



DISSERTATION GUIDELINES

MSc/MPhil in Information Technology

As a key component of your Masters in Information Technology, you are expected to write a mini-thesis. As part of registration at the start of your thesis year, you will be expected to submit a research proposal (1-2p) and a memorandum of understanding ([ACA47a](#)) signed by your supervisor. Therefore, it is prudent to begin your search for a supervisor now. Ideally, your assignments for CSC5017Z, the research methods module, will also be work towards your mini-thesis, although this is not required.

Choosing a topic is not easy. Make sure to select a topic for which you will be technically competent to do Masters-level research, and in which you have some interest. Remember that you will be doing this research independently, without course notes, for a year or more. Please also remember to keep your supervisor updated on your progress. Even if you do not intend to submit by the end of the year, supervisors are required to give a report to the Faculty each year. If they have not heard from you, then you will be given an Unsatisfactory report, and you may not be permitted to continue the following year.

Also keep in mind the Faculty requirements for a minor dissertation, which should not exceed 30,000 words. Please see the Faculty of Science Handbook for a description (pp 36-38, 40, 48051 in the 2024 version), and the Faculty of Science Postgraduate Studies Information Booklet for more details about expectations and procedures.

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

<http://www.science.uct.ac.za/sci/postgrad/current/guide>

You may also refer to some completed MSc/MPhil(IT) theses. Electronic submissions of dissertations are available on UCT Open (<https://open.uct.ac.za/>) and on the UCT Computer Science Research Document Archive (<http://pubs.cs.uct.ac.za/view/type/thesis.html>).

POTENTIAL SUPERVISORS

The following people are available for students starting their minor dissertations in 2025. Please note that people presently on sabbatical may be more difficult to contact but will still accept students for supervision in 2026. Honorary, adjunct, and emeritus professors do not supervise MIT dissertations.

For more information about each person, please refer to their websites and contact information available on the School of Information Technology staff web page (<http://www.sit.uct.ac.za/sit/staff>)

Computer Science Staff (CSC5004W)

- **Dr Jan Buys:** Natural Language Processing, Deep Learning
- **Dr Josiah Chavula:** Network Measurements, Software Defined Networks
- **Prof Melissa Densmore:** Human Computer Interaction for Development (HCI4D), Co-Design, Maternal Health Education, Mobile-First Content Creation, Community Network Applications
- **Prof James Gain:** Computer Graphics, Virtual Reality



- **Prof Maria Keet:** Artificial intelligence, Ontologies, Conceptual Modelling, Human Language Technologies
- **Prof Michelle Kuttel:** Computational Science, Simulation, Visualization, High Performance and Parallel Computing
- **Dr Zola Mahlaza:** Human Language Technologies
- **A/Prof Patrick Marais:** Computer Vision/Image Processing, machine learning for computer vision, Computer Graphics and Visualisation
- **Francois Meyer:** Natural Language Processing, Machine Learning, Deep Learning
- **Prof Tommie Meyer:** Artificial Intelligence, Knowledge Representation and Reasoning, Logic-based Ontologies
- **Prof Deshen Moodley (on sabbatical):** Artificial Intelligence, Bayesian Belief Networks, Predictive Analytics, Cognitive Systems
- **Prof Geoff Nitschke:** Evolutionary Computation, Artificial Neural Networks, Neuro-Evolution, Artificial Life, Evolutionary and Swarm Robotics, and Collective Behaviour / Swarm Intelligence
- **Krupa Prag:** Computational Intelligence, Reinforcement Learning, Control Systems
- **Aslam Safila:** Educational Technology
- **Prof Rob Simmonds:** Parallel and Distributed Computing
- **Prof Hussein Suleman:** Digital Libraries, ICT4D, Information Retrieval, High Performance Computing

Information Systems Staff (INF5010W)

- **Prof Irwin Brown:** Information Systems
- **Prof Adheesh Budree:** Ecommerce, Information Management, Knowledge Management, Developmental Economics
- **Prof Wallace Chigona:** ICT for Human Development, ICT Policy, Cybersecurity
- **Dr Tendani Mulanga Chimboza:** Social Informatics, Digital Ethics, Cyberpsychology, Digital Parenting, Digital Activism, and ICT policy
- **Dr Zane Davids:** Human Computing, ICT for Education, Technology, AI, Machine Learning & Data Science
- **Dr Sharon Geeling:** IS development, Digital Ethics
- **Prof Salah Kabanda:** Technology and Developing Countries, E-Commerce, ICT4D
- **Meke Kapepo:** health information systems
- **Prof Michael Kyobe:** Information systems security, Alignment, IT governance, Mobile Bullying
- **Gwamaka Mwalemba:** ICT Skills, ICT Education, ICT4D, Data&Business Intelligence, Enterprise systems
- **Grant Oosterwyk:** Information Systems, Big Data Analytics, Decision-making, Grounded Theory
- **Ayanda Pekane:** Emerging technologies in Organizations, Digitisation in Society
- **Prof Ulrike Rivett:** ICT4D, Co-Design, Water and Sanitation, Education, Development
- **Prof Sumari Roodt:** Tech4Good, Serious Games, ICT in Education, AR/VR, Entrepreneurship
- **Dr Zainab Ruhwanya:** Cybersecurity, Behavioral Information Security, Privacy, Learning Technologies
- **Prof Lisa Seymour:** Enterprise system adoption, Business Process Management (BPM) and IS educational research, all with a developmental focus.
- **Dr Dirk Snyman:** Information security, computational linguistics
- **Prof Maureen Tanner:** Agile Software Development, Affordance Theory, Mobile Dating, Virtual Teams
- **Luzoko Tekeni:** Cybersecurity, Networking Information Security
- **Pitso Tsibolane:** ICT4D, Gig Economy, Indigenous Theory, Grounded Theory, IS Education



- **Dr Walter Uys:** Technology Enabled Learning, Research-based Learning, Mobile Learning, Self-Directed Learning
- **Prof Jean-Paul Van Belle:** ICT4D, Technology Adoption, Cloud Computing, SOA, Mobile Technology

CHOOSING A SUPERVISOR AND TOPIC

One of the most important decisions you will make as part of your Masters degree is the choice of supervisor and topic for your research. We will provide a list of suggested topics, and the following resources will also give you a good idea of what topics your potential supervisors are working on:

- The supervisor's personal web page
- The supervisor's publications
 - Google Scholar – [google-scholar.uct.ac.za](https://scholar.google.co.za/uct/)
 - Our publication archive: pubs.cs.uct.ac.za
- Past dissertations, see also the publication archive
- Past honours projects, see projects.cs.uct.ac.za/honsproj/

If you would like to do a project from our list of suggested topics, you may approach the supervisor directly to ask for more details about the project and possible supervision. Most supervisors will take only one or two students each, so selection of a topic below does not guarantee that you will be accepted for supervision.

Please confirm your supervisor's willingness to supervise your dissertation by completing a Memorandum of Understanding, and submit it to the MIT Coordinator. The template for the MoU can be found on the [Science Faculty Postgraduate Registration Page](#). This MUST be done prior to registration in February next year; however, it should be begun and preferably complete by December. You should have a confirmed supervisor by 1 November. If you have tried to contact supervisors and not had a reply within two weeks, please follow up with the MIT Coordinator (mit@cs.uct.ac.za). If you do not have a supervisor by 1 November, please also contact the MIT Coordinator.

REGISTRATION

Most students will register for the dissertation only in their second year of study, after all of the coursework modules have been completed¹. You will register for CSC5004W if your supervisor is in the Department of Computer Science, and for INF5010W if your supervisor is in the Department of Information Systems. Either course code counts equally towards the degree. For the first year that you are registered for the dissertation, you will be required to complete a Memorandum of Understanding on Peoplesoft with your supervisor. This MoU is an opportunity to clarify mutual expectations between the student, the supervisors, and the departments. Please try to discuss the MoU contents before you begin registration. While you will need to complete the form online, you can find some of the questions in advance on the UCT website (<https://forms.uct.ac.za/studentadmin/aca47a.pdf>).

ALTERNATE TOPICS AND SUPERVISORS

It may also be possible to propose your own topic, provided that you can find a supervisor willing to supervise that topic. Self-selected topics tend to be related to or using data from your workplace. If you would like to propose your own topic, please email the MIT Coordinator (mit@cs.uct.ac.za) with your proposed topic and a

¹ Note: students may begin their dissertation once they have passed 7 of the 8 modules.



list of three potential supervisors by 1 October. For each potential supervisor, please explain why their expertise and experience is suitable for your proposed topic. **Do NOT contact potential supervisors directly before consulting with me and reviewing their research profiles first.**

SUPERVISORS FROM OTHER DEPARTMENTS OR UNIVERSITIES

Rarely a student will propose a supervisor from another department or university. If this is an avenue you would like to pursue, please first discuss this with the MIT Coordinator (mit@cs.uct.ac.za). Due to faculty rules, you are required to have at least one supervisor from the Department of Computer Science. However, the best supervisor for a proposed topic in information technology may be in another department, and this is permissible provided that they are willing to co-supervise your work. You may want to look at the full listing of [staff in the School of IT](#), including staff from the Department of Information Systems.

UCT KNOWLEDGE COOP

Another potential source for project ideas, and potential funding, is the UCT Knowledge Coop.

The UCT Knowledge Co-op builds on this tradition of social responsiveness – and aims to make it easier for community partners to access UCT’s skills, resources and professional expertise. It works by matching community groups with academic partners in a collaboration that meets the needs for research or practical support identified by the community group. The partners jointly reformulate the questions into manageable student projects. In the case of research projects, these are mostly taken up by students as projects that are conducted under the supervision of a senior academic for their dissertations. Projects address a wide range of need: from ICT support to early childhood development, prisoner rehabilitation, and sustainable community gardens.

For a list of current projects, please see visit the website:

<http://www.knowledgco-op.uct.ac.za/>

If you find a project that interests you, please treat it as a self-selected topic. You will need to find a supervisor willing to supervise your chosen project and should send the MIT Coordinator both the proposed topic and your list of three potential supervisors that you would like to approach by 1 October.

SUBMISSION AND EXAMINATION

Your dissertation should be on the order of 50 pages, or 17,000 – 25,000 words. For full details please consult the Faculty handbooks.

Once you and your supervisor(s) are satisfied with your dissertation, you will submit it for examination. This will be handled by the faculty of your supervisor: the Faculty of Commerce for those registered for INF5010W and the Faculty of Science for those registered for CSC5004W. Please consult the faculty guidelines for details of the process:

- [Master's Dissertation Information - Faculty of Commerce](#)
- [Research Examination – Faculty of Science](#)

Both faculties recommend that you submit your Intention to Submit and other related forms at least 6-8 weeks in advance of your planned submission date. Only once this form has been accepted will you be able to submit your dissertation.



If you have any intellectual property developed as a part of your research, you may consider “suppressing” the publication of your dissertation for a period to allow for any patent or other related applications to be processed.

As a minor dissertation, your dissertation will be examined by one internal (to UCT) and one external examiner, selected by the faculty from a list of potential examiners identified by your supervisor. This process normally takes 6-8 weeks but can take longer if the examiners fail to submit feedback in a timely manner. You can check on the progress of your examination at any time by emailing your faculty postgrad office (Commerce Faculty HDC comfac-hdc@uct.ac.za or Science Faculty Postgrad sci-postgrad@uct.ac.za).

MILESTONE AND DELIVERABLE GUIDELINES

Every dissertation will have a different set of milestones, depending on what you will be doing for your research and your supervisor’s expectations. The table below is intended to apprise you of some typical and administrative milestones. In general, you will set deadlines for yourself that are significantly earlier than those listed here, especially if you are working on your dissertation full-time rather than part-time. You should also take into consideration periods of leave by your supervisor or yourself when planning your work. Dates provided are rough guidelines. You should also take into consideration the academic calendar for the year of your dissertation.



Activity	Suggested	Latest
Pick a Topic, Contact Potential Supervisors Review Dissertation Topics list, identify 2-3 potential topics and supervisors. Use one of these topics for your research methods assignment.	15 July Final Coursework Semester	15 Aug Final Coursework Semester
Find a Supervisor Begin contacting supervisors early. Do not assume that they will agree to supervise you. If you can get the supervisor to agree to take you on before the RM A1 is due, then the RM assignments will help you make initial progress on your dissertation.	15 Aug Before Research Methods A1 is Due	1 November Final Coursework Semester
Memorandum of Understanding You and your supervisor will complete a memorandum of understanding detailing plans for review of progress and expected milestones for the year. This must be submitted with a 1-2 pg research proposal as part of your registration for CSC5004W.	15 Dec Final Coursework Semester	1 Feb Dissertation Year
Research Plan In some cases, the research proposal submitted with registration will be sufficient, but in others the supervisor will require more detail. The research plan should clearly lay out the problem statement, any questions and hypotheses if relevant and the approach that will be used to answer them. Feedback will be given to the student by their supervisor.	15 Mar Dissertation Year	15 April Dissertation Year
Background and Literature Review Student should submit a complete write-up of any relevant background information (context, related theory, collaborators, etc) and a review of related literature. Assistant supervisors will provide feedback on the first draft within 2-3 weeks, and supervisors should provide additional feedback on an ongoing basis. The first submission should be done at latest by 30 April.	15 Apr Dissertation Year	30 April Dissertation Year
Outline and Partial Draft (2-3 chapter drafts)	30 May	30 July



Students should submit an outline of their dissertation and drafts of 2-3 chapters (not including literature review). For non-theory students it would be expected that some findings and data analysis will have been done, and the methodology written up. Students intending to graduate by Apr 2021 should target having this done by 30 May, but this should be done at latest by 30 July.	Dissertation Year	Dissertation Year
First Full Draft Details about the examination process are available on the Science Faculty website . Please note you should discuss realistic deadlines for submitting your dissertation with your supervisor. The first full draft should be as complete as possible, with revisions to the literature review and prior submitted drafts already incorporated. The draft will be reviewed by the supervisor, with initial feedback to be given within two weeks. Students intending to graduate in April 2021 should target having this done by 1 July, but this should be done at latest by 30 November.	1 July Dissertation Year	30 November Dissertation Year
Intention to Submit This is a form that must be signed by your supervisor and the head of department and submitted to the Faculty and to the Course Convenor prior to submission. This kicks off the process of identifying your examiners.	1 July Dissertation Year	6-8 weeks prior to submission
Final Draft This version should be as close to complete as possible, and ready for submission to the faculty. This does NOT constitute the final submission for examination, which you will do separately according to the instructions on the Science Faculty website . Supervisors may elect to give additional feedback at this stage prior to submission to the faculty.	20 Aug Dissertation Year	Two weeks prior to the start of the next academic year
Submission of Thesis/Dissertation You will submit your dissertation on PeopleSoft with all the required forms, according to the instructions available on the Science Faculty website .	1 Sept Dissertation Year	12h00 on the first day of classes the following year