

Division of

# Emergency Medicine

## Course information prospectus



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# South African Academic Emergency Medicine

Prospective students are referred to the Division of Emergency Medicine's comprehensive official website. The following document contains only some of the more relevant or important information. The site can be found on [www.emergencymed.co.za](http://www.emergencymed.co.za).

## A Brief History

The Division of Emergency Medicine was formed in 2001, but Emergency Medicine only became recognised as a speciality by the Health Professions Council of South Africa in March 2003. In May 2004 the College of Emergency Medicine was founded by the Colleges of Medicine of South Africa. As the first division to develop, the University of Cape Town and Stellenbosch University became the first South African universities to offer a joint Master of Medicine (MMed) degree in Emergency Medicine, and the first registrars started in their posts in January 2004. To date, over 20 have graduated the 4-year training programme.

Currently there are around 42 MMed students registered (these include 10 supernumerary registrars), with students from as far afield as Kenya, Cameroon, Nigeria and Saudi Arabia. From this Division alone, 12 MMed degrees, 8 Fellows of the College of Emergency Medicine, and 12 MPhil degrees have been awarded so far. 2009 saw the registration of the first students for PhDs in Emergency Medicine.

The Division is committed to the education and training of specialist registrars who are supported by a formal academic programme, a mentoring programme, an ongoing evaluation system and final examination preparation support. Undergraduate students at both universities are exposed to emergency medicine teaching. Emergency ultrasound proficiency has become a requirement for the final exit examination and an emergency ultrasound rotation has been developed this year supported by a VLE component.

Due to the expansion of the Division's activities, the Emergency Care Institute South Africa has been created. The Institute plans to cover all essential aspects of emergency medicine, including education and training and outreach into other African countries (already including Botswana, Madagascar and Uganda).

These are proving to be exciting times for emergency medicine in the region, and this emerging speciality is fast becoming a vital foundation for health care in South Africa.

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## **Objectives of the division**

- To promote interest in the discipline of Emergency Medicine in the medical community; gain acceptance for Emergency Medicine as a speciality; and to stimulate academic activities, including research, in Emergency Medicine in the Faculties of Health Sciences at the Universities of Cape Town and Stellenbosch.
- To promote interest in the discipline of Emergency Medicine on the African continent; and to gain acceptance for Emergency Medicine as a speciality in this area.
- To develop undergraduate teaching programmes in Emergency Medicine.
- To offer a Master of Philosophy degree, a Master of Medicine degree, and a Master of Science degree in Emergency Medicine, and to encourage further doctoral study.
- To offer a Doctor of Philosophy degree in Emergency Medicine.
- To offer continuing medical education in the discipline of Emergency Medicine in the form of lectures, demonstrations, journal clubs, morbidity and mortality meetings, workshops, and formal courses.
- To promote a high standard of emergency care to patients in both the Pre-Hospital and In-Hospitals sectors of the discipline, while supporting a continuous line of good medical management from the time that the patient is in need, being transported, through to receiving good medical attention in the most appropriate medical facility.
- To become a recognised centre of excellence on the African continent and the world.

## 2. The Master of Medicine Degree in Emergency Medicine (MMed.EM)

The specialist MMed.EM degree was registered in 2003 and first offered in January 2004. It is a joint programme, offered between the Health Science Faculties of the Universities of Cape Town and Stellenbosch. It was the first MMed.EM programme in the country. The first students graduated in December 2007. From 2009 the division has also hosted several foreign students on this course. Foreign nationals interested in this course should refer to the *Emergency Medicine Foreign Information Brochure* published on the website.

Protected teaching time for specialist registrars is every third Wednesday, for the full day. It alternates between the Surgical Conference Room, J floor, Old Main Building, Groote Schuur Hospital, and the Audio Visual suite, Tygerberg campus of Stellenbosch University. Teaching includes lectures, demonstrations, journal club, simulations, and M&M meetings. Non-registrars are welcome to attend, with the understanding that the teaching will be focused on the educational needs of the registrars. The sessions are CPD accredited.

The teaching timetable is posted on the Division of Emergency Medicine's website ([www.emergencymed.co.za](http://www.emergencymed.co.za)). You will also find links to study aids, lecture presentations, podcasts and past papers.

### 2.1. Aims of the programme

- To equip the trainee, at the completion of four years of study, with the theoretical knowledge, practical ability and interpersonal skills for fulltime or independent specialist Emergency Medicine practice.
- To enable the trainee to develop the attitudes and abilities necessary to become an independent learner and to accept the responsibility for lifelong continuing professional development.
- To equip the trainee to plan, conduct, interpret and publish independent research in the field of Emergency Medicine.

### 2.2. Expected Outcomes of the Programme

The student should possess a broad knowledge of:

- a. Current state-of-the-art developments in medicine in general.
- b. Ethical principles as applicable to Emergency Medicine and the practice of medicine in general.
- c. An interdisciplinary approach to patient evaluation and care.
- d. Epidemiological and statistical principles and their application in analysing scientific data.
- e. Humanitarian and socio-economic issues governing the overall practice of Emergency Medicine and medicine in general.

The student should have the ability to:

- a. Identify and solve problems in such a way that it will be clear that decisions are reached by way of critical and creative thinking.
- b. To perform his/her work and interact with patients and fellow workers in a way that demonstrates the exemplary application of professional values.
- c. Ability to effectively co-operate with other people as member of a health team.
- d. To organise and manage himself/herself and his/her activities in a responsible and efficient manner.
- e. Collect, analyse, organise and critically evaluate information, and to extrapolate beyond given data to new, broader issues.
- f. To communicate effectively, orally or in writing, using statistics, audio-visual aids and other information technology as appropriate.

### 2.3. Course requirements

The selection of specialist registrars follows formal criteria laid down by the two Universities, and the Provincial Government of the Western Cape. The selection committee is chaired by the programme convenor. The members of this committee include the members of both Health Science Faculties, and members of the Provisional Government of the Western Cape.

Applicants should have two years of general experience, which should be varied and preferably include Medicine, Surgery, Obstetrics and Gynaecology, and Paediatrics. In date certification in Advanced Life Support Courses (ACLS; ATLS; APLS / PALS) is a requirement. Possession of the Primary examination of the FCEM is a distinct advantage.

Registrars who are selected onto the programme are required to complete the biannual College of Emergency Medicine primary examination within the first 18 months of their rotation. Refer to the CMSA regulations in regard to the Primary and Fellowship examination regulations. These regulations are available from the CMSA and include the curriculum (CMSA-Rondebosch: Mrs. Elise Engelbrecht, tel. 021-6893161 and CMSA-Parktown: Mrs. Ann Foster, tel. 011-7267037. [www.collegemedsa.co.za](http://www.collegemedsa.co.za))

### 2.4. Recognised training preceding registration

Applicants who have undergone training that is directly relevant to Emergency Medicine may be credited with this time on the rotation. Individuals in this position will need to apply directly to the HPCSA for accreditation of this time.

### 2.5. Course description

The philosophy of the division with respect to training is both informal and enabling; there are no rigid rules for the conduct of day-to-day activities – an ethical, mature and responsible approach on the part of the trainee, as an independent medical practitioner, is assumed as a given. Furthermore, teaching staff, while always available for advice or direct assistance, expect initiative and inquiry, rather than the burden of didactic teaching.

An integral part of training is to be a trainer; teaching of interns and undergraduate students is part of the course of service delivery. Providing optimal patient care is a fundamental responsibility.

The core recommended clinical text is:

- ROSEN, BARKIN. EMERGENCY MEDICINE – CONCEPTS AND CLINICAL PRACTICE

The Division also recommends the following text for the CEM primary exams

- Anatomy:  
*Clinically Oriented Anatomy*  
Keith L Moore, Arthur F Dalley (Lippincott Williams and Wilkins)
- Pathology:  
*Applied Basic Science for Basic Surgical Training*  
Andrew T Raftery (Churchill Livingstone)
- Physiology:  
*Review of Medical Physiology*  
William F Ganong (McGraw-Hill)
- Pharmacology:  
*Pharmacology for Anaesthesia and Intensive Care*  
Tom E Peck, Sue Hill (Cambridge University Press)  
*South African Medicines Formulary*  
Colleen J Gibbon (Health and Medical Publishing Group)

Candidates are advised to acquaint themselves particularly with those aspects that relate to the practice of emergency medicine, and to use the most recent edition available

**Part one** examination: FCEM(SA) primary examination

The traditional logbook is replaced by the College of Emergency Medicine's C.R.I.T.I.C.A.L. (Certified Record of In-service Training Including Continuous Assessment and Learning) performance portfolio. This is available from the College website. Clinical evaluation is done by the clinical supervisors, who are required to complete a clinical evaluation form at the end of each rotation. An example of a rotation is as follows: your actual rotation is likely to vary from this, depending upon requirements and availability:

- 3/12 Pre-hospital medicine
- 6/12 Medical Emergencies, adult (includes acute Psychiatry)
- 3/12 Medical emergencies, paediatric
- 3/12 Obstetrics and Gynaecology.
- 3/12 Anaesthetics
- 6/12 Intensive Care (Paediatric and adult)
- 9/12 Trauma (includes Orthopaedics, Ophthalmology, ENT)
- 15/12 Emergency Centre. Medical emergencies and Emergency Centre time will include Cardiology and Infectious diseases

There are several additional courses available which candidates can complete in this time. Please refer to the ECI website for the most up-to-date information on these.

**Part two**, The FCEM(SA) act as the common exit examination for both qualifications.

**Part three**, The Dissertation:

Students must complete the dissertation prior to being permitted entry to write the Part two examination. The outcome expected is of at least one publishable article (see dissertation section below).

### 3. The Master of Philosophy Degree (MPhil)

- **Clinical Emergency Care**
- **African Emergency Care**
- **Patient Safety and Medical Decision-making**

The MPhil was the first academic emergency medicine degree to be offered through the University of Cape Town. However the original format (clinical work/log book, exam and dissertation) registered its last students in 2010. In the last nine years the course targeted South African doctors who have not had access to a formal specialist registrar rotation in Emergency Medicine. This degree was offered internationally, which provided the opportunity for South African doctors anywhere to further their careers in Emergency Medicine. Although unable to use the degree as basis for specialist registration with the Health Professions Council of South Africa, successful candidates utilised the degree to demonstrate academic competence.

In recent years the division received an increase in requests from both foreign nationals who have not had access to a formal specialist registrar rotation in Emergency Medicine in their home countries, and also nursing and paramedic graduates wishing to further their careers. This resulted in the new MPhil degree which will be available from 2011, with 2 streams: MPhil Emergency Medicine (Clinical Emergency Care) and MPhil Emergency Medicine (Emergency Medicine in Africa). From 2013 it is planned to include a Patient Safety and Medical Decision-making stream in conjunction with Dalhousie University, Canada and the University of Maryland, USA.

Interested foreign candidates should also refer to the *Emergency Medicine Foreign Information Brochure* published on the website.

#### 3.1. MPhil Emergency Medicine (Clinical Emergency Care)

##### 3.1.1. Academic requirements:

- Registration as a medical practitioner with the HPCSA
- **Graduate** emergency care practitioners registered with the HPCSA
- **Graduate** nurse practitioners registered with the HPCSA

Although there are no other entry requirements, it is advisable to have completed the ACLS, ATLS, and APLS/PALS before attempting the examinations. This is a 2 year degree. RPL (Recognition of Prior Learning) principles may be applied to appropriate potential candidates who do not meet the specified requirements. The use of a bridging course and an entrance examination will be used to promote and vet candidates for entry on to the programme.

##### 3.1.2. Course description

The philosophy of this division with respect to training is both informal and enabling; there are no rigid rules for the conduct of day-to-day activities – an ethical, mature and responsible approach on the part of the trainee, as an independent practitioner, is assumed as a given. Whilst supervisors should always be available for advice or direct assistance, initiative and inquiry, rather than the burden of didactic teaching is expected.

There are three parts to the degree:

## 1. Learning Portfolio

**A learning portfolio** is to be maintained throughout the 2 years of registration. The aim of the portfolio is to encourage mature and reflective thinking about academic and professional development during this Masters program. Portfolios should consist of a minimum of 25 reflections, a minimum of 1 per month throughout the 2 year program.

The portfolio may be kept in electronic or paperbased format. However portfolios should be made available to the mentor on a quarterly basis. The student and mentor will discuss the portfolio and the goals and learning objectives demonstrated within.

## 2. Modules

1. MPhil Clinical Emergency Care core modules Emergency Care I and II, Resuscitation and Critical Care, Clinical Research Methods I and II, and Emergency Care Systems and Management.
2. Elective modules. Students in the Clinical Emergency Care stream will have to select 2 modules from the following: Ultrasound in Emergency Care, Disaster Medicine, Education and Training in Emergency Care, Medical Rescue and Primary Health Care for Emergency Care Workers.

For core recommended clinical text please see elsewhere in document

Candidates are advised to acquaint themselves particularly with those aspects that relate to the practice of emergency medicine, and to use the most recent edition available

## 3. A dissertation (30% of assessment)

The outcome expected is at least one publishable article.

## 3.2. MPhil Emergency Medicine (African Emergency Care)

### 3.2.1. Academic requirements:

- MBChB or equivalent degree
  - Registration as a medical practitioner with the student's health board in their country of origin
- OR
- Registration as a medical practitioner with the HPCSA

Although there are no other entry requirements, it is advisable that the candidate have experience in emergency care systems and management in a developing world setting. This is a 2 year degree.

### 3.2.2. Course description

The philosophy of this division with respect to training is both informal and enabling; there are no rigid rules for the conduct of day-to-day activities – an ethical, mature and responsible approach on the part of the trainee, as an independent practitioner, is assumed as a given. Whilst supervisors should always be available for advice or direct assistance, initiative and inquiry, rather than the burden of didactic teaching is expected.

There are three parts to the degree:

## 1. Learning Portfolio

**A learning portfolio** is to be maintained throughout the 2 years of registration. The aim of the portfolio is to encourage mature and reflective thinking about academic and professional development during this Masters program. Portfolios should consist of a minimum of 25 reflections, a minimum of 1 per month throughout the 2 year program.

The portfolio may be kept in electronic or paperbased format. However portfolios should be made available to the mentor on a quarterly basis. The student and mentor will discuss the portfolio and the goals and learning objectives demonstrated within.

## 2. Modules

1. The core module for the African Emergency Care stream includes Clinical Research Methods I and II, and African Emergency Care.
2. Elective modules. Students will have to select a further module from the following: Ultrasound in Emergency Care, Disaster Medicine and, Education and Training for Emergency Care.

For core recommended clinical text please see elsewhere in document

Candidates are advised to acquaint themselves particularly with those aspects that relate to the practice of emergency medicine, and to use the most recent edition available

## 3. A dissertation (50% of assessment)

The outcome expected is a Masters level thesis. At least 2 publishable articles from this work is encouraged.

### 3.3. MPhil Emergency Medicine (Patient Safety)

This course is planned for 2013. It is being developed in conjunction with Prof Pat Croskerry from Dalhousie University in Canada and Prof Terry Mulligan from The University of Maryland, USA.

This course is aimed at experienced Emergency Care managers and deals with aspects of medical decision making, patient safety and quality improvement. A Masters level thesis will be required.

More details to follow.

### 3.4. MPhil Emergency Medicine Reading List

#### MODULES:

#### 3.4.1. Emergency Care I and II

1. Rosen's Emergency Medicine: concepts and clinical practice  
*John Marx, Robert Hockberger, et al*  
ISBN: 978-0-323-05472-0

2. Evidence-Based Emergency Medicine  
*Brian Rowe (editor)*  
ISBN: 978-1-4051-6143-5
  
- 3.4.2. Resuscitation and Critical Care
  1. Rosen's Emergency Medicine: concepts and clinical practice  
*John Marx, Robert Hockberger, et al*  
ISBN: 978-0-323-05472-0
  2. Evidence-Based Emergency Medicine  
*Brian Rowe (editor)*  
ISBN: 978-1-4051-6143-5
  
- 3.4.3. Emergency Care Systems and Management
  1. Patient Safety in Emergency Medicine  
*Pat Croskerry, Karen S Cosby*  
ISBN: 978-0-7817-7727-8
  2. Emergency Medicine Decision Making: Critical Choices in Chaotic Environments  
*Scott Weingart, Peter Wyer*  
ISBN: 0-07-144212-X
  
- 3.4.4. Clinical Research Methods I and II  
Key Topics in Clinical Research  
*F Gao Smith, JE Smith*  
ISBN: 1-85996-028-6
  
- 3.4.5. Ultrasound in Emergency Care  
CEM(SA) Emergency Ultrasound Resource Document
  
- 3.4.6. Disaster Medicine  
South African Textbook of Disaster Medicine  
*L.A. Wallis (ed.)*  
Juta Publishers (expected Nov 2010)
  
- 3.4.7. Education and Training in Emergency Care  
Practical Teaching in Emergency Medicine  
*Rob Rogers, Amal Mattu et al*  
ISBN: 978-1-4051-7622-4
  
- 3.4.8. Medical Rescue  
Departmental notes
  
- 3.4.9. Primary Health Care for Emergency Care Workers  
Departmental notes
  
- 3.4.10. African Emergency Care  
Article Reading List:
  1. African Health Monitor issue 12: April/June 2010 (WHO)
  2. Health Systems in Action: An eHandbook for Leaders and Managers (MSH)
  3. Global Health Risks Report 2009 (WHO)

4. Hsai R, Razzak J, et al. Placing Emergency Care on the Global Agenda. *Annals of EM* 2010;56(2):142-149
5. Departmental Notes

GENERAL RESOURCES:

3.4.11.Journals

1. Emergency Medicine Clinics of North America
2. Emergency Medicine Journal
3. Annals of Emergency Medicine
4. Prehospital and Disaster medicine
5. International Journal of Emergency Medicine

3.4.12.Online Resources

1. EMRAP – Emergency Medicine Reviews and Perspectives
2. EMA – Emergency Medical Abstracts
3. ED Leadership Monthly
4. EMT podcast

## 4. Master of Science Degree (MSc.EM)

This research degree offered by UCT is by dissertation only. Candidates will be required to undertake an advanced, approved researched project under the guidance of a supervisor, indicating successful training in methods of research.

**Please note:** Applicants for research degrees are required to submit a research proposal **with** their application. Prospective applicants are advised to contact the Division direct in order to present their research idea **prior** to completing an application.

Academic requirements:

- Registration as a medical practitioner with the HPCSA
- **Graduate** emergency care practitioners registered with the HPCSA
- **Graduate** nurse practitioners registered with the HPCSA

In date Advanced Life Support course status (ACLS, ATLS and APLS/PALS) is an advantage when applying.

The Dissertation guidelines for the MMed.EM and the MPhil.EM apply in principal. However, the requirements in terms of length and depth of the dissertation for the MSc.EM are greater (length – 40,000 to 50,000 words) representing at least two publishable papers.

If after the first year of work on the dissertation, the candidate and the supervisor feel that there is good reason to convert the MSc.EM to a PhD this will be considered by the Senate. The MSc degree is not regarded as basis for registration as a specialist with the Health Professions Council of South Africa, but can indeed be registered as an additional qualification.

## 5. Doctor of Philosophy (PhD.EM)

This research degree offered by both universities and is by dissertation only. Candidates will be required to undertake an advanced, approved researched project under the guidance of a supervisor, indicating successful training in methods of research. The PhD degree is not regarded as basis for registration as a specialist with the Health Professions Council of South Africa, but can be registered as an additional qualification.

**Please note:** Admission requirements are subject to amendment based on new requirements of the Department of Education. Applicants for research degrees are required to submit a research proposal **with** their application. Prospective applicants are advised to contact the Division direct in order to present their research idea **prior** to completing an application.

5.1 The rules and regulations that govern a PhD done through **UCT** are described

- on UCTs website: <http://www.uct.ac.za/apply/candidates/downloads/>

5.2 The rules and regulations that govern a PhD done through **SUN** (available from 2011)

A student can be admitted to the degree PhD provided that:

- a minimum period of two years has passed since obtaining the degree MB, ChB;
- the candidate has obtained a relevant honours degree in Medical Sciences directly following an MB, ChB degree;

- the candidate has obtained a relevant MSc degree (Master of Natural Science) of the University, or another university approved by Senate;
- the candidate has obtained another qualification (and has allowed for the required period following the qualification) that is deemed sufficient by Senate;
- the candidate complies with all the other provisions for doctorates (as stipulated in the Briefing Document on Doctoral degrees available from the programme coordinator: Ms G Mji, gumji@sun.ac.za)

SUN will consider all applications on merit, recognising prior learning from non-doctors. Upon application for registration (enrolment as student), the prospective student needs to use a specific form that can be obtained from the Administration to provide Senate with details of qualifications (accompanied by certified copies of certificates if the qualifications have not been obtained at Stellenbosch University), the place and subject of the dissertation for approval. Upon approval, a promoter will be appointed.

The PhD degree will be awarded to a student:

- After the candidate has been registered for the PhD degree at the University for at least two academic years;
- On the condition that, with the promoter's consent, the student will at least six months prior to the desired date of graduation give written notice to the Registrar of his intention to submit a dissertation;
- Based on a dissertation – under supervision by a promoter – that covers a problem from an area in the Medical Sciences. (The dissertation must provide proof to the satisfaction of the University of advanced, original work, which contributes to the enhancement of fundamental, theoretical and/or clinical knowledge in the particular field of research.);
- Provided that the dissertation is accompanied by a statement confirming that it has not previously been submitted to another university or institution in order to obtain a degree or diploma, and that it is the student's own work; and
- After the candidate has passed an oral examination. An oral examination for the doctorate is a general requirement (apart from the advanced doctorates), but subject to the approval of Senate, exemption from this examination may be granted in specific cases based on sufficient motivation.

The PhD degree is awarded in recognition of high quality, original research and is conventionally assessed based on a dissertation. In addition to this, a PhD degree may be obtained in an alternative way, namely primarily based on at least 5 published scientific articles. It is however not possible to obtain a PhD exclusively on the basis of published articles. This option is accommodated by the DSc degree in Medical Sciences. More details on the latter option can be found in the briefing document on Doctoral studies at the Faculty, and can be obtained from the Faculty Secretary or downloaded from <http://www.uct.ac.za/apply/candidates/downloads/>

With regard to the date of submission of the dissertation, the number of copies to be submitted, as well as the further requirements with which students have to comply in order to graduate, the general provisions for doctorates will apply as stipulated under Higher Degrees in Part 1 of the Calendar, as well as in the Briefing Document on Doctorate degrees of the Faculty of Health Sciences.

## 6. Dissertations (research projects)

### 6.1. General guidelines:

The purpose of a dissertation is to demonstrate 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 important publications on the subject. It should also demonstrate that the candidate is able to communicate results and evaluate his/her own work and that of others critically.

The guidance that follows is intended for candidates, dissertation supervisors and examiners. The division's website has an entire section dedicated to dissertations ([www.emergencymed.co.za](http://www.emergencymed.co.za)). Candidates should review the Division's policy on submitting a research proposal for MMed, MPhil, MSc or PhD which is available on the website. Candidates will need to work closely with their dissertation supervisors to focus the research proposal and to make the project manageable within limited resources.

Dissertation guidance for prospective doctoral students is not discussed here. Candidates need to follow the guidance available on the UCT website ([www.uct.ac.za](http://www.uct.ac.za)) or SUNs website ([www.sun.ac.za](http://www.sun.ac.za)).

It is very important that candidates review the guidelines for approval of health research in the Western Cape (SA) which can be found on [www.emergencymed.co.za](http://www.emergencymed.co.za). The application form is included in this document. Approval from the Western Cape DoH will be required for all health research proposals where research will be conducted in the Western Cape public health sector (page 8 of the document lists the specifics). Students should be aware that a fast-track system applies in order to expedite their applications. Annexure 2 of the guidelines has been modified and students should tick the relevant box in Part A to indicate this.

#### 6.1.1. Standard:

The expected standard is that of a publishable article in a peer-review journal. The research does not have to be published (although candidates are strongly encouraged to pursue this). The division (and specifically the primary supervisor) has the right to publish any work that has not gone to publication within six months of graduation. The literature review should be comprehensive, and must be relevant and up to date, demonstrating that the candidate is aware of the important publications. The expected outcome from dissertation is as follow:

- MMed: **One** publishable paper
- MPhil Emergency Medicine (Clinical Emergency Care): **Two** publishable papers
- MPhil Emergency Medicine (African Emergency Care): **Two** publishable papers
- MSc: **Two** publishable papers
- PhD: **Five** publishable papers

#### 6.1.2. Format:

With the exception of the PhD, the division expects dissertations to be presented in the following format:

- 1) The proposal for the research as submitted and approved by DRC
- 2) A brief literature review (2-3 pages, see style below)
- 3) Publishable paper/ article(s) ready to submit to a named journal (the number of papers required depends on the masters course enrolled in- see above). Authors need to include at least the principal investigator as the first author and the research supervisor(s)
- 4) The instructions for authors of the journal(s) which can normally be found on the submission website of the specific journal

Despite the use of publishable papers, the thesis must nonetheless show acceptable academic style, scholarly content and coherence as a connected account with a satisfactory introduction, statement of thesis and conclusion. Where multi-authored papers are included, the contribution of the candidate must be clearly stated. Journals acceptable for publication must be Contact the divisional research committee should there be any query regarding this format. PhD rules for submission can be found at <http://www.uct.ac.za/apply/candidates/downloads/>

### 6.1.3. Methods:

The research should involve collection of data using qualitative or quantitative methods or a combination of the two, or formal review methods if it is a systematic review. This may be data from interviewing or examining research participants, or data from official publications, records, registration, or notification systems, or other databases.

### 6.1.4. Layout and style:

#### Page setup:

- Left margin at least 4cm; right margin about 2.5cm. This will allow for the binding of the dissertation/thesis
- 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

#### General suggestions:

- Make sure that your tables, graphs, and other graphics are properly numbered and that you refer to them correctly

- Make sure that you write in an easily understood manner. Don't make paragraphs consisting of one sentence. Use shorter rather than long, complicated sentences. Academic writing is meant to be clear, not jargon! The ideal is one idea/thought/result per sentence
- Mind your grammar
- When you use a term in full (for which there is an acknowledged abbreviation) the first time then put the abbreviation in brackets. After that you can use the abbreviation, but ensure that you write it down correctly. It is always a good idea to include a list of abbreviations used in your text. This will be included in the text just after the Table of Contents
- When you use lots of technical terms it may be a good idea to include a glossary of terms used. You will insert this after the list of abbreviations
- Always do a spell-check once you have completed a paragraph or a section. This will be easier and faster than running a spell-check right at the end. Be very particular with the spelling because there is nothing that irks an examiner as much as spelling error after spelling error
- Print on only one side of the page
- Decide on which referencing method you will be using and ensure that you do not deviate from that. It is a good idea to stipulate somewhere which referencing method you are using

Supervisors, although they may assist with this, are not required to do detailed editing nor correction of spelling and grammar, or style. Students who need assistance in academic writing are encouraged to make use of support services available, e.g. The UCT Writing Centre. Provided the dissertation is readable and internally consistent, any of a number of styles is acceptable. It is suggested that candidates look at completed master's dissertations in the library for appealing layouts. These may be available as loan copies.

Title Page:

<p><b><i>Title of dissertation</i></b></p> <p><b>by</b></p> <p><b><u>Student: full names</u></b></p> <p><b><u>Student number</u></b></p> <p><b>SUBMITTED TO THE UNIVERSITY OF CAPE TOWN</b></p> <p><b>In (partial if the degree was by coursework AND dissertation) fulfilment of the requirements for the degree</b></p> <p><b>M .... (name of degree)</b></p> <p><b>Faculty of Health Sciences</b></p>
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**UNIVERSITY OF CAPE TOWN**

**Date of submission**

**Supervisor [s]:**

***Name and Department and University***

Declaration Page:

You must include a signed and dated declaration in the front of your dissertation/thesis. Please use the standard format shown below:

**DECLARATION**

I, ....., hereby declare that the work on which this dissertation/thesis is based is my original work (except where acknowledgements indicate otherwise) and that neither the whole work nor any part of it has been, is being, or is to be submitted for another degree in this or any other university.

I empower the university to reproduce for the purpose of research either the whole or any portion of the contents in any manner whatsoever.

Signature: .....

Date: .....

**6.1.5. Timing:**

Most candidates will require a year or two to complete the dissertation. Candidates will require HOD motivation to register beyond three years after starting the dissertation. Form D2(b) should be completed annually by candidates and their supervisors in order to keep track of progress. Form D2(b) is available from the Postgraduate office or the division's website.

**6.1.6. Supervisors:**

One cannot overemphasize the importance of arranging a dissertation supervisor as early as possible. The supervisor should be an individual who can relate to your research project, be available for frequent and regular discussion and advice, and someone with whom you can develop a good working relationship.

The supervisor can be based outside the parent University (ICT or SU). In such a case, an internal supervisor will be required to serve as a guide and link to university procedures. A

candidate need to enter into an agreement with all supervisors involved. This is called a memorandum of understanding. On this document the UCT/ SU supervisor need to be listed as the primary supervisor. Primary supervisors retain responsibilities to the candidate and the university until the dissertation process is complete. Other supervisors and their responsibilities are then listed on the document and signed by all parties. It is therefore possible that a co-supervisor without ties to UCT/ SU may be more productive in assisting a candidate. This is acceptable as long as the responsibilities of each supervisor are clearly described.

In order to assist a candidate with a masters research topic the supervisor needs to hold a masters degree or higher. The same applies apply to doctoral research (MD or PhD). If the primary supervisor does not hold a higher degree, then a second supervisor with adequate qualifications will need to be appointed by the senate.

One arrangement that candidates may reach with supervisors is an undertaking to publish the study, with the supervisor as co-author. This will usually require work beyond the graduation date. Such arrangements should be discussed in advance. Supervisors are not required to do detailed editing or correction of spelling, grammar, or style. They may refer candidates to the UCT Writing Centre for this purpose. A clinical supervisor may also act as a dissertation supervisor.

#### 6.1.7. Examiners:

Three examiners are selected for each candidate, two of whom will definitely examine the candidate's dissertation (one of these will be external to UCT/US); the third will be used if required. The examiners will most likely have national standing in regard to the subject matter of the research. Examiners will be selected by the Divisional Head, and the supervisor. These nominations will be circulated to the dissertations committee for approval.

Details required for each examiner are as follows: academic qualifications, postal and physical address, telephone and fax numbers, and email address. The candidate's supervisor may not examine the dissertation. The candidate may not be informed of the identities of the examiners, nor have any contact with the examiners. Once the outcome of the dissertation has been finalised, the examiners' identities are made known if the examiners have indicated that they have no objection to this.

#### 6.1.8. Submission of dissertations:

Master's candidates must submit two copies of the dissertation in temporary binding (e.g. ring binding), and a CD containing the dissertation in one continuous file in a universally readable format.

If you wish to graduate in June of any particular year then you have to:

- Give a letter of intention to submit to the Manager of the Postgraduate Unit not later than 15 February of that year
- Submit your dissertation by no later than 15 March of that year

If you wish to graduate in December of any particular year then you have to:

- Give a letter of intention to submit to the Manager of the Postgraduate Unit not later than 20 July of that year
- Submit your dissertation by no later than 15 August of that year

If you submit your dissertation before 15 February of a particular year then you do not have to reregister or pay fees again. If, however, you receive a grade of “Revise and Resubmit” then you must reregister and pay fees again w.e.f. the date on which you received the notification of the result. Supervisors will be asked by the Faculty Postgraduate Officer to submit a letter supporting submission. This letter should be supplied by the primary supervisor.

## 6.2. Guidance on how to structure a research proposal

The main purpose of this section is to ensure that your proposal proceeds through all the university approval processes without being returned to you to revise it. The division’s website has a more complete section on the research proposal ([www.emergencymed.co.za](http://www.emergencymed.co.za)).

A research proposal should cover at least the following issues:

- Introduction/background
- Literature review
- Aims and objectives
- Methods
- Ethical considerations
- Work plan and budget (if appropriate)
- Dissemination of findings
- References
- Appendices (especially copies of data collection tools)

### 6.2.1. Introduction/background

The introduction should provide a bit of background to the research, explain what the problem is that you are going to investigate (problem statement) and motivate for why this research is important/why this problem should be studied (rationale and justification for research). It should be short and capture the attention of the reader.

### 6.2.2. Literature review

It is important to demonstrate that you are familiar with the literature that has been written on this topic and to establish that your study is one link in a chain of research that is contributing to increased knowledge in your field. The major things you need to draw out of a literature review are:

1. What previous research has been done in this area (if there is a lot of literature, highlight the most important bits of previous research) – from this, you can identify what we currently know about your research topic and more importantly, what the gaps are in current knowledge (which helps justify why your research is important);
2. How have other researchers explored this research topic – i.e. you might get valuable insights into what theoretical and empirical approaches you should (or should not) use.

*Two tips: Firstly, avoid writing while constantly referring back to articles or other literature – rather read the articles first making very brief notes and then write from your notes – this will help avoid the problem of plagiarism.*

*Secondly, avoid describing each article/publication individually – rather identify the key issues that are raised overall in the literature and use references to the literature to substantiate a line of argument that you develop about these key issues.*

Finally, even if there is very little literature on the subject, you MUST have a literature review. At least indicate that the literature is very limited and mention what does exist – you will be able to find at least a few articles which are related to your research topic in some way.

### 6.2.3. Aims and objectives

You need to provide an explicit statement of the aims and objectives of your research. The aim is a general statement on the intent or direction of the research. Objectives are specific, clear and succinct statements of what you will do in your research and for what intended outcome (e.g. to undertake key informant interviews to understand the context within which x policy was developed). Someone who reads the objectives should have a pretty clear idea of what you are going to do in your study and why. One way of distinguishing aims and objectives are that objectives are specific operational tasks that you will perform, and that these tasks need to be accomplished in order to meet the aim.

Some researchers, particularly in scientific fields, also state a hypothesis (i.e. the assumption that your research will test) for the research. Often in the social sciences, or where more qualitative work is being undertaken, researchers present a conceptual framework. This clarifies the definitions and theoretical concepts you will use in your research and provides a framework for the analysis of results.

### 6.2.4. Methods

The methodology section of your proposal should clearly outline what information you are going to collect, how you will collect it and how it will be analysed. You should start the methodology section by stating the study design (i.e. is it a cross-sectional, longitudinal etc. study).

- What information you will collect: Be explicit and comprehensive here. If you are going to use a questionnaire for data collection, you should include the full questionnaire in an appendix, but you should summarise the key variables in the methods section (e.g. demographic, utilisation of health services, geographic access and socio-economic status information).
- How you will collect the information: e.g. conduct interviews, patient record review, questionnaire, observation etc. If you are going to collect this information for a sample of the population you are studying, you need to explain what sample size you will use and the technique you will use to sample (e.g. random, cluster, etc.)
- How you will analyse the data: What statistical tests will you use (if any), what software will you use etc.

### 6.2.5. Ethical considerations

This is absolutely critical in the health sciences faculty. If you are conducting research at a particular health care facility, you need to indicate that you have obtained permission to access information and/or patients at that facility (and provide a supporting letter to this effect in your appendices). Whenever you are going to conduct interviews or administer a questionnaire, you need to show that you will obtain informed consent from study participants (once again you need to include a copy of your informed consent form in the appendices). You need to indicate that you have paid attention to other issues such as language barriers – that questionnaires will be translated into respondent's first language etc. Essentially, be comprehensive and clearly demonstrate that you have carefully thought through all the ethical implications of your research and have adequately addressed them.

### 6.2.6. Work plan and budget (if appropriate)

While this is not essential for an unfunded post-graduate research project, it is good research practice to outline the timeframe for the project and indicate who will be undertaking various tasks (e.g. if you have a research assistant helping to extract data for you).

### 6.2.7. Dissemination of findings

Again, it is good research practice to indicate what you intend to do with your research findings, particularly how the information will be made available to the 'subjects' of your research or to other important stakeholders.

### 6.2.8. References

All literature referred to in the literature review or in any other part of the proposal must be referenced in full. You can select what method you would like to use (e.g. Vancouver, Harvard etc.) If you need ideas on appropriate referencing, look at some articles in your favourite leading journal and follow the referencing technique they use. Alternatively, ask your supervisor for information on the different referencing systems.

### 6.2.9. Appendices

Any data collection tools, e.g. questionnaires, structured interview schedule, record review data extraction sheets, should be included in the appendices. It is also important to include a copy of informed consent forms (in all languages that will be used in the research). You should also include supporting letters from appropriate institutions here.

### 6.2.10. Submission

Submission guidance for ethics approval and dissertation committee submission depends on the University you are enrolled at. Please use the guidelines provided on the website ([www.emergencymed.co.za](http://www.emergencymed.co.za)) in order to submit to the proper authority. The required documents and forms can be downloaded from the same site and is included in this document as appendix A and B.

## **7. Undergraduate Training**

Emergency Medicine has been included in the UCT undergraduate programme in years 3 through 6. The content varies from year to year: details are available from the undergraduate convenor, Dr Annemarie Kropman. Email [annemarie\\_kropman@yahoo.co.uk](mailto:annemarie_kropman@yahoo.co.uk)

An opportunity of including Emergency Medicine in the US undergraduate curriculum in the future is anticipated.

## 8. Contact details

### 8.1. Head of the Division of Emergency Medicine

Prof. Lee Wallis

Tel: +27-21-948-9908  
Fax: +27-21-948-9909  
Email: lewallis@pgwc.gov.za  
Address: METRO EMS  
Private Bag X24  
Karl Bremer Hospital  
Mike Pienaar Blvd  
Bellville  
7535  
South Africa

### 8.2. Application for MMed.EM (*either UCT or SUN*)

MMed.EM coordinator: Dr. Heike Geduld

Tel: +27-21-948-9908  
Fax: +27-21-948-9909  
Email: heikegeduld@yahoo.com

### 8.3. Application for MPhil.EM (*UCT*)

MPhil.EM coordinator: Dr. Stevan Bruijns

Tel: +44-1752-766305  
Email: scbruijns@googlemail.com

### 8.4. Application for MSc.EM (*UCT*)

MSc.EM Degree code: MM095

Area of specialty code: EM1

MSc.EM coordinator: Dr Sue le Roux

Email: Sue.leroux@mediclinic.co.za

### 8.5. Application for PhD (*either UCT or SUN*)

PhD coordinator: Prof Lee Wallis

Email: lewallis@pgwc.gov.za

UCT PhD info: <http://www.uct.ac.za/apply/candidates/downloads/>

SUN PhD info: Ms G Mji (gumji@sun.ac.za)

### 8.6. Research/ Dissertation (*either UCT or SUN*)

Research and dissertation board's contact details are through the division's website-  
[www.emergencymed.co.za](http://www.emergencymed.co.za)

## APPENDIX A.

**MPhil Emergency Medicine PROGRAM STRUCTURE**

- A. Clinical Emergency Care (8 core/2 electives)  
 B. African Emergency Care (5 core/1 elective)  
 C. Patient Safety and Medical decision making (7 core/ 1 elective) \*

NB. All core modules to be completed in the two years of registration.

	<b>Clinical Emergency Care</b>	<b>African Emergency Care</b>	<b>*Patient safety and Medical Decision Making</b>
<b>CORE YR 1</b>	Clinical Research Methods I 10	Clinical Research Methods I 10	Clinical Research Methods I 10
	Clinical Emergency Care I 10		Emergency Care Systems and Management 15
	Clinical Emergency Care II 10	African Emergency Care 15	Critical Thinking in Emergency Care 15
			Patient Safety and CQI 15
<b>CORE YR 2</b>	Clinical Research Methods II 15	Clinical Research Methods II 15	Clinical Research Methods II 15
	Resuscitation and Critical Care 10		
	Emergency Care Systems and Management 15		
<b>ELECTIVE</b>	Emergency Ultrasound 10	Emergency Ultrasound 10	Error theory and Advanced Decision making 10
	Disaster Medicine 10	Disaster Medicine 10	
	Basic Medical Rescue 10		
	Education and Training in Emergency Care 10	Education and Training in Emergency Care 10	Education and Training in Emergency Care 10
	Primary Health Care In Emergency Care 10		
<b>Credits for coursework</b>	90	50	80
<b>LEARNING PORTFOLIO</b>	40	40	20
<b>RESEARCH MODULE</b>	60	90	90
<b>TOTAL Credits</b>	<b>180</b>	<b>180</b>	<b>180</b>

\* Patient Safety stream to be done in conjunction with the Departments of Emergency Medicine at Dalhousie University, Canada (Prof Pat Croskerry) and Maryland University, USA (Prof Terry Mulligan) from 2013.