## GRADUATE ENTRY MEDICAL SCHOOL UNIVERSITY OF LIMERICK FACULTY OF EDUCATION AND HEALTH SCIENCES

BACHELOR OF MEDICINE BACHELOR OF SURGERY (BM BS)







UNIVERSITY of LIMERICK



E Education & Health Sciences



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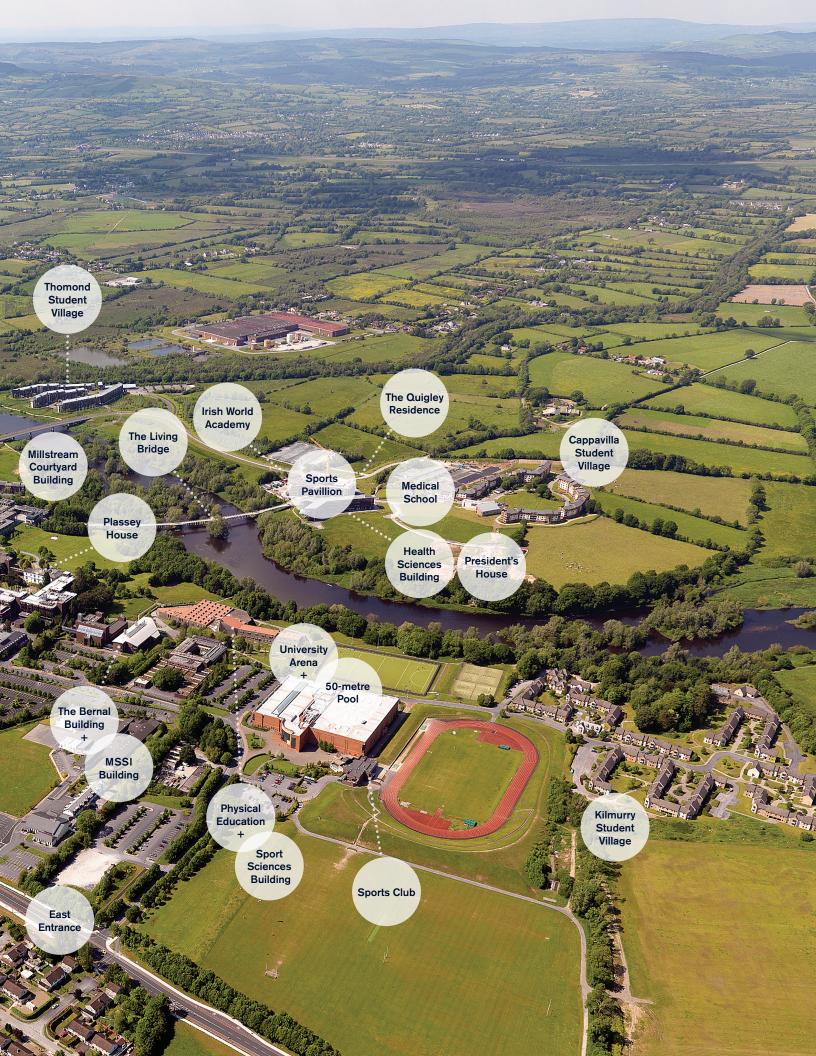


A growing campus on the banks of the River Shannon

UNIVERSITY of LIMERICK

OLLSCOIL LUIMNIGH





## Mission Statement

The Graduate Entry Medical School at the University of Limerick will produce doctors who are competent, confident and caring; who understand the scientific basis of medicine; who recognise the social and environmental context in which health and illness exist and in which medicine is practised; and who have skills for and commitment to service, teamwork, scientific enquiry, self-fulfilment and lifelong learning.





# Welcome from the Head of School

#### Professor Deirdre McGrath, Head of School

Welcome to the University of Limerick Graduate Entry Medical School, where our uniquely practical and interactive approach to learning shapes exceptional individuals who contribute in a positive way to the world of medicine.

UL's BM BS Graduate Entry Medical Programme is open to graduates from any discipline. It has a highly innovative curriculum, which offers students the opportunity to complete undergraduate medical training in four years in an environment specifically designed for graduate students.

During the four years of study, students will be taught the basic medical and clinical sciences needed to form the basis for postgraduate training and for a career in any branch of medicine.



Professor Deirdre McGrath, Head of School, Graduate Entry Medical School

"A highly innovative curriculum, which offers students the opportunity to complete undergraduate medical training in four years."



## FACTS & FIGURES

560 MEDICAL STUDENTS



300 FACULTY MEMBERS & TUTORS

## **UL PROFILE**

The University of Limerick is an independent, internationally focused university with over 13,000 students and 1,400 staff. It is a young, energetic and enterprising university with a proud record of innovation in education and excellence in research and scholarship. The University is situated on a superb riverside campus of over 133 hectares with the River Shannon as a unifying focal point. Located 5km from Limerick city and 20km from Shannon International Airport, the University boasts outstanding recreational, cultural and sporting facilities, which further enhance this exceptional learning and working environment.



## GEMS PROFILE

The Graduate Entry Medical School (GEMS) is purpose-built and located on the scenic North Campus of the University. The building is situated in expansive natural surroundings adjacent to the River Shannon and is an ideal environment for the promotion of student learning and overall wellbeing.

The highly innovative GEMS building, distinguished by its striking limestone exterior, received the prestigious Royal Institute of British Architects' European Award in 2013 and the Royal Institute of Architects of Ireland's Assessors Award in 2014.

## WHY STUDY AT GEMS?

- GEMS offers a four-year medical degree programme open to graduates from any discipline.
- GEMS has a highly innovative and dynamic curriculum, which is founded on problem-based learning (PBL), a method that is very relevant to clinical practice.
- GEMS staff ensure that graduates are fully equipped with the knowledge and skills required to meet the existing and emerging needs of a global society.
- GEMS students develop the higher-order skills needed to meet the demands of 21st-century health care.
- GEMS students have opportunities to engage in research during the programme.
- GEMS welcomes a balanced mix of Irish and international students.
- The UL experience offers over 70 Clubs & Societies, including the increasingly popular UL International Society, Medical Society and Surgical Society.
- Ireland's Sports Campus promotes a culture of positive health and wellbeing among students and staff alike.



#### 6 FAMILY MEDICINE (GENERAL PRACTICE/PRIMARY CARE) UNITS

- Area 1 Limerick/North Tipperary/North Cork
- Area 2 Clare
- Area 3 South Tipperary/North Cork/Waterford
- Area 4 Kerry
- Area 5 Carlow/Kilkenny/Wexford
- Area 6 Laois/Offaly/Westmeath

### 5 FOUNDATION TEACHING HOSPITALS University of Limerick Hospitals Group

- University Hospital Limerick (Limerick City)
- South Tipperary General Hospital, Clonmel (Co. Tipperary)
- St. Luke's General Hospital, Kilkenny (Co. Kilkenny)
- Midland Regional Hospital, Tullamore (Co. Offaly)
- Portiuncula Hospital, Ballinasloe (Co. Galway)

# Welcome from the Course Director

Our goal is to produce medical graduates of the highest calibre who are internationally recognised for their competence and commitment. We foster in our students a drive for lifelong learning and scientific enquiry, which they will then carry with them through their careers. We equip our graduates with the skills to solve the individual and population health challenges that their patients face on a day-to-day basis.

From day one of the GEMS programme, students working in small groups develop skills through an integrated, problem-based curriculum. The problem-based method of learning promotes the development of critical clinical reasoning, team, leadership and lifelong learning skills that are essential to working in clinical practice on graduation. Clinical exposure is introduced in Year 1 through clinical and communication skills training and through the Early Patient Contact programme.

In keeping with the School's drive for excellence, assessment at GEMS adheres to international best practice standards; a blend of assessment instruments is used to evaluate our students fairly and reliably. We operate robust internal and external quality assurance (QA) procedures and respond to feedback from multiple sources, including our students. Our QA processes ensure that the GEMS programme adheres to the highest standards and that the curriculum remains dynamic and in line with the rapidly advancing changes in medicine in the 21<sup>st</sup> century.



Dr. Helena McKeague Course Director

"We foster in our students a drive for lifelong learning and scientific enquiry."

The GEMS BM BS programme at the University of Limerick is accredited by the Medical Council of Ireland.



Comhairle na nDochtúirí Leighis Medical Council

## THE PROGRAMME AND CURRICULUM

Three domains feature throughout the four years: Knowledge of Health and Illness, Clinical and Anatomical Skills and Professional Competencies.

The first two years of the programme see these domains delivered, predominantly on campus, in a comprehensive, integrated system-based and problem-based learning (PBL) approach to the basic sciences. The PBL approach ensures that students, working together in small groups, come to understand the basic sciences in the context of clinical problems. Early clinical exposure is an important aspect of the first two years, and students are introduced to clinical sciences and skills from the very first week of the programme.

In Year 3 and Year 4 of the programme, students undertake an intensive clinical apprenticeship, encompassing the major clinical disciplines across five affiliated teaching hospitals and several family medicine (general practice/primary care) networks.

All students should expect to be placed outside of Limerick at some stage during their clinical training.



### THREE DOMAINS OF THE PROGRAMME

#### KNOWLEDGE OF HEALTH AND ILLNESS

The modules in this domain centre on the structure, function and development of the normal human body at all levels of organisation, from molecular and cellular to the whole individual. They examine the causes and consequences of disease, injury and abnormal development and look at evidence-based strategies for the treatment and prevention of disease. The modules deliver a thorough grounding in the basic sciences relevant to medicine through the study of carefully designed problem-based learning (PBL) cases. PBL is an educational technique where students learn in small-group tutorials.

The modules cover six key topics: life support, life control, life maintenance, life structure, life cycle and life protection.

#### **CLINICAL & ANATOMICAL SKILLS**

Clinical skills are the skills required by a doctor for direct patient contact and constructive interaction with other health professionals. These include consultation and communication skills, practical and procedural skills, and emergency care management. In the early years these skills are taught in small groups in custom-built clinical skills labs using a range of resources including simulated and real patients, manikins, models and high-fidelity simulators.

Practical sessions relevant to the basic sciences centre on anatomical teaching, which students learn through surface anatomy on live humans and anatomical models and through medical imaging. Living anatomy is taught in the hospital theatre setting.

#### **PROFESSIONAL COMPETENCIES**

The Professional Competencies modules involve the consideration of health and illness in the wider context of family, cultural groups and community. The modules focus on the ethical and legal frameworks of medicine and on personal and interpersonal skills appropriate to lifetime medical practice. During the modules, students learn how to appraise and review medical literature with a view to practising evidence-based medicine and keeping up-to-date with current medical thinking and treatments.

The Human Doctor component of the modules examines how being a doctor can affect one's self and advocates a mindfulness-based, stress management approach to self-care in medicine.

#### YEARS 1 AND 2 MODULE TITLES

#### YEAR 1

Knowledge of Health & Illness 1 Clinical & Anatomical Skills 1 Professional Competencies 1

#### **YEAR 2**

Knowledge of Health & Illness 2 Clinical & Anatomical Skills 2 Professional Competencies 2

#### YEAR 3

Family Medicine (General Practice/Primary Care) Medicine 1 Surgery 1 Professional Competencies 3

#### YEAR 4

YEARS 3 AND 4 MODULE TITLES - CLINICAL PLACEMENTS

Medicine 2 Surgery 2 Obstetrics & Gynaecology Paediatrics Psychiatry Professional Competencies 4



# Problem-Based Learning

Problem-based learning (PBL) is core to the teaching methodology at the School. The 'problems' used to facilitate student learning are highly structured hypothetical clinical cases, each of which takes a week to work through.

Each semester, students are divided into small groups. The group meets, with a dedicated tutor, for three sessions each week to work through the clinical case of the week. The tutor does not act as a teacher but as a facilitator, guiding the group through the sequence of steps that have been devised to help them learn from the cases provided. Each step and new development (such as results of investigations or details of drugs prescribed) is provided after the group has finished discussing the previous step.

By working through the problem and hypothesising about what is wrong with the patient, the PBL group generates a list of learning outcomes that represent the key knowledge needed to understand what is happening to the patient.

"The 'problems' used to facilitate student learning are highly structured hypothetical clinical cases."

## ELECTIVES

Completing a clinical elective in North America is essential to securing a residency in the United States or Canada. As a result, GEMS has entered into formal arrangements with McMaster University and Rutgers University to provide our students with clinical electives. In addition to our formal arrangements, students have completed electives at a number of North American medical schools. This provides our students with clinical electives in a variety of specialties. The list below is a sample of where our students have completed electives in the past. In formal evaluations, North American institutions that have enrolled UL GEMS students on elective programmes have commented on their clinical proficiency and exceptional medical communication skills.

- · Memorial University, St John's, Newfoundland
- · Lerner College of Medicine, Cleveland Clinic, Ohio
- Michael G DeGroote School of Medicine, McMaster University, Hamilton, Ontario
- Memorial Sloane Kettering Clinic, New York
- Weill Cornell University, New York
- · Lahey Clinic, Boston
- St Elizabeth's Hospital, Brighton, Boston
- Rutgers University, New Brunswick, New Jersey
- Johns Hopkins, Baltimore
- Morristown Medical Centre, New Jersey

### RESIDENCY

Many Canadian and US students aim to secure residency placements in North America after completing their medical programme. Our medical school is committed to facilitating the application process and examination requirements for our North American students to help them secure residency posts. Our recent graduates enjoy an enviable reputation in securing competitive residencies throughout North America. Below is a sample of the residency locations secured by recent graduates, both in the US and Canada:

- McMaster University
- University of Manitoba
- Tufts University
- Johns Hopkins University
- New York University
- New Jersey City University
- University of Michigan

- University of Illinois
- University of Arizona
- University of Ottawa
- Western University
- University of Alberta
- Dalhousie University
- Queen's University



## LICENSING EXAMS

Preparation for licensing or board exams (USMLE, MCCQE Part 1) is recognised as essential for students applying for North America residency training and is carefully scheduled around the official academic timetable. GEMS supports students with bespoke tutorial programmes delivered by senior academic and clinical staff. In addition to academic-led experiential teaching, access to online resources, including QBank, diagnostic examinations and simulated testing, is provided.



# Welcome from the Director of Research

The Graduate Entry Medical School recognises that education and research are both fundamental aspects of modern medical practice. With this in mind, the School strives to promote and support effective research in parallel with education.

Research methodology forms a core component of the BM BS curriculum. To complement this, we provide opportunities for students to engage with researchers who seek solutions to relevant clinical challenges. Students are also given the opportunity to participate in integrated research observerships at our affiliate clinical sites and to undertake projects over the summer months. These activities, along with postgraduate research at master's and PhD level, have resulted in a considerable number of publications, many of which are highly cited by peers internationally.

Crucially, we have found that involvement in such research initiatives encourages students to reflect on real-life medical and surgical practice and illustrates for them the extent to which evidence-based clinical decision-making can beneficially influence patient outcomes. We believe that a holistic approach to medical education requires exposure to top-tier research, and we will continue to provide the necessary resources and leadership to foster such intellectual curiosity in our students.



Professor Colum Dunne. Director of Research

"Complementing our curriculum, we provide opportunities for students to engage with researchers seeking solutions to real clinical challenges."

Centre for Interventions in Infection Inflammation & Immunity

UL's Centre for Interventions in Infection, Inflammation & Immunity (4i) brings together like-minded researchers from across the University, distributed clinical campuses and affiliated general practice networks. The Centre provides the vision, sense of identity, support and guidance needed to enable existing and new researchers to contribute to medical knowledge. Professor Colum Dunne is the director of 4i.



The Graduate Entry Medical School is implementing a research strategy organised around the themes of metabolic mediators of chronic disorder and life stage-specific conditions, including aspects of ageing. This strategy also includes the provision of prophylactic guidance and therapeutic care in the community and acute facilities.

The Graduate Entry Medical School offers postgraduate research-based MD/MCh/PhD degrees.

#### **INTERVENTIONS**

Investigators from the Centre are determining the effectiveness of interventions and establishing the safety, cost effectiveness and acceptability of those interventions. These interventions focus on translational research and on the integration of biomedical and clinical research in primary and secondary care.

#### **INFECTION**

Our clinical and laboratory programmes are developing new insights into the underlying mechanisms of host-pathogen interactions and creating novel strategies to prevent or treat infectious diseases.

#### **INFLAMMATION**

The acute phase response to deal with tissue damage and infection is diverse. Our researchers investigate processes ranging from acute inflammation associated with microbial infection of the skin through to the chronic processes involved in atherosclerosis, respiratory, arthritis and gastrointestinal diseases.

#### IMMUNITY

This aspect of the Centre carries out clinical and laboratory investigations of specific and non-specific components of the host (human) response to challenges.

## STUDENT TESTIMONIALS



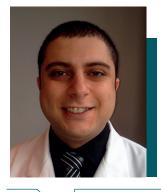
## LILY EDELSON

#### Student testimonial

**G** The University of Limerick Graduate Entry Medical Programme in Limerick, Ireland is a new and developing program so it offers many unique and exciting opportunities. The teaching staff is world-renowned and their worldwide connections are invaluable when applying to electives in the United States and Canada. UL GEMS understands the needs of its foreign students; it offers students a weekly USMLE training course and supports them to organize electives overseas.

The office staff and teaching staff are supportive and approachable. With their help I was able to participate in my first elective in South Africa after my first year of medical school and in many Canadian electives after that. The excellent training I received from my teachers gave me the confidence, skills and knowledge I needed to excel in my electives in my chosen field. With only a few graduating classes, UL GEMS has an excellent record of residency matches to the United States and Canada.

Attending GEMS offers a balanced work-life. I have travelled all over Europe and I have lived in different communities across Ireland, all while participating in research, presentations and lecture series. The last four years have been great, and I highly recommend a medical education at the University of Limerick Graduate Entry Medical School. **99** 



## MICHAEL YACOB

#### Student testimonial

**66** The University of Limerick Graduate Entry Medical School is a relatively new medical school that is producing doctors of the highest competency and skill. As a medical student here, I have had the pleasure of working with opinion leaders and masters of their respective fields. These ideal role models have helped me develop and enrich my clinical knowledge and skills. As this is a graduate entry programme, the medical school focuses all of its attention and resources to cater to the needs of a more mature medical student. Furthermore, they are very receptive to any feedback that students may have and continue to seek our opinions regarding program improvements for future students. There are plenty of research opportunities provided to medical students in order to create a solid foundation of academic medicine. In the last four years, I've had the opportunity to actively conduct a clinical audit, literature review, and qualitative analysis of various topics that have sparked my interest and curiosity, all of which are being considered for publication at this time.

On the international scene, I have been able to perform alongside North American medical students with absolute confidence and comfort due to the nature of the self-directed focus of the UL GEMS program. I've had strong positive feedback during my international electives and have returned with a very well-rounded clinical acumen. Having interviewed for various highly competitive surgical programs internationally, I am confident that my training at the University of Limerick has prepared me well to meet and exceed all the expectations for a junior doctor in any program in any country that I end up matching to a residency.

## GRADUATE TESTIMONIALS



## DANIELLE GIBBS

#### GEMS graduate

66 Early and extensive clinical exposure, emphasis on patient care and a dedication to professional development were aspects of the University of Limerick's GEMS program that attracted me to apply. The unique problem-based learning (PBL) approach required students to employ a strong work ethic in addition to adapting the skills required to become valued team members. Moreover, the enduring support from faculty, hospital consultants, tutors, administration, and fellow medical students were integral to my experience at UL. With the help of faculty and administration, I arranged multiple clinical electives and sub-internships across Canada and the USA. This enabled me not only to gain North American experience but also to establish connections with well-regarded institutions, which is central to applying for residency. Furthermore, I felt well prepared for my electives and was able to make seamless transitions between the different health care systems.

In addition to the abundant opportunities for travel and experiences in living abroad, I was most fortunate to meet my fiancé in Ireland, and both of us will be starting our residencies in the USA this summer. From the moment I interviewed with UL, I felt an instant connection with this institution, and I will be forever happy with my decision to attend medical school here.



## **GENEVIEVE CHICK**

#### GEMS graduate

**G** I graduated from the University of Limerick Medical School in 2013, and I can wholeheartedly say that I had a fantastic experience throughout my four years at UL.

The problem-based learning (PBL) approach was an invaluable way of learning. I am now an internal medicine resident in Ontario, Canada, and I can say with full confidence that the clinical knowledge and physical exam skills that I acquired in medical school have made me a competent, responsible resident. I also feel that the emphasis on group learning and public speaking through PBL was incredibly helpful in making me an effective and confident team member, which is so important for residents.

The emphasis on a collegial, welcoming environment that has been created there is like no other; as students, we never felt that we couldn't approach our professors with questions and concerns, and the focus on tailoring the program to students' needs is unparalleled.

Looking back, I truly feel that both my educational and overall life experience at UL was one that I will never forget; it has provided me with the tools to succeed as a physician. **99** 



# The UL Student Experience

Limerick is a riverside city where the Shannon is an integral part of the city's character. Vibrant Limerick combines big-city amenities with an innate friendliness, a mix that guarantees an attractive and welcoming environment for student living. The UL experience is second to none; the campus is located just outside Limerick city, which is home to more than 200,000 people, of whom almost 50% are under the age of 30. The Limerick of today is a fast-moving and cosmopolitan city in which to live and study.

#### **UL Sport**

The University is home to the UL Arena, which is one of the largest sports facilities in Ireland. The indoor Arena operates four independent multi-purpose courts, a 60m indoor suspended sprint track and a 3-lane 225m jogging track. The University's 50m swimming pool is Ireland's first Olympic-sized pool. The Arena's Cardio Fitness Centre is one of the largest and most comprehensive gyms in Ireland.

#### **Clubs and Societies**

UL Wolves represents over 70 extremely active UL Clubs & Societies; some of the most popular societies of particular interest to new medical students are the well-established UL International Society and UL Medical Society and the newly established Surgical Society.

For more information visit: www.ulwolves.ie.





# How to Apply

North American candidates should contact the Atlantic Bridge Program for further information and application materials: **www.atlanticbridge.com** 

## ENTRY CRITERIA (NON-EU APPLICANTS)

Graduates of any discipline may apply.

Candidates must hold a minimum 2.1 (second class honours, grade 1) result in their first honours bachelor degree (NFQ Level 8). For North American applicants, a competitive GPA is required.

For candidates who meet this requirement, the GAMSAT (Graduate Australian Medical Schools Admissions Test) or the MCAT (Medical College Admission Test) will be used as an instrument for selection.

Non-EU applicants must attend for interview as part of the selection process. To facilitate prospective students from North America, GEMS faculty members travel to central locations in the US and Canada to conduct the interviews.

## FURTHER INFORMATION

If you require any further information about the BM BS Graduate Entry Medical Programme, please contact:

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