

UNIVERSITY OF CAPE TOWN

DEPARTMENT OF CIVIL ENGINEERING

POSTGRADUATE STUDIES

PREFACE

The Civil Engineering Department offers a wide range of postgraduate studies which are usually linked to the research fields in which the Department is currently active. Master degree programmes are offered which comprise different levels of research versus course work, thus allowing students to educate themselves according to their particular strengths and career choices.

This brochure provides information on postgraduate study within the Department of Civil Engineering, University of Cape Town.

ENQUIRIES

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Faculty of Engineering & Built Environment

ebe-faculty@uct.ac.za, Telephone: 021 650 2699

Admissions Office

admissions@uct.ac.za; Telephone: 021 650 2128/9

International Academic Programmes Office

int-iapo@uct.ac.za, Telephone: 021 650 2822/3740

Postgraduate Funding Office

pgfunding@uct.ac.za, Telephone: 021 650 2206/3926

Student Accounts and Fees Office

fnd-feeeng@uct.ac.za, Telephone: 021 650 1704/4076

Student Housing Admission and Advocacy

res@uct.ac.za, Telephone: 021 650 1045/1040

ACADEMIC CALENDAR 2017 AND 2018

	2017 year pattern
1st quarter	13 March 2017 to 28 April 2017
1st vacation	29 April 2017 to 7 May 2017
2nd quarter	08 May 2017 to 23 Jun 2017
Mid-year vacation	17 July 2017 to 13 August 2017
3rd quarter	14 August 2017 to 22 September 2017
Mid-term vacation	23 Sept 2017 to 01 October 2017
4th quarter	02 October 2017 to 22 Dec 2017

STRUCTURE OF POSTGRADUATE STUDIES IN THE DEPARTMENT OF CIVIL ENGINEERING

Postgraduate studies play a vital role in developing the skills necessary for success in a knowledge-driven economy, both locally and internationally.

The Faculty is committed to:

- Making its educational programmes increasingly research-led
- Increasing both the numbers and the relative proportions of postgraduate students
- Continually improving the postgraduate educational experience
- Increasing throughput rates.

Postgraduate education in the Department of Civil Engineering at UCT commonly results in one of three outputs: a Doctor of Philosophy degree (PhD); a Master degree; or a Postgraduate Diploma. Master degrees in the Faculty may be obtained in one of three ways (i) by a 180 credit research dissertation; or (ii) by 60 credits of coursework and a 120 credit research of dissertation; or (iii) by 120 credits of coursework and a 60 credit dissertation. Note that 1 Credit implies 10 notional hours of intensive study (South African Qualifications Authority).

As a matter of clarity, by convention a Master degree is normally awarded following the successful examination of a dissertation, which means a discourse or discussion. A PhD is awarded on the basis of a thesis (an assertion or tenet that has to be proved against critical attack). In practice, however, the two terms are commonly used interchangeably.

This handbook is intended to serve as a guide to postgraduate students in Civil Engineering. It draws on other published University documents and Handbooks, it does not replace them. The rules for the various higher degrees are set out in the [Handbook General Rules & Policies](#) (Handbook 3 in the UCT series) and the [Faculty Handbook](#) (Handbook 7(b) in the UCT series).

THE DIFFERENCE BETWEEN A MASTERS AND A DOCTORAL DEGREE

At the most fundamental level, the PhD is the higher degree: it requires more effort and time to obtain. However, in practice the difference is more subtle than this.

A Master degree is frequently the first real research students will undertake. Its primary function is thus training in research. It is a clearly circumscribed piece of work that the supervisor feels confident can be undertaken within, or close to, the minimum time period. The process includes posing the research question, undertaking a relevant literature review, engaging rigorously with research methods, drawing valid conclusions and communicating findings in a clear, logical and scholarly way. Importantly, the work does not have to contain original findings - it must simply demonstrate a mastery of the methods of research.

The degree of Doctor of Philosophy, on the other hand, certifies that the candidate is able to conduct independent research on his / her own initiative. Through the thesis the candidate must be able to demonstrate that he / she is at the academic forefront in the topic selected, that the work is original and that it advances knowledge.

Masters degrees are departmental degrees: students are located within departments or within departmentally-related research groups. Most Master degrees are discipline-specific. The Master of Philosophy is interdisciplinary and students are usually located with the department of the primary supervisor. In contrast, the PhD is a University-wide degree (the award of the degree is the responsibility of the Doctoral Degrees Board) and students are academically located with the department of the principal supervisor.

MASTER DEGREES IN ENGINEERING

The Department of Civil Engineering offers a number of Postgraduate Master Degrees, as listed below.

Master of Engineering (MEng)

This is a coursework masters (120 credits of coursework and 60 credits of a minor dissertation). Generally, candidates entering this programme should have a four year engineering degree or its equivalent (based primarily on academic qualifications and work-place experience).

Master of Science in Engineering (MSc Eng)

This is a research-based degree (180 credit dissertation or 120 credit dissertation plus 60 credits coursework). Generally, candidates entering this programme should have an equivalent of an Honours degree or a four year engineering degree.

Master of Philosophy (MPhil)

This is a faculty (not a departmental) degree for candidates engaged in interdisciplinary dissertation and coursework. The MPhil is offered in three options:

- a) 120 credits coursework with 60 credit minor dissertation
- b) 120 credits dissertation with 60 credit coursework
- c) 180 credits research dissertation

Prof Masters (ProfM)

The department offers two Prof Master degrees. The degree is aimed at Professionals with limited time available to concentrate on a dissertation. Candidates are required to complete 140 credits coursework as well as a 45 credit project.

PROGRAMME AND COURSE INFORMATION

MSc in Engineering specialising in Civil Engineering [CIV01]

The Department prepares candidates for the Master of Science in Engineering in Civil Engineering and for the Doctor of Philosophy. The Department offers a number of special postgraduate courses each year, some of which are scheduled to facilitate attendance by practising engineers from industry. The Master of Science in Engineering can be either by dissertation only [EM023] or by coursework (approved by your supervisor) and dissertation [EM024].

Civil Infrastructure Management and Maintenance

Programme Convener: Professor Hans Beushausen, Dipl-Ing. (HAW Germany), MSc, PhD Cape Town

The primary aim of the MEng and MScEng specialising in Civil Infrastructure Management & Maintenance is to produce graduates with the necessary knowledge and skills to engage effectively in structural and materials engineering with respect to maintenance, rehabilitation and management of civil infrastructure. The broad areas of interest are deterioration science, assessment technologies, and renewal engineering.

COURSE SCHEDULE 2017

Course	Code	Credits	Contact week	Fees
1. Advanced Infrastructure Management	CIV5067Z	20	05 – 09 June	R9 910.00
2. Project Planning and Implementation	CON5016Z	20	02 – 05 May	R9 910.00
3. Durability & Condition Assessment of Concrete Structures	CIV5116Z	20	22 – 24 Feb & 02 – 03 May	R9 910.00
4. Bridge Management and Maintenance	CIV5115Z	20	19 – 23 June	R9 910.00
5. Structural Performance Assessment & Monitoring	CIV5119Z	20	TBC August	R9 910.00

Geotechnical Engineering

Programme Convener: Dr Denis Kalumba, BSc(Eng) Makerere, MSc(Eng) Cape Town, PhD Newcastle-upon-Tyne

The master's programme with a specialisation in Geotechnical Engineering is intended to support high level training and enhance both the technical skills of recent graduates or experienced personnel who work in, or aspire to a career in civil engineering construction, consulting, environmental and related industries. The primary purpose of the programme is to provide advanced conceptual understanding, detailed factual geotechnical knowledge and specialist technical skills appropriate for postgraduates who wish to widen their professional scope and work towards a career in the field of geotechnical engineering.

COURSE SCHEDULE 2017

Course	Code	Credits	Contact week	Fees
1. Laboratory and Field Techniques	CIV5110Z	16	27 Feb – 03 March	R5 840.00
2. Ground Improvement Techniques Foundation Design	CIV5111Z	16	19 – 23 June	R5 840.00
3. Advanced Soil Mechanics	CIV5122Z	16	17 – 21 July	R5 840.00
4. Foundation Design	CIV5114Z	16	28 Aug – 01 Sept	R5 840.00

Structural Engineering and Materials

Programme Convener: A/Professor Hans Beushausen, Dipl-Ing. (HAW Germany), MSc, PhD Cape Town

The programme offers high level training in structural design, structural analysis and structural materials by providing sound theoretical background and encouraging critical and innovative thinking. Students benefit from expertise in concrete technology, structural performance and design, computational mechanics, and finite element analysis. The programme is supported by excellent laboratory and computing facilities and draws from cutting edge research outputs.

COURSE SHEDULE 2017

Course	Code	Credits	Contact week	Fees
1. Contract Law	CIV5025Z	12	12 – 14 July	R4 300.00
2. Advanced Mechanics of Materials	CIV5108Z	16	29 June – 03 July	R5 840.00
3. Stability and Design of Steel Structures	CIV5112Z	16	11 – 14 Seot & 02 – 05 Oct	R5 840.00
4. Plates and Shell Structures	CIV5100Z	16	13 – 17 Nov	R5 400.00

Additional courses can be selected from the postgraduate programme of the University of Stellenbosch or from CERECAM at UCT.

Water Quality Engineering

Programme Convener: Professor GA Ekama, BSc(Eng) PhD Cape Town SFWISA FRSSAf FSAAE MASSAf MWEF MIWA

The primary aim of the MEng and MScEng specialising in Water Quality Engineering is to produce graduates with the necessary knowledge and skills to engage effectively in theory, design, modelling and operation of biological and chemical wastewater and sludge treatment systems.

To protect surface water quality and prevent the de-oxygenation and eutrophication, municipal wastewater treatment is required. In South Africa (and many other countries in the world) the preferred technology for this is the biological nutrient (N&P) removal (BNR) activated sludge system. The primary objective of the PGDipl, MEng and MSc (Eng) specialising in Water Quality Engineering is to produce engineers and scientists with high-level and in-depth knowledge and understanding of bioprocess engineering so that they can competently and effectively use steady state and dynamic simulation models for the design and operation of municipal wastewater treatment plants comprising primary treatment, BNR activated sludge, secondary settling tanks, flotation thickening and stabilisation of waste sludge by aerobic and/or anaerobic digestion unit operations in a plant wide integrated way. The steady state and dynamic WWTP unit operation models are based on bioprocess engineering and mathematical modelling principles with supporting information from several scientific disciplines such as chemistry, microbiology and biochemistry. Upon completion of this curriculum the modern approach of modelling and simulation to wastewater treatment plant design and operation can be embraced with deeper insight, advanced knowledge and greater confidence.

COURSE SHEDULE 2017

Course	Code	Credits	Contact week	Fees
1. Modelling & Simulation of Wastewater Treatment	CIV5049Z	12	20 July – 27 Aug	R5 060.00
2. Aquatic Chemistry Part A	CIV5051Z	14	06 Feb – 09 March	R5 060.00
3. Aquatic Chemistry Part B	CIV5052Z	14	23 March – 08 May	R5 060.00
4. Advanced Chemical, Physical & Biological Processes Modelling	CIV5054Z	10	04 Sept – 16 Oct	R4 300.00

Transport Studies

Programme Convener: A/Professor Roger Behrens, Pr Pln BA MCRP PhD Cape Town

The programme offers degrees specialising in transport studies, with a specific focus on the planning and management of urban passenger transport systems. The primary aim is to produce graduates from a range of postgraduate disciplines with the necessary knowledge and skills to engage effectively with the challenge of creating affordable, efficient, sustainable, safe, equitable and environmentally sound urban transport systems, and to contribute to the implementation of new and demanding policy directives. Curriculum content is cross-disciplinary in orientation and exposes students to a broad range of the analytical, evaluative, planning and management issues they are likely to encounter in the field.

A candidate for the Master of Transport Studies is required to complete core courses totalling not less than 60 credits plus approved elective courses totalling a minimum of 75 credits, research projects totalling a minimum of 45 credits and to comply with the prescribed curriculum. A candidate for the MEng in Transport Studies is required to complete core courses totalling 120 credits (including a 60 credit minor dissertation) plus approved elective courses totalling a minimum of 60 credits, and to comply with the prescribed curriculum. A candidate for the MPhil in Transport Studies is required to complete core courses totalling 120 credits (including a 60 credit minor dissertation) plus approved elective courses totalling a minimum of 60 credits, and to comply with the prescribed curriculum. The MPhil in Transport Studies can also be completed through a 120 credit or 180 credit dissertation. No new applications for the Postgraduate Diploma in Transport Studies will be considered in 2015 (<http://www.cfts.uct.ac.za>).

COURSE SCHEDULE 2017

Course	Code	Credits	Contact week	Fees
1. Transport Modelling	CIV5133Z	20	30 Jan – 06 Feb	R9 910.00
2. Local Area Transport Planning	CIV5036Z	20	06 – 13 March	R9 910.00
5. Integrated Land Use-Transport Planning	CIV5038Z	20	08 – 15 May	R9 910.00
6. Transport Demand Analysis and Project Assessment	CIV5132Z	20	05 – 12 June	R9 910.00
7. Management of Transport Supply and Demand	CIV5035Z	20	14 – 21 August	R9 170.00
8. Public Transport Systems Design and Operations	CIV5071Z	20	09 - 16 October	R9 170.00
9. Public Transport Policy and Regulation	CIV5070Z	20	13 – 20 November	R9 170.00

Urban Infrastructure Design and Management

Programme Convener: Professor N Armitage, PrEng BSc(Eng) *Natal* MSc(Eng) *Cape Town* PhD *Stell* FSAICE FWISA FSAIMunE Mem IAHR Mem IAHS Fellow IWA

The primary aim of the MPhil specialising in Urban Infrastructure Design and Management is to produce graduates with the necessary knowledge and skills to engage effectively with developing cities: Issues and strategies; community development, urban renewal, sustainable urban systems, advanced infrastructure management and information technology and other planning and management topics.

A central issue for both South Africa and the broader African continent is the delivery of urban services and infrastructure to rapidly growing urban populations, such that they are enabled to live and work in sustainable and integrated environments. This Master's programme, leading to an MPhil in Urban Infrastructure Design and Management, is aimed at building capacity among those in government and the private sector that are committed to the future of African cities and to the servicing of particularly poorer inhabitants. The programme has a strong inter-disciplinary focus, as the Faculty believes that urban problems can only be addressed through an integration of approaches which come from specific disciplinary backgrounds. To this end the programme draws on staff from engineering, architecture, planning, environmental sciences, geography, the social sciences, and management.

COURSE SCHEDULE 2017

Course	Code	Credits	Contact week	Fees
1. Urban Transitions in the Global South	CIV5064Z	20	13 - 17 March	R9 910.00
2. Integrated Urban Water Management	CIV5107Z	20	16 - 20 October	R9 910.00

GENERAL STUDENT INFORMATION

➤ APPLICATIONS

Prospective applicants can apply online <https://www.uct.ac.za/apply/applications/forms/> or submit a printed application form to the Admissions office on campus.

QUALIFICATION AND SPECIALISATION CODES REQUIRED WHEN COMPLETING APPLICATIONS							
Qualification	Specialisation	Code	CV incl. work exp	100 Word research outline	Supervisor	letter of motivation	Start Date
MASTER DEGREE PROGRAMMES							
Master of Engineering (60 research 120 coursework)	Civil Infrastructure Management and Maintenance	EM017CIV07	Y	N	N	N	N
	Structural Engineering & Materials	EM017CIV04	Y	N	N	N	N
	Transport Studies	EM017CIV06	Y	N	N	N	N
	Water Quality Engineering	EM017CIV02	Y	N	N	N	N
Master of Science in Engineering (180 credits research)	Civil Engineering	EM023CIV01	Y	Y	Y	Y	Y
	Civil Infrastructure Management and Maintenance	EM023CIV07	Y	Y	Y	Y	Y
	Water Quality Engineering	EM023CIV02	Y	Y	Y	Y	Y
Master of Science in Engineering (120 credits research, 60 credits coursework)	Civil Engineering	EM024CIV01	Y	Y	Y	Y	Y
	Civil Infrastructure Management and Maintenance	EM024CIV07	Y	Y	Y	Y	Y
	Geotechnical Engineering	EM024CIV08	Y	Y	Y	Y	Y
	Water Quality Engineering	EM024CIV02	Y	Y	Y	Y	Y
Master of Philosophy (180 credits research)	Civil Engineering	EM025CIV01	Y	Y	Y	Y	Y
Master of Philosophy (120 credits research, 60 credits coursework)	Civil Engineering	EM026CIV01	Y	Y	Y	Y	Y
	Transport Studies	EM026CIV06	Y	Y	Y	Y	Y
Professional Masters	Geotechnical Engineering	EM028CIV08	Y	Y	Y	Y	Y
	Transport Studies	EM029CIV09	Y	Y	Y	Y	Y
Master of Philosophy (60 credits research, 120 credits coursework)	Transport Studies	EM027CIV06	Y	Y	Y	Y	Y
DOCTORAL PROGRAMME							
Doctor of Philosophy	Civil Engineering	ED001CIV01	Y	Y	Y	Y	Y
OCCASIONAL STUDY PROGRAMME							
Occasional EBE Postgraduate	Civil Engineering	EZ002CIV01	Y	N	N	Y	N

The following additional information will be required to accompany your application: detailed curriculum vitae including referee names and contact details; degree transcripts and certificates. Faxed or scanned copies of the application form or any other form are **NOT** accepted. You may need to submit specified documents with your application form. Please send copies and NOT originals. Copies must be certified by a Commissioner of Oaths. Any postmaster, police officer, advocate or attorney will certify copies for you. The Faculty will retain these copies. Please note that the university will not hesitate to prosecute anyone who submits forged documents.

➤ APPLICATION FEES

Applicants will be required to pay a non-refundable application fee.

- UCT students/graduates: nil
- Postgraduate applicants (SA and SADC region): R100
- Postgraduate applicants (outside SADC region): R300

The application fee may be paid by cheque, postal order, EFT or credit card. Cash payments may only be made to the Cashiers Office, Kramer Building, Middle Campus, UCT.

EFT Payments can be made into the following bank account:

Beneficiary: University of Cape Town – No.1 Sundries Account
Bank: Standard Bank SA Ltd
Branch: Rondebosch, Western Cape
Branch Code: 025009
Account: 071053854
Swift Code: SBZAZAJJ
Reference: 11196, applicant's name and surname e.g. *1196 Adam Eva Smith*

➤ INTERNATIONAL STUDENT FEES

International students from outside the SADC region must pay the full international term fee before registration. The International Academic Programmes Office (IAPO) will send you a fee invoice on request detailing the cost of your study for the duration of your stay. If you are a student from the SADC member countries*, you pay the local/South African fee. All non-South African students who qualify for local fee rates must pay the minimum initial payment of academic, residence and administrative service fee.

*The SADC countries are: Angola, Botswana, Democratic Republic of Congo, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Swaziland, Seychelles, South Africa, Tanzania, Zambia, and Zimbabwe.

➤ APPLICATION DEADLINES

31 October 2017 is the closing date for all programmes.

THE APPLICATION PROCESS

Applications cannot be amended once submitted. Should you wish to change your programme of study, or any other details, you will be required to contact the UCT Admissions Office on email: admissions@uct.ac.za

Online applications: The following correspondence will be received within 48 hours:

- an application number which should be used in all future correspondence with UCT
- your unique log-in details to monitor your application through our self-service facilities
- further instructions which you will be required to follow carefully.

Application forms: The following correspondence will be posted to you within 7 days:

- an application number which should be used in all future correspondence with UCT
- your unique log-in details to monitor your application through our self-service facilities
- a data sheet, which contains the details of your application.

➤ INTERNATIONAL APPLICANTS

English language proficiency

The medium of instruction and examination at UCT is English. You must have attained proficiency in English. Visit toefl@ets.org or www.toefl.org for detailed information on requirements.

➤ STUDY VISAS

UCT's International Academic Programmes Office (IAPO) co-ordinates and facilitates internationally-related initiatives and activities at UCT. IAPO supports international students and facilitates your integration into the UCT environment. IAPO helps international students with queries relating to application procedures, application deadlines, visa requirements and international tuition fees.

In terms of the Immigration Act No 13 of 2002, if you are resident outside of South Africa and are not a South African citizen or do not have permanent residence, you are required to obtain a study visa to enter the Republic for the purpose of attending the University. The offer of a study place by the University does not bind the Department of Home Affairs in any way to allow you to study in South Africa, nor does it remove the need for you to obtain permission to enter the country. If you are offered a study place please apply immediately for a study visa. Your application must be made to the nearest South African Embassy, Consulate or High Commission. This procedure could take up to 8 weeks.

Please obtain further information and application guidelines from IAPO.

➤ FEES FOR 2017

Fee information can be accessed through the University of Cape Town's website: www.uct.ac.za/apply/fees/

Alternatively, contact the Fees Office on Tel: 021 -650 1704 or email: fnd-feeeng@uct.ac.za

Requests for pro-forma invoices are sent to the Fees Office. The following link can be used to access the form: www.uct.ac.za/downloads/uct.ac.za/apply/fees/proforma_invoice.pdf

➤ STUDENTS FROM SOUTH AFRICA AND SADC COUNTRIES

SADC Countries: Angola, Botswana, Democratic Republic of Congo, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Swaziland, South Africa, Tanzania, Zambia and Zimbabwe.

First year postgraduate students starting their studies in February/March must pay the initial instalment for tuition by 06 February 2017, unless they can provide the Fees Office with proof that they have secured financial assistance from the UCT's Postgraduate Funding Office, or have a firm written commitment of a scholarship or bursary from a sponsor.

➤ INTERNATIONAL STUDENTS FROM NON-SADC COUNTRIES

Fees are to be settled in full prior to registration. An international academic fee will be charged to international students from non-SADC countries. For further details please refer to the Fees Handbook which can be access at www.uct.ac.za/apply/fees/

For further information and pro-forma invoices, please contact the International Academic Programmes Office:

Tel: 021 – 2822 or email: int-iapo@uct.ac.za

➤ STUDENT CARDS

New postgraduate students need to produce their Identity document to obtain an official student card bearing the student's details, student number and photograph from Campus Protection Services. Students must keep this card in order that it can be revalidated for use in the following year. A charge is levied for replacement of cards. Returning postgraduate student cards will be automatically reactivated once the registrations are processed.

➤ HANDBOOKS AND RULES

Candidates for postgraduate degrees must carefully read the appropriate degree/diploma rules set out in the Engineering Faculty Postgraduate Handbook as well as the General Rules and Policies (*Book 3*). These handbooks, including the Student Support and Services Handbook can be accessed at <http://www.uct.ac.za/apply/handbooks/>

➤ RENEWAL OF REGISTRATION

Each candidate is responsible for maintaining the continuity of his/her registration. Registration and curriculum forms for returning candidates are distributed by the Departments in January. Registration must be completed by end February each year, or if a candidate is taking first semester courses, by no later than the date the first course begins. A penalty fee of R2000 is charged for late registration. Candidates who for some reason do not receive their forms by end January are expected to follow up with the administrators in their departments.

➤ REGISTRATION FOR MASTER STUDENTS

Newly entering candidates who will be taking coursework as part of their programmes must register not later than the date on which their first course begins (there is a R2000 penalty for late registration). However, there is no specific date for first registration of newly entering postgraduates who are registering for a thesis, dissertation / project – commencement is by mutual arrangement with the supervisor.

Masters and PhD students who need to have the year of first registration counted as an academic year for their minimum period of registration must have been registered for the degree concerned by 30 April. Registration follows formal acceptance by the Faculty of an application for admission. Registration / provisional registration involves completion of 2 forms – a curriculum form and a registration form.

In the case of Master degrees, the Head of Department and supervisor must be satisfied that the student is equipped for Master degree study and has a suitable research topic before he/she is accepted and registered. Candidates should submit, via the proposed supervisor, a written proposal (as a guideline 6-10 pages) which outlines, *inter alia*

- The topic to be investigated
- familiarity with the central literature within the broad field of study
- Clarity on the research methods.

In terms of best practice, it is recommended that the proposal should be delivered to a departmental research seminar before the field or laboratory research process begins. Normally this would occur within 3 months after registration.

Wherever possible the supervisor should make every effort to ensure that all postgraduate students attend a formal research methods course. In the case of 120/60 credits research Masters degrees the above requirement should be covered in at least a 4-credit theory course which deals with generic research methods. This should form part of the necessary 60 theory credits.

If you are a new Master's student in 2015 taking the 120 credits dissertation option, it is compulsory that you register for the dissertation preparation course plus your coursework. In 2016 you will register for the 120 credit dissertation course.

➤ REGISTRATION FOR PhD STUDENTS

The procedure with regard to PhD students is that initially they register provisionally until their research proposals have been formally approved by the Doctoral Degrees Board. The approval procedure requires the candidate to present a seminar, based on a written research proposal, to departmental staff, other postgraduate students and others with specialist knowledge in the field of study, which demonstrates, *interalia*, that:

- The candidate is familiar with the main literature in the field
- There is sufficient scope in the topic for a PhD and there is a clear definition of the hypotheses proposed
- The candidate has the ability to undertake the work
- The potential contribution to knowledge has been identified and there is a clear definition of the key questions to be addressed in the context of the proposed hypotheses
- The method of research is sound and achievable and there is a clear knowledge of the experimental procedures to be used and the methodology to be pursued in analysing the results.

This should be done within 6 (six) months of first registration. The Head of Department then convenes a panel to confirm or reject the candidature and to confirm that:

- The supervisor has the knowledge to undertake the supervisory task (the unwavering rule must be that if there is not sufficient specialist knowledge within the department in that field, the candidate should not be accepted)
- The supervisor has sufficient time to undertake the supervisory role adequately (the Head must specifically address issues of equity and balance in teaching loads at this point).

If the panel is satisfied on these issues, the Head recommends acceptance to the Faculty's Committee of Assessors (COA) and then to the Doctoral Degrees Board (DDB) for final approval. In the event of a seminar being impossible, for logistical or other good reasons, the candidate must produce a major paper which can then be evaluated in the same way.

➤ UPGRADING TO PhD

It is possible to change the status of registration during the process of study. Thus, it is possible for a Master degree to be upgraded to a PhD if the supervisor believes there is potential in the process to lead to a higher qualification. This would normally occur in the second year of the research process. It is not possible to backdate registration to the first year. However, it must occur well before the dissertation is examined: it is not possible to use the work of the Master degree towards a PhD after the examination process. Similarly, it is possible to downgrade from a PhD to a Master degree. Again, however, this must occur before examination. It is not possible for a Master degree to result from a failed PhD. It is the responsibility of the supervisor, with the endorsement by the Head of Department, to motivate the upgrade in writing.

➤ PROCEDURE FOR CHANGING CURRICULUM

If, after registration as a postgraduate, a candidate wishes to add any courses to his/her curriculum or withdraw from any courses it is essential that the prescribed change of curriculum form be completed and submitted to the Head of Department before the specified closing date. The closing dates for curriculum changes are published in the handbook *General Rules and Policies*, a copy of which is obtainable from the Faculty Office or the Department, on request or in the *Fees Handbook*.

Candidates are responsible for regularly checking their curricula and reporting any anomalies to the Faculty Office (Postgraduate Officer on Tel No. 650 5860 or email: Kawai.Ho@uct.ac.za)

➤ LEAVE OF ABSENCE OR CANCELLATION/DISCONTINUATION OF STUDIES

If you are a registered student at UCT and it is impossible for you to continue with your studies/research in the current year but you intend continuing in the following year, you must apply for leave of absence, by completing the Leave of Absence form which must be submitted to Faculty of Engineering & the Built Environment, sent via email to Kawai.Ho@uct.ac.za.

An additional letter of motivation should include: your address, name, surname, student no., your reasons, the period for the leave of absence (i.e. whole year, 1st semester. (Jan – Jun) or 2nd semester (Jul – Dec), the name of your supervisor and what your intentions are when you return from the leave of absence. However, you should note it is the policy of the Faculty that leave of absence is not granted for more than two years. Applications for the grant of leave of absence retrospectively will not be accepted. For a candidate to be considered, if eligible, for a refund of fees already paid, application for leave of absence must be made before the deadline dates specified in the Fees Handbook (obtainable at www.uct.ac.za/apply/fees/)

➤ CANCELLATION/DISCONTINUATION OF STUDIES

A candidate who wishes to discontinue his/her studies and not return, must complete a Cancellation of Registration form obtainable from <http://www.uct.ac.za/downloads/uct.ac.za/currentstud/undergrad/cancelregistration.pdf> before the set deadline date (refer to the Fees Handbook for information on these dates and on eligibility for refunds). This form must be completed and submitted to the Faculty Office with his/her student card. This is of critical importance because if a candidate leaves without cancelling he/she will still be liable for fees that are payable. Applications for retrospective cancellation of registration will not be accepted. There are specified dates after which a cancellation cannot be accepted or any fees refunded (details are in the Fees Handbook).

➤ SELECTING A SUPERVISOR

Once students have decided on the broad research area in which they wish to work, it is necessary to identify a supervisor. Save in exceptional circumstances, the principal supervisor must be a full-time member of the academic staff or a person who has been accredited by the Faculty's Postgraduate Planning & Administration Committee for supervisory purposes. Co-supervision by persons within or without the University is a possibility, but a person employed outside of the University may not act as principal supervisor. Student-supervisor relationships are normally established through one of four processes:

- The prospective student directly approaches a staff member
- The prospective student approaches the Head of Department who will suggest a supervisor
- The prospective student approaches the head of a research unit working in the broad field of interest who will suggest a supervisor
- A staff member (usually with access to research funding) will approach the student, in order to encourage the student to undertake research in the staff member's area of research interest.

In the final instance, however, the Department allocates supervisors to students: the students do not select their own supervisor. It is an important function of the Head of Department to satisfy him/herself that the proposed supervisor has adequate knowledge and time to do the job properly. In the case of Doctoral candidates, the Doctoral Degrees Board is also charged with satisfying itself about the adequacy of the supervisor. Academic staff who do not have a PhD, will not normally supervise PhD degrees. In some cases, people who are experts in their fields and who do not have a PhD are suitable for supervision. In these cases,

the Department must secure formal accreditation to act as a PhD supervisor from the Faculty's Postgraduate Planning and Administration Committee.

Staff members should not accept the responsibility of supervision unless they have knowledge in the direct research area or if their workload is too heavy for them to discharge their supervisory duties satisfactorily. As a general guideline, no member of staff should supervise more than 8 postgraduate students at any point in time. Heads of Departments should review workloads annually to ensure a balance is maintained. For information on research areas offered in the various departments, please go to www.ebe.uct.ac.za

➤ **SELECTING A TOPIC**

The selection of a topic for research may occur in two ways. Particularly in cases where the supervisor is part of an active research group, students may be invited to work on a topic identified by the supervisor. In other cases, the topic will be identified by the candidate. In all cases, however, it is the responsibility of the candidate to select the final topic. This identification and selection is seen as an important part of the research process.

➤ **MoU BETWEEN POSTGRADUATE STUDENTS AND SUPERVISOR**

In the case of PhD registration the University has introduced a Memorandum of Understanding (MoU) to be signed in the first year of registration by both supervisor and candidate, clarifying issues relating to relative roles and responsibilities, timing, funding (if appropriate) and intellectual property. The University has produced a generic model of the agreement, but faculty-specific versions are allowed, with the approval of the University.

Before the start of the second and subsequent years of registration, a supplement to the MOU, consisting of two schedules (candidates' plan of work for the year (schedule 2) and budgets and outputs (schedule 3) should be signed by both the candidate and supervisor. This process represents an annual review of progress and should preferably be undertaken at the end of each academic year. If in the opinion of the supervisor, adequate progress is not being made, the MOU should clearly lay down criteria (such as submission dates and milestones) against which further progress shall be measured). If progress continues to be unsatisfactory, the Doctoral Degrees Board may refuse re-registration. In the case of a Masters degree, an MoU will also be required. A lack of progress should be formally documented and milestones set.

➤ **FACULTY BEST PRACTICE WITH RESPECT TO ROLES AND RESPONSIBILITIES**

Responsibility of the student:

- To accept that the primary responsibility for his/her education rests with the student.
- To demonstrate a reasonable work ethic and to make every effort to meet the normal throughput rate (2 years for a Masters student, 4 years for a PhD student).
- To share ideas and to work collegially.
- To participate in and to contribute to the life of the department.
- To assist in the mentoring and orientation of fellow students from outside Cape Town.
- To commit to co-publication with the supervisor.
- To commit to constructive feedback at the end of the process.
- To familiarise him/herself with the University rules, particularly with regard to plagiarism, and to commit to respecting those rules.

Responsibility of the Supervisor:

- To provide quality supervision on a regular basis (as a guideline, a minimum of one hour per week).
- To respond timeously to the submission of written work requiring feedback.
- To arrange for a suitable replacement if the supervisor has to be absent for a lengthy period of time (more than three weeks).
- To refrain from any form of sexual harassment.
- To treat the student with unfailing respect and politeness.
- To integrate the student into the academic life of the department. This should include the following: -
 - Whenever possible, providing an opportunity for the student to teach undergraduate students in the candidate's area of growing expertise.
 - To organise a seminar by the student, involving staff and senior students in the Department. As a guideline each student should give one seminar a year with the first seminar to be delivered once the student's research proposal has been developed to the satisfaction of the supervisor. A seminar should also be delivered within 4 months of the final write up of the thesis / dissertation. These sessions should be used by the head or postgraduate programme convenor to monitor the progress of each student.
 - To facilitate postgraduate students, on a voluntary basis, playing a mentoring role to undergraduate students - part of this function could include the early identification of serious stress and referral to appropriate forms of assistance.
 - To assist in the incorporation of the student into the social life of the department.

➤ APPEALS

The relationship between supervisor and postgraduate student is an important one: if it is unsatisfactory it can significantly and negatively impact on the educational experience. If serious problems develop in this relationship, the student should normally:

- Raise the matter with the supervisor and seek to resolve the matter personally.
- If this does not resolve the matter, the problem should be referred to the Head of Department. If the supervisor is the Head, it should be referred directly to the Deputy-Dean charged with Postgraduate Affairs.
- If the supervisor is the Dean or a Deputy Dean, the matter should be referred to the Deputy Vice-Chancellor with the research portfolio.

➤ SUPERVISION AND ATTENDANCE AT THE UNIVERSITY

During the period of his /her registration, a higher degree candidate will be expected to be available to attend at the University for discussion with his/her supervisor. For persons who are not on Campus or who are based outside Cape Town the general rule for PhD candidates for many years has been that a supervisor may require one year of attendance during the total period of registration for the degree. For Master candidates the guideline has been one month per annum of attendance while registered for the degree. Nowadays, given the ease of communication by means of fax or email, a supervisor may at his/her discretion modify the attendance requirement. However, a candidate must be prepared to make him/herself available for discussion at the University if required.

➤ ETHICS

The issues of ethics and intellectual honesty are vital to university life. The Faculty takes the issue of ethics in research very seriously and to this end has established a Faculty Ethics Committee. Students are required to apply for ethics approval through the following link: <https://universityofcapetown.submittable.com>

The terms of reference of this Ethics Committee are to:

- take steps to ensure the highest ethical standards in research by members of the Faculty;
- raise the consciousness of members of the Faculty (staff and students) regarding ethical standards in research;
- review, in terms of ethical considerations, research applications submitted by members of the Faculty, student research, contract research and research activities undertaken by individual staff members. (details of how this will be done were under consideration at the time this booklet was sent to the printers);
- raise the consciousness of the Faculty student body regarding plagiarism;
- promote the education of the Faculty student body regarding proper and appropriate styles of referencing cited work;
- provide assistance, upon request, to Heads of Department within the Faculty on matters relating to ethics in research;
- further the aims and objectives of the University Ethics in Research Committee insofar as they are applicable to research undertaken within the Faculty.

The EBE Research Based Education Handbook can be accessed via the following link:

http://www.ebe.uct.ac.za/sites/default/files/image_tool/images/50/2014%20EBE%20RESEARCH-BASED%20EDUCATION%20HANDBOOK_0.pdf

The Ethics in Research Handbook can be accessed via the following link:

http://www.ebe.uct.ac.za/sites/default/files/image_tool/images/50/ethics%20handbook.pdf

➤ PLAGIARISM

In academic work, researchers build on the ideas of others. This is a legitimate and accepted way of doing research. Plagiarism is using someone else's ideas or words and presenting them as if they are your own. It is therefore a form of academic cheating, stealing or deception. Because plagiarism is an offence, all universities take a very serious view of anyone who is found cheating. Those who are suspected of having plagiarised, will be referred to the Vice-Chancellor or nominee for possible disciplinary action in terms of the rules on disciplinary jurisdiction and procedures (DJP1.1).

Not all plagiarism is deliberate, but even inadvertent plagiarism will be severely penalized. It is therefore your responsibility to know what will be regarded as plagiarism and to know how to avoid it.

A particular (and unfortunately growing) ethical issue is that of plagiarism. Plagiarism, in essence, is passing off someone else's work as your own: it results from inadequately acknowledging sources of data, analyses and ideas. It is dishonest and it has no place at a university. If students are in any doubt on issues relating to plagiarism, they must consult their supervisor or the Ethics Committee. Instances of plagiarism will be taken to the University Court and may have very serious consequences, including rustication or even expulsion.

All Master candidates, at the same time of submission, are required to make a declaration, which should be included in the dissertation stating: "I know the meaning of plagiarism and declare that all of the work in the document, save for that which is properly acknowledged, is my own".

If in any doubt regarding ethical issues relating to research, seek advice from your supervisor or Head of Department.

➤ PRESENTATION AND SUBMISSION OF DISSERTATION

At the conclusion of research, the candidate shall submit a dissertation or thesis for examination. This normally occurs after receiving an indication from the supervisor that the product is in a form which is acceptable for submission. However, a candidate is not debarred from submission without the supervisor's approval.

If a candidate intends submitting a Masters dissertation for examination he/she must inform the Faculty Office by submitting the completed 'intention to submit' form. The supervisor will then be asked by the Faculty Office to fill in an 'appointment of examiners' form on which recommendations on external examiners are made. If submitting a PhD thesis, the candidate must inform the Doctoral Degrees Board Officer (Bremner Building) by submitting the completed intention to submit form.

The final dates for submission of the 'Intention to Submit' for the purpose of graduation are:

- for Master candidates: 15 February for persons hoping to graduate in June; 16 July for persons hoping to graduate in December
- for PhD candidates: 10 January for persons hoping to graduate in June; 20 June for persons hoping to graduate in December.

The dates for submission of Dissertations and Theses are;

- for Masters candidates: 30 March for persons hoping to graduate in June; 31 August for persons hoping to graduate in December
- for PhD candidates: 15 February for persons hoping to graduate in June; 15 August hoping to graduate in December.

All candidates submitting a thesis/dissertation, including candidates who submit a dissertation or a thesis before the beginning of the academic year or during the first quarter, must complete registration forms. If the thesis/dissertation is submitted before the first day of the academic year no fee is payable. If submitted after the first day of the first quarter or after the first day of the second quarter (up to the beginning of the second semester) a pro-rata fee may be rebated, depending on the date of submission, and at the request of the student. However, this will result in the termination of access to the UCT network and other infrastructure. In most cases a full year will be payable.

Please note that where a student is required to revise and resubmit a dissertation/thesis the student is required to re-register at the date of the letter of notification of the result, and the appropriate academic fee will apply. Further information can be found at:

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

➤ MASTER PAPER REQUIREMENT

This applies to students registered in his/her final year who will be submitting a 120cr/180cr dissertation. It is most important that candidates refer to the EBE Faculty Handbook, the Research Based Education for Masters and PhD booklet and consult their supervisors regarding this requirement. Deadline is 30 April (June graduation) and 30 September (December graduation).

➤ POSTGRADUATE FUNDING OFFICE

Postgraduate funding applications should be completed as part of the application for admission to UCT. Funding applications can be found on the Postgraduate Funding Office Website:

<http://www.uct.ac.za/apply/funding/postgraduate/applications/>

The closing date for South African applications is **31 October 2017**

A limited number of scholarships are available for international and refugee students. UCT international and refugee students' scholarships are not full cost awards. Before applying to the Postgraduate Funding Office for funding, the UCT application form needs to be submitted. Application form 10C needs to be completed and returned to the Postgraduate Centre and Funding Office by 31 July 2015.

➤ EBE FACULTY INTERNATIONAL POSTGRADUATE ACADEMIC SCHOLARSHIPS

The Faculty offers a generous system of international scholarships to encourage student diversity. The scholarships are awarded to first time registering postgraduates on the basis of academic merit. The award is granted for one academic year at a time. Application forms are available from the PG Officer in the EBE Faculty Office. All applications must be accompanied by recommendation from the head of the recipient's host department and the supervisor. Applications are considered by a panel of senior Faculty academics who make a recommendation to the Dean for final decision. Applications for renewal must be submitted by letter from the student together with a progress report signed by the Supervisor by not later than 30th November of each year.

➤ EBE FACULTY INTERNATIONAL STUDENT BURSARIES

Applications may be made to have the International registration fee reduced to the level of local fees, on the grounds of proven financial hardship. Application must be made through the EBE Faculty Office to the Deputy Dean charged with this portfolio. The forms are available from the Faculty Office as well as the departments. The following students are exempt from paying the international fee and would therefore not be eligible to apply for this bursary:

- Students from SADC countries
- Research Masters students (180 credit dissertations)
- Doctoral Students

Please note that all international students are required to pay an administrative service fee that is not covered by the bursary. Please consult the Student Fees handbook (Book 12 in the University series of handbooks).

SUPPORT STRUCTURES AND SERVICES AT UCT

Student Support and Services handbook can be downloaded at:

<http://www.uct.ac.za/downloads/uct.ac.za/apply/handbooks/Handbook5StudentSupportServices2014.pdf>

➤ FINANCIAL ASSISTANCE AND STUDENT ACCOMMODATION

Limited financial support is available in the form of scholarships, bursaries and student loans. Certain awards are granted exclusively on academic merit, while others take financial need into account. For information on various forms of postgraduate financial assistance offered, please contact the Postgraduate Funding Office, Otto Beit Building, Upper Campus, Tel: 021- 650 2206 or email: pgfunding@uct.ac.za

➤ STUDENT HOUSING OFFICE (UCT RESIDENCE ACCOMMODATION)

Please refer to the link below with regards to the Student housing policy:

https://www.uct.ac.za/downloads/uct.ac.za/about/policies/student_housing_policy_2015.pdf

Many students who fail to secure student accommodation or are in their second or subsequent years of study stay in leased or private accommodation close to UCT. UCT has Off Campus Student Accommodation Services (OCSAS) that advertises vacancies in private accommodation. For more information go to the OCSAS website: <http://www.accommodation.uct.ac.za/ocsas/about/>

➤ LIBRARIES

UCT Libraries offer state-of-the-art technology, vast collections of reading and research material, and the specialized services of friendly, efficient, and helpful staff.

In keeping with its central role in the academic life of the university, the Chancellor Oppenheimer Library lies at the heart of Upper Campus, while its eight branch libraries are set in locations convenient to the faculties. The Libraries house more than 1.2 million print volumes, while their "virtual" presence—consisting of bibliographic and full-text databases, electronic books and journals, and a growing institutional digital repository—may be accessed via the Libraries' web site, both on and off campus. For more detailed information, and access to the Libraries' resources, visit <http://www.lib.uct.ac.za/>

➤ UCT WRITING CENTRE

The UCT Writing Centre supports postgraduate students from all faculties of the university with their writing of research. The Centre focuses on the structures and processes of academic writing. Its four interventions include:

- One on one consultations
- Writers circles
- Taught Masters courses
- Seminars and workshops

The Writing Centre is located in the Hlanganani Building, Level 6, Upper Campus. Visit the website for more information: <http://www.writingcentre.uct.ac.za>

➤ CAMPUS PROTECTION SERVICES (CPS)

Campus Protection Services (CPS) provides a 24-hour security service for students.

Telephones of satellite offices:

- 021 650-2222/3 – Main Office
- 021 650-2121/4080 – Upper Campus
- 021 650-3022/5759 – Kramer Building
- 021 650-2120 – Bremner Building
- 021 406-6100/6109 – Medical School
- 021 480-7101 – Hiddingh Campus
- 021 650-3856 – Forest Hill
- 021 650-3996/4357 – Access Control
- 021 650-4429 (Crime Reporting Hotline)

➤ JAMMIE SHUTTLE

Timetables and route maps are available on the UCT website at:

<http://www.uct.ac.za/students/services/jammie/maps/>

The Jammie Shuttle service is only available to the UCT Community, therefore passengers are assured of safe, friendly, clean and comfortable transport at all times. The buses are environmentally friendly and equipped to cater for sight and hearing-impaired students.

➤ PARKING

Location: P&S Building (off Ring Road) *Phone: Administration Office:* 021 3640/3312

Students, from their second year onwards, may park on campus in unmarked bays for students. Bays for disabled students can be obtained through the Disability Unit. (*A valid doctor's certificate is required.*) The parking areas that you are allowed to use are indicated on the parking disc, which is purchased from the Traffic Administration Office after you have registered. Cash, credit card and debit card may purchase parking discs only. Information on set of student traffic rules is available at the Traffic Administration Office.

➤ STUDENT WELLNESS

Location: Ivan Toms Building, 28 Rhodes Avenue, Mowbray

Telephone: (021) 650-1020 (health appointments); (021) 650-1017 (counselling appointments)

Clinic Hours: Mon – Wed; 08h30 – 16h30 Thurs 09h30 – 16h30 Fri 08h30 – 16h30

Fulltime students are entitled to use the University's facilities for medical consultations. Students not receiving financial aid pay medical aid rates for consultations, but certain services are free.

➤ CAFETERIAS

- Café Quencha, Level 3, Leslie Social Science Building,
- Leslie Social Sciences Building, Level 3, After hours kiosk (halaal)
- Java Junction, Level 3, Leslie Social Science Building
- Leslie Social Science, Ground Floor, Vegetarian Kiosk
- Glasshouse, Menzies Building
- Kaplan Centre Cafeteria, Kaplan Centre, Library Road, next to Oppenheimer Institute – full kosher cafeteria
- Moot Room, Humanities Graduate School Building
- Purple Haze, Centlivres Building
- UCT Club, Sports Centre.
- Super Sandwich, University Avenue, next to NSLT, University Avenue North Road (halaal)
- MacHarry's, University Avenue, next to Molecular Biology Building, University Avenue North Road
- Rainbow Takeaways, University Avenue, next to NSLT: Chinese food

➤ **STUDENT DOCUMENT CENTRE (PHOTOCOPYING AND PRINTING)**

Location: Chancellor Oppenheimer Building, Upper Campus *Phone:* 021 650-3372/3124

Hours: Term:

08h00 - 18h30 Mondays – Fridays

09h00 - 17h00 Saturdays

Hours: UCT Student Holidays:

08h00 - 16h00 Mondays – Friday;

Closed Saturdays

Services provided include desktop editing, digital printing, Litho printing, colour copying, course readers, One Step mailing, punching/drill, business cards, letterheads and complement slips, specialised printing, laminating, book binding, scanning, collating, stapling and much more. Money is credited to the student card which can then be used at photocopying machines at any library on campus. Binding of books, theses, etc. can also be done through the Chancellor Oppenheimer Student Document Centre, Upper Campus.

Enjoy your studies with us