UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Faculty of Engineering, Built Environment and Information Technology

Fakulteit Ingenieurswese, Bou-omgewing en Inligtingtegnologie

School of Information Technology
Skool vir Inligtingtegnologie

Department of Informatics
Departement Informatika

PhD (Information Systems)
Brochure 2018

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Table of Contents

1. Research in Informatics (Information Systems) 3

1.1 Informatics(Information Systems) as discipline 3

1.2 Research areas in the Department of Informatics 3

1.3 Objective of Doctoral studies 3

2. Admission requirements and procedures 4

2.1 Academic requirements 4

2.2 Suitability requirements 4

2.3 Application procedure 5

3. Supervision 6

3.1 The role of the supervisor 6

3.2 The role of the student 7

4. Application dates 7

5. Registration and re-registration 7

5.1 Registration information for courses at E@UP 7

5.2 Registration information for PhD(IS) 8

5.3 Application for Ethical clearance 9

6. Submission of the final dissertation 9

7. Financing of studies 9

8. Contact details 9

Addendum 10

A1. PhD Questionnaire 10

A2. Informatics Short Courses 2018 11

1) Advanced Topics in IS research 11

2) Writing a PhD proposal in IS 11

A3. International students 12

A4. Other information 12

1. Research in Informatics (Information Systems)

1.1 Informatics(Information Systems) as discipline

Modern organizations cannot function without information and the technology with which they gather, store, compute and make available the information. The successful application of technology is, however, more than just writing computer programs. Computer programs are important, but an understanding of the business within which the organization functions and an understanding of the use of information and information technology to support the objectives of the organization, are far more important. This can clearly be seen in the description of the discipline:

Informatics(Information Systems) is a multi-disciplinary subject, where information, Information Systems, and the integration thereof into the organization, are studied for the benefit of the entire system (individual, organization and community).

1.2 Research areas in the Department of Informatics

In general research in the department deals with fundamental concepts of information and information systems, humans as part of the information system and the broader system and IS in service of the organization and the community.

The four focus areas are

- IT management
- IS and education
- ICT for sustainable development
- Data science

A detailed summary of each faculty member's research interest can be found at http://informatics.up.ac.za. See also addendum A5.

1.3 Objective of Doctoral studies

A PhD graduate has an in-depth and broad knowledge of a specialized area of the discipline, is well versed in the scientific method and has proven through independent and guided research that he/she can apply the scientific method in a scientific study to make an original contribution to the discipline. Therefore, the objective of the doctoral study is to guide students to do original research. The thesis should be an original contribution towards knowledge and insight of the discipline. The research should be suitable for publication in an accredited scientific journal. The thesis must show clearly that the candidate

- Is familiar with the nature and objective of his/her study;
- Has satisfactory knowledge of the relevant literature;

- Has mastered the research methods used in the study;
- Has a good knowledge of the underlying theory/ies and the application of the scientific method;
- Is able to evaluate the scientific implications and meaning of the findings;
- Is able to structure and organize the research material in a logical way.

2. Admission requirements and procedures

2.1 Academic requirements

A prospective PhD student must be in possession of a master's degree in IT/IS or must be admitted to that status by the Dean. In addition the student must have had extensive working experience in the information systems field. In exceptional cases a student with a master's degree in other relevant fields might be considered for admission. An attainment of at least 65% (average of all the courses and/or dissertation) for the master's degree in IT/IS (or equivalent) is required. International students see Addendum (A3). In addition, we expect the **research component of the master's degree to contribute to at least 50% of the credits** of the degree.

All students may be expected to do preparatory study, the extent of which will be decided upon in consultation with the student. Students who have not done their MCom or MPhil at the Department of Informatics will have to do two short courses through Enterprises@UP before they will be allowed to register for the PhD. The two courses are 1) "Advanced topics in IS Research" and 2) "Writing a PhD proposal in IS". The first course is presented in the first half of the year whereas the second one during the second semester. Candidates must obtain at least 70% for the first course in order to continue with the second course. Only those students with at least 70% for the second course will be considered for registration for the PhD the following year. If you do not meet the 70% mark, you will not be allowed to continue with the PhD nor be allowed to improve your mark the following year. More information about the courses is given in the addendum (A2).

2.2 Suitability requirements

The postgraduate committee has to decide whether the candidate stands a reasonable chance to successfully complete the doctoral programme. The following are taken into account: the personal profile and motivation of the candidate, the academic record and the quality of the assignments and research proposal done during the two courses. A mark of 70% and above for the courses does not automatically ensure admittance to the PhD programme.

The supervision of postgraduate students is a time consuming process, thus, the Department **reserves the right to limit the amount of students** accepted into the programme. All reasonable measures will be undertaken to ensure that students who meet the minimum requirements are accepted. In the event that department capacity cannot accommodate the number of students who meet the minimum requirements, the Department will **rank the students** according to the above

averages, and the top performing students will be admitted to the programme, up to the limit of department teaching and supervision capacity. **For this reason students can only expect feedback on admittance by the end of November 2017.**

2.3 Application procedure

- A PhD candidate must apply for the degree on-line at www.up.ac.za. The PhD(IS) is a degree offered by the Department of Informatics and can therefore be supervised by faculty members of Informatics.

- After the application has been submitted on-line, the candidate needs to complete the PhD questionnaire (see addendum A1) and send it to Mrs Rhona van der Merwe (rhona.vandermerwe@up.ac.za). Consider the research interest of the lecturers at http://www.up.ac.za/en/informatics/article/2414608/individual-academics-research-focus-areas and contact a potential supervisor for possible supervision.

- In addition, the candidate has to send an electronic version of his/her completed Master's dissertation to Mrs Rhona van der Merwe.

- **The candidate might have to present his/her topic of interest (10 minutes) to a panel at the Department of Informatics. There will be one opportunity on 16 November 2017.**

- The candidate will be informed of the status of the application.

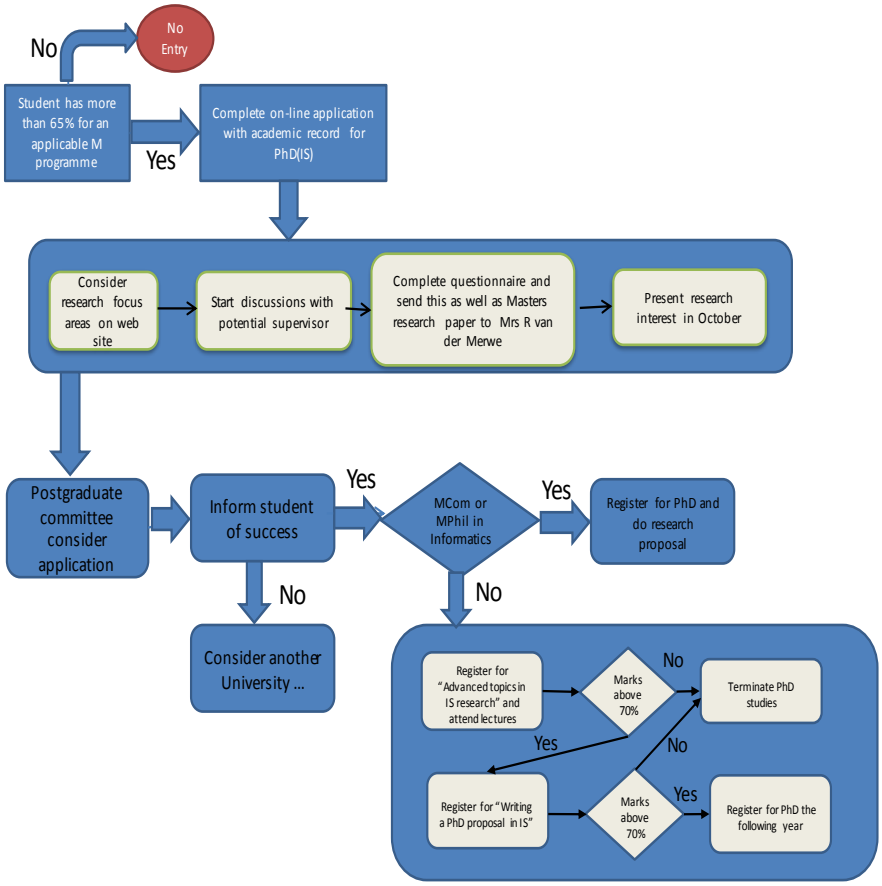

Figure 1: the PhD application process

3. Supervision

The success of the PhD studies depends to a large extent on the successful partnership between the student and supervisor. A Memorandum of Understanding has to be undersigned by both parties at the beginning of the study which will be provided by the postgraduate administrator. Each of the role players has certain responsibilities as described below:

3.1 The role of the supervisor

- The most important role of the supervisor is to guide the student and not to give active assistance to the student.
- The supervisor expects regular contact (either face to face or via e-mail) - at least once every three months. It is the responsibility of the student to arrange these sessions and to report on his/her progress during these sessions.
- These reports must be clearly written in an acceptable standard of English. It is not the supervisor's duty to do "rough editing" and (s)he will merely concentrate on contents and structure.
- The supervisor will give feedback on any submitted work within one month.

- The supervisor has to provide motivation to faculty administration for continuation of the PhD study if its duration exceeds four years.

3.2 The role of the student

- It is the student's responsibility to arrange sessions (either contact or virtual) with the supervisor and to submit written reports for discussion.
- The student has to determine whether no other similar study has already been undertaken.
- The student is responsible to arrange for language editing and to apply the correct referencing styles.
- The student has to write the research proposal under guidance of the supervisor and other lecturers.

4. Application dates

Note that online application for 2018 closes on the following dates
International students: 31 July 2017
Other students: 31 October 2017

5. Registration and re-registration

You will be informed whether you have been accepted provisionally as PhD candidate. If so, you need to register for "Advanced topics in IS research".

If you have been exempted from the courses, you can register online for PhD(IS).

Once you have registered for the PhD(IS), you need to register for the PhD(IS) every year of your studies. From the fifth year of registration you will need a permission letter from the supervisor to be able to register.

The two sections below explain the registration process for the E@UP course as well as for the PhD(IS). Note that you first have to pass the two E@UP courses with at least 65% respectively before you can register for the PhD(IS). Those students who are exempted from the two courses can register for the PhD(IS) as explained in 5.2.

5.1 Registration information for courses at E@UP

This is done after you have been notified that you have been accepted as PhD candidate at the Department of Informatics. With the notification you will receive a registration form and details on how to register and pay the fee which will be announced early 2018.

5.2 Registration information for PhD(IS)

This is done after the application has been approved and you have completed and passed the two E@UP courses with at least 70% respectively or after you have been exempted from the two courses. You will receive an Official Admissions letter by e-mail (This letter will also be available on your Student Portal – Student Centre - Communication).

www.up.ac.za/online-registration

On-line contract will also be available on Student Portal (Student Portal – on-line contract "complete the form – down load – sign – and hand in the original at Client Service Centre or courier it to the University.

Pay your registration fee – (Use your student nr as reference)

After 24 hours it should be effective on the system. Processing your on-line registration on your student portal under registration.

Registration, Financial Unsuitable, Hold, etc. problems please contact Faculty Administration

EMS *(MCom, Phd Informatics)*

Mrs Nellie Bahula – nellie.bahula@up.ac.za 012 420 5279
Office: EMS Building, Room1-12.6

EBIT *(M.IT (IS), Phd IT and PhD IS)*

Mrs Dawn Taljaard – dawn.taljaard@up.ac.za 012 420 4095
Office: Engineering 1, Room 6-5

International queries & "hold":

Mrs Jenny Lambinon – jenny.lambinon@up.ac.za 012 420 4024
Mrs Wiida le Roux – wiida.leroux@up.ac.za 012 420 5107

Fee Requirements:

Mrs Rose Malinga – rose.malinga@up.ac.za 012420 5114
Mr Frans Mothogoane – frans.mothogoane@up.ac.za 012 420 5115
Ms Komane Lehong – komane.lehong@up.ac.za 012 420 5110

5.3 Application for Ethical clearance

MCom Students:

Faculty EMS - Committees – Ethics Committee

M.IT (IS) Students

Faculty EBIT – Research Ethics

6. Submission of the final dissertation

The following dates are important when the student considers submission of the final dissertation:

30 June/ 27 February: student informs the supervisor and that he/she plans to submit before 31 August/ 30 April.
31/August/30 April: student submits signed submission form and examination copies (ring bound and electronic copies) as well as proof from an accredited journal that an article has been submitted to Mrs Rhona van der Merwe (postgraduate administrator).
15 January/ 15 June – submit e-copies with corrections as suggested by external examiners, received from students; supervisors check that all corrections have been done; student submits UPeTD upload form;
22 January/ 22 June: student submits hardbound copies.

For April Graduation – submit before end of August.

For September graduation – submit before end of April.

7. Financing of studies

Contact Client Services Centre at csc@up.ac.za (e-mail) for information regarding fees and bursaries, and/or visit http://web.up.ac.za/default.asp?ipkCategoryID=121.

8. Contact details

Mrs Rhona van der Merwe
Postgraduate administrator
Rhona.vandermerwe@up.ac.za
012 420 6321

Prof Machdel Matthee
Postgraduate coordinator
Machdel.matthee@up.ac.za
012 420 3365

Addendum

A1. PhD Questionnaire

PhD application questionnaire
2018

Dear PhD candidate,

In order to familiarize ourselves with our PhD candidates we urge you to first consider the research focus areas in the Department of Informatics before you complete these questions. Please answer the questions as truthfully as possible – we are committed to provide you with good supervision and our first step is to understand why you want to study towards a PhD and what your interest is.

Consider the research interest of the lecturers at http://www.up.ac.za/en/informatics/article/2414608/individual-academics-research-focus-areas and contact a potential supervisor for possible supervision

Please complete the following questions:

1. Briefly describe the role you perform in your current job.

2. Who/what influenced you the most in your life?

3. Give a short description of the research done for your Masters dissertation. Would you be interested to continue with this research or do you prefer to do a new topic?

4. Why do you want to do a PhD? (At least 300 words).

5. Where did you do your Masters? Why do you want to study with the University of Pretoria?

6. Considering the topics in the research focus areas in the Department of Informatics.

    a. What is your broad topic of interest that aligns to one of the focus areas?

    b. What is the specific problem that you would like to address in this area?

    c. Why is it important and why are you interested in this topic?

    d. Are there any other topics that interest you? Name them.

7. Who did you identify as a potential supervisor?

8. Attach some evidence of communication with this potential supervisor (either a letter of the supervisor or e-mail correspondence).

A2. Informatics Short Courses 2018

Preliminary dates (subject to change): Meet the department and fellow students on Friday 16 February 2018 in the Tea Room (IT Building 5-62/64) 12:30 – 13:00

1) Advanced Topics in IS research

Schedule

Date	Activity	Time	Venue
9 February 2018	Seminar	08:00 – 15:30	IT 5-56
9 March 2018	Seminar	08:00 – 15:30	IT 5-56
4 May 2018	Seminar	08:00 – 15:30	IT 5-56
1 June 2018	Seminar	08:00 – 15:30	IT 5-56
22 June 2018	Due date research proposal		

Learning content

1) The philosophy behind the main research paradigms in IS research. These are the positivist, interpretive and critical social paradigms. Students are challenged to become aware of and question the underlying assumptions in IS thinking.
2) A discussion of various Information Systems Theories, including systems, social and information theory as applied in Informatics.
3) Research methods and approaches in Information Systems.

Assessment

Assignments and a research proposal.

2) Writing a PhD proposal in IS

Schedule

Date	Activity	Time	Venue
17 August 2018	Seminar	08:00 – 15:30	IT 5-56
7 September 2018	Seminar	9:00 – 12:00	IT 5-56
12 October 2018	Seminar	9:00 – 12:00	IT 5-56
23 November 2018	Submit and present final research proposal	08:00 – 15:30	IT 5-56

Assessment
The final research proposal will be marked by the supervisors and course coordinator.

Learning content
Supervisors will work individually with their students towards the final proposal. The one day contact session will be presented by the course coordinator.

A3. International students

International students need to have their qualifications accredited by the South African Quality Assurance body before they can apply for study at South African universities. More info available at http://web.up.ac.za/default.asp?ipkCategoryID=92
International students have to provide proof of SAQA accreditation. In some cases TOEFL (Test of English as a foreign language) www.ets.org/toefl and IELTS (International English Language Testing System) www.ielts.org tests may be required.

A4. Other information

Also compare http://www.ceatup.com for information on certificate courses.
Information on all Informatics postgraduate courses can be found on the web at:

Informatics.up.ac.za/masters
Informatics.up.ac.za/doctoral
Informatics.up.ac.za/hons
Informatics.up.ac.za/postgrad

Other relevant information:

Details about M.IT and other IT programmes in the School of IT are available at http://www.up.ac.za/mit or mit@up.ac.za

Information Science: http://web.up.ac.za/default.asp?ipkCategoryID=2074 OR http://is.up.ac.za.

Computer Science (Honours) http://www.cs.up.ac.za/content.php?spc=dc

Computer Science (Postgraduate) http://www.cs.up.ac.za/content.php?spc=dd

Please contact csc@up.ac.za for information on other courses.