



USA-EU Collaborative Degree

Postgraduate Professional Doctorate in Pharmacy

University of Malta (Malta) in collaboration
with University of Illinois at Chicago (USA)



L-Università
ta' Malta



INTERNATIONAL COLLABORATIVE PROGRAMMES
UNIVERSITY OF MALTA

THE
UNIVERSITY OF
ILLINOIS
AT
CHICAGO
COLLEGE
OF PHARMACY



Welcome to the Postgraduate Doctorate in Pharmacy programme

The Department of Pharmacy of the Faculty of Medicine and Surgery at the University of Malta is a leader in Europe for patient-focused curricula. This programme, which is offered in collaboration with the College of Pharmacy at the University of Illinois at Chicago, USA, focuses on developing advanced clinical pharmacy skills and perspectives on patient safety with regards to development and use of innovative drugs.

The programme has unique characteristics in that it is built on a hybrid learning model that allows online learning, live tutorials for patient case discussions, journal clubs and seminars. The practical placements include rotations undertaken in different pharmaceutical scenarios, including hospital pharmacy, community pharmacy, pharmacy health-systems and pharmacovigilance settings. The programme also supports the development of leadership skills and includes self-reflecting portfolios and group seminars to discuss topical issues in pharmaceutical services.

The excellent track record in applied practice research allows for students to participate in innovative and groundbreaking research projects as part of the dissertation requirements in this programme. This dynamic and varied Level 8 postgraduate doctorate programme provides an interactive approach for the student as it nurtures student input and sharing of ideas and experiences as the students progress in the course. The Department of Pharmacy at the University of Malta enjoys extensive international collaborations which allow for joint research and student and staff mobilities across Europe and the USA.

The programme has an international audience and to-date students from fourteen different countries across the world have joined the programme. We are committed to contribute in developing pharmacists who have furthered their studies within the professional perspective, emphasising the merging of scientific and practice aspects in the evaluation of innovative medicines, the use of medicines and patient monitoring and in pharmaceutical policy development.

Students on the programme have the opportunity to take up paid traineeship positions in pharmaceutical services. This structure will offer additional practical experience and provide remuneration to cover expenses incurred.

We look forward to welcoming you in person and do not hesitate to contact us for additional information or for visits.

Course Co-Ordinators



Lilian M. Azzopardi

Professor and Head of Department of Pharmacy, University of Malta

President, European Association of Faculties of Pharmacy



Alan Lau

Professor and Director International Clinical Pharmacy Education, College of Pharmacy, University of Illinois at Chicago

Meet the Team

The Department of Pharmacy University of Malta (Malta)



Professor Lilian M.
Azzopardi



Professor Anthony
Serracino-Inglott



Dr Roberta Agius



Dr Alison Anastasi



Dr Maresca Attard Pizzuto



Dr Marise Gauci



Dr Louise Grech



Dr Nicolette Sammut Bartolo



Dr Janis Vella



Dr Francesca Wirth



Dr Maurice Zarb Adami



Lilian Wismayer

The College of Pharmacy University of Illinois (USA)



Professor Alan Lau
*Professor and Director;
International Clinical
Pharmacy Education*



Dr Christina Mactal Haaf
*Clinical Assistant Professor;
Coordinator for Collaborative
Degree Program*



Dr Jennifer T. Pham
*Clinical Assistant Professor;
Coordinator for Collaborative
Degree Program*

Over 30 faculty members from the College of Pharmacy at the University of Illinois at Chicago participate in running dynamic practice and case-based tutorials.

The Department of Pharmacy

University of Malta (Malta)

The earliest known apothecary in Malta was Magister Salvatus about the year 1450. Since then, pharmacy and pharmaceutical studies experienced an evolution which resulted in one of the most advanced, quality-oriented and innovative professions which the nation can boast of.

In the 1530s, the Knights of St. John made it mandatory for aspiring apothecaries to sit for an exam. The Faculty of Medicine and Surgery and the Department of Pharmacy were established in 1676 when the Council of the Order of the Knights of St. John approved the Grandmaster's decision for the foundation of the faculty at the Sacra Infermeria (Holy Infirmary) in Valletta. The Department of Pharmacy forms part of the Faculty of Medicine and Surgery at the University of Malta. This culminated in the opening of the Diploma in Pharmacy in 1729. One of the earliest documented evidence of the practice of clinical pharmacy in Europe goes back to the time of the Knights of St. John at the Sacra Infermeria,

where the pharmacist participated in ward rounds with the physician.

The Department of Pharmacy at the University of Malta today provides a selection of courses aimed at delivering competent and well-trained graduates in pharmacy and pharmaceutical technology at graduate and post-graduate level. Emphasis in the learning programmes is directed towards experiential learning to ensure the application of knowledge to practical aspects. The Department of Pharmacy boasts of innovative learning methods for the development of research skills and has achieved excellence in research in the areas of clinical pharmacy, clinical pharmaceutical analysis, pharmaceutical synthesis and pharmaceutical technology.

The Department of Pharmacy is at the forefront of pharmacy education developments. It collaborates with local and international stakeholders to contribute to the evolvement of pharmacy and pharmaceutical services.



College of Pharmacy

University of Illinois at Chicago (USA)

In 1852, the American Pharmaceutical Association was created to increase the knowledge of pharmacy practitioners throughout the United States. Among their many lofty goals, was the crafting of a formalised educational system for pharmacy practitioners who, at the time, were still called druggists. In 1859, the Chicago College of Pharmacy, the precursor to the UIC College of Pharmacy, was born. The UIC College of Pharmacy has been known by many names and has been situated in many locations through its history. From its humble beginnings in rented halls in Downtown Chicago, to its current spot as a world renowned teaching and research institution with campuses in both Chicago and Rockford, the institution has always been at the forefront of the ever-changing world of pharmacy.

The UIC College of Pharmacy offers a four-year professional degree programme in pharmacy and programmes leading to six masters degrees and four doctorate degrees. More than 185 research and clinical faculty members conduct research and provide training to professional students, graduate students and post-doctoral trainees. UIC is ranked the sixth College of Pharmacy in the country by

US News and World Report for good reasons: research and clinical innovations, discoveries and comprehensive, committed teaching. Our clinical faculty members are especially well known for their comprehensive patient care services as well as their teaching in our highly sought after PGY-1 and PGY-2 residency programs. We have been at the top of our field for more than 150 years. From the involvement in more than 20 student clubs and organisations, to hands-on research, clinical opportunities and community outreach, College of Pharmacy students are actively learning, collaborating and doing important work internationally. The College of Pharmacy boasts a powerful alumni network of more than 10,000 people, including leaders in the profession and change agents who are loyal to students and graduates entering the field.

In addition to the educational and clinical opportunities offered through the University of Illinois Hospital, the College focuses on its mission to serve society by interacting with the community through patient-oriented projects, education and research. The College reflects the multi-cultural composition of its host city, as well as the patients it serves.



The Doctorate in Pharmacy Programme

The Doctorate in Pharmacy programme is offered by the Department of Pharmacy of the University of Malta, in collaboration with the College of Pharmacy at the University of Illinois at Chicago, Illinois, USA (UIC).

This programme is unique in that it combines the development and application of advanced clinical pharmacy skills with contextual research. All study-units are delivered jointly by the

University of Malta and the UIC College of Pharmacy. This gives a perspective of the practice, health-systems and service developments in Europe and USA.

The Doctorate in Pharmacy programme features innovative lecturing methods. Lectures are delivered throughout the first year of the programme. Advanced experiential sessions and the doctoral research dissertation are covered in the second and third year.



Features of the Programme

- ✔ Targeted at pharmacists who would like to advance their careers by enhancing professional patient-focused activities.
- ✔ Offers a professional doctorate suitable for pharmacists working in hospitals, primary-care or community pharmacy, pharmacovigilance, innovative drug evaluations and patient safety monitoring and pharmacy administration.
- ✔ Empowers pharmacists to assume leadership roles that will drive policies and service developments in clinical practice, use of medicines and service developments that draw on scientific, evidence-based research.

Delivery and Duration

- ▶ Teaching faculty includes leading internationally-recognised staff from the University of Malta and University of Illinois at Chicago.
- ▶ The Doctorate in Pharmacy is spread over 3 years of study, commencing in October and spanning a total of 6 semesters.
- ▶ The first year of study is mainly composed of taught units with two components of rotations each of 4 weeks duration.
- ▶ During the second and third year three rotations of 8 weeks each are undertaken.
- ▶ The applied research dissertation is spread over the second and third year.
- ▶ The programme is delivered using a blended learning model that includes lectures, distance learning and practice-based learning.

Candidates who successfully complete 90 ECTS are awarded a Master in Advanced Clinical Pharmacy if they do not wish to proceed further.

Curriculum

Drug Information and Statistics

This unit reviews drug information sources that are used in health-systems. Critical evaluation of literature in a systematic approach is presented and the clinical application of statistical tools is explored. The concepts of ensuring patient safety and legal and ethical implications when responding to drug information requests are discussed, as well as aspects required in the use of evidence-based medical literature in the retrieval and analysis of information and literature evaluation for formulary development and disease

state management policies. Students will also learn how to design, develop and evaluate educational information targeted at different levels of audience. They will also be exposed to methods of development and management of drug information services in different care settings, as well as being able to develop comparative efficacy reports and health technology assessments while preparing reviews and medication use evaluations. Pharmacovigilance and drug use monitoring processes are described.

Experiential

This unit is intended to provide the student with an immersion in real practice scenarios. Students will be required to complete a workbook and present reflections on the experience indicated. The module also approaches self-reflective development and analysis

of contemporary issues relating to pharmaceutical services and use of innovative drugs. The module seeks to develop systematic skills in patient assessment, drug therapy problems, collaborative therapeutic management and pharmaceutical policies.

Rotations

During the rotations, students participate in a pharmaceutical healthcare service. This aims to develop skills in managing and improving the medication-use process, identify opportunities for pharmacist

intervention in patient care and in medication use at a population or individual patient level. Experience in evidence-based, patient-centred medication therapy management within an interdisciplinary team is highlighted.

Pharmacoeconomics

Advanced concepts of pharmacoeconomics, such as the advanced economic evaluation in healthcare, health policy management and pricing of medicinal products and reimbursement schemes, are discussed.

Application of economic-based evaluation methods in pharmaceutical care services is introduced, along with methodologies adopted in the economic approach of drug therapy and pharmaceutical services.

Health Systems in USA and EU

The various healthcare systems, their associated regulations and international government regulations of healthcare are introduced and critically analysed. Delivery systems and health financing

models in different countries are taken as examples to appraise health systems and to propose models for developing health systems with rational and safe delivery.

Pharmacotherapeutics I and Pharmacotherapeutics II

These units present an integration of scientific aspects of medicinal chemistry, drug action, pharmacokinetic and toxicology to the use of drugs in disease state management. The application of evidence-based medicine to pharmacotherapeutics, with the identification of benefits and limitations to patient populations and individual patients, is presented. An advanced up-to-date overview of principles

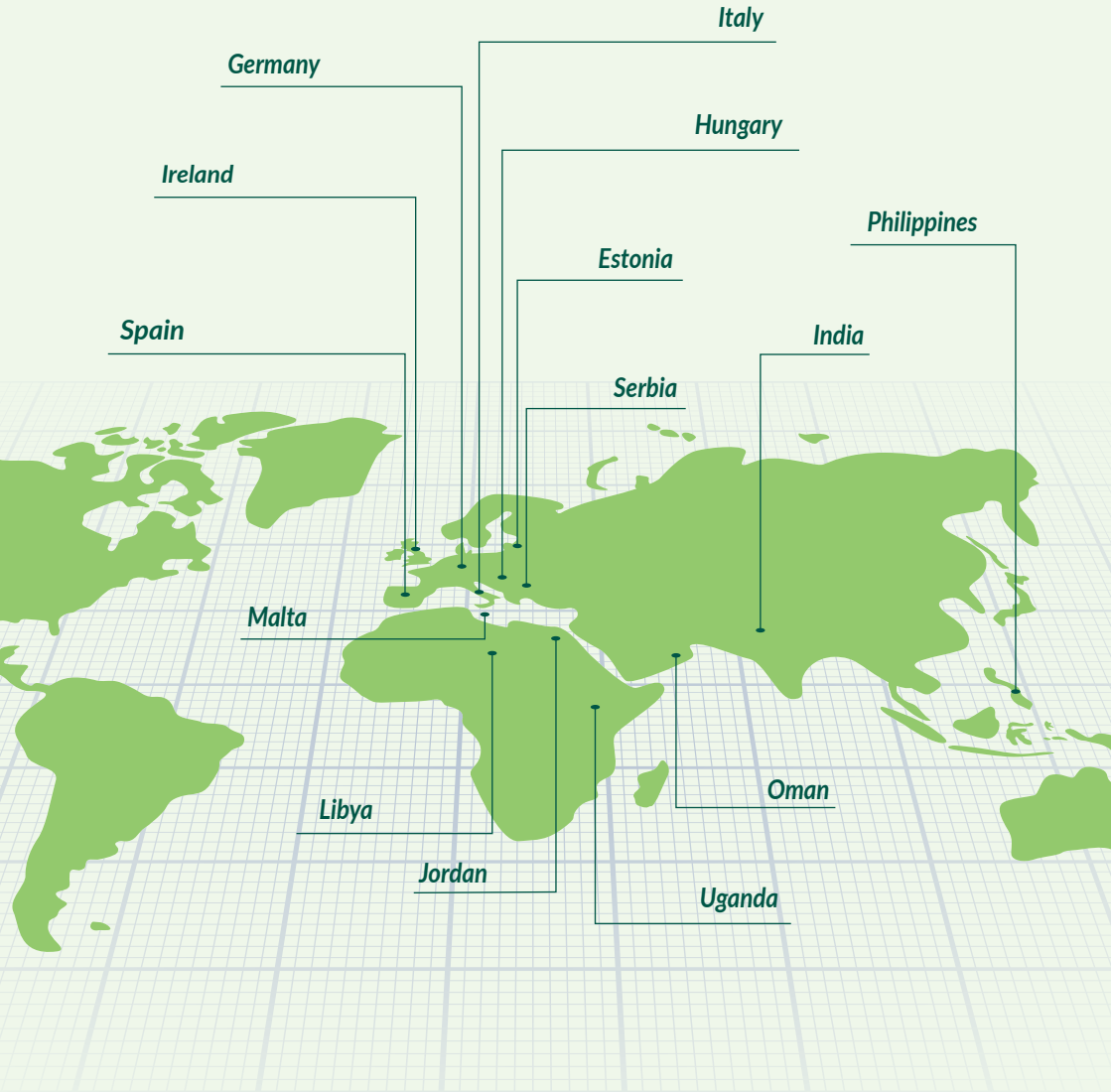
of pharmacotherapeutics in areas including cardiology, endocrinology, hepatology, infectious disease, fluid, electrolytes disorders and nutrition, nephrology, neurology, oncology, paediatrics, psychiatry and rheumatology is provided. The development of an integrated approach of skills and knowledge required in rhetorical decision-making for pharmacotherapeutic management is emphasised.

Doctoral Dissertation

The Doctoral Dissertation aims at enhancing critical analysis skills while exposing the student to international research communities. Students evolve into independent researchers within an applied professional context by contributing to knowledge and putting forward original ideas that may lead to service development, safe use of

medicines and improved pharmaceutical processes. Research areas covered by past students in the programme include clinical pharmacy service, chronic medication management, medication errors and patient safety, innovative therapies, stem cell therapy, biosimilars, pharmacogenetics and patient-centred pharmaceutical regulatory sciences.

Our International Family



Student Reflections

After being accepted in three doctorate programmes in England, Ireland and Malta, I decided to choose the Doctorate in Pharmacy course offered in Malta in collaboration with UIC, for its unique combination of clinical and research-based education. We were all given the opportunity to apply our clinical skills through multiple hospital-based placements.

Amar Abbas - Ireland

The Doctorate in Pharmacy course granted me the opportunity to design and undertake further research in clinical pharmacy which has always been the area of pharmacy that fascinated me. The research project provided me with further clinical and research experience making the Doctorate in Pharmacy course a very satisfying and excellent choice in my career.

Noelia Holgado Sanchez - Spain

The clinical rotations at the hospital are the most challenging yet most enjoyable aspect of the Doctorate in Pharmacy course. I would recommend this course to pharmacists who aspire to become experts in the field of clinical pharmacy as this course is designed in a way which would allow one to achieve this.

Shaista Sadaf - India

I particularly enjoyed the course as it expands upon the knowledge previously acquired and goes beyond the local and European clinical scenario, adding richness to the course by discussing approaches applied in the USA. Having students from various backgrounds, each with their own experiences in pharmacy, brings out the beauty of sharing the experiences and knowledge we each have gained.

Danika Agius Decelis - Malta

Scholarship & Traineeship Opportunities

Paid Traineeship with the Malta Medicines Authority

The Mission of the Malta Medicines Authority (MMA) is to protect and enhance public health through the regulation of medicinal products and pharmaceutical activities. The key objectives of The Malta Medicines Authority International Fellowship Programme are to:

- assist people to pursue further levels of academic research;
- reduce skills mismatches particularly within the pharmaceutical and life sciences sector;
- contribute to the consolidation of expertise on emerging and challenging topics relevant to innovative therapies and technologies;
- increase the capacity and level of research, innovation and development activity in Malta;
- support the implementation of the MMA 2016-2020 Strategy and the Framework for Education Strategy for Malta 2014-2024

In line with the Framework for Education Strategy for Malta 2014-2024, and following the success of the MMA Traineeship, the Authority aims to extend this opportunity started in 2014.

Applications are required to register in a course leading to the Doctorate of Pharmacy with a commitment to carry out the research on the objectives of the Medicines Authority. The host institution will either pay the fees associated to the programme for the duration of the course and the selected participants are required to participate in a fellowship at the Malta Medicines Authority or the agreed host institution of an average of eighty hours every four weeks for a period of three years. Alternatively, a grant of €935 every four weeks [unless otherwise agreed by both parties], or pro rata thereof, will be provided subject to a fellowship at the Malta Medicines Authority or the agreed host institution of an average of eighty hours every four weeks.

For more information:

www.medicinesauthority.gov.mt

Scholarships are available in the form of paid traineeships with local companies and entities relating to the Doctorate in Pharmacy curriculum. These are great opportunities for students to gain experience while they study, as well as being more financially flexible for the duration of the course.

The scholarship is designed on a case-by-case basis and a maximum of twenty hours per week is available to the students. Those who would like to participate or ask for more information may contact Professor Lilian M. Azzopardi.

When in Malta

Life is about decisions, about chances and opportunities. Your success will depend on the chances you decide to take and what opportunities you make the most of. Deciding to further your studies with us at the University of Malta will not only give you the opportunity to pursue personal and professional growth through cross-cultural interactions but will also give you the opportunity to form part of the thriving international community in Malta. Malta also boasts an ideal climate and scenery which has been favoured by students and tourists alike. The island at the centre of the Mediterranean offers the right balance between traditional hospitality and modern lifestyle, ideal for students who are looking for a unique experience. Our team is more than willing to help with any questions you may have and will help ensure the smooth running of your transition here.

Contact Professor Lilian M. Azzopardi by email or telephone on **+356 2134 4971**

Feel free to contact us and discuss via live chats on Skype:

Username: **pharmd-pharmacy.ms**

Postgraduate Professional Doctorate in Pharmacy

Course Information

Start Period: October

Duration: 3 years

Certification Awarded: Doctorate in Pharmacy

Entry Requirements

Pharmacy Degree from a recognised institution

English language competency

Course Fees

	EU students		Non-EU students	
	Semester 1	Semester 2	Semester 1	Semester 2
Year 1:	€ 2,500	€ 2,500	€ 6,750	€ 6,750
Year 2:	€ 2,500	€ 2,500	€ 6,000	€ 6,000
Year 3:	€ 2,500	€ 2,500	€ 6,000	€ 6,000

Applications are available on um.edu.mt/icp/apply-online

For more information

➤ um.edu.mt/ms/pharmacy
um.edu.mt/icp

Contact

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