MASTER IN MEDICINE
(two-year part-time option)

2016/2018
University of Dublin, Trinity College
Introduction

This Master in Medicine course is aimed at medical graduates in training who wish to develop their research skills, broaden their research interests, and develop advanced knowledge in selected areas of clinical and scientific practice. The proposed course will offer an opportunity for those entering higher medical training to develop good research practices in advance of undertaking an MD or PhD. In addition, it will also provide an opportunity for those not intending to complete higher medical training to undertake a period of formal academic activity and acquire formal (university degree level) recognition of these activities.

The course is available as a one-year (fulltime) option and as a part-time course, run over 2 calendar years. This prospectus relates to the part-time course. The prospectus for the one-year (fulltime) option is available from: www.medicine.tcd.ie/master-medicine/how-to-apply

Aims of the Course

The course aims to equip students with the knowledge, skills and competence to:

- Work at an advanced level in clinical practice, and to develop and sustain evidence-based practice
- Understand the principles of health service management
- Communicate effectively with others and work as part of a team
- Formulate research hypotheses, design experimental studies and conduct research
- Statistically analyse data, write research reports and critically appraise research

In addition to obligatory “core” modules, students will be able to choose optional modules from a molecular and translational medicine strand or a population health and health implementation strand according to their chosen career pathway. Their research project will also reflect their chosen optional pathway of learning.
Learning Outcomes

On successful completion of this course, the student should be able to:

- Implement all legal and ethical requirements pertaining to the contemporary practice of medicine
- Demonstrate an in-depth knowledge of the principles of health service management and be capable of incorporating these into clinical practice
- Formulate research hypotheses, design experimental studies and conduct research in a scientific and ethical manner
- Critically appraise research data and write research reports
- Manage all aspects of patient care, including adverse outcomes, as part of a multidisciplinary healthcare team
- Critically evaluate the role of molecular and cellular biology in the etiology of disease [strand A only]
- Appraise the role and potential importance of molecular techniques / approaches in the diagnosis and therapy of disease [strand A only]
- Evaluate the key concepts of global health and examine the major challenges affecting health systems and health outcomes globally [strand B only]
- Discuss the role of the doctor in the primary and secondary prevention of disease at population level [strand B only]

Intended Participants

Candidates should be

- medically qualified (MB, BCh, BAO or equivalent from a recognised medical school) and
- registered with the Medical Council of Ireland or equivalent overseas regulatory body and
- at least 2 years post registration.

In addition each potential candidate will be required to attend for interview to assess his/her suitability for the course and to determine which of the two strands (“molecular and translational medicine” and “population health and health implementation”) of the course he/she will pursue from year 2 of the course.

Application for admission to the course will be made online. Check out: http://www.tcd.ie/courses/postgraduate/how-to-apply for full details.`
Course Structure

All students must complete 12 modules: 6 obligatory “core” modules and 6 “optional” modules from either:

- Molecular and Translational Medicine (Strand A) or
- Population Health and Health Implementation (Strand B)

Students will choose to pursue either strand A or B according to their chosen career pathway. Once a student has been accepted onto a specific strand, he/she will not normally be allowed to change to the alternative strand, except under exceptional circumstances and only with the approval of the course committee.

Part-time students will normally be expected to complete the core modules within the first academic year and their optional modules within the second academic year; this may be extended for one further year on a case-by-case basis, and with the approval of the course committee. In addition, each student will also be required to undertake a research project and submit a dissertation at the latest by the 31st August in the second year. An extension may be granted on a case-by-case basis and with the approval of the course committee. The student may begin the initial work on his/her proposal for dissertation during year 1, in tandem with core modules, with the aim of achieving approval of the proposal by the course committee by the end of year 1. During year 2, the student may work on the organizational aspects (such as application for research ethics committee approval where appropriate), in tandem with the optional modules. Practical work on the research project normally begins once the taught modules have been satisfactorily completed.

Modules will be offered generally in the format of a 2.5 / 3-day stand-alone programme. The overall structure of the programme is outlined in Figure 1.
Figure 1: Overall Structure of the Masters in Medicine Course*

Core Modules (totalling 30 ECTS)
The core modules, which will normally be taken in year 1 of the course, have been designed to provide advanced training in key domains of excellence relevant to modern medical practice namely Personal Competencies and Professional Practice, Scholarship and Research, and Systems-Based Practice and Policy.

Students must complete all modules (5 ECTS each)
1. Professional and Ethical Practice of Medicine
2. Research Skills I
3. Research skills II
4. Health Services Management
5. Health Informatics
6. Patient Safety for Clinical Specialists

Optional Modules: Students complete either strand A or B (totalling 30 ECTS)

Strand A: Molecular and Translational Medicine
The modules in this option are designed for those students who wish to pursue a career as a clinician scientist and hence must be well versed in the fundamentals of laboratory-based research. The students wishing to avail of this option must successfully complete all modules, which will be run in association with the MSc in Molecular Medicine. Students may undertake several modules at the same time (see summary table on page 6).

Students must complete 6 of the following modules (5 ECTS each) of which five are shared with the MSc in Molecular Medicine
- Cellular Biology and Cell Signalling Mechanisms
- Introduction to Genetics and Development
- Molecular Oncology
- Molecular mechanism of Human Disease I
- Molecular Mechanisms of Human Disease II
- Laboratory skills for Clinical Specialists
- Clinical Skills for Clinical Specialists

Strand B: Population Health and Health Implementation
This strand is designed for clinicians intending to pursue specialist clinical practice in the development and implementation of national and/or international health policy. The students wishing to avail of this option must successfully complete all modules. One of these optional modules will be run in association with the MSc in Pharmaceutical Medicine (see summary table on page 7).

Students must complete 6 of the following modules (5 ECTS each)
- Public Health for Clinical Specialists
- Global Health for Clinical Specialists
- Teaching and Learning for Clinical Specialists
- Health Economics (Pharmaceutical Medicine shared module)
- Pharmacoepidemiology and Drug Safety
- Clinical Skills for Clinical Specialists
- Developing and Prescribing Medicines for Special Populations
- The Role of Biological and Advanced Therapies in Current Clinical Practice

Dissertation (totalling 30 ECTS) to be completed and submitted by the end of the course

*As of 2nd October 2015
Course Content and Timetable

Year 1

Table 1 outlines the structure and timing of year 1 of the course. Normally students complete the core modules before they proceed to undertake the optional modules in year 2.

**TABLE 1: Summary of Core Modules**

<table>
<thead>
<tr>
<th>Module Title (5 ECTS per module)</th>
<th>Structure and time of delivery**</th>
<th>Assessment (5.5% total marks per taught module)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Skills I</td>
<td>2.5 day programme (lectures, workshops, practical sessions) Year 1/Term 1</td>
<td>Personal assignments at end of module</td>
</tr>
<tr>
<td>Research skills II</td>
<td>2.5 day programme (lectures, workshops, practical sessions) Year 1/Term 1</td>
<td>Personal assignments at end of module</td>
</tr>
<tr>
<td>Health Services Management</td>
<td>2.5 day programme (lectures, workshops, case-study reviews) Year 1/Term 1</td>
<td>Personal assignments at end of module</td>
</tr>
<tr>
<td>Health Informatics</td>
<td>5 half-day sessions (including site visit) Years 1/2</td>
<td>Personal assignments (literature-backed report) at end of module</td>
</tr>
<tr>
<td>Professional and Ethical Practice of medicine</td>
<td>2.5 day programme (lectures, case study reviews) Year 1/2</td>
<td>Personal assignments at end of module</td>
</tr>
<tr>
<td>Patient Safety for Clinical Specialists</td>
<td>2.5 day programme (lectures, practical sessions, case-study reviews) Year 1/Term 2</td>
<td>Personal assignments at end of module</td>
</tr>
<tr>
<td><strong>Total 30 ECTS</strong></td>
<td></td>
<td><strong>33% of overall marks</strong></td>
</tr>
</tbody>
</table>

**timings may be subject to change
*As of 2nd October 2015
Year 2

Students who successfully complete 6 modules in year 1 will undertake a further 6 modules from either Strand A (Molecular and Translational Medicine) or Strand B (Population Health and Health implementation) during year 2. The student’s optional pathway choice will be agreed at time of initial interview for the course. Students will normally be expected to complete these modules within one academic year; this may be extended for one further year on a case-by-case basis, and only with the approval of the course management committee.

Tables 2 and 3 outline the structure and timing of year 2 modules currently offered in Strands A and B. In Strand A, students will undertake several modules simultaneously.

Table 2: Summary of modules* for Strand A Option: Molecular + Translational Medicine

<table>
<thead>
<tr>
<th>Module Title (5 ECTS per module)</th>
<th>Structure and time of delivery**</th>
<th>Assessment (5.5% total marks per module)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cellular Biology and Cell signalling Mechanisms</td>
<td>Lectures / seminars on Weds and Thurs during term Year 2/Term 1</td>
<td>Critical literature review essay. Written examinations during and at end of lecture programme</td>
</tr>
<tr>
<td>Introduction to Genetics and Development</td>
<td>Lectures / seminars on Weds and Thurs during term Year 2/Term 1</td>
<td>Critical literature review essay. Written examinations during and at end of lecture programme</td>
</tr>
<tr>
<td>Molecular Oncology</td>
<td>Lectures / seminars on Weds and Thurs during term Year 2/Term 1</td>
<td>Critical literature review essay. Written examinations during and at end of lecture programme</td>
</tr>
<tr>
<td>Molecular mechanisms of human disease I</td>
<td>Lectures / seminars on Weds and Thurs during term Year 2/Term 2</td>
<td>Critical literature review essay. Written examinations during and at end of lecture programme</td>
</tr>
<tr>
<td>Molecular mechanisms of human disease II</td>
<td>Lectures / seminars on Weds and Thurs during term Year 2/Term 2</td>
<td>Critical literature review essay. Written examinations during and at end of lecture programme</td>
</tr>
<tr>
<td>Laboratory skills for clinical specialists</td>
<td>2 X 5-day laboratory-based practical sessions Year 2 (one week per term)</td>
<td>Completion of a practical project at the end of each 5-day session</td>
</tr>
<tr>
<td>Clinical skills for clinical specialists</td>
<td>2.5 day programme (lectures, practical sessions, case-study reviews) Year 2 / Term 1</td>
<td>Personal assignments and practical examination at end of module</td>
</tr>
<tr>
<td><strong>Total 30 ECTS</strong></td>
<td><strong>33% overall marks</strong></td>
<td></td>
</tr>
</tbody>
</table>

*As of 2nd October 2015

**timings may be subject to change

6
Table 3: Summary of Modules* for Strand B Option: Public Health and Health Implementation

<table>
<thead>
<tr>
<th>Module Title</th>
<th>Structure and Time of delivery**</th>
<th>Assessment (5.5% total marks per module)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pharmacoepidemiology and drug safety</td>
<td>3 day programme (lectures, case-study reviews, Workshops) Year 2/Term 1</td>
<td>Personal assignments at end of module</td>
</tr>
<tr>
<td>Global health for clinical specialists</td>
<td>3 day programme (lectures, case-study reviews, workshops) Year 2/Term 1</td>
<td>Personal assignment at end of module</td>
</tr>
<tr>
<td>Teaching and Learning for clinical specialists</td>
<td>3 day programme (lectures, case-study reviews, workshops) Year 2/Term 1</td>
<td>Personal assignments at end of module</td>
</tr>
<tr>
<td>Clinical skills for clinical specialists</td>
<td>2.5 day programme (lectures, practical Sessions) Year 2/Term 1</td>
<td>Personal assignments and practical examination at end of module</td>
</tr>
<tr>
<td>The Role of Biological and Advanced Therapies in Current Clinical Practice</td>
<td>Lectures / seminars over 2.5 days Year 2/Term 1</td>
<td>Personal assignments at end of module</td>
</tr>
<tr>
<td>Health Economics</td>
<td>3 day programme (lectures, case-study reviews, workshops) Year 2/Term 2</td>
<td>Personal assignment at end of module</td>
</tr>
<tr>
<td>Public health for clinical specialists</td>
<td>Lectures / seminars over 2.5 days Year 2/Term 1/2</td>
<td>Personal assignments at end of module</td>
</tr>
<tr>
<td>Developing and Prescribing Medicines for Special Populations</td>
<td>2.5 day programme (lectures, practical sessions) Year 2/Term 2</td>
<td>Personal assignments at end of module</td>
</tr>
<tr>
<td><strong>Total 30 ECTS</strong></td>
<td></td>
<td>33% overall marks</td>
</tr>
</tbody>
</table>

*timings may be subject to change
*As of 2nd October 2015

Dissertation (30 ECTS)

Each student will also be required to undertake a research project and submit a dissertation at the latest by the 31st August in the second year. The dissertation will take the form of either (i) an analysis of a data set collected by the student, or (ii) a laboratory-based project. The student may begin the initial work on his/her proposal for dissertation during year 1, in tandem with core modules, with the aim of achieving approval of the proposal by the course committee by the end of
year 1. During year 2, the student may work on the organizational aspects (such as application for research ethics committee approval where appropriate), in tandem with the optional modules. Practical work on the research project will normally begin once the taught modules have been satisfactorily completed.

**Assessment**

Each module will be assessed by way of completion of written personal assignments during or after completion of the module, within an agreed timeframe. In addition, some of the modules may also be evaluated by way of a practical examination during or after completion of the module. The final mark for each module will be the average mark derived from each assessment type (i.e. personal assignments, or examination during or after completion of the module).

The dissertation should be 10,000 words long (excluding appendices) and should normally be submitted by no later than 31st August at the end of the second academic year. In addition the student will be required to write up a scientific paper for publication, based on his/her research.

A 50% pass mark is required for each of the modules, and also for the dissertation. Students will be allowed to resubmit and/or repeat the examination on one occasion. Compensation *between optional modules only* may be possible (up to a total of 10% of marks) but students must have obtained at least 40% or more marks in the module. Compensation is not possible for the core modules or the dissertation; neither can they be used to compensate for any of the optional modules. The dissertation module must be passed in order for the student to be considered for an award of a Master in Medicine degree.

**Course Venue**

The modules will be run primarily in the Trinity Centre in St James’ Hospital (SJH). Some sessions may also be held in the Adelaide, Meath, National Children’s Hospital, Tallaght (AMNCH) and Trinity college main campus (in the Biomedical Sciences Institute (TBSI) and Lloyds Institute buildings).

**Course Materials**

Course materials will be made available for each module via the interactive Blackboard website. In addition, students will be provided with pre-module reading before each of the taught modules. The students will be expected to
review all material provided and to study the reading lists contained in the course materials. Personal assignments for each module must be completed by each student and returned within the designated time frame. Late assignments will be subject to penalties.

Students will be expected to provide their own computer and online access for the modules and module documentation presented on the interactive Blackboard website.

**Tuition Fees***

<table>
<thead>
<tr>
<th></th>
<th>EU</th>
<th>Non-EU</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Year 1</strong></td>
<td>7,250</td>
<td>14,500</td>
</tr>
<tr>
<td><strong>Year 2</strong></td>
<td>7,250</td>
<td>14,500</td>
</tr>
</tbody>
</table>

*Fees shown represent the 2015/2016 rates.

**Further Information**

Contact the Course Co-ordinator (Dr Mary Teeling) at:

teeingm@tcd.ie

or

Phone: 00 353 1 4103671
Fax: 00 353 1 4730596

**Applications for this course should be made online.**

**Further information is available at:**

[http://www.tcd.ie/courses/postgraduate/how-to-apply](http://www.tcd.ie/courses/postgraduate/how-to-apply)