



## Faculty of Engineering, Built Environment and Information Technology

Fakulteit Ingenieurswese, Bou-omgewing en  
Inligtingtegnologie / Lefapha la Boetšenere,  
Tikologo ya Kago le Theknološhi ya Tshedimošo

## Department of Informatics

# PhD(IS/IT)

**Brochure 2024**

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# 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 information available. The successful application of technology is however more than just writing computer programs. Yes, computer programs are essential, 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 five focus areas are:

- IS and Organisations
- IS and Education
- ICT for Sustainable Development
- Data Science
- Human-computer Interaction

A detailed summary of each faculty member's research interest can be found at <https://www.up.ac.za/informatics/article/2034127/research>

## 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/theories 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. 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** (MOU) 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:

### 2.1 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.

### 2.2 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.
- The student should have a laptop/PC and internet access off campus for online/take home assignment purposes.

## 3. Admission Requirements and Procedures

### 3.1 Academic requirements

A prospective PhD student must be in possession of a master's degree in IT/IS. In addition, the student must have had extensive working experience in the information systems field. 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 (3). 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 PhD candidates must do preparatory work, which must be evaluated and approved before they can register for the PhD.

Possible scenarios:

- Students who have not done their MCom or MPhil at the Department of Informatics will have to do two courses as doctoral preparatory students before they will be allowed to register for the PhD. The two courses are 1. 'Advanced topics in IS Research' and 2. 'Preparation for PhD studies in IS'. The first course is presented in the first half of the year whereas the second one is 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 (2).
- Students who completed the INF seminar as prospective Masters students more than 5 years before the date of application for the PhD: student will have to redo the INF seminar and obtain at least 70% for both semesters before they will be allowed to register for the PhD degree in the following year.
- Students who completed the INF seminar as prospective Masters students within the last 5 years from the date of application: student must register for ZZZ888 (non-degree purposes course meant for postgraduate preparatory studies) and complete preparatory work within 6 months after registration for ZZZ888. The supervisor may ask the student to attend the INF seminar lectures and use the guidelines presented in the INF seminar to complete the preparatory work. The assignment must be presented to the postgraduate committee, where it will be evaluated. If the assignment satisfies the minimum requirements, the student will receive permission to register for the PhD degree.

### 3.2 Suitability requirements

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

Supervision of postgraduate students is a time-consuming process, thus the Department **reserves the right to limit the number of students** accepted into the programme. All reasonable measures will be undertaken to ensure that students who meet the minimum requirements are accepted.

### 3.3 Application procedure

- A PhD candidate must apply for the degree online at [www.up.ac.za](http://www.up.ac.za). The PhD(IS/IT) is a degree offered by the Department of Informatics and will therefore be supervised by faculty members of Informatics.
- After the application has been submitted online, the candidate needs to complete the PhD questionnaire (see addendum 1) and send it to Mrs Rhona van der Merwe ([rhona.vandermerwe@up.ac.za](mailto:rhona.vandermerwe@up.ac.za)) in a separate document.
- 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 will be informed of the status of the application.

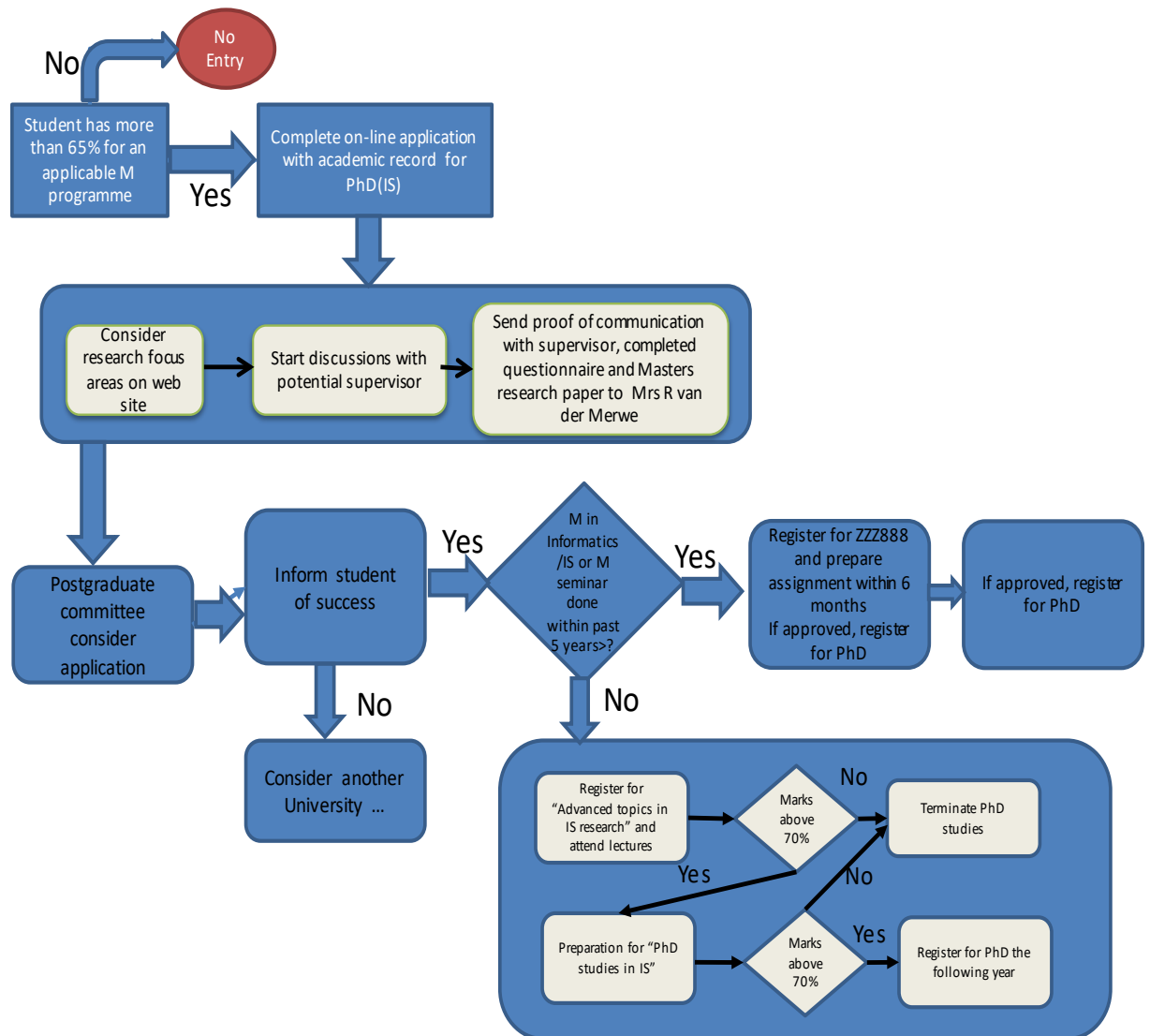


Figure 1: The PhD application process

## 4. Application Dates

Although the official closing date for PhD applications for 2024 is 31 May 2024, we cannot guarantee processing PhD applications for those candidates who apply after 31 October 2023. We have an internal selection process due to limited supervision capacity. However, these applications will be considered for 2024.

## 5. Registration and Re-registration

You will be informed whether you have been provisionally accepted as PhD candidate. If so, you need to register as doctoral preparatory student (explained in 5.1).

### 5.1 Registration information for ZZZ888 (non-examination purposes)

Registration is done after notification that you have been accepted as PhD candidate at the Department of Informatics. You need to register online as a PhD preparatory student for program EN003 Engineering PG, plan 12290001 *Non-examination purposes*, Class No 8610. The code 'ZZZ888 Doctoral preparatory' will appear on your academic record. This will give you access to the campus and the library and the INF seminar ClickUP page.

#### **Procedure to follow 2 weeks before the starting date of the 1<sup>st</sup> Seminar class**

After receiving a confirmation e-mail from the Post Graduate Coordinator Prof Matthee, confirming that your application was approved for the INF seminar or for the preparatory work, the following steps must be taken:

1. Register online from 4 January 2024 at [www.up.ac.za](http://www.up.ac.za)
2. Log onto the student portal.
3. In the middle of the page, you will find the block 'Student Centre'.
4. In the block, click on 'Student Centre'.
5. Register by following the steps provided.
6. Complete the **Student Contract** and upload it on the system as indicated.
7. The original contract must be handed in at Student Service Centre (SSC) or be couriered to the University, (courier address: Student Contracts, University of Pretoria, University Road, Hillcrest, 0002) or handed in physically at the post box located at the Engineering Entrance 3, University Road.
8. E-mail a copy of the contract to Ms Demas ([verona.demas@up.ac.za](mailto:verona.demas@up.ac.za)).
9. If the original contract is not received by SSC or Ms Demas, you will not be able to continue to register as there will be a block on the registration process.
10. Pay the estimate fee of R2000. You do not have to pay the UP Registration fee. Use your **student number** as the reference number. Banking details: [www.up.ac.za](http://www.up.ac.za) – Fees and Funding – Fees – Banking details (ABSA or Standard Bank).
11. After the contract is delivered and the 'hold' is lifted, send a copy of the proof of payment to Ms Malinga ([rose.malinga@up.ac.za](mailto:rose.malinga@up.ac.za)) to waive the balance on your student account. (**Always provide your student number.**)
12. Contact Mr Kenneth Nkanyana ([kenneth.nkanyana@up.ac.za](mailto:kenneth.nkanyana@up.ac.za)) to assist with the 'block lift' on the registration. As soon as Mr Nkanyana gives you permission to register, do so immediately. Please copy [rhona.vandermerwe@up.ac.za](mailto:rhona.vandermerwe@up.ac.za) in the e-



mail. (**Always provide your student number**)

13. The 'block' will return within 24 hours.
14. You will be registered for PG Engineering Non-examination purposes.
15. On your Proof of registration, you will see the following: (example below)

Term: 20xx	Program: Engineering PG	Plan: Non exam. purposes			
Module Code	Module Name	NQF	Credits	%	Results
ZZZ888	Doctoral preparatory	09	1.00		
Weighted average for term: 0.00		Cumulative weighted average: 0.00			

16. All INF seminar students: once you are registered for the module, your name will be added to the INF seminar ClickUP page. ZZZ888 will also appear on your ClickUP page but will show that it is unavailable. We do not create a page for that module but a separate page for the INF seminar. That is where you will find all information regarding the seminar.

**NB: To complete the registration it is very important to do step 6 and 10 as soon as possible.**

## 5.2 Registration information for PhD(IS/IT)

Registration is done after the application has been approved and you have completed and passed the two courses with at least 70% respectively, or after the preparatory work (for those students who did the INF seminar within the past five years) has been approved.

- After approval of your application, you will receive an Official Admissions letter by e-mail. The letter will also be available on your Student Portal – Student Centre - Communication.
- You have to pay the registration fee before you are allowed to register (use your student number as reference). After registration a contract will be available on the student portal (online contract – complete the form – download - sign). Hand in the original at Client Service Centre or courier it to the University. (Courier address: Student Contracts, University of Pretoria, University Road, Hillcrest, 0002.)
- Registration: Online only from 4 January 2024 ([www.up.ac.za/online-registration](http://www.up.ac.za/online-registration)).
- You will be able to complete the registration process within 24 hours after paying the registration fee.
- For access to campus, take a printout of the “Proof of registration” to the Student Centre to obtain your student card.
- Once you have registered for the PhD(IS/IT), you need to register for the PhD(IS/IT) every year of your studies. From the fourth year of registration you will need a permission letter from the supervisor to be able to register.

Any registration problems (e.g. ‘Financial unsuitable’, ‘Hold’, ‘Change of modules’), must be directed to Faculty Administration:

### PhD IS/IT:

#### FACULTY ADMINISTRATION:

Mr Kenneth Nkanyana	Engineering1 Room 6-8	012 420 4095/6735	<a href="mailto:kenneth.nkanyana@up.ac.za">kenneth.nkanyana@up.ac.za</a>
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**International queries & 'Hold':**

Mrs Jenny Lambinon	012 420 4024	jenny.lambinon@up.ac.za
Mrs Wiida le Roux	012 420 5107	wiida.leroux@up.ac.za
Mr Smart Maqubela	012 420 6610	Smart.maqubela@up.ac.za

### 5.3 Study fees

More information on study fees can be found at <https://www.up.ac.za/student-fees>

Fee Inquiries: Email: [ssc@up.ac.za](mailto:ssc@up.ac.za)

Mrs Sophy Seefane	<a href="mailto:sophy.seefane@up.ac.za">sophy.seefane@up.ac.za</a>
Ms Rose Malinga	Rose.malinga@up.ac.za
Ms Komane Lehong	<a href="mailto:komane.lehong@up.ac.za">komane.lehong@up.ac.za</a>

Fees enquiries:

Please ALWAYS include your **student number** in all communication to UP.

FULL FINANCIAL INFORMATION: <https://www.up.ac.za/student-fees>

(Payment arrangements, banking details, 2,5% discount, family rebate, when to pay what, how to view the account, residences, parents, summer school, discontinuation of studies, how to change/remove/add modules, students studying with a bursary and more handy financial information)

How to view your account:

<https://www.up.ac.za/student-fees/article/2735975/statement-of-account>

When to pay what:

<https://www.up.ac.za/student-fees/article/2735925/when-to-pay-what->

Payments made and not reflecting on the account: Please forward proof of payment to: [payments@up.ac.za](mailto:payments@up.ac.za) I can unfortunately not trace or allocate payments.

Payments may take up to 5 days to reflect.

### 5.4 Application for Ethical clearance

Go to: Faculty EBIT – Research Ethics.

## 6. Seminar schedule 2024

### 6.1 Advanced Topics in IS research

#### Schedule

(Preliminary dates, subject to change) **Please note that classes will be presented on Thursday**

Date <b>THURSDAY</b>	Activity	Time	Venue
7 March 2024	Seminar	08:00 – 15:30	IT 5-56
4 April 2024	Seminar	08:00 – 15:30	IT 5-56
2 May 2024	Seminar	08:00 – 15:30	IT 5-56
30 May 2024	Seminar	08:00 – 15:30	IT 5-56
27 June 2024	Due date final assignment		

#### Learning content

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

#### Assessment

Assignments in preparation for PhD studies.

### 6.2 Preparation for PhD studies in IS

#### Schedule

(Preliminary dates, subject to change) **Please note that classes will be presented on Thursday**

Date <b>THURSDAY</b>	Activity	Time	Venue
1 August 2024	Seminar	08:30 – 15:30	IT 5-56
5 September 2024	Seminar	9:00 – 12:00	IT 5-56
3 October 2024	Seminar	9:00 – 12:00	IT 5-56
<b>Friday</b> , 22 November 2024	Submit and present final assignment	08:30 – 15:30	IT 5-56

#### Learning content

Supervisors will work individually with their students towards the final proposal. The contact sessions will be presented by the course coordinator and lecturers.

#### Assessment

The final assignment will be marked by the supervisors and course coordinator.

## 7. 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 <https://www.up.ac.za/international-cooperation-division>

International students have to provide proof of SAQA accreditation. In some cases TOEFL (Test of English as a foreign language) [www.ets.org/toefl](http://www.ets.org/toefl) and IELTS (International English Language Testing System) [www.ielts.org](http://www.ielts.org) tests may be required.

## 8. Other information

- Compare <http://www.enterprises.up.ac.za/> for information on certificate courses.
- Information on all Informatics postgraduate courses can be found on the web at:

[Informatics.up.ac.za/masters](http://informatics.up.ac.za/masters)

[Informatics.up.ac.za/doctoral](http://informatics.up.ac.za/doctoral)

[Informatics.up.ac.za/hons](http://informatics.up.ac.za/hons)

[Informatics.up.ac.za/postgrad](http://informatics.up.ac.za/postgrad)

- 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](mailto:mit@up.ac.za)

Information Science: <https://www.up.ac.za/information-science>

Computer Science: <https://www.up.ac.za/computer-science>

- Please contact [ssc@up.ac.za](mailto:ssc@up.ac.za) for information on other courses.

## 9. 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 a signed Submission Form and examination copies (ring bound and electronic copies) as well as proof of a published article from an accredited journal, to Mrs Rhona van der Merwe (Postgraduate administrator).
- 15 January / 15 June: student submits e-copies with corrections (as suggested by external examiners); 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.

## 10. Financing of Studies

Contact Student Services Centre at [ssc@up.ac.za](mailto:ssc@up.ac.za) for information regarding fees and bursaries, and/or visit <https://www.up.ac.za/article/2749200/fees-and-funding>

## 11. Contact Details

Postgraduate Coordinator	Prof Machdel Matthee	012 420 3365	<a href="mailto:machdel.matthee@up.ac.za">machdel.matthee@up.ac.za</a>
Postgraduate Administrator	Mrs Rhona van der Merwe	012 420 6321	<a href="mailto:rhona.vandermerwe@up.ac.za">rhona.vandermerwe@up.ac.za</a>

# ADDENDUM

## 1. PhD Questionnaire



### PhD application questionnaire 2024

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 the questionnaire. Please answer the questions as truthfully as possible – we are committed to provide you with good supervision and our first step is to understand the reason you want to study towards a PhD and what your interests are.

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