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IYUNIVESITHI YASEKAPA • UNIVERSITEIT VAN KAAPSTAD

# Master of Science in Epidemiology and Biostatistics

***Programme Brochure: 2023***

# **Master of Science in Epidemiology & Biostatistics**

## **Programme Convenor 2023**

Professor Landon Myer, BA (Brown), MA, MBChB (Cape Town), MPhil, PhD (Columbia)

Welcome to the Master of Science in Epidemiology & Biostatistics at the University of Cape Town.

The School of Public Health is a multidisciplinary department within the Faculty of Health Sciences at the University of Cape Town. We are committed to the concept of a healthy population having equitable access to resources and highly competent health care professionals to achieve a better quality of life. Our guiding values include: Openness, Social Engagement, Mutual Respect, Social Justice and Lifelong Learning.

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## INTRODUCTION

This brochure provides details for students regarding specific aspects of the UCT MSc Epidemiology & Biostatistics programme. It also may be used to assist prospective candidates in deciding whether the UCT MSc Epidemiology & Biostatistics programme suits their needs. Prospective candidates interested in this programme may also be interested in the UCT Master of Public Health Epidemiology & Biostatistics specialisation found here:

[http://www.publichealth.uct.ac.za/phfm\\_master-public-health](http://www.publichealth.uct.ac.za/phfm_master-public-health).

A coursework plus minor dissertation MSc Epidemiology & Biostatistics has been offered in the Faculty of Health Sciences from 2022. It is offered as a focused epidemiology & biostatistics degree based on established strengths at UCT in the School of Public Health.

Degree candidates from a variety of backgrounds will acquire knowledge and skills to assist them to contribute towards an effective and equitable health system based on population- and individual-level approaches.

The programme is taught as a series of semester length **courses** (sometimes called **modules**) which are compulsory for the degree.

- Candidates will need to complete **8 courses plus a minor dissertation**, achievable in 24 months of full-time study or longer with part-time study.

### Specific requirements:

- The candidate must have completed the required courses (see page 25) and a minor dissertation in the field of Epidemiology and/or Biostatistics demonstrating application of quantitative skills. *There are also pass mark minima on certain courses within the programme required for progression to higher level courses.*

Note that all applications to the UCT MSc Epidemiology & Biostatistics must go via the University's central admissions process, and can be completed online. See: <http://www.uct.ac.za/apply/applications/forms/>

# 1 BACKGROUND AND DEGREE OBJECTIVES

## 1.1 What are Epidemiology and Biostatistics?

Epidemiology is the study of the distribution of disease, injury and other health states in populations. This includes the study of factors that influence health states and the interventions that may be used to ameliorate these. Often considered the 'basic science' of public health, epidemiology is predominantly quantitative in its approaches. Epidemiology is often closely linked with biostatistics, which involves the application of statistical techniques to address problems in the health sciences, including the analysis of data from quantitative investigations in public health.

Biostatistics is the development and application of statistical methods to analyse health related data. In Public Health, Biostatisticians make inferences from epidemiological data by carefully considering the nature of the data and how the data was collected. These inferences then help address problems in health sciences by informing health policy or advocating for interventions/change.

Importantly, Epidemiology and Biostatistical concepts and methods do not focus on a single set of diseases but can encompass the range of health conditions and health-related behaviours. Linked to this, the epidemiological and biostatistical concepts and methods that are at the core of Public Health can also be applied to address *clinical questions* regarding the aetiology, presentation, management and course of disease.

## 1.2 Target candidates

Target candidates include:

- Individuals with a demonstrated interest in epidemiology and biostatistics research and an identifiable link between prior experience and education, and the topics covered in programme course work.
- University graduates in Statistics or related fields wanting to broaden their skills and fill roles in health sciences, or to develop specific skills;

- Non-health science graduates, e.g. from the physical and biological sciences; social sciences; commerce; and/or engineering; who want an entry point into the health sector and/or to strengthen their activities in their own disciplines;

The distinction between full-time and part-time candidates is based on the number of modules taken per semester and thus the overall time required to complete the degree. Typically, part-time students take 1-2 modules per semester, and full-time students take 3-4 modules per semester, though there is no fixed rule in this regard. All students, whether full-time or part-time, are required to attend the modules for which they are registered and complete all assignments on time and in full.

#### **1.4 Perspectives and skills**

Perspectives emphasised in the course are:

- An appreciation of diverse, population-based approaches to thinking about human health and its determinants;
- An ability to ask focused questions related to health and disease in individuals and populations, as well as to apply critical thinking and conduct high-quality research to answer such questions;
- An ability to use quantitative evidence in different forms to inform different types of interventions to improve population health;
- An ability to select and apply different quantitative methods to data from diverse sources related to health and disease in individuals and populations;
- An appreciation of the goal of achieving greater equity in health, health services and health systems development; and,
- Scholarship that helps to address real-world problems.

Skills the graduate of this programme should exit with include:

- Reflect critically on theories and concepts related to scientific study design, ethical research and the application of these to health research
- Contribute to the development of knowledge related to epidemiological and biostatistical research and methods at an

advanced level, i.e. at the level that integrates the disciplinary grounding of an Honours equivalent degree with the conceptual framework of epidemiology and health research

- Design, conduct and evaluate complex studies systematically with reference to appropriate theory and concepts, with an understanding of the strengths and limitations of different options
- Make critical use of quantitative data and related information in assessing health problems and considering solutions
- Communicate research findings and project outcomes clearly to specialist and non-specialist audiences, including through academic seminars, policy briefs and engagement with the end users of health sciences data
- Demonstrate self-direction and originality in tackling and solving problems and act autonomously in planning and implementing tasks with a theoretical underpinning – this capability will be developed through both coursework and research.

In addition to programme-specific skills and abilities, cross-cutting attributes that the programme seeks to promote across courses include:

- Critical thinking and problem-solving skills
- Creative thinking and innovation
- Ability to work in teams and adapt to diverse health concerns
- Academic and scientific communication & leadership
- Social responsiveness

Importantly, this degree is different from an MSc in Biostatistics offered in the Department of Statistical Science (UCT) as this degree does not require an honours degree in Statistics nor focus on theoretical or methodological aspects of biostatistics. This degree is also different from the MPH Epidemiology & Biostatistics specialisation as it allows greater focus on quantitative methods and application, and requires a more substantive research oriented minor dissertation.

## **1.5 Outcomes**

Graduates should emerge with certain generic skills, including: a close understanding of quantitative research methods as applied to the health sciences; the ability to design and conduct epidemiologic research studies; the ability to conceptualise and carry out data analyses from a variety of sources; and the ability to critically evaluate evidence related to health and health care; translation of research findings for policy making and the ability to argue or advocate for specific policies or practices.

Graduates could be employed in any sector with health functions, including but not limited to health services or related organizations (whether in the public or private sector), academia, research, finance, labour, community-based groups and non-governmental organisations but in roles that may have a research or quantitative assessment of data emphasis. While the focus of the UCT MSc is on strengthening quantitative research skills in the health sciences for South Africa and the continent, increasingly careers in public health are international in scope.

The MSc in Epidemiology & Biostatistics is aimed at candidates who wish to develop a broad understanding of quantitative thinking in the health sciences. Of the eight courses required, they will complete four courses in Epidemiology, three in Biostatistics and one in general Quantitative Research Methods. This will suit candidates who envisage a career that requires skills in understanding and synthesising epidemiological data and other quantitative data sources. Students who complete the MSc in Epidemiology & Biostatistics are well prepared to go on to work in research, or further their postgraduate studies.

The Biostatistics courses are a complement to the Epidemiology training but do not offer the equivalent of a Masters in Biostatistics. The Biostatistics courses offered in this programme focus on the application of statistical methods to solve epidemiological problems and less on the mathematical and theoretical details.



Candidates who wish to be admitted to the MSc Epidemiology & Biostatistics will need to provide evidence of quantitative skills in their previous training. Admission to higher level Epidemiology courses is subject to a minimum of 55% pass in the introductory level subjects. Admission to Advanced Epidemiology requires a minimum pass of 65% in Introduction to Epidemiology. Admission to Biostatistics II requires a minimum pass of 65% on Biostatistics I.

To complete this degree, candidates must use quantitative methods in their dissertation. Candidates should seek advice from the programme convenor if they are unsure about the suitability of a proposed dissertation.

## 2 CURRICULUM REQUIREMENTS AND ORGANISATION

### 2.1 Time commitment

The programme may be taken part-time or full-time. **The programme does not currently provide for distance learning candidates and residence in Cape Town is a requirement.** Most courses and other learning activities expect regular attendance at face-to-face meetings in Cape Town. *Candidates may choose to undertake the programme while living outside of Cape Town but take responsibility for their studies noting that this is not a distance learning degree.*

**Note for 2022: Due to the COVID-19 pandemic, certain teaching and learning activities may be shifted to a “virtual” or remote format. However, any such alterations in the mode of teaching will be temporary, and the programme does not cater to distance learning. The ability to attend face-to-face (in-person) teaching and learning activities is expected of all students.**

The projected formal commitment for the degree is a minimum of 1800 “notional” hours divided approximately as follows:

- Classroom/Practicals: 260 hours (~32 hours per course);

- Formal assignments, reading, course project work: 700 hours;
- Dissertation: 900 hours (minimum)

Note that these are notional hours, and do not necessarily reflect actual time commitments involved which may be more or less in different circumstances.

While the coursework component of the degree can be completed in 3 semesters the minimum time to completion of the degree is unlikely to be less than 24 months. Candidates are encouraged to aim to complete their coursework and dissertation within 24 months, but some may elect to take three or four years for this. The University expects that the degree will be completed within four years. A fifth year of registration is allowed, and registration to complete the MSc over longer periods requires special consideration from the programme convenor and postgraduate office.

## **2.2 Entry requirements**

*Minimum* entry requirements are:

- An appropriate 4-year Bachelors course, 4-year Honours course or any degree recognised by the University Senate as equivalent;
- Has attained at least a C-grade pass in higher grade Senior Certificate Mathematics or an equivalent recognised by Senate for the purpose; and
- A formal test of English proficiency is required of applicants from non-English speaking countries (see page 16).

In addition, a candidate will be required to submit evidence of previous academic performance, work history, and research output or involvement in research, and a 500 word typed essay setting out (i) his/her reasons for doing the course, and (ii) the ways in which she/he envisages the programme will improve his/her skills and abilities related to quantitative health sciences research

## **2.3 Diversity of backgrounds**

Candidates with training other than in the health sciences, e.g. biology, environmental sciences, psychology, or statistics, are strongly encouraged to apply for admission. Course combinations and teaching will to some extent take

this diversity of background into account.

Numeric and writing skills may be tested before and/or after admission for diagnostic purposes. Teaching assistants are available in some courses but candidates with deficiencies in numeracy and/or writing skills may be requested to seek additional tuition at their own expense. The University also provides writing skills support (see page 20), and candidates may be referred to the UCT Writing Centre after assessment of their written English.

## **2.4 Degree structure**

The building block of the degree is the *course* (also called a *module*): a self-contained one-semester course, which might require pre-requisite courses to be completed. The degree programme consists of 8 courses, plus a research-based dissertation. Each course consists of approximately 32 classroom hours, plus approximately 88 hours of independent reading, studying and assignments.

*Core* courses are offered annually. All *elective* courses are offered annually in most years but may take place less frequently based on demand. The University reserves the right to cancel any elective if there is insufficient demand, or to change the timetabling of any course. Numbers for a course may also be capped in certain instances, for example, to prioritize students for whom a given course is *core* over those for whom that course is an *elective*.

Courses are usually taught as a half-week *block* (14-16 hours) plus eight or nine 2-hour sessions spread through the semester. Block (whole day) teaching will take place during February/March (Semester 1) and in July/August (Semester 2), from 8h30 - 16h00 daily. *Note that both semesters start earlier than other programmes in the University.* The semester sessions for each course take place every 1-2 weeks on Monday-Thursday afternoons during the semester. Semester sessions take place in one of two 2-hour sessions, usually held either from 13.30 to 15.30 or 16h00 to 18h00. Courses may be scheduled to other time slots and this will be communicated by the individual course convenors.

The MSc degree is suitable for students who are working on either a part-time or full-time basis. However, students who are working while in the MSc programme should clear attendance commitments with their employer in advance for the whole programme, including study leave and examinations.

## **2.5 Graduation requirements, degree time limits and degree certificates**

A total of 8 courses successfully completed are required for the degree, plus a pass on the dissertation. Upon graduation, the specialisation is inscribed on the degree certificate, as "Epidemiology and Biostatistics" after the degree designation (Master of Science).

## **2.6 Minor dissertation**

The *minor dissertation* (so named because it is shorter than the full-length dissertation that is standard in dissertation-only Master's degree programmes) carries one-half of the weighting of the degree.

Candidates will be required to complete a dissertation in a research area related to epidemiology and biostatistics. The candidate will be expected to find an approved supervisor, with the assistance of the programme convenor, within their area of interest. To ensure appropriate support to students, primary supervisors must be drawn from the School of Public Health & Family Medicine, Division of Epidemiology & Biostatistics. External co-supervisors (i.e. non-UCT) may also be drawn from any appropriate tertiary or research institution. (See page 40 for further details on the dissertation). The programme does not provide funding for research, although candidates may apply for such research funding through any available channel.

## **2.7 Assessment of student performance**

Each course convenor will determine the appropriate form of assessment in that module. Such assessment will consist of some combination of take-home assignments, semester projects and/or final examinations. Generally, the examination carries 50% of the assessment weight. The examination for each course will be written off at the end of the semester in question. Generally, a **pass mark of 50% is required overall, with a 45% sub-minimum on each of the**

## **examination and semester mark separately.**

An external examiner is appointed for every course. The external examiner for each course retains the discretion to alter the final course mark based on assessment of the candidate's performance across the course as a whole.

**Candidates may be allowed to repeat a course they have failed, at the course convenor's discretion. No course may be undertaken more than twice. Where a candidate fails (a) any core course twice, or (b) any 3 courses, a recommendation will be made to the Dean to refuse the candidate further registration in the programme.** This applies to both core and elective courses. **No supplementary examinations will be offered to candidates who fail a course.** Candidates will have to repeat core courses they have failed. This may prolong the period of residence in Cape Town or extend registration.

The coursework and dissertation components must be passed independently. The dissertation will be marked by two examiners, both external to the university. The *highest* standard aimed for will be that of a manuscript potentially capable of publication as a single paper in a peer reviewed journal (although it need not be submitted for publication, nor be at the level of a peer-reviewed scientific publication in order to pass for the degree).

### **2.8 Deferred examination and access to examination scripts**

*Deferred* examinations may be offered on medical and other grounds. For more detailed information, please see the UCT examinations site. *Access to marked examination scripts will be provided based on the UCT General Rules and Policies Handbook.*

### **2.9 Distinction**

Rules for distinction are determined by the Faculty and are subject to change. At the time of writing, the MSc degree will be awarded with distinction to candidates who average 75% or above on coursework plus dissertation, with a 70% sub-minimum on each component. (i.e. at least 70% average across all courses and at least 70% on the dissertation.)

## Quality assurance

Each course will be evaluated by candidates using a standard questionnaire or via VULA, the electronic teaching platform. Course convenors may hold open discussions during the semester to provide feedback. The programme convenor will work with course convenors in considering evaluations, solving problems, and maintaining the coherence of the programme.

The programme convenor will also hold meetings with the whole MSc class from time to time. The external examiner for each course is asked to submit a report on the quality of the course and the examination.

All student feedback is welcome and is considered highly valuable towards strengthening the programme and improving student learning. In addition to the mechanisms described above, confidential feedback can be communicated to the programme convenor.

## 2.10 University and programme rules

### 2.10.1 Entry

**All participants, including non-degree candidates, or candidates for other UCT degrees, must register and pay fees for every course.**

*Participants may not “audit” courses, i.e. may not sit in for non-examination purposes.*

*The only exception to this is PhD students registered in SPH&FM in the year in which they would like to take a particular module.*

The final decision on admission of degree candidates sits with the programme convenor. The final decision on admission of non-degree candidates sits with the programme and course convenors.

**Attendance at face-to-face learning activities is mandatory.** Students should inform the module convenor if they are going to be absent for any part of a

course or learning activity.

- **Anyone missing the initial block of a module (40-50 percent of the teaching time) may *not* join that course afterwards.** This is a Duly Performed (DP) requirement. Candidates should plan travel, conference attendance and private schedules accordingly. This is not negotiable.
- **Students should also ensure that the examination weeks are kept free of any competing engagements.**
- **Students missing sessions must make their own arrangements to obtain material they have missed.**
- **Semester timetables should be consulted well in advance. These are posted on VULA and the School website.**

### 2.10.2 Communication

Primary communication with students about a module will take place via email, with additional communications via VULA or in class, as arranged by the module convenor. **It is essential that the correct email address used by candidates appears on all lists. Please note that official communications are sent to UCT email addresses, and if a student is not using their UCT email address regularly they should arrange for an autoforward from their UCT email to their regular email.**

It is the responsibility of the student to ensure that the programme administrator has all their correct contact details, including any change in email address or phone numbers. Email communication, typically using VULA, will also be used for routine programme-level matters.

### 2.10.3 Assignments

There are generally two or three assignments per course, with hand in deadlines; extensions must be sought well **in advance** of the advertised deadline. Penalties are determined by the convenor; some assignments may not be handed in late at all.

### 2.10.4 Credits and exemptions

(a) *Credits* towards the degree, or (b) *Exemption* (with substitution) from a core

module, based on Masters-level courses passed elsewhere, may be considered on production of appropriate documentation to the programme convenor.

For credits, such courses must have been undertaken as part of a degree programme at another institution but cannot have formed part of an obtained qualification. This criterion does not apply to exemptions, which are aimed at avoiding duplication of prior study and do not reduce the number of courses required.

### **2.10.5 Plagiarism**

The University has strict rules against plagiarism, i.e. presenting the work of others, including fellow students, as one's own without acknowledgement. This includes re-presenting text from written or electronic sources (e.g., the internet) without attribution. Generally, a complaint involving plagiarism results in immediate and automatic expulsion from the MSc programme and the University, from which individuals may appeal or later apply for readmission.

The subject of plagiarism, and how to avoid it, will be discussed at the beginning of the programme and at regular intervals thereafter. Candidates will be expected to submit signed declarations with all written work. Plagiarized work will earn zero credit, and the student reported via the University disciplinary process. This may result in a course failure, loss of financial support and/or expulsion. Convictions for plagiarism are endorsed on academic transcripts.

### **2.10.6 Punctuality and lecture courtesy**

Please be seated with your notes open by the advertised starting time. It is disruptive to have people walking in once the session has started. All cell phones should be switched off or on silent during sessions. Eating in lecture rooms is not permitted. Please discuss with your course convenor or University facilitator for lecture recordings. Audio and/or video recording of lectures without the permission of the lecturer is not allowed.

### **2.10.7 Summarised University language policy**

English Foreign Language (EFL) or Foreign Permanent (FP) applicants whose



primary language is not English are required to submit one of the following:

- A recent score of at least 570 (paper-based TOEFL test) or a score 230 (computer-based TOEFL test or a score of 90 (Internet-based TOEFL test). A recent test is a score that is obtained within 3 to 5 years before applying for admission to UCT.
- A recent overall band score of 7.0 (with no individual element of the test scoring below 6.5) on the International English Language Testing System (IELTS).
- *See also:*  
<http://www.uct.ac.za/apply/intlapplicants/degree/applications/language/>

### 2.10.8 Registration

**All candidates – new and returning - must register promptly at the beginning of each year. This is not discretionary.** This applies even if the courses commence only in the second semester and applies even for students who have only the dissertation remaining to complete before graduation. Unregistered students may be asked to leave class or be refused supervision.

**Continuous registration is expected of all students in the MSc programme:** you must register for the degree every year from entry to graduation. The only exception to this is a withdrawal of registration, or a formal leave of absence.

**Failure to register in a timely manner every year (until graduation) may result in suspension from the programme and/or additional fees.** If you are suspended for non-registration readmission to the programme is by re-application / re-admission, and is not automatic. If you are readmitted, fee penalties are levied for late registration and fees charged retrospectively for any years “missed”.

Where a candidate is still completing coursework and does not intend to submit the dissertation in that year, registration for the dissertation should be deferred. *This does not preclude a candidate from starting work on the dissertation and being assigned a supervisor as soon as he or she is ready to do so.*

Candidates must register for the dissertation in the year in which they intend to submit their dissertation. Candidates must pay the full dissertation fee at least once. If registration for the dissertation is continued into a subsequent year, a rebate may be earned for early submission depending on the date of submission. (The “year” for submission purposes usually extends to early February of the following year). “Dissertation only” students must, however, register and pay fees in **every** year in which the dissertation remains uncompleted. *As a result, we recommend that students register for the dissertation ONLY after they and their supervisors are both confident that they will hand in the dissertation during the year.*

### **2.10.9 Notice to leave: Withdrawal of registration**

Students or their parents or guardians must give notice of intention to discontinue studies in writing by completing the Cancellation of Registration Form and submitting this to their Faculty Office in person **or by registered mail.**

**The deadlines for rebates on fees for first and second semester courses are available from the MSc programme administrator, the Faculty of Health Sciences Postgraduate Office and the University Fees Office. These dates will be strictly adhered to. Any fees owing are due immediately on cancellation of studies.**

See also

[http://www.students.uct.ac.za/sites/default/files/image\\_tool/images/434/study/handbooks/2021/UCT\\_Handbook\\_12\\_2021\\_StudentFees.pdf](http://www.students.uct.ac.za/sites/default/files/image_tool/images/434/study/handbooks/2021/UCT_Handbook_12_2021_StudentFees.pdf) [‘Drop an Individual Course’ (in Section 2.3)]

No reduction in fees will be granted if the notice of intention to discontinue studies is received by the Faculty office after these deadlines. Change of “Curriculum Forms” are to be handed to the programme administrator at least a week before the deadline date to allow for signatures, etc. and for onward forwarding to the Postgraduate Faculty Office before the deadline date.

**Candidates who stop attending a course yet either do not formally withdraw or withdraw after the last date above will have an ‘absent’ recorded for that course in that year.** An “absent” (AB) mark is equivalent to a failure (F) in the programme and University. This will appear on the official transcript even if the course is later successfully completed.

#### **2.10.10 Leave of absence**

A postgraduate student is required to have unbroken registration across a year of study until graduation and cannot merely absent him-herself without faculty approval.

Should Leave of Absence (LOA) be approved by the Deputy Dean: Postgraduate Education, on recommendation of the programme convenor and HOD, this will be valid for up to one year only. To apply for LOA the student must write to the Manager: PG Administration, setting out the circumstances, and attach substantiating documentation. If the student is applying on medical grounds he/she will need a medical certificate. Members of the staff in the Student Wellness Services do not have discretion to grant leave of absence. While a member of the Clinical Staff (or the student’s own doctor) may discuss a leave of absence with the student as part of managing his/her condition, they may not request or instruct the Faculty to grant leave of absence. They may only provide a medical opinion.

**2.10.11 Retrospective leave of absence is not granted.** In such cases, full payment of fees for any “missed years” is required before re-registration.

#### **2.11 University resources**

UCT’s postgraduate and postdoctoral hub is a useful clearing house for information related to postgraduate studies, including the Master of Public Health, at UCT. For more information see:

<http://www.uct.ac.za/students/postgraduates/administration/>

##### **2.11.1 Student representation**

The university and faculty have a Postgraduate Students’ Association to

represent the interests of postgraduate students. Membership is encouraged.

In the past, students in each enrolment years of the programme have elected a 'class representative' to be the focal point for feedback to the programme on students facing issues. As the programme grew larger this approach proved less useful, and now we recommend to course convenors of larger courses (eg, >20-30 students) that they elect 'class representatives' for that specific module, if desired.

### **2.11.2 Computing facilities**

The Barnard Fuller Computer Laboratory (Level 1, alongside the Postgraduate seminar lecture rooms) is available for use by all postgraduate students. Other computer facilities on campus are shared between undergraduate and postgraduate students.

- Students must use their UCT swipe card to gain access to computer labs. Should a card be left at home or not function, students can go to Student Administration to gain access.
- The opening times are 24 hours a day, 365 days a year.
- Wireless access areas (via Eduroam) are available across campus.

### **2.11.3 Parking**

Student parking on campus is available at the standard university fee that is payable annually.

### **2.11.4 Continuing Professional Development (CPD) credits**

For individuals registered with the Health Professions Council of South Africa, 30 CPD points are awarded on graduation; this does not include ethics points.

### **2.11.5 The Writing Centre**

The Writing Centre at UCT forms part of the Language Development Group in the Academic Development Programme (Centre for Higher Education Development). This Centre offers students assistance with academic writing. Please visit their website: <http://www.ched.uct.ac.za>

Over the last few years, the upper campus Writing Centre has been so well utilised by students across the university, that the need for satellite writing centres has become apparent. In response to this need, the Faculty of Health Sciences Writing Lab officially opened its doors on the 9th of February 2015. The Writing Lab provides FHS students and staff with convenient access to specialist writing support on their own campus. Please visit the FHS Writing Lab website: <http://www.writingcentre.uct.ac.za/about/healthsciences>

Candidates may be referred to the Writing Centre by staff on the basis of performance in written work during the programme.

### **3 GENERAL INFORMATION**

#### **3.1 Fees**

See the latest University Fee Handbook for up-to-date fee information: <http://www.uct.ac.za/students/postgraduates/fees/handbook/>

The University's course-based fee structures will enable students to accurately calculate the cost of their academic studies at UCT. Students can use the course codes listed in this document to look up the all-inclusive cost of the degree in the fees handbook. The sum of these costs will give the total cost for the set of chosen courses per semester and per year.

All students from outside South Africa or other Southern African Development Community (SADC) countries should refer to fees for international students in the Fees booklet on the website above.

**All students will be billed in South African Rand regardless of the country of origin. For students who are not from SADC countries, an 'international fee' called the *International Term Fee*, will be charged in addition to standard registration fees. Both the International Term Fee plus the individual course based fees must be paid prior to registration. The full annual International Term Fee is charged even if registration commences in the second semester.**

#### **3.2. Financial Assistance**

Information regarding scholarships and bursaries is available on request from

the Postgraduate Centre and Funding Office

Tel: +27 21 650 3629 Fax: +27 21 650 4352

Email: [pgfunding@uct.ac.za](mailto:pgfunding@uct.ac.za)

Website: [www.uct.ac.za/apply/funding/postgraduate/applications/](http://www.uct.ac.za/apply/funding/postgraduate/applications/)

There are a number of University-administered Masters level scholarships for which both entering candidates and those already in the programme may apply. Deadlines are typically six months to one year in advance. Applications for the programme must be submitted by new applicants in parallel with any scholarship applications.

International students can apply for scholarships via the International Academic Programmes Office (IAPO). Forms will be available on the IAPO website (<http://www.uct.ac.za/about/iapo/overview/intro/>).

Generally, financial assistance for postgraduate studies at UCT is highly competitive.

### **3.3. Accommodation**

University accommodation is limited although specific residences close to the Health Sciences campus are available for postgraduate students. All inquiries about housing should be directed to:

Student Housing Accommodation & Advocacy Services (SHAAS)

University of Cape Town

Phone: +27 21 650 2977 Fax: +27-21- 650 4014

Email: [res@uct.ac.za](mailto:res@uct.ac.za)

<http://www.uct.ac.za/apply/residence/life/overview/>

### **3.4. Study permits for international students**

International students must obtain a study permit before entering South Africa. Please consult the nearest South African embassy/consulate well in advance. Further information for international students is available from the International Academic Programmes Office(IAPO):

<http://www.uct.ac.za/about/iapo/overview/welcome/>.

### 3.5. Emergency Contacts

<b>Employee Wellness</b>	<b>021-650-5685</b>	<a href="mailto:Blanche.claasen-hoskins@uct.ac.za">Blanche.claasen-hoskins@uct.ac.za</a>
<b>Occupational health and Safety</b>	<b>021-650-3873</b>	<a href="mailto:ohs@uct.ac.za">ohs@uct.ac.za</a> <a href="mailto:key@uct.ac.za">key@uct.ac.za</a>
<b>Campus Safety</b>	<b>021-650-2222/3</b>  <b>24 hours</b>	
<b>Sexual-assault response team</b>	<b>072-393-7824</b>  <b>24 hours</b>	<a href="mailto:sart@uct.ac.za">sart@uct.ac.za</a>
<b>Office for Inclusivity and Change (OIC)</b>	<b>021-650-3530</b>	
<b>Whistle-blowing hotline</b>	<b>0800 650 0000</b>  <b>24 hours</b>	<a href="mailto:uct@whistleblowing.co.za">uct@whistleblowing.co.za</a>
<b>UCT Ombud</b>	<b>021-650-0000</b>	<a href="mailto:ombud@uct.ac.za">ombud@uct.ac.za</a>

### **3.6. MSc enquiries**

The MSc programme office is located in the School of Public Health & Family Medicine in Falmouth Building on the Health Sciences Campus. The physical location is:

School of Public Health & Family Medicine  
Falmouth Building, Entrance 5, Level 5  
University of Cape Town Faculty of Health Sciences  
Anzio Road, Observatory 7925, Cape Town, South Africa  
<http://www.publichealth.uct.ac.za/>

Logistical and administrative enquiries may be directed to the MSc programme administrative team:

General enquiries:

Ms. Mikateko Sithole (MSc Senior Secretary)  
Tel: 021 406 6578  
Email: [mikateko.sithole@uct.ac.za](mailto:mikateko.sithole@uct.ac.za)

Ms. Tshamani Netshifhefhe (Programme Administrator);  
Tel: 021 6501098  
Email: [tshamani.netshifhefhe@uct.ac.za](mailto:tshamani.netshifhefhe@uct.ac.za)

Academic enquiries may be directed to the MSc Programme Convenor:

Professor Landon Myer  
Tel: 021 650 6300  
Email: [landon.myer@uct.ac.za](mailto:landon.myer@uct.ac.za)



## 4 COURSES / MODULES

As part of the programme, all students are required to complete a minimum of eight modules: seven core modules and one elective modules.

Candidates are also required to produce a Masters dissertation based on their own research in an area related to epidemiology or biostatistics. The Masters dissertation accounts for 50% of the final assessment for the Master's degree, i.e. equal weight is given to both the course work and dissertation components of the programme.

### **Epidemiology & Biostatistics (MM012PPH02)**

Compulsory courses

PPH7018F	Introduction to Epidemiology
PPH7021F	Biostatistics I
PPH7070S	Quantitative Research Methods
PPH7092S	Biostatistics II
PPH7095F	Biostatistics III
PPH7029F	Advanced Epidemiology
PPH7022S	Evidence based healthcare

*One of:*

PPH7063S	Epidemiology of Infectious Diseases
PPH7065S	Epidemiology of Non-Communicable Diseases
PPH7090F/S	Seminars in Epidemiology

*Please note that requests for exemptions from or substitutions of compulsory courses may be discussed with the programme convenor involved, and may be considered based on special circumstances.*

## Prerequisites

Course	Prerequisites
Advanced Epidemiology (PPH7029F)	A pass of 65% for Introduction to Epidemiology  Pass in Biostatistics I and Biostatistics II Pass in or co-enrolled in Biostatistics III One or more of: <ul style="list-style-type: none"><li>• Evidence Based Healthcare</li><li>• Epidemiology of Infectious Disease</li><li>• Epidemiology of Non-Communicable Disease</li><li>• Seminars in Epidemiology &amp; Biostatistics (by permission only)</li></ul>
Biostatistics II (PPH7092S)	Pass in Biostatistics I Pass in Introduction to Epidemiology
Biostatistics III (PPH7095S)	Pass in Biostatistics II

## **4.1 INTRODUCTION TO EPIDEMIOLOGY (PPH7018F)**

### **Convenors**

Jasantha Odayar, MBChB, MPH (Cape Town), DTM&H (Witwatersrand)

### **Structure**

- Compulsory
- Semester 1: one half week block in February/March
- One two-hour session approximately every week during the semester

### **Skill Objectives**

The course aims to introduce the basic principles and methods of epidemiology. At the end of the course candidates should be able to demonstrate knowledge of:

- The nature and uses of epidemiology
- The strengths and limitations of epidemiological study designs
- The epidemiological approach to defining and measuring the occurrence of health-related states in the population
- The epidemiological approach to assessing study validity and disease causation

- 

### **Content**

- Basic measures of disease occurrence and disease association
- Types of study designs
- Random error, bias and confounding
- Introduction to demography and standardization
- Epidemiology in prevention and screening
- Causal inference in epidemiology
- Introduction to critical appraisal of the literature

### **Requirements**

As for degree (see section 2.2)

## **4.2 BIostatISTICS I (PPH7021F)**

### **Convenor**

Elton Mukonda, BSc, MSc (UCT)

### **Structure**

- Compulsory
- Semester 1: one half week block in February/March
- One two-hour session approximately every week during the semester

### **Skill Objectives**

This course provides an introduction to the basic concepts and methods of biostatistics. At the end of the course candidates should be able to demonstrate knowledge of:

- The importance of statistics
- Descriptive statistics
- Inferential statistical procedures
- Critically interpreting statistical output
- An application to all techniques by statistical software

### **Content**

- Populations and samples, and sampling methods
- Descriptive measures and graphical techniques
- Distributions
- Estimation: Point and Interval estimation
- Hypothesis testing
- Power, Effect, and Sample size
- Measures of effect – risk ratio and odds ratio

### **Requirements**

As for degree (see section 2.2)

## **4.3 ADVANCED EPIDEMIOLOGY (PPH7029F)**

### **Convenor**

Professor Landon Myer, BA (Brown), MA, MBChB, (Cape Town), MPhil, PhD (Columbia)

### **Structure**

- Compulsory
- Semester 1: one half-week block in February/March
- Face-to-face learning sessions during the semester approximately every week supplemented by notes and discussion board learning on VULA.

### **Skill Objectives**

To provide candidates with a deeper understanding of quantitative research concepts learned in the Introduction to Epidemiology course such as:

- Causation, measures of occurrence, and measures of association
- A framework for understanding the relationships between observational and experimental study designs, and an understanding of how different observational designs are inter-related
- An appreciation of the role of variable measurement in research, with emphasis on bias and misclassification and their effects
- A deeper understanding of confounding and how confounding is controlled in epidemiological research, and of the uses and limitations of matching in analytical studies
- A deeper understanding of intermediate variables and the role of intermediate variables in investigating the determinants of disease
- A deeper understanding of effect modification/interaction, including the relevance of these concepts to public health and the difficulties in identifying these phenomena in data
- The ability to integrate and apply different epidemiological concepts to provide a thorough critique of study design, conduct and analysis

### **Content**

- Overview of study design and epidemiologic principles

- Measures of occurrence & effect
- Approaches to the assessment of causality
- Cohort studies and randomised control trials
- Case control and cross-sectional studies: appropriate effect measures
- Bias and validity
- Confounding (including standardisation)
- Effect measure modification
- Matching
- Critical appraisal

### **Requirements**

- A pass of at least 65% in Introduction to Epidemiology (PPH7018H)
- Biostatistics I and Biostatistics II (PPH7021F) (completed)
- Biostatistics III (PPH7092S) (completed or co-enrolled)
- One or more of:
  - Evidence Based Health Care (PPH7022S)
  - Epidemiology of Infectious Diseases (PPH7063S)
  - Epidemiology of Non-communicable diseases (PPH7065S)

## **4.4 BIOSTATISTICS III (PPH7095F)**

### **Convenor**

Dr Tamsin Phillips, BSc(UJ), MPH , PhD (UCT)

### **Structure**

- Compulsory
- Semester 1
- This class meets weekly throughout the semester with extra sessions scheduled at the start of the semester

### **Skill Objectives**

- To provide candidates with a thorough understanding of the analysis of longitudinal and clustered data and a capability to perform such analyses themselves
- To introduce students to other more advanced statistical methods relevant to medical research, so that they are aware of their availability for application to specific problems in medical research

### **Course content**

- Advanced survival analysis
- Analysis of longitudinal data and clustered data
- Advanced topics in statistical modeling

### **Requirements**

Pass Biostatistics II with at least 65%

Candidates failing Biostatistics III will be allowed to repeat the course only at the discretion of the course convenor.

## **4.5 EVIDENCE-BASED HEALTH CARE (PPH7022S)**

### **Convenor**

Associate Professor Mark Engel, BSc(Med) Hons, MPH, PhD (Cape Town)

### **Structure**

- Semester 2: one half week block in July/August
- One two-hour session approximately weekly during the semester

### **Skill Objectives**

To enable candidates to:

- Convert health care information needs into answerable questions
- Identify the best evidence with which to answer them
- Critically appraise the evidence for validity and usefulness
- Apply the evidence in health care practice and policy

Elements involved in developing a protocol for systematic reviews will be highlighted.

### **Content**

- Formulating answerable questions
- Systematic and comprehensive searches for evidence
- Evaluating articles about treatment or prevention, diagnosis, prognosis, harm, clinical decision analysis and clinical practice guidelines
- Data abstraction, synthesis and interpretation

### **Requirements**

*A pass of at least 55% in Introduction to Epidemiology (PPH7018H).*

### **Recommended**

- Biostatistics I (PPH7021F)



## 4.6 EPIDEMIOLOGY OF INFECTIOUS DISEASES (PPH7063S)

### Convenor

Professor Mary-Ann Davies, MBChB PhD (Cape Town), FCPHM (SA)

### Structure

- Elective; semester 2: one half-week block in July/August
- One two-hour session approximately every week during the semester

### Skill Objectives

By the end of the course candidates should be able to:

- Apply descriptive epidemiology to communicable diseases and their control and to outbreak situations
- Classify infectious diseases epidemiologically and use common terms and definitions appropriately
- Discuss transmission dynamics and mathematical modelling of epidemics
- Discuss routine and sentinel surveillance
- Discuss the epidemiology and development of vaccines
- Apply epidemiology to specific communicable diseases including HIV/AIDS, tuberculosis (TB), sexually transmitted illnesses (STIs), malaria, hospital-acquired infections and childhood communicable diseases

### Content

Commonly used terms and definitions, descriptive epidemiology, outbreak investigation, transmission dynamics, mathematical modelling, surveillance, vaccination efficacy and effectiveness, epidemiology applied to HIV/AIDS, TB, STIs, malaria and childhood communicable diseases.

### Requirements

*A pass of at least 55% in Introduction to Epidemiology (PPH7018F)*

## **4.7 EPIDEMIOLOGY OF NON-COMMUNICABLE DISEASES (PPH7065S)**

### **Convenors**

Professor Lara Dugas, BSc PhD (Cape Town) MPH MSc (Loyola)

### **Structure**

- Elective: Semester 2; one half-week block in July/August
- One two-hour session most weeks during the semester

### **Skill Objectives**

By the end of the course candidates should be able to:

- Understand definitions of NCDs, debates in their designation and factors underlying their emergence
- Know the epidemiology of the determinants of NCDs applying frameworks to understand social determinants, risk factors, and infectious agents (causation)
- Interpret the population burden of non-communicable disease measures and data
- Use appropriate conceptual frameworks, such as the socio-ecological framework, the life-course approach to study and understand non-communicable disease occurrence and control at an individual and population levels
- Demonstrate familiarity with methodological issues and epidemiological methods in the study of non-communicable disease including the limits of observational evidence, life-course epidemiology and genetic associations
- Evaluate different interventions at individual, community and societal level to prevent and control chronic diseases including screening and surveillance

### **Content**

Burden of non-communicable disease; Conceptual frameworks for studying chronic disease causation and control; Epidemiology of cardiovascular disease, diabetes, respiratory disease, cancer, mental ill-health, neurodegenerative

diseases, injuries and environmental hazards; Epidemiologic transition in relation to risk factors for the major chronic diseases, e.g. nutrition, obesity, physical exercise, alcohol and tobacco use as well as upstream factors impacting on diseases such as food policy and the built environment; Integrated health services interventions; Genetics and public health. Study designs used to assess to associations between exposures and NCDs.

## **4.8 QUANTITATIVE RESEARCH METHODS (PPH7070S)**

### **Convenor**

Ms. Thokozile Malaba, BSc Hons, MPH (Cape Town)

### **Structure**

- Compulsory
- Semester 2
- This class meets twice weekly during the semester

### **Skill Objectives**

- To enable students to formulate pertinent research questions and hypotheses in public health and write detailed research proposals that utilize quantitative methods
- To promote research reading, review and writing skills (including citation and scientific argument) for purposes of research proposals
- To introduce students to data handling best practices (mainly in the post data collection to analysis steps) for analysis, sharing and reporting on data
- To introduce students to the application of quantitative research methods in the monitoring and evaluation of programmes

### **Content**

- Programme Monitoring and Evaluation
- Formulation of research questions
- Research protocol, research ethics, literature review
- Population, sampling and subject selection; sample size calculation
- Measurement: questionnaires; validity and reliability
- Conducting quantitative research
- Data management and manipulation

### **Requirements**

As for degree (see section 2.2)

## **4.9 BIOSTATISTICS II (PPH7092S)**

### **Convenor**

Mr. Frissiano Honwana, BSc, MSc (UKZN)

### **Structure**

- Compulsory
- This class meets twice weekly during the semester

### **Skill Objectives**

To equip candidates with a good understanding of modelling the relationship between a response and a set of risk factors, so as to be able to perform such analyses themselves using sophisticated statistical software.

### **Content**

- Multiple linear regression for modelling and identifying the relationship between a continuous response and a set of risk factors
- Logistic regression for modelling and analysing the relationship between a dichotomous indicator of disease status and a set of risk factors
- Cox regression analysis (survival analysis methods)

### **Requirements**

- Biostatistics I (PPH7021F)
- Introduction to Epidemiology (PPH7018F)

Candidates failing Biostatistics II will be allowed to repeat the course only at the discretion of the course convenor.

## **4.10 SEMINARS IN EPIDEMIOLOGY & BIOSTATISTICS (PPH7090F/S)**

### **Convenor**

Professor Landon Myer, BA (Brown), MA, MBChB, (Cape Town), MPhil, PhD (Columbia)

### **Structure**

- Semesters 1-2 (Register in semester 1 of year 2)
- Weekly two-hour sessions mixing student reading presentations and sample analyses with critical discussion and didactic seminars, supplemented by VULA-based readings and discussion

### **Skill Objectives**

To provide a working understanding of advanced epidemiological principles and proficiency in advanced epidemiological analytic methods, including: causal modelling, including the application of marginal structural models; infectious diseases modelling; directed acyclic graphs and estimator biases; instrumental variables, propensity scoring and alternative methods for adjusting for confounding.

### **Content**

- The purpose of Seminars in Epidemiology & Biostatistics is to provide select MSc candidates in the with advanced training in epidemiological and/or biostatistical methods. The course is structured as a reading and tutorial seminar over one semester that provides students with understanding of recent developments in epidemiological principles as well as proficiency in advanced epidemiological analytic methods.
- Students will meet the convenor or designated lecturer for weekly 2-hour sessions and are expected to undertake an additional 4-6 hours of reading or demonstration analyses each week.
- Assessment is by student critical reading summaries and class participation (33%); a student project based on coursework (33%) and final examination (34%)

**Prerequisites**

- Introduction to Epidemiology (PPH7018F)
- Advanced Epidemiology (PPH7029F) (or co-enrolled)
- Biostatistics I (PPH7021F)
- Biostatistics II (PPH7092S)
- Biostatistics III (PPH7095F) (or co-enrolled)

*In addition, please note that registration for this course requires prior written permission from the course convenor.*

## 5 DISSERTATION GUIDELINES

### MSc MINOR DISSERTATION

#### 5.1 Scope and standard

The MSc Epidemiology & Biostatistics is a mixed coursework degree. The minor dissertation thus needs to be distinguished from that required for a Masters by thesis alone.

The purpose of the dissertation is to show that the candidate is able to carry out supervised research, has a grasp of the research tools in the chosen field and is familiar with the more important publications on the subject. It should also demonstrate that the candidate is able to communicate results and to evaluate his or her own work and that of others critically.

A minor dissertation should have a limited focus and scope, e.g. on one research question rather than many. Candidates will need to work closely with their supervisor to focus the question and manage the scope. The research is often a secondary analysis, or one smaller aspect of a larger research project.

**The standard of presentation for the journal article component is a manuscript formatted for submission to a peer-reviewed academic journal. The publication worthiness of the work is not directly related to mark, and the publication worthiness of the manuscript is not a pass/fail criterion. However strong dissertations will be more likely to be awarded higher marks as well as be suitable for publication.**

#### 5.2. Weighting

The MSc Epidemiology & Biostatistics weights the dissertation at 50% of the programme mark with the remaining 50% made up of eight courses.



The dissertation and coursework have to be passed independently, i.e. the coursework mark cannot compensate for a fail on the dissertation, and vice versa.

To be awarded the degree with distinction, at least 70% is required on the dissertation. See section 2.9 of brochure for the rule regarding programme distinction.

### **5.3. Structure**

<b>The dissertation must be structured in five parts.</b>
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#### **Part A: Protocol**

The protocol should include the study protocol, relevant references (not a full literature review), the Ethics Approval or clearance letter and questionnaire or data capture forms. Detailed guidelines will be given during the programme for the writing of protocols. The length must be appropriate to the study – a typical protocol without references and appendices may range from 10 to 25 pages.

#### **Part B: Structured literature review**

A structured literature review appropriate to the subject matter and methods of the dissertation. The review should not exceed 10 000 words. This will not ordinarily be of the detail or standard required for a “Cochrane type” systematic review but will have a structured format. It needs to include important literature in the field but does not have to be comprehensive.

#### **Part C: Journal manuscript**

A manuscript of an article for a named peer reviewed journal The manuscript

must meet all the requirements set out in the Instructions for Authors of that journal, including word count and referencing style. (The journal must allow *at least* 3 000 words). Supervisors will assist candidates to identify an appropriate journal.

The article does *not* have to be submitted to the journal in order to meet academic requirements.

## **Part D: Appendices**

These will vary with the study but should typically include:

- a. Acknowledgements, including a description of the role played by each person who would be expected to be an author on a published article arising from the dissertation. In a thesis derived from work started by others, e.g. analysis of data from another project, the candidate's contribution must have been made after his/her registration and therefore under supervision. **In a multi-author project, the candidate is expected to be first author.**
- b. Questionnaire/data capture instrument(s) (if not appended to protocol in Part A).
- c. Ethics consent form(s) (if not appended to protocol in Part A).
- d. *Selected* tables or figures, with brief explanatory text, that would be useful for the examiner to see as part of the analyses but which could not be included in the article for reasons of space. These should not simply be a collection of analysis printouts but should be readable as an addendum with reference to the article. E.g. these might be submitted to the journal as supplementary materials.
- e. Any technical appendices needed – for example, laboratory techniques, statistical formulae.
- f. The instructions for authors for the target journal.

## **Part E:**

An editorial/opinion piece/policy brief of up to 3 000 words.

### **5.4 Total length and page set-up**

*There is no strict overall length requirement.*

#### **Page set-up:**

- Left margin at least 2.5cm; right margin about 2.5cm.
- Use A4 page set-up
- Page numbers in the same font as the font you are using for the text. Use fonts such as Arial, Times New Roman, Book Antiqua, or Bookman Old Style. Avoid the “**comic**” fonts.
- Font size 11 or 12
- Set language to English [South Africa] – avoid the American spellings e.g. *behavior*
- Line spacing of 1.5 is recommended. We also suggest that you set your spacing to allow 6pts after each paragraph – this improves the look of the document and you don’t have to put in an extra paragraph break.

Using size 12 font, A4 size pages and double spacing, this will typically be around 40-60 pages. References and appendices may add another 10 to 20 pages. A typical minor dissertation will be around 100 pages in total.

### **5.5 Choice of subject matter**

The dissertation must be done in the area of epidemiology and biostatistics. If in doubt the advice of programme convenor should be sought. There may be limitations on choice of a subject, research methodology or subject area owing to lack of a suitable supervisor.

### **5.6 Choice of methodology**

The research should involve use of data collected using quantitative methods

and demonstrate application and interpretation of epidemiology and biostatistics methods.

### **5.7 Use of prior or collaborative work**

Candidates are encouraged to arrive with a topic of interest. However, the principle is that a substantial part of the research should be completed during the degree period under supervision. *Analysis of already collected data or secondary data analysis is allowed.* In such cases, analysis and write up of these data would form the basis of the dissertation.

In the case of collaborative work, the role of each contributor should be clearly stated in the Acknowledgements section. (In collaborative work, the candidate would be expected to be the first author of any publication arising from the dissertation work).

### **5.8 Time planning**

The earlier the protocol development is commenced, the better. Candidates need to pace their dissertation progress according to graduation horizon. For example, candidates seeking to graduate within two years should have their protocol ready towards the end of the first year and data collected and/or analysis completed by May of the second year. See section 7.11 below for hand-in deadlines. See section 2.6 earlier in this brochure for rules regarding time limits on registration.

### **5.9 Finding supervisors**

Candidates are encouraged to seek out their own supervisor within the Division of Epidemiology & Biostatistics, who should ideally be knowledgeable in the content and methods of the subject area. Candidates should feel free to approach the programme convenor or staff for guidance. Additional statistics guidance may be needed – candidates should approach the staff who teach biostatistics in the first instance.

**Please take note of the following when selecting a supervisor:**

Generally the student must be registered for a degree in the department of the main supervisor. The co-supervisors may be from other departments/faculties or even may be external. This applies to both full research Masters and PhD students. Deviations from this are possible, allowing the main supervisor to be from outside the department in which the student is registered, but this should be discussed in advance with the programme convenor.

A co-supervisor may be based inside or outside the university – in all cases, at least one internal (UCT) supervisor is required to serve as a guide and link to university procedures.

Both the supervisors and co-supervisors retain responsibilities to the candidate and the University, and their willingness and ability to meet these responsibilities until the dissertation process is complete, i.e. graduation, needs to be established by the candidate in advance. **Supervisors and candidates are required to sign a Memorandum of Understanding and Progress Report annually.**

First time supervisors must have a UCT co-supervisor. There is no provision for payment of external co-supervisors.

## **5.10 Approval of Research Protocol**

### **Departmental approval**

Departmental (“School”) approval for a research proposal must be sought by submitting a proposal form (*available on the postgraduate website*) and the proposal as soon as it is ready, to the Departmental Research Committee Administrator, Liza Smith. The form should be signed by the supervisor(s) undertaking to act as supervisor(s) and approving the proposal.

### **Ethics approval**

*This is not the same as Departmental approval.* This should be sought by submitting a proposal to the Faculty of Health Sciences Human Research Ethics Committee, using the Ethics Committee application form (*available on the*

*postgraduate website*) Many sections of this form will not be applicable, and should be marked "N/A".

Please note that per University guidelines, the supervisor of the student must be listed as the Principal Investigator on the submission to the Faculty of Health Sciences Human Research Ethics Committee.

If the protocol is later changed in a way which has ethical implications, fresh approval of the change needs to be sought.

No data should be collected before a letter is received from the Human Research Ethics Committee, with at least provisional approval. Such letters should be kept by the candidate.

If the research has received ethics approval from an outside institution, the proposal must still be reviewed by the Faculty Human Research Ethics Committee. The prior approval letter must be submitted. Dissertation proposals based on analysis of secondary data not in the public domain should also be submitted.

Expedited review is given in most cases. If in doubt, the chairperson of the Departmental Research Committee should be contacted for advice.

### **Department of Health Approval**

In addition to UCT Research Ethics Committee approval, any primary research taking place in a provincial or local authority health department facility, such as hospitals or clinics, must be submitted to the relevant provincial or local authority for access approval. This can only be done after departmental and ethics approval have been obtained.

### **5.11 Submission of dissertation**

Details on the process of submitting the dissertation are available from the programme administrator and the Faculty of Health Sciences Postgraduate Office. All submissions are digitally uploaded, hard copies are not required.

The submission deadline for April graduation is generally around **1 September** and for December graduation around **the end of June** of the same year. The Faculty of Health Sciences Postgraduate Office must be informed at least 6 weeks in advance by way of a digitally uploaded Intention to Submit form.

The supervisor will be asked by the Faculty Officer to submit a form supporting submission. Co-supervisors should do this in cooperation with the supervisor. Candidates are strongly advised to have their supervisors' approval before submitting.

All candidates have to pay the full dissertation fee at least once. A rebate on the annual dissertation fee may be obtained in the second or subsequent years of registration of the dissertation if the dissertation is submitted early in the year.

Candidates who do not or cannot make the end of June deadline may hold over submission to the beginning of the following year. If submission occurs before the last date permitted for registration (see below), the candidate will be given a "technical registration" for purposes of dissertation examination and no fees will be charged.

Dissertations thus need to be submitted before the beginning of the first semester i.e. early February, to avoid attracting further fees; for rebates the dissertation must be submitted before the start of the second semester for a 50% fee rebate of fees; before early March for a 75% rebate and before early August for a 25% rebate.

### **5.12 Examiners**

Three examiners are nominated by the supervisor, two of whom are invited to examine, and one held as an alternate. One examiner must be internationally based. All examiners must be external to UCT. These nominations are circulated to the Faculty Dissertations Committee for approval.

It is *the supervisor's* responsibility (with co-supervisors as relevant) to submit names of potential examiners to the Faculty Officer when the candidate is

ready to submit. The examiners will be sent this dissertation guideline to enable them to judge the standard required.

Supervisors are encouraged to secure agreement in advance from examiners as this expedites the process. The details required from each examiner are: position and institutional affiliation, academic qualifications, postal and or physical address, telephone and fax numbers and email address, and a one paragraph description of their standing in the relevant field. Examiners will be asked by the faculty not to communicate with supervisors during the examination process, but rather with the faculty postgraduate officer, if they have any queries.

*The candidate may not be informed of the identity of the examiners.* After the outcome of the dissertation has been finalised, the examiners' identities are made known if the examiners have indicated that they do not object to this.

### **5.13 Publication**

Candidates are *not* required to publish their research for purposes of the qualification. However, where research participants have contributed time, effort or resources, failure to meet dissemination or publication commitments made in the Ethics section of the research protocol or on a consent form can be regarded as unethical. Reporting or dissemination commitments should be met as soon as possible after the research is completed. Likelihood of being able to meet such commitments should be taken into account when preparing the protocol and consent form.

Candidates are encouraged to undertake to publish the study if of appropriate standard, with the supervisor(s) as a co-author(s). This will almost always require work beyond the graduation date.

Other co-authors on a publication arising out of the dissertation could include anyone who has made a substantial intellectual or academic contribution to the study. Measures of this contribution include time spent on developing the proposal, assisting with the analysis, reviewing results and assisting with their interpretation.



### **5.14 Language and writing**

Clear, grammatically correct English is essential. Candidates who have difficulties are encouraged to seek help from the writing support facilities on main campus (see: <http://www.ched.uct.ac.za/adp/writing/>). Supervisors are *not* required to do detailed editing or correction of spelling, grammar or style. They may refer candidates elsewhere for this, at the candidate's own expense.

### **5.15 Layout, style, etc.**

As long as the thesis is readable and internally consistent, any of a number of styles is acceptable. The Harvard style for referencing is recommended. In this style, referencing is by first author in parentheses in the text and the bibliography is listed alphabetically (rather than using numerical superscripts in the text). A guide to the Harvard (and other styles) can be found at <http://www.lib.uct.ac.za/wp-content/uploads/2012/08/harvarduct-2012.pdf>