consistent referencing will be a requirement. Use of technology is implicit in all work requiring literature exploration, and in the written or oral presentation of work. Laboratory equipment is also heavily dependent on computer technology.

Summative assessment of the students' work is based on elements drawn from the whole range of their learning experience. A variety of assessment methods include problem solving assignments, unseen tests, practical work and reports, poster and seminar presentations, dissertation and unseen examinations. The coursework assessment elements are used formatively where possible.

Formative assessment is given continuously during the sessions in the dialogue between the demonstrating staff and the students. In the MSc research project practical skills will be assessed by the results obtained and their contribution to the overall standard of achievement.

Cognitive skills are summatively assessed by, inter alia, information abstracting and reviewing exercises, problem solving exercises, essays requiring the ability to sustain an argument, and the Research Project report and its oral defence. Poster and seminar presentations provide scope for both peer assessment and immediate formative feedback.

Course structure

This section shows the core and option modules available as part of the course and their credit value. Full-time Postgraduate students study 180 credits per year.

Credit Level 7				
Module code	Module title	Status	UK credit	ECTS
FCM7XX	Phytopharmaceuticals	Core	20	10
FCM7XX	Applied Phytomedicine	Core	20	10
FSL700	Research Methods	Core	20	10
Award of Postgraduate Certificate in Medicinal Plant Science available				
Module code	Module title	Status	UK credit	ECTS
FCM7XX	Phytopharmaceuticals	Core	20	10
FCM7XX	Applied Phytomedicine	core	20	10
FSL700	Research Methods	Core	20	10
FCM7XX	Pharmaceutical Analysis and Quality Assurance	Core	20	10
FCM7XX	Phytotherapeutics	Core	20	10
Plus one of the options from below				
FCM7XX	Plant Science	Option	20	10
	Pharmacology and Drug Discovery	Option	20	10
	Xenobiotic, Metabolism, Pharmacokinetics and Toxicology	Option	20	10
Award of Postgraduate Diploma in Medicinal Plant Science available				
Module code	Module title	Status	UK credit	ECTS
FCM7XX	Phytopharmaceuticals	Core	20	10
FCM7XX	Applied Phytomedicine	core	20	10
FSL700	Research Methods	Core	20	10
FCM7XX	Pharmaceutical Analysis and Quality Assurance	Core	20	10
FCM7XX	Phytotherapeutics	Core	20	10
FSL701	Research Project	Core	40	20
Plus two of the options from below				
FCM7XX	Plant Science	Option	20	10
	Pharmacology and Drug Discovery	Option	20	10
	Xenobiotic, Metabolism, Pharmacokinetics and Toxicology	Option	20	10
Award of MSc in Medicinal Plant Science available				

Please note: Not all option modules will necessarily be offered in any one year.

Academic regulations

The MSc, PgDip and PgCert Medicinal plant Science, and its intermediate awards operate in accordance with the University's Academic Regulations and the Framework for Higher

Education Qualifications in England, Wales and Northern Ireland published by the Quality Assurance Agency for Higher Education (QAA) in 2008.

All students should make sure that they access a copy of the current edition of the general University handbook called Essential Westminster, which is available at westminster.ac.uk/essential-westminster. The following regulations should be read in conjunction with Section 18: Modular Framework for Postgraduate Courses and relevant sections of the current Handbook of Academic Regulations, which is available at westminster.ac.uk/academic-regulations

Award

To qualify for the award of **MSc Medicinal Plant Science**, a student must have:

- obtained a minimum of 180 credits at Level 7;
- attempted modules worth no more than 240 credits; and

Note: A first attempt of any module will count as an attempt, and a re-attempt of any module that a student has failed will count as a further, separate attempt. Re-assessment following referral at the first sit will not count as a further separate attempt.

- satisfied the requirements contained within any course specific regulations for the relevant Course Scheme.

The University may award:

- a Masters Degree with Merit to a student whose marks average at least 60% across modules at Level 7.
- a Masters Degree with Distinction to a student whose marks average at least 70% across the modules at Level 7.

To qualify for the target award of **Postgraduate Diploma in Medicinal Plant Science**, a student must have:

- obtained a minimum of 120 credits at Level 7;

To qualify for the target award of **Postgraduate Certificate in Medicinal Plant Science**, a student must have:

- obtained a minimum of 60 credits at Level 7;

Support for students

Upon arrival, an induction programme will introduce students to the staff responsible for the course, the campus on which they will be studying, the Library and IT facilities and to the Faculty Registry. Students will be provided with the Course Handbook, which provides detailed information about the course. Students are allocated a personal tutor who can provide advice and guidance on academic matters.

Learning support includes four libraries, each holding a collection of resources related to the subjects taught at their Faculty. Students can search the entire library collection online through the Library Search service to find and reserve printed books, and access electronic

resources (databases, e-journals, e-books).

Students can choose to study in the libraries, which have areas for silent and group study, desktop computers, laptops for loan, photocopying and printing services. They can also choose from several computer rooms at each campus where desktop computers are available with the general and specialist software that supports the courses taught at their Faculty. Students can also securely connect their own laptops and mobile devices to the University wireless network.

The University uses a Virtual Learning Environment called Blackboard where students access their course materials, and can communicate and collaborate with staff and other students.

At University level, Services for Students provide advice and guidance on accommodation, financial and legal matters, personal counselling, health and disability issues, careers and the chaplaincy providing multi-faith guidance. The International Office provides particular support for international students. The University of Westminster Students' Union also provides a range of facilities to support all students during their time at the University.

Reference points for the course

Internally

The course draws upon the mission statement of the University and of the Faculty, and is an integral part of the Faculty Business Plan. It seeks to establish the quality and good practice in teaching and learning that are articulated through the University's policies and quality assurance mechanism.

The following University documents are referred to for guidance in planning and reviewing all courses.

- University of Westminster Mission Statement
- University teaching and learning policies
- University quality assurance handbook and Modular Frameworks
- Handbook of Academic Regulations
- Faculty of Science and Technology Mission Statement
- Faculty of Science and Technology teaching, learning and assessment strategies

Externally

QAA and SEEC

The QAA suggest the EWNI (England, Wales and Northern Ireland) credit level descriptors be used as a point of reference. The South East England Consortium (SEEC) have set out detailed descriptors for knowledge skills and attributes at each academic level that have been adopted by the University as good practice.

QAA Subject benchmarks

Whilst specific subject benchmarks for Medicinal Plant Science is not available from the Quality Assurance Agency (QAA) for Higher Education, reference has been made solely to the QAA Masters Degree Characteristics (March 2010) for specific guidance of M-Level

academic outcomes.

Professional body accreditation

Not applicable

Quality management and enhancement

Course management

The course is managed on a day-to-day basis by the Communication and Dissemination Group which consists of the Head of the Department, all the course leaders and core theme leaders. This group meets monthly to monitor the provision and ensure issues raised by students, staff and the university are disseminated, discussed and actioned. This management structure is supported by the module leaders and lecturers.

The Faculty offers a range of undergraduate, postgraduate and short courses in the areas of complementary medicine as well as biomedical science, human and health science and molecular & applied science, all of which are the overall responsibility of the Dean of Faculty, Prof. Jane Lewis.

Course approval, monitoring and review

The course was initially approved by a University Validation Panel in 2014. The panel included internal peers from the University and external subject specialists from academia and industry to ensure the comparability of the course to those offered in other universities and the relevance to employers. Periodic course review helps to ensure that the curriculum is up-to-date and that the skills gained on the course continue to be relevant to employers.

The course is monitored each year by the Faculty to ensure it is running effectively and that issues which might affect the student experience have been appropriately addressed. Staff will consider evidence about the course, including the outcomes from each Course Committee, evidence of student progression and achievement and the reports from external examiners, to evaluate the effectiveness of the course. The Annual Monitoring Sub-Committee considers the Faculty action plans resulting from this process and the outcomes are reported to the Academic Council, which has overall responsibility for the maintenance of quality and standards in the University.

Student involvement in Quality Assurance and Enhancement

Student feedback is important to the University and student views are taken seriously. Student feedback is gathered in a variety of ways. The most formal mechanism for feedback on the course is the Course Committee. Student representatives will be elected to sit on the Committee to represent the views of their peer group in various discussions. The University and the Students' Union work together to provide a full induction to the role of the Course Committee.

All students are invited to complete a Module Feedback Questionnaire before the end of each module. The feedback from this will inform the module leader on the effectiveness of the module and highlight areas that could be enhanced. The University also has an annual Student Experience Survey, which elicits feedback from students about their course and University experience.

Students meet with review panels when the periodic review of the course is conducted to provide oral feedback on their experience on the course. Student feedback from course committees is part of the Faculty's' quality assurance evidence base.

For more information about this course: please contact Professor Annie Bligh (a.bligh@westminster.ac.uk) where further information about the course is available.

Please note: This programme specification provides a concise summary of the main features of the course and the learning outcomes that a student might reasonably be expected to achieve and demonstrate if s/he takes full advantage of the learning opportunities that are provided. This specification should be read in conjunction with the Course Handbook provided to students and Module Handbooks, which provide more detailed information on the specific learning outcomes, content, teaching, learning and assessment methods for each module.

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