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ACADEMIC PERSONNEL AS AT 30 SEPTEMBER 2009

DEAN

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CHAIRPERSON OF THE SCHOOL

Bothma, T.J.D., BA(Pretoria) MA DLitt et Phil(Unisa)

Department of Informatics

De Villiers, C., BSc(Potchefstroom) BSc(Hons) DCom(Pretoria)..... Professor (Head)
MEd DTO HED(Unisa)

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Leonard, A.C., BSc(Hons)(Potchefstroom) MSc(Unisa) Associate Professor
DCom(Pretoria)

Joubert, P., BSc BCom(Hons) MCom(Pretoria) Senior Lecturer

Kruger, C.J., NHD(Technikon Pretoria) MBA MIT PhD(Pretoria)..... Senior Lecturer

Lotriet, H.H., PrEng BEng(Hons)(Pretoria) MEng Senior Lecturer
PhD(Stellenbosch)Dip Datametrics(Unisa)

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Van Loggerenberg, J.J., BSc MBA(Potchefstroom) Senior Lecturer
DCom(Pretoria) (Gijima AST chair)

Weilbach, E.H. BCom(Hons) MCom(Pretoria) HED Senior Lecturer

Harmse, S.S.A., BCom (UNISA), MIT (Pretoria) Lecturer

Joubert, P., BIT MPhil(Pretoria) Lecturer

Krauss, K.E.M., ND(IT) BTech Ed(Cape Tech)
MCom(KwaZulu-Natal) Lecturer

Lutu, P.E.N., BSc(Hons) MSc(Manchester) Lecturer

Pretorius, H.W., BSc(Hons) MSCE MIT(Pretoria) Lecturer

Pretorius, J., BA(Ed) BA(Hons) MPhil(Pretoria) Lecturer

Roodt, S., BCom(Pretoria) DipPM(Cranefield) MBA(CapeTown) Lecturer

Twinomurinzi, H., BSc(Hons)(Math) MIT(Pretoria)..... Lecturer

Van Deventer, J.P., BA SocSci(Hons)(Psych) Lecturer
BA(Hons)(Information Science) MIS(Pretoria)

Asmelash, D.W., BA:MIS(Solusi) Junior Lecturer

Steyn, A.A., BCom(Hons)(Pretoria)..... Junior Lecturer

Department of Information Science

Bothma, T.J.D., BA(Pretoria) MA DLitt et Phil(Unisa) Professor (Head)

Boon, J.A., BA(Potchefstroom) BA(Bibl)(Hons)(Pretoria) MBibl
DLitt et Phil(RAU) HD(Bibl)(Pretoria) Professor

Dick, A.L., BBibl(Hons)(Western Cape) MLS(Washington, Seattle)
PhD(Cape Town) Professor

Fourie, I., MBibl(Free State) DLitt et Phil(RAU) DTE(Unisa)..... Associate Professor

Snyman, M.E., BA MA DLitt(Pretoria) HED(Unisa)..... Associate Professor

Britz, JJ ,BA BD BBibl(Hons)DD(Pretoria) Extraordinary Professor

Lor, P.J., BA(Hons)(Bibl)(Stellenbosch) MBibl DPhil(Pretoria) Extraordinary Professor

Snowden, D J ,BA(Hons) MBA(Middlesex Business School) Extraordinary Professor

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Penzhorn, C.E., BA(Log) BBibl(Hons) MIS(Pretoria)
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Franken, C.J., BA BSc(Hons) MSc(Pretoria) Lecturer

Holmner, M.A., BA(Hons) MA DPhil(Pretoria).....	Lecturer
Schutte, M, BBibI BBibI(Hons) MIS(Pretoria)	Lecturer
Sewdass, N., BBibI BBibI(Hons)(Unisa) MBA(Buckinghamshire Chilterns Univ College) MInf(Unisa) DPhil(Pretoria)	Lecturer
Squier, M.M., BBibI(Unisa) BBibI(Hons) MIS(Pretoria)	Lecturer
Thompson, J.E., BA BEd MIS HD(BibI) HED(Natal)	Lecturer

Department of Computer Science

Engelbrecht, A.P., BSc(Hons) MSc PhD(Stellenbosch).....	Professor (Head)
Kourie, D.G., BSc(Hons) MSc(Pretoria) MSc(Unisa) PhD(Lancaster).....	Professor
Olivier, M.S., BSc(Hons) MSc PhD BA BA(Hons)(RAU).....	Professor
Venter, H.S., BSc(Hons) MSc PhD(RAU)	Associate Professor
Eloff, J.H.P., BSc(Hons) MSc PhD(RAU).....	Extraordinary Professor
Van den Heever, R.J., BSc(Hons) MSc(Pretoria) MS(Stanford) MEng PhD(California).....	Extraordinary Professor
Watson, B.W., JB(Math) JB(Math)(Hons)(Waterloo) PhD(Eindhoven).....	Extraordinary Professor
Gruner, S., MSc PhD (Dr.rer.nat) (Aachen RWTH).....	Senior Lecturer
Coetzee, S., BSc(Hons) HED MSc PhD(Pretoria)	Lecturer
Malan, K., BSc(Hons) MSc(Cape Town).....	Lecturer
Marshall, L., BSc(Hons) MIT(Pretoria)	Lecturer
Pieterse, V., BSc HED(Pretoria) BSc(Hons)(Unisa) MSc(Pretoria)	Lecturer
Strauss, M.D., BSc(Hons) MSc(Pretoria)	Lecturer
Theunissen, W.H.M., BSc(Hons) MSc(Pretoria)	Lecturer
Klazar, R.D., BSc(Univ of Limpopo) BSc(Hons)(Pretoria)	Junior Lecturer
Köhn, M.D., BMus BMus(Hons) BSc(Hons)(Pretoria).....	Junior Lecturer
Langenhoven, L., BIS BSc(Hons)(Pretoria)	Junior Lecturer
Morkel, T., BSc(Hons)(Pretoria)	Junior Lecturer
Riekert, M., BSc(Hons)(Pretoria).....	Junior Lecturer
Van Heerden, W.S., BSc(Hons)(Pretoria)	Junior Lecturer

Four-year programme

Naidoo, S, DSP(TCE) HED(SCE) BEd MEd(RAU)	Lecturer
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Head: Computer and information literacy

Jacobs, E.

Head: Student Administration

Jones, E.

GENERAL INFORMATION

Admission

Any person, who wishes to register at the University for the first time, or after an interruption of studies, should apply or reapply for admission. Application for admission to all undergraduate programmes closes on 30 September. Visit the website (<http://sit.up.ac.za>) for application details concerning the postgraduate programmes.

Selection

A selection procedure takes place prior to admission to the degree programmes in the School of Information Technology. The number of students admitted to the undergraduate programmes in the school may be limited. Postgraduate selection takes place in accordance with departmental policy.

Statement of symbols

When registering at this university for the first time, an undergraduate candidate must submit a statement of symbols obtained for subjects in the final Grade 12 examination.

National Senior Certificate

All undergraduate candidates who enrol at the University of Pretoria for the first time must show their original National Senior Certificate at the student administration of their faculty before the end of the first semester.

Medium of instruction

In conducting its business, the university uses two official languages, namely Afrikaans and English. In formal tuition, the medium of instruction is either Afrikaans or English, or both of these languages; provided that there is a demand and that it is academically and economically justifiable. However, it remains the student's responsibility to ascertain on an annual basis whether modules in a programme are to be presented in Afrikaans and/or in English.

In respect of administrative and other services, a student has the right to choose whether the university should communicate with him or her in Afrikaans or English.

Bursaries and loans

Particulars of bursaries and loans are available on request.

Accommodation

Applications for accommodation in university residences for a particular year may be submitted as from March 1 of the preceding year. Applications will be considered while vacancies exist, and prospective students are advised to apply well in advance. Please note that admission to the University does not automatically mean that lodging will also be available.

Welcoming day and academic orientation week

Details about the welcoming day, to which all parents are cordially invited, and about the subsequent academic orientation week, which all new first-year students **must** attend, are obtainable from the Dean of Students, University of Pretoria, 0002.

Prescribed books

Lists of prescribed books are not available. The lecturers will supply information regarding prescribed books to students at the commencement of lectures.

Amendment of regulations and fees

The University retains the right to amend the regulations and to change tuition fees without prior notification.

NB: The fees advertised and thus levied in respect of a module or study programme presentation represents a combination of the costs associated with the formal services rendered (for example lectures, practicals, access to laboratories, consumables used in laboratories, etc.) as well as associated overheads such as the provision of library and recreation facilities, security and cleaning services, electricity and water supply, etc. Therefore the fees in respect of a module or study programme presentation cannot simply be reconciled with the visible services that are rendered in respect of such module or study programme.

GLOSSARY OF TERMS

academic year: The duration of the academic year, which is determined by the University Council.

admissions regulation: A regulation compiled by the dean concerning the admission of students to a specific school, which includes a provision regarding the selection process.

credit (or **credit value**): A value unit linked to learning activities, calculated in accordance with the SAQA norm of **1 credit = 10 notional hours (learning hours)**. Credits are linked to modules and qualifications.

curriculum: A series of modules which form a programme, grouped together over a specified period of time and in a certain sequence according to the regulations.

examination mark: The mark a student obtains for an examination in a module, including practical examinations where applicable.

extended study programme: A study programme for a degree or diploma that is completed over a longer period than the minimum duration of the particular degree or diploma.

final mark: The mark calculated on the basis of the semester/year mark and the examination mark which a student obtains in a particular module according to a formula that is determined from time to time in the regulations for each module with the proviso that should no semester/year mark be required in a module, the examination mark serves as the final mark.

GS: A combined (final) mark (semester/year mark plus examination mark) of 40%-49%.

learning outcome: The end product of a specified learning process, i.e. the learning result (specific skills) that one intends to achieve at the end of the learning process.

level of a module: The academic level (year) of a module, which is indicated in the module code and which gives an indication of the complexity of the module.

LP: With the lecturer's permission.

TDH: With the head of department's permission.

module: An independent, defined learning unit, designed to result in a specific set of learning outcomes, and which is a component of a programme.

module code: Consists of an equal number of letters and digits, which indicate the name of the module, the year of study, the period of study and the level of the module.

notional hours (learning hours): The notional number of hours students should spend in mastering the learning content of a particular module or programme. The total number of learning hours for a module consists of the time needed for lectures, tutorials and practicals (contact hours), as well as for self-tuition, examination preparation and any other activity required by the study programme. (**notional hours = credits x10**)

NQF: National qualifications framework. This is a national framework in which all SAQA-registered qualifications are listed, arranged on eight levels in accordance with the complexity of the qualification.

programme: This is a comprehensively planned, structured and coherent set of teaching and learning units (modules), designed to attain a specific set of predetermined learning outcomes at a specific level, which culminates in a student being awarded a particular qualification (diploma, degree).

qualification: In outcomes-based education, a qualification is a diploma or a degree which is obtained after attaining the learning outcomes as specified in a coherent learning programme, expressed as an accumulation of credits at specific levels.

SAQA: South African qualifications authority. This body has been established by law and has as its purpose the registration of qualifications, programmes and unit standards, in order to ensure that specific national and international criteria are achieved.

semester/year mark: The mark a student obtains during the course of a semester or a year for tests, class-work, practical work or any other work in a particular module as approved by regulation.

student-centred learning: Teaching and learning methodology, which facilitates the total own responsibility for the learning process. A prerequisite is that lectures, tutorials and practicals be adapted so that active participation by students is always achieved.

syllabus: Summary of the contents of a module.

weighted average: The weighted average is composed of the marks of the various modules, weighted with the credits of each module as a fraction of the total number of credits for the quarter, semester or year.

DEGREES CONFERRED IN THE SCHOOL OF INFORMATION TECHNOLOGY

The Faculty of Engineering, Built Environment and Information Technology comprises three schools namely the School of Engineering, the School for the Built Environment and the School of Information Technology.

The School of Information Technology has three departments, namely the Department of Informatics, the Department of Information Science and the Department of Computer Science. Two faculties offer the degrees that fall under the School of Information Technology. This implies that although the Department of Informatics falls under the School of Information Technology, the degree BCom (Informatics) is conferred by the Faculty of Economic and Management Sciences (see below for further details).

Faculty of Engineering, Built Environment and Information Technology

The following degrees are conferred by the faculty:

- (a) Bachelor of Information Technology [BIT]
- (b) Master of Information Technology [MIT]
- (c) Doctor of Philosophy in Information Technology [PhD (Information Technology)]

Department of Informatics

The following degrees are conferred by the Faculty of Economic and Management Sciences:

- (a) Bachelor of Commerce in Informatics
- (b) Bachelor of Commerce Honours in Informatics
- (c) Master of Commerce in Informatics
- (d) Master of Philosophy in Informatics
- (e) Doctor of Commerce in Informatics
- (f) Doctor of Philosophy in Informatics

Department of Information Science

The following degrees are conferred by the Faculty of Engineering, Built Environment and Information Technology:

- (a) Bachelor of Information Science [BIS]
 - (i) in Information Science
 - (ii) in Multimedia
 - (iii) in Multimedia (Four-year programme)
 - (iv) in Publishing
- (b) Bachelor of Information Science Honours [BISHons]
 - (i) in Information Science
 - (ii) in Multimedia
 - (iii) in Publishing
- (c) Master of Information Science (Research) [MIS]
 - (i) in Library Science
 - (ii) in Information Science
 - (iii) in Multimedia
 - (iv) in Publishing
- (d) Master of Information Science (Coursework) [MIS]
 - (i) in Library Science
 - (ii) in Information Science
 - (iii) in Multimedia
 - (iv) in Publishing
- (e) Doctor of Philosophy [DPhil]
 - (i) in Library Science
 - (ii) in Information Science
- (f) Doctor of Philosophy [PhD]
 - (i) Publishing

The following degrees are conferred by the Faculty of Humanities:

- (a) Master of Arts in Development Communication (Research)
- (b) Master of Arts in Development Communication (Coursework)

Department of Computer Science

The following degrees are conferred by the Faculty of Engineering, Built Environment and Information Technology:

- (a) Bachelor of Science Information Technology in Information and Knowledge Systems
- (b) Bachelor of Science Information Technology in Information and Knowledge Systems (Four-year programme)
- (c) Bachelor of Science in Computer Science
- (d) Bachelor of Science Honours in Computer Science
- (e) Master of Science in Computer Science
- (f) Doctor of Philosophy in Computer Science

REGULATIONS

The rules for degrees here published are subject to change and may be amended prior to the commencement of the academic year in 2010.

IT.1 Admission to undergraduate study

General Regulations G.1 to G.15 are applicable to bachelor's degrees.

- (i) In order to register for a first bachelor's degree at the university a candidate should

- (a) be in possession of a valid National Senior Certificate with admission to degree purposes;
 - (b) comply with the particular requirements, prescribed in the admission procedures and faculty regulations of the respective faculties and departments, for admission to particular modules and fields of study.
- (ii) A candidate, who does not comply with the requirements in G.1.1(a) above, may also be considered for admission, provided that the candidate
- (a) is in possession of a certificate deemed by the university to be equivalent to any of the certificates mentioned in G1.1(a);
 - (b) is a graduate from another tertiary institution or has been granted the status of a graduate of such an institution; or
 - (c) passes an admissions examination prescribed by the university.
- Abovementioned candidates are requested to contact the relevant faculty for more detail regarding admission requirements.
- (iii) The senate may limit the number of students allowed to register for a programme, in which case the dean concerned may, at his or her discretion, select from the students who qualify for admission those who may be admitted.
- (iv) Subject to faculty regulations and the stipulations of General Regulations G.1.3 and G.62, a candidate is admitted to a postgraduate bachelor's degree only if he or she is already in possession of a recognised bachelor's degree.

IT.2 Admission requirements for candidates with a National Senior Certificate (NSC)

- (a) To be able to gain access to the specific programme, the appropriate combinations of recognised NSC subjects as well as certain levels of achievement in the said subjects are required from prospective students. In this regard the determination of an admission point score (APS) is explained and a summary of the specific requirements, i.e. APS and the specific subjects required is provided.
- (b) Determination of an admission point score (APS)
The calculation is simple and based on a candidate's achievement in six 20-credit recognised subjects by using the NSC ratings, that is the "1 to 7 scale of achievement". Thus, the highest APS that can be achieved is 42. Life orientation is excluded from the calculation determining the APS required for admission.

Rating code	Rating	Marks %
7	Outstanding achievement	80-100%
6	Meritorious achievement	70-79%
5	Substantial achievement	60-69%
4	Adequate achievement	50-59%
3	Moderate achievement	40-49%
2	Elementary achievement	30-39%
1	Not achieved	0-29%

- (c) Preliminary admission is based on the results obtained in the final Grade 11 examination. Final admission is based on Grade 12 results.
Please note: The final Grade 12 results will be the determining factor with regard to admission.

(d) Alternative admission channels

Candidates with an APS lower than required, could be considered for admission to the faculty if they meet the additional assessment criteria specified by the faculty from time to time. Preference will, however, be given to students who comply with the regular admission requirements of the faculty.

(e) Admission requirements for specific degree programmes:

(a) A valid National Senior Certificate with admission to degree purposes.

(b) The following minimum subject and level requirements for 2010:

School of Information Technology – minimum requirements					
Degree	APS	Group A			Group B
		Two languages	Mathematics	Life orientation	3 Other subjects
BIT	27	Comply with NSC minimum requirements; ADDITIONALLY one of these languages must be Afrikaans OR English at level 5 (60-69%).	5 (60-69%)	4 (50-59%) (Excluded when calculating the APS)	Any three subjects
BSc (Computer Science)	27	Comply with NSC minimum requirements; ADDITIONALLY one of these languages must be Afrikaans OR English at level 5 (60-69%).	5 (60-69%)	4 (50-59%) (Excluded when calculating the APS)	Any three subjects
BScIT (Information and Knowledge Systems)	24	Comply with NSC minimum requirements; ADDITIONALLY one of these languages must be Afrikaans OR English at level 4 (50-59%).	4 (50-59%)	4 (50-59%) (Excluded when calculating the APS)	Any three subjects
BScIT (Information and Knowledge Systems) (Four-year programme)	22	Comply with NSC minimum requirements; ADDITIONALLY one of these languages must be Afrikaans OR English at level 4 (50-59%).	3 (40-49%)	4 (50-59%) (Excluded when calculating the APS)	Any three subjects
BIS (Multimedia)	24	Comply with NSC minimum requirements; ADDITIONALLY one of these languages must be Afrikaans OR English at level 4 (50-59%).	4 (50-59%)	4 (50-59%) (Excluded when calculating the APS)	Any three subjects

BIS (Multimedia) (Four-year programme)	22	Comply with NSC minimum requirements; ADDITIONALLY one of these languages must be Afrikaans OR English at level 4 (50-59%)	3 (40-49%)	4 (50-59%) (Excluded when calculating the APS)	Any three subjects
Degree	APS	Group A	Group B		
		Two languages	Mathematics or Mathematical Literacy	Life orientation	3 Other subjects
BIS (Information Science)	24	Comply with NSC minimum requirements; ADDITIONALLY one of these languages must be Afrikaans OR English at level 4 (50-59%).	Mathematical literacy 3(40-49%) or **	4 (50-59%) (Excluded when calculating the APS)	Any three subjects
** If Informatics is selected as a subject at first-year level, an achievement rating of 4 (50-59%) must be obtained for Mathematics.					
BIS (Publishing)	24	Comply with NSC minimum requirements; ADDITIONALLY one of these languages must be Afrikaans OR English at level 5 (60-69%).	3 (40-49%) or Mathematical literacy 3(40-49%)	4 (50-59%) (Excluded when calculating the APS)	Any three subjects

IT.3 Requirements for specific modules

A candidate who has:

- (a) obtained at least 3 (40-49%) for Mathematics in Grade 12, will be admitted to WTW 133 and WTW 143; or 4 (50-59%), will be admitted to WTW 115 and WTW 126 and at least 5 (60-69%) to WTW 114 and WST 111;
- (b) obtained at least 4 (50-59%) in Mathematics in the Grade 12 examination, or at least 50% in both Statistics 113, 123 will be admitted to Informatics 112; Economics 113, 123 and 120;
- (c) obtained at least 5 (60-69%) in Accounting in the Grade 12 examination, may enrol immediately for INF 181, a module covering computer applications in accounting and offered for the duration of the first semester (14 weeks). All other students who have obtained at least 40% in FRK 111 must enrol for INF 181 in the second semester (14 weeks);
- (d) to obtain admission to COS 130, should have obtained the following:
 - (i) at least level 3 (40%-49%) in Mathematics in the final Grade 12 examinations; and
 - (ii) An APS of at least 22.
- (e) obtained at least 4 (50-59%) in Mathematics, or has passed WTW 133 and WTW 143, will be admitted to Informatics 153, 154, 163, 164.
- (f) not passed at least three Computer science modules at second-year level, will not be permitted to register for the Computer science modules at third-year level, unless special permission has been granted by the head of department.

Please note:

- (i) ...*the Grade 12 examination*... refers to the National Senior Certificate examination.
- (ii) **A student who takes a module presented by another faculty or department must take note of the admission requirements of such module, subminimum required in examination papers and supplementary examinations.**

IT.4 Registration for a specific year

A student registers for all the modules he or she intends taking in that specific year (quarter modules, first and second-semester modules and year modules) at the beginning of an academic year. Changes to a curriculum at the beginning of the second semester may be made only with the approval of the dean.

IT.5 Minimum study period

The minimum period of study for the degree is indicated at the relevant degree programme. Students registering for a three-year degree, must complete the degree in a maximum of five years. Students registering for a four-year degree, must complete the degree in a maximum of six years.

IT.6 Promotion requirements

6.1 General

- (a) A student must pass all the modules of the first year of study, before he or she is permitted to register for any module of the third year of study. Module prerequisites remain applicable. Exceptions to this rule will be considered by the relevant head of department and the dean.
- (b) A student must pass all the modules of the second year of study, before he or she is permitted to register for any module of the fourth year of study (in the case of a four-year degree). Module prerequisites remain applicable. Exceptions to this rule will be considered by the relevant head of department and the dean.
- (c) A new first-year student, who has failed in all the prescribed modules of the programme at the end of the first semester, will not be permitted to proceed to the second semester in the School of Information Technology.
- (d) A student who has not passed at least 70% of the core credits of the current year of study after the November examinations will not be re-admitted to the School of Information Technology.
- (e) Students who fail a module for a second time, forfeit the privilege of registering for any modules of an advanced year of study.
- (f) Students whose academic progress is not acceptable can be suspended from further studies.

6.2 Procedure: Exclusion from and re-admission to further studies

- (a) A student who is excluded from further studies in terms of the stipulations of the abovementioned regulations, will be notified in writing by the dean or admissions committee of the School of Information Technology at the end of the relevant semester.
- (b) A student who has been excluded from further studies may apply in writing to the admissions committee of the School of Information Technology on level 6 in the Engineering building I for re-admission.
- (c) Written applications for re-admission to the second semester must be submitted at least 7 days before lectures resume for the second semester.
- (d) Written applications for re-admission to the new academic year must be submitted before 11 January.

- (e) Late applications will be accepted only in exceptional circumstances after approval by the dean.
- (f) Should a student not be re-admitted to further studies by the admissions committee of the School of Information Technology, he/she will be informed in writing.
- (g) A student who is not re-admitted by the admissions committee of the School of Information Technology, has the right to appeal to the Appeals Committee: Admissions in the Administration building, room 3-12.
- (h) Any decision taken by the Appeals Committee: Admissions is final.
- (i) Should the student be re-admitted by the Admissions Committee, strict conditions will be set which the student must comply with in order to proceed with his/her studies.
- (j) A student, who is repeating his or her year, may be permitted by the dean, on recommendation of the relevant head(s) of department, to register for modules of the following year of study in addition to the outstanding modules he or she has failed, providing that he or she complies with the prerequisites of these modules and no timetable clashes occur. In no semester may the total credits for which a student registers, exceed the normal number of credits per semester by more than 16 credits, except with special permission from the relevant head of department.

IT.7 Change of field of study

Transfer from one field of study to another may only take place with the dean's approval, after consultation with the relevant head of department.

IT.8 Registration for modules

- (a) Final dates are set for the change of modules (cancellation or addition) for each academic year. These dates are available from the student administration offices. Students may change the modules they are registered for only with the approval of the dean and within the first two weeks after commencement of the module.
- (b) A student may not register for a module of a subsequent year if a timetable clash occurs with a module of a previous year which has not yet been passed and which is prescribed for his or her field of study, unless exemption is obtained from class attendance in the latter module.
- (c) Should a student register for modules of the second semester at the beginning of a year of study, and it becomes evident at the end of the first semester that he or she does not comply with the prerequisites of the second semester modules, the registration of such modules will be cancelled. It is also the student's responsibility to ensure at the beginning of the second semester that the cancellation has been brought about.

IT.9 Module credits for unregistered students

There are students who attend lectures, write tests and examinations and in this manner earn "marks", but who have neither registered for modules nor registered as students. These marks will not be communicated to any student before he/she has provided proof of enrolment. A student cannot obtain any credits in a specific academic year for a module "passed" in this manner during a previous academic year and for which he/she was not registered. This arrangement applies even where the student is prepared to pay the tuition fees.

IT.10 Computer and information literacy

Computer and information literacy are offered as compulsory modules. Students will be allowed to write an exemption examination for CIL 111. Students may write the exemption examination for CIL 111 only once.

IT.11 Academic literacy

It is expected of every new undergraduate student who wishes to register at the University of Pretoria, to sit for an academic literacy test. Students who pass will be granted exemption from the compulsory EOT Academic literacy modules.

IT.12 Examinations

12.1 Examinations, projects and research reports

- (a) An examination in a module may be written and/or oral. Projects and research reports are prepared and examined as stipulated in the study guide of the module, in accordance with the regulations and procedures as described in 11.2 below.
- (b) The examinations for modules of the first semester are held in May/June, while all other examinations (third and fourth-quarter modules, second-semester modules and year modules) are held in October/November.

12.2 Examination admission

A minimum semester/year mark of 40% is required in order to be admitted to the final examination in a specific module, with the exception of a first-semester module at first-year level where a minimum semester mark of 30% is required for admission to the final examination. In addition, all other examination admission requirements, applicable to the relevant module, must have been met.

12.3 Pass requirements

Refer also to General Regulations G.10.2, G.11.1(a) and G.12.2.2

- (a) In order to pass a module, a student must obtain an examination mark of at least 40% and a final mark of at least 50% except if stated otherwise in the study guide. A student passes a module with distinction if a final mark of at least 75% is obtained. The final mark is compiled from the semester/year mark and the examination mark.
- (b) Calculation of the final mark: The semester/year mark must account for no less than 40% and no more than 60% of the final mark, with the exception of modules such as design and research projects and research reports, as well as in modules where the development of general skills is the primary learning activity, where appropriate alternative norms are determined individually by schools or departments. The specific details and/or formula for the calculation of the final mark are set out in the study guide of each module.
- (c) Calculation of the semester/year mark: The semester/year mark is compiled from formative assessment of learning activities such as assignments, presentations, practicals and group projects, as well as from class tests and semester tests. For each module the specific formula for the calculation of the semester/year mark is determined by the lecturer(s) responsible for the presentation of the module and the details are set out in the study guide. Refer also to General Regulation G.11.1(b).
- (d) In some modules specific requirements in respect of certain components of the semester/year mark may be set in order for a student to pass the module (for example that satisfactory performance in and attendance of practical classes are required). Thus, even if a pass mark is obtained in the module, a

pass is not granted unless these requirements are met. For such modules these specific requirements are set out in the study guide.

- (e) A student must comply with the subminimum requirements in subdivisions of certain modules. For such modules these specific requirements are set out in the study guide of the module.
- (f) A student may be promoted (exempted from the examination) in certain modules should a specified semester/year mark (minimum 65%) be obtained. For such modules these specific requirements are set out in the study guide of the module. Refer also to General Regulation G.10.3.

12.4 Ancillary examinations

Refer to General Regulation G.12.3.

12.5 Supplementary examinations

Refer to General Regulation G.12.4.

In the School of Information Technology all supplementary examinations are considered and granted in accordance with the stipulations of General Regulation G.12.4, except that the semester mark is taken into account when the final mark is calculated and in accordance with the faculty regulations of the faculty in which the module is offered. The only exception to this rule is in the case of first-year modules at first-semester level, where the semester mark is not considered, and where the supplementary examination mark is taken as the final mark, with the provision that the maximum final mark awarded may be no more than 50%. Special supplementary examinations will not be arranged for students who were not able to write the supplementary examinations during scheduled times, as provided in the examinations timetable.

12.6 Special examinations (including the aegrotat)

Refer to General Regulation G.12.5.

12.7 Other special examinations

Refer also to General Regulation G.12.6.

- (a) The dean may, on the recommendation of the head of department concerned, grant a special examination in a module to a student who failed that module in the final year of study, and consequently does not comply with degree requirements. A student may at most, be admitted to either one special examination in a year module or two special examinations in semester modules or four special examinations in quarter modules.
- (b) To be taken into consideration for a special examination, a student should have obtained a minimum final mark of 40% and should also have complied with all other examination admission requirements which are applicable to the relevant module.
- (c) A student must apply in writing to the dean before consideration will be given to admission to a special examination. The head of department decides when the special examination will take place and may prescribe work that must be satisfactorily completed before a student may write the examination.
- (d) During calculation of the final mark the semester mark is retained and the final mark is calculated as the weighted average of the special examination mark and the semester mark, in accordance with the formula as published in the study guide of the specific module. The candidate should also comply with the subminimum requirements. The highest final mark that may be awarded is 50%.

- (e) If a test or examination clash occurs between modules within the prescribed curriculum, an adjustment of the test date and/or time will only be considered if the student completes an official application form at the department's administration office and submits a copy and supporting documentation to the relevant lecturer at least seven (7) days prior to the scheduled test. A module from a higher year level receives preference to that of a lower year level within the prescribed curriculum.

12.8 Re-marking of examination scripts

Refer to General Regulation G.14.

IT.13 Degree with distinction (undergraduate)

A degree in the School of IT is conferred with distinction on a student who did not repeat any module of his/her final year, obtained a weighted average of at least 75% in all the prescribed modules for the final year, provided that a subminimum of 65% is obtained in each of these modules and provided that the degree is completed in the prescribed minimum period of time. Ad hoc cases will be considered by the dean, in consultation with the head of the relevant department.

IT.13.1 Module information

XYZ 151: Prerequisite. Before a student is admitted to a module, XYZ 163, he or she must pass the prerequisite module(s) XYZ 153, unless one of the following indications is used:

		Minimum requirement
(j)	Code in brackets: (XYZ 151)	Examination admission
GS	Code followed by GS: XYZ 151 GS	Combined final mark of 40%-49%

Deviations from these requirements may be permitted only with the approval of the dean, after consultation with the relevant head(s) of department(s).

CURRICULA OF THE INFORMATION TECHNOLOGY PROGRAMMES

IT.14 Bachelor of Information Technology [BIT] (Code 02130082)

This degree is conferred by the Faculty of Engineering, Built Environment and Information Technology.

Programme organiser:

Dr M Matthee, Information Technology building, room 5-58,
Tel: 012 420 3365, email: machdel.matthee@up.ac.za

Admission requirements for candidates with a National Senior Certificate

To obtain admission to this degree programme, a candidate should have obtained the following:

- a valid National Senior Certificate with admission for degree purposes; and
- a minimum APS of 27 in the final Grade 12 examinations; and
- compliance with the NSC minimum requirements; additionally one of these languages must be Afrikaans or English at level 5 (60%-69%); and

- (d) at least level 5 (60-69%) in Mathematics; and
 (e) at least level 4 (50-59%) in Life orientation (excluded when calculating the APS).

Curriculum

The list of required modules is given below in a proposed study programme. The degree is awarded upon successful completion of a minimum of 708 credits, of which 196 are required at first-year level, 166 at second-year level, 186 at third-year level, and 160 at fourth-year level.

Requirements for promotion to the following year of study

Also consult General Regulations.

- (i) A student is promoted to the following year of study after obtaining the required credits as mentioned below:
- Second year of study after obtaining at least 70% of the credits of the first year of study.
 - Third year of study after obtaining at least 70% of the credits of the second year of study.
 - Fourth year of study after obtaining at least 70% of credits of the third year of study.
- (ii) The degree is conferred when all prescribed modules have been passed.

(a) First year of study (196 credits)

Code	Module	Prerequisites	Credits	Period
Pass an exemption examination in CIL 111 or				
CIL 111	Computer literacy and		4	S1
CIL 121	Information literacy (^compulsory)		4	S2
Pass an academic literacy test or				
EOT 110	Academic literacy		6	S1
EOT 120	Academic literacy		6	S2
and				
EOT 164	Communication in organisations		6	Q3-4
COS 132	Imperative programming		16	S1
COS 110	Program design: Introduction	COS 130GS or COS 131GS or COS 132GS and Maths level 4 or WTW 133	16	S2
COS 121	Software modelling	COS 130GS or COS 131GS or COS 132GS	16	S2
COS 151	Introduction to Computer science		8	S1
ERA 284 (previously EOS 284)	Computer architecture	COS 110 or COS 130 or COS 131 or COS 132	16	S2
OBS 114	Business management		10	S1
FRK 111	Financial accounting		10	S1
FRK 121	Financial accounting	FRK 111GS	12	S2
INF 153	Informatics	Par IT.3(e)	5	S1
INF 163	Informatics	INF 153	5	S2

INL 110	Information science: Introduction to Information science		12	S1
WTW 115	Discrete structures	Par 1.2 – Natural Sciences(Maths level 4)	8	S1
WTW 114	Calculus	Par 1.2 – Natural Sciences(Maths level 5)	16	S1
WTW 126	Linear algebra	Par 1.2 – Natural Sciences (Maths level 4)	8	S2
FIL 120	Philosophy		12	S2

(b) Second year of study (166 credits)

Code	Module	Prerequisites	Credits	Period
COS 212	Data structures and algorithms	COS 110 or COS 131	16	S1
COS 222	Operating systems	COS 130 or COS 131 or COS 132	16	S2
COS 216 (previously COS 140)	Netcentric computer systems	COS 110 or COS 131	16	S1
INF 214	Informatics	CIL 111 and CIL 121	14	S1
INF 271	Informatics	CIL 111, 121 INF 163, 164 Reg 1.2(g)	14	Year
INF 272	Informatics	CIL 111, 121 INF 163, 164 Reg 1.2(g)	14	Year
IMY 210	Multimedia: Advanced mark-up languages (1)	Departmental selection	16	S1
IMY 220	Multimedia: Advanced mark-up languages (2)	IMY 210	16	S2
BER 410	Business law		12	S1
WTW 285	Discrete structures	WTW 115	12	S2
At least one of the following:				
INL 210 or	Information science: Information seeking and retrieval	CIL 121	20	S1
INL 240	Information science: Social and ethical impact		20	S1

(c) Third year of study (minimum 186 credits)

Code	Module	Prerequisites	Credits	Period
COS 301 or	Software engineering or	COS110 and COS 121	27	Year

INF 370 or IMY 300	Information systems project or Multimedia project	INF 225, 261, 271 and 272 Departmental selection	30 45	Year Year
INF 324	Informatics	INF 225, 261, 271 and 272	15	S2
INF 315	Informatics	LP	15	S1
INF 354	Informatics	INF 225, 261, 271 and 272	15	S1
INL 310	Information science: Information organisation		30	S2
INL 320	Information science: Information and knowledge management		30	S1
At least three of the following:				
COS 314	Artificial intelligence	COS 131 or COS 110	18	S1
COS 326	Database systems	INF 214 or TDH	18	S2
COS 333	Programming languages	COS 110	18	S2
COS 341	Compiler construction	COS 212	18	S1
COS 330	Computer security and ethics	COS 110	18	S2
COS 344	Computer graphics	COS 110 and WTW 126	18	S1
COS 332	Computer networks	COS 216	18	S1

(d) Fourth year of study (160 credits)

Code	Module	Prerequisites	Credits
SIT 700	Industry-based learning		52
JCP 202	Community-based project		8
Five modules (minimum 100 credits) of the following with a maximum of four modules from one department: Note that a student who wishes to continue with an MSc(Computer Science) or MCom(Informatics) or MIS(Information Science) should take four of the five honours modules from that specific department.			100
Information science			
	Choice of honours modules in consultation with the programme organiser		20 each
Informatics			
	Choice of honours modules in consultation with the programme organiser		20 each
Computer science			
	Choice of honours modules in consultation with the programme organiser		20 each

POSTGRADUATE PROGRAMMES IN INFORMATION TECHNOLOGY

Consult General Regulations G.30 to G.62

**IT.15 Master of Information Technology (Coursework)
[MIT] (Code 02250082)**

Also consult General Regulations G.30-G44 and G.57-G62

Programme organiser:

Mrs K Malan, Information Technology building, room 4-31,
Tel: 012 420 3618, email: kmalan@cs.up.ac.za

This degree programme is presented in English only.

(a) **Admission**

- (i) Subject to the stipulations of General Regulations G.1.3, G.30 and G.62, an appropriate honours or bachelor's degree is a requirement for admission; and
- (ii) A pass mark in Mathematics at grade 12 level or another qualification in Mathematics, Statistics or Mathematical statistics, which the chairperson of the School of Information Technology considers to be sufficient; and
- (iii) Sufficient appropriate practical experience in the technology field in the opinion of the chairperson of the School of Information Technology.
- (iv) The chairperson of the School of Information technology may set additional requirements for admission. In particular, this will apply to candidates with insufficient academic background in Information technology.
- (v) Selection of candidates will take place.
- (vi) The result of the selection is final and no correspondence will be entered into.

(b) **Duration**

A minimum of two years' part-time study. The MIT degree must be completed in a maximum of three years. A student will have to apply with the Dean of the Faculty of Engineering, Built Environment and Information Technology if he/she needs more than three years to complete the degree.

(c) **Conferment of the degree**

The master's degree in Information Technology is conferred on a student who successfully completes 240 credits.

Mini-dissertation	120 credits
Core modules	120 credits

(d) **Pass requirements**

A minimum semester mark of 40% is required in order to be admitted to the final examinations in all the prescribed modules of the degree. A final mark of 50% is required to pass all coursework modules and the mini-dissertation.

(e) **Degree with distinction**

The degree is conferred with distinction on students who have obtained at least 75% for the mini-dissertation and a minimum of 75% weighted average final mark for the coursework modules.

(f) **Curriculum**

The curriculum is determined in consultation with the programme organiser.

**IT.16 Doctor of Philosophy in Information Technology
[PhD (Information Technology)] (Code 02260593)**

Also consult General Regulations G.45 to G.62.

- (a) Subject to the stipulations of Regulations G.45 and G.62, no candidate is admitted to doctoral studies unless he/she holds an appropriate master's degree.
- (b) Unless the dean, on the recommendation of the chairperson of the school, decides otherwise, the PhD degree is conferred on the basis of a thesis and an examination on the thesis.
- (c) Unless the Senate, on the recommendation of the supervisor, decides otherwise, a student, before or on submission of a thesis, must submit proof of submission of an article to an accredited journal, to the Head: Student Administration. The draft or submitted article, as the case may be, should be based on the research that the student has conducted for the thesis and be approved by the supervisor if the supervisor is not a co-author. The supervisor shall be responsible for ensuring that the paper is taken through all the processes of revision and resubmission, as may be necessary. Conferment of the degree may be made subject to compliance with the stipulations of this regulation.
- (d) The student must provide proof by means of his or her work, thesis and examination of advanced original research and/or creative work which makes a real and substantial contribution to the relevant field of research.

**IT.17 BCom in Informatics
[BCom (Informatics)] (Code 07130172)**

The Faculty of Economic and Management Sciences confers this degree.

Package coordinator:

Prof C de Villiers, IT 5-78, Tel: 012 420 3085, email: carina.devilliers@up.ac.za

Total credits required: 419

Admission requirements for candidates with a National Senior Certificate

To obtain admission to this degree programme, a candidate should have obtained the following:

- (a) a valid National Senior Certificate with admission for degree purposes; and
- (b) a minimum APS of 28 in the final Grade 12 examinations; and
- (c) compliance with the NSC minimum requirements; additionally one of these languages must be Afrikaans or English at level 4 (50%-59%); and
- (d) at least level 4 (50-59%) in Mathematics; and
- (e) at least level 4 (50-59%) in Life orientation (excluded when calculating the APS)

This programme is defined as the application of modern information systems in organisations, both private and public. The student will have a graduate-level knowledge of the analysis, design and implementation of information systems, databases, operating systems, networks and information management. In addition, the student will have the

KOB	Communication management		210, 220	310, 320
FBS	Financial management		210, 220	310, 320
BEM	Marketing management ⁽⁷⁾	110, 121 ⁽⁷⁾	211, 221	311, 321
BDO	Industrial and organisational psychology ⁽⁷⁾	110, 120 ⁽⁷⁾	219, 229 271, 272	319 ⁽⁶⁾ , 329 ⁽⁶⁾ 371, 372
PAD	Public administration ⁽⁷⁾	110, 120	210, 220	310, 320

Elective modules can only be taken if they can be accommodated in the class, test and examination timetables.

Note: See regulation C.2 in the yearbook of the Faculty of Economic and Management Sciences for prerequisites of all modules.

✖ Students may write the exemption examination for CIL 111 only once.

(1) Prerequisites for modules:

Year level 1: INF 112 (see IT.3(b), INF 153 and INF 154 (see IT.3(c)), INF 163 (INF 153), INF 164 (INF 154);

Year level 2: INF 214 and INF 225 (CIL 111, CIL 121), INF 261 (INF 214), INF 271 and INF 272 (CIL 111, CIL 121, INF 163, INF 164),

Year level 3: INF 301 (INF 214, 225, 261, 271, 272)

(2) In addition to the provisions of the footnote⁽¹⁾ above, a student who does not fulfil the Mathematics requirement for admission but is nevertheless interested in a BCom: (Informatics) degree, should register for the BCom (Code 07130221) and pass Pre-calculus 133 (WTW 133) and Calculus 143 (WTW 143) and the fundamental modules SIT 110 and SIT 120 as extra modules. He or she may then apply for permission to change to the second year of the BCom (Informatics) programme. Students who have passed Informatics 112, may, if their academic performance merits it, be allowed by the dean, on the recommendation of the head of department, to register simultaneously for Informatics 153, 154, 163, 164 and 271, 272.

(3) If a student obtained at least 5 (60-69%) in Accounting in the Grade 12 examination, he or she may enrol immediately for INF 181, a module covering computer applications in accounting and offered for the duration of the first semester (14 weeks). All other students who have obtained at least 40% in FRK 111 must enrol for INF 181 in the second semester (14 weeks);

(4) INF 181 is a 14-week module that is offered in the first as well as the second semester.

(5) Taxation 220 (BEL 220) is compulsory on the 200-level, if Financial accounting 311, 321 (FRK 311, 321) are chosen as a major.

(6) OBS 310 and BDO 319, 329 may not be included in the same curriculum for degree purposes.

(7) If these modules are chosen as part of the electives in the second and third year, the first-year modules will have to be included as extra modules.

Specialisation module: INF 301

II. HONOURS DEGREES

See General Regulations G.16 to G.29.

IT.18 Bachelor of Commerce Honours [BComHons]
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(a) **General**

The dean has the right of authorisation regarding matters not provided for in the General Regulations or in the faculty regulations.

(b) **Requirements for admission**

- (i) Subject to the stipulations of General Regulations G.1.3 and G.62, a candidate is not admitted to the study for the BComHons degree unless he/she is in possession of a BCom degree.
- (ii) Preparatory work for the honours degree, as determined by each head of department, with an assessment thereof, is compulsory for all candidates. Candidates can be exempted from this requirement if they pass an exemption assessment as determined by the head of the department concerned.
- (iii) A candidate may be refused admission to an honours degree by the head of department if he or she does not comply with the level of competence required in the subject as determined by the department – with the proviso that a candidate, who fails to comply with the level of competence required, may be admitted if additional study assignments, as agreed upon, are completed and/or examinations are written.
- (iv) A candidate, who is refused admission to an honours degree, may request that the dean reconsider his or her application for admission in terms of the set procedures.
- (v) The head of department concerned may set additional admission requirements.
- (vi) In respect of all BComHons fields of specialisation:
 - Mathematics at Grade 12 level or another qualification in mathematics, statistics or mathematical statistics deemed adequate by the head of department.
 - Adequate knowledge of management, financial and economic sciences as well as statistics as determined by the head of the department concerned in consultation with the dean.

(c) **Field of study**

BComHons

Informatics (07240172)

(d) **Duration of study**

Subject to the provisions of General Regulation G.18.3, a full-time student must complete his or her studies for an honours degree within two academic years (four semesters) and an after-hours student within three academic years (six semesters) after first registration for the degree. However, the dean may, on the recommendation of the head of department concerned, extend the period of study in both cases by a maximum of two semesters. A student who does not qualify for the degree within three years (six semesters) or four years (eight semesters) respectively after first registration, must repeat the prescribed modules.

(e) **Curricula**

- (i) A student compiles his/her curriculum in consultation with the head of department concerned.
- (ii) Details of modules, credit values and syllabi are available, on request, from the relevant head of department.

(f) **Examination**

(i) The subminimum required in the examination in each module is 50%, except in modules presented by the departments of Accounting, Auditing, Marketing and Communication Management, Business Management, Statistics, Financial Management, Taxation, Tourism Management and School of Public Management and Administration where a subminimum of 40% must be obtained. However, all departments set a final mark of at least 50% as the pass mark for a module.

A minimum pass mark of 50% is required for a research report.

(ii) Subject to the provisions of General Regulation G.26, a head of a department determines, in consultation with the dean:

(aa) when the honours examinations in his/her department will take place, provided that:

(1) honours examinations which do not take place before the end of the academic year, must take place not later than 11 January of the following year, and all examination results must be submitted to student administration by 15 January;

(2) honours examinations which do not take place before the end of the first semester, may take place not later than 15 July, and all examination results must be submitted to student administration on or before 19 July;

(bb) whether a student will be admitted to a supplementary examination: provided that a supplementary examination is granted only once in a maximum of two prescribed semester modules or in one year module.

NB: For the purposes of this stipulation, the phrase "may not sit for an examination more than twice in the same subject" as it appears in General Regulation G.18.2, implies that a student may not be admitted to an examination in a module, including a supplementary examination, more than three times.

(cc) the manner in which research reports are prepared and examined in his/her department.

NB: Full details are published in each department's postgraduate information brochure that is available from the head of the department concerned. The minimum pass mark for an research report is 50%. The stipulations regarding pass requirements for dissertations in General Regulation G.12.2. apply *mutatis mutandis* to research reports.

(iii) Subject to the provisions of General Regulation G.12.2 (2.1.3), the subminimum required in subdivisions of modules is published in the postgraduate information brochure that is available from the head of department concerned.

(iv) To obtain the degree with distinction, a student must obtain an average of at least 75% in the prescribed modules.

III. MASTER'S DEGREES

See General Regulations G.30 to G.44 and G.57 to G.62.

The dean has the right of authorisation regarding matters not provided for in the General Regulations or the faculty regulations.

IT.19 Master of Commerce [MCom]
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(a) **Requirements for admission**

- (i) Subject to the provisions of General Regulations G.1.3 and G.62, the related BHons degree is a requirement for admission to master's degree study.
- (ii) The requirement of an exemption assessment on preparatory work, as determined by the head of the department concerned, should be complied with.
- (iii) Adequate knowledge of management, financial and economic sciences as well as statistics as determined by the head of the department concerned in consultation with the dean.
- (iv) The head of department concerned may set additional admission requirements.
- (v) For MCom degree, Mathematics at Grade 12 level or another qualification in Mathematics, Statistics or Mathematical statistics deemed adequate by the head of department.

(b) **Field of study**

MCom degree

Informatics (07250172)	Dissertation
(07250173)	Coursework

(c) **Duration of study**

The degree programme must be completed within four years after the first registration for the degree, provided that the dean may, in exceptional cases, and on the recommendation of the head of department concerned, approve a fixed limited extension of the period of study.

(d) **Dissertations, curricula and module credits**

- (i) A dissertation must be submitted on a topic from the field of study chosen for the honours degree. However, the dean may, on the recommendation of the head of department concerned, approve the substitution of the required dissertation by the successful completion of a prescribed number of module credits and a mini-dissertation.
- (ii) Information regarding modules, credits and syllabi are available, on request, from the head of the department concerned.

(e) **Pass requirements**

- (i) The minimum pass mark for both a dissertation and a mini-dissertation is at least 50%. The provisions regarding pass requirements for dissertations, contained in General Regulation G.60.2.1.2(a), apply *mutatis mutandis* to mini-dissertations.
- (ii) A pass mark of at least 50% is required in the examination of each module.
- (iii) In order to obtain the degree with distinction, at least 75% must be obtained for the dissertation or an average of at least 75% in the examinations and for the mini-dissertation.

DEGREE PROGRAMMES IN INFORMATION SCIENCE

IT.20 Bachelor of Information Science [BIS]
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Programme manager:

Prof TJD Bothma, IT 6-73, Tel: 012 420 2293, email: theo.bothma@up.ac.za

Enquiries:

Mrs J Geertsema, email: joukje.geertsema@up.ac.za

IT.20.1 BIS in Information Science (Code 12131004)

The increasing amount of information available and growing information needs have necessitated the training of information intermediaries to effectively facilitate the bringing together of users and the information they require. This package focuses on the use of information technology and the processing of information products and is designed to train students in the management, retrieval and organisation of information, as well as to teach them how to add value to, package and distribute information. Students will also have the opportunity to develop knowledge and skills in the management of one of the most important resources of enterprises – information and knowledge.

Two or three specialisation options are available, depending on the electives chosen.

Package organiser:

Dr N Sewdass, IT 6-52, Tel: 012 420 4209, email: nisha.sewdass@up.ac.za

Admission requirements for candidates with a National Senior Certificate

To obtain admission to this degree programme, a candidate should have obtained the following:

- a valid National Senior Certificate with admission for degree purposes; and
- a minimum APS of 24 in the final Grade 12 examinations; and
- compliance with the NSC minimum requirements; additionally one of these languages must be Afrikaans or English at level 4 (50%-59%); and
- at least level 3 (40-49%) in Mathematics or Mathematical literacy; and
- at least level 4 (50-59%) in Life orientation (excluded when calculating the APS)
- if Informatics is elected as an elective subject on first-year level, a minimum of at least level 4 (50-59%) in Mathematics is required.

Minimum credits required: 423-446*	Year-level 1	Year-level 2	Year-level 3	Total
Fundamental modules	20	8	0	28
Core modules	68	92	75	235
Elective modules	30	60-63*	70-90*	160-183*
Total	118	160-163*	145-165*	423-446*

Note:

* Because credits are not calculated in the same way in all faculties, students should ensure note that the total number of credits required for this package at least 423-446 depending on the choice of elective modules.

FIRST YEAR OF STUDY				
Code	Module	Prerequisites	Credits	Period
Fundamental modules (20 credits)				
Pass an exemption examination in CIL 111 or				
CIL 111	Computer literacy		4	S1
CIL 121 [^]	Information literacy ([^] compulsory)		4	S2
Pass an academic literacy test or				
EOT 110	Academic literacy		6	S1
EOT 120	Academic literacy		6	S2
Core modules (68 credits)				
INL 110	Information science: Introduction to information science		12	S1
INL 120	Information science: Organi- sation and representation of information		12	S2
INL 130	Information science: Personal information management		12	S1
INL 140	Information science: Information and communication technology		12	S2
OBS 114 and	Business management		10	S1
OBS 124	Business management	(OBS 114)	10	S2
Elective modules (30 credits*)				
Select one group in consultation with the package organiser.				
Group A* (30 credits)				
Code	Module	Prerequisites	Credits	Period
INF 112	Informatics	IT.3(b)	10	S1
INF 153	Informatics	IT.3(e)	5	S1
INF 154	Informatics	IT.3(e)	5	S1
INF 163	Informatics	INF 153	5	S2
INF 164	Informatics	INF 154	5	S2
Note:				
* Prerequisite for INF is at least level 4 (50-59%) in Mathematics in the Grade 12 examination or passed WTW 133 and WTW 143 as well as the module prerequisites.				
or				
Group B (30 credits*)				
Code	Module	Prerequisites	Credits	Period
At least 30 credits* from any module(s) at year-level 1. Choose modules in consultation with package organiser.			30*	
Note:				
* Because credits are not calculated in the same way in all faculties, students should take note that the total number of credits required for Group B must be at least 30.				

SECOND YEAR OF STUDY				
Code	Module	Prerequisites	Credits	Period
Fundamental module (8 credits)				
+JCP 202	Community-based project		8	^
Note:				
+ All students registered as first-year students from 2005 onwards, must complete the above module as part of the requirements for the bachelor's degree. A student may register for the module during the second or third year of study in accordance with departmental requirements.				
^ Consult the department at the beginning of the year.				
Core modules (92 credits)				
INL 210	Information science: Information seeking and retrieval	CIL 121	20	S1
INL 220	Information science: Representation and organisation	INL 210 or LP	20	S2
INL 240	Information science: Social and ethical impact		20	S1
Select one of the following modules in consultation with the package organiser:				
OBS 210 and	Business management	OBS 114 or OBS 124 with admission to examination in the other	16	S1
OBS 220 or	Business management	OBS 114 or OBS 124 with admission to examination in the other	16	S2
KOB 210 and	Communication management		16	S1
KOB 220	Communication management	KOB 210GS	16	S2
Elective modules (60-63 credits*)				
Select one group in consultation with the package organiser.				
Note:				
* Because credits are not calculated in the same way in all faculties, students should take note that the total number of credits required for Group A is at least 63 and for Group B at least 60.				
Group A^ (63 credits*)				
Code	Module	Prerequisites	Credits	Period
INF 214	Informatics	CIL 111 and CIL 121	14	S1
INF 261	Informatics	INF 214	7	S2
INF 225	Informatics	CIL 111 and CIL 121	14	S2
INF 271	Informatics	CIL 111 and CIL121 INF 163, 164	14	Year
INF 272	Informatics	CIL 111 and CIL 121 and INF 163 and 164	14	Year
Note:				
^ Prerequisite for INF is at least level 4 (50-59%) in Mathematics in the grade 12 examination or WTW 101 or (WTW 133 and WTW 143) as well as the module prerequisites.				

or				
Group B (60 credits*) Choose three of the following modules:				
Code	Module	Prerequisites	Credits	Period
INL 230	Information science: User studies and dissemination		20	S1
INL 250	Information science: Bibliographic representation		20	S2
INL 260	Information science: Economics and politics of information		20	S2
INL 270	Information science: Indigenous knowledge and communication		20	S2

THIRD YEAR OF STUDY				
Code	Module	Prerequisites	Credits	Period
Core modules (75 credits)				
INL 310	Information science: Information organisation		30	S2
INL 320	Information science: Information and knowledge management		30	S1
INL 370	Information science: Experiential learning project		15	Y
Elective modules (minimum of 70-90 credits*)				
Select one group in consultation with the package organiser.				
Note:				
* Because credits are not calculated in the same way in all faculties, students should take note that the total number of credits required for Group A is at least 70 and 90 for Groups B and C.				
Group A (70 credits*)				
Code	Module	Prerequisites	Credits	Period
INF 315	Informatics	LP	15	S1
INF 324	Informatics	INF 261, 262, 271 and 272	15	S2
And at least 40 credits for Business management or Entrepreneurship or Communication management at year-level 3.			40	
Or				
Group B (90 credits*)				
Choose three of the following modules:				
INL 330	Information science: Subject representation	INL 250	30	S1
INL 340	Information science: Digital libraries		30	S2
INL 350	Information science: Management of information organisations		30	S2
INL 360	Information science: Socio-political aspects of information in a global context		30	S1
Or				
Group C (90 credits*)				
INF 315	Informatics	LP	15	S1

INF 324	Informatics	INF 261, 262, 271 and 272	15	S2
And at least 60 credits from Group B.			60	

IT.20.2 BIS in Multimedia (Code 12131005)
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Modern information technology offers the possibility of information products being designed and created comprising various types of media over and above the traditional text medium. Information technology therefore results in the convergence of various previously separate traditional media. There is not a single discipline that handles the combination of information products. The multimedia qualification in the department of Information science addresses this shortcoming. Any type of institution in all economic spheres, including government, may profit from a multimedia approach to information design, organisation and retrieval.

Multimedia documents include text, graphics, sound, video and animation. The purpose of this qualification is to enable students to understand the necessary concepts to build multimedia products and maintain the products. This programme is therefore a combination of theory and practice. The explosion of the web, as well as the exponential growth and power of information technology, requires the introduction of this degree following international trends.

Package organiser:

Prof TJD Bothma, IT 6-73, Tel: 012 420 2293, email: theo.bothma@up.ac.za

Admission requirements for candidates with a National Senior Certificate

To obtain admission to this degree programme, a candidate should have obtained the following:

- a valid National Senior Certificate with admission for degree purposes; and
- a minimum APS of 24 in the final Grade 12 examinations; and
- compliance with the NSC minimum requirements; additionally one of these languages must be Afrikaans or English at level 4 (50%-59%); and
- at least level 4 (50-59%) in Mathematics; and
- at least level 4 (50-59%) in Life orientation (excluded when calculating the APS)

Minimum credits required: 501	Year-level 1	Year-level 2	Year-level 3	Total
Fundamental modules	20	8	0	28
Core modules	116	136	105	357
Other compulsory modules	40	40		80
Elective modules			36	36
Total	176	184	141	501

FIRST YEAR OF STUDY				
Code	Module	Prerequisites	Credits	Period
Fundamental modules (20 credits)				
Pass an exemption examination in CIL 111or				
CIL 111	Computer literacy		4	S1

CIL 121 [^]	Information literacy (^compulsory)		4	S2
Students who are at risk in terms of their level of academic literacy after writing the Academic Literacy Test are compelled to take the following two modules:				
EOT 110	Academic literacy		6	S1
EOT 120	Academic literacy		6	S2
Students who are not at risk in terms of their level of academic literacy after writing the Academic Literacy Test are compelled to take the following two modules:				
*EOT 162	Academic writing skills		6	Q2
*EOT 164	Communication in organisations		6	Q3-4
Core modules (116 credits)				
IMY 110	Multimedia: Mark-up languages	Departmental selection	12	S1
IMY 120	Multimedia: Multimedia for the web	IMY 110	12	S2
INL 110	Information science: Introduction to Information science		12	S1
INL 120	Information science: Organisation and representation of information		12	S2
INL 140	Information science: Information and communication technology		12	S2
COS 132	Imperative programming		16	S1
COS 110	Program design: Introduction	COS 130GS or COS 131GS or COS 132GS and Maths level 4 or WTW 133	16	S2
COS 151	Introduction to computer science		8	S1
COS 121	Software modelling	COS 130GS or COS 131GS or COS 132GS	16	S2
Other compulsory modules (40 credits)				
ERA 284 (previously EOS 284)	Computer architecture	COS 110 or COS 130 or COS 131 or COS 132	16	S2
VIO 102	Visual design	Mathematics 4 or WTW 114 or WTW 101 or WTW 133 and 143	24	Year

SECOND YEAR OF STUDY

Code	Module	Prerequisites	Credits	Period
Fundamental module (8 credits)				
+JCP 202	Community-based project		8	^
Note:				
+ All students registered as first-year students from 2005 onwards, must complete the above module as part of the requirements for the bachelor's degree. A student may register for the module during the second or third year of study in accordance with departmental requirements.				
^ Consult the department at the beginning of the year.				

Core modules (136 credits)				
IMY 210	Multimedia: Advanced mark-up languages (1)	Departmental selection	16	S1
IMY 211	Multimedia: Multimedia and hypermedia theory	Departmental selection	20	S1
IMY 220	Multimedia: Advanced mark-up languages (2)	IMY 210	16	S2
PUB 210	Publishing: Copy-editing		20	S1
COS 212	Data structures and algorithms	COS 131 or COS 110	16	S1
COS 216 (previously COS 140)	Netcentric computer systems	COS 110 or COS 131	16	S1
COS 222	Operating systems	COS 130 or COS 131 or COS 132	16	S2
COS 226	Concurrent systems	COS 130 or COS 131 or COS 132	16	S2
Other compulsory modules (40 credits)				
VIO 202	Visual design	VIO 102	40	Year

THIRD YEAR OF STUDY				
Code	Module	Prerequisites	Credits	Period
Core modules for year-level 3 (105 credits)				
IMY 300	Multimedia: Project	Departmental selection	45	Year
IMY 310	Multimedia: Human-computer interaction	Departmental selection	30	S1
IMY 320	Multimedia: Trends	Departmental selection	30	S2
Elective modules (36 credits*)				
Select at least two ^ of the following semester modules:				
COS 301	Software engineering	COS 110 and COS 121	27	Year
COS 314	Artificial intelligence	COS 131 or COS 110	18	S1*
COS 332	Computer networks	COS 216	18	S1*
COS 333	Programming languages	COS 110	18	S2*
COS 341	Compiler construction	COS 212	18	S1*
COS 330	Computer security and ethics	COS 110	18	S2*
COS 326	Database systems	INF 214 or TDH	18	S2*
COS 344	Computer graphics	COS 110 and WTW 126	18	S1*
Note: The semester in which these modules are offered may vary from year to year. Students who wish to continue with a BSc(Hons)(CS) should consult the Computer Science department for the correct admission requirements to the degree. COS 301 and three COS electives are compulsory admission requirements for BSc(Hons) (CS).				

IT.20.3 BIS in Multimedia (Four-year programme) (Code 12131008)
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Package organiser:

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Enquiries:

Mrs J Geertsema, email: joukje.geertsema@up.ac.za

If a student does not comply with the admission requirements for the BIS(Multimedia) degree, he or she may be admitted to the Four-year programme if the following admission requirements are met:

Admission requirements for candidates with a National Senior Certificate

To obtain admission to this degree programme, a candidate should have obtained the following:

- (a) a valid National Senior Certificate with admission for degree purposes; and
- (a) a minimum APS of 22 in the final Grade 12 examinations; and
- (b) compliance with the NSC minimum requirements; additionally one of these languages must be Afrikaans or English at level 4 (50%-59%); and
- (c) at least level 3 (40-49%) in Mathematics; and
- (d) at least level 4 (50-59%) in Life orientation (excluded when calculating the APS)

Minimum credits required: 565	Year-level 1	Year-level 2	Year-level 3	Year-level 4	Total
Fundamental modules	20		8		28
Core modules	124	72	120	105	421
Elective modules				36	36
Other compulsory modules	16	24	40		80
Total	160	96	168	141	565

FIRST YEAR OF STUDY				
Code	Module	Prerequisites	Credits	Period
Fundamental modules (20 credits)				
Passing of an exemption examination in CIL 111 or				
CIL 111	Computer literacy		4	S1
CIL 121^	Information literacy (^compulsory)		4	S2
Students who have been identified as being at risk in terms of their level of academic literacy after writing the Academic Literacy Test are compelled to take the following two modules:				
EOT 110	Academic literacy		6	S1
EOT 120	Academic literacy		6	S2
Students who have been identified as not being at risk in terms of their level of academic literacy after writing the Academic Literacy Test are compelled to take the following two modules:				
EOT 162	Academic writing skills		6	Q2
EOT 164	Communication in organisations		6	Q3-4
Core modules (124 credits)				
COS 151	Introduction to Computer science		8	S1

COS 130	Introduction to programming	APS 22, Maths level 3	16	S1
COS 110	Program design: Introduction	COS 130GS or COS 131GS or COS 132GS and Maths level 4 or WTW 133	16	S2
INL 110	Information science: Introduction to information science		12	S1
INL 120	Information science: Organisation and representation of information		12	S2
INL 140	Information science: Information and communication technology		12	S2
SIT 110	Information technology orientation		16	S1
SIT 120	Information technology orientation (continuation)	SIT 110	16	S2
WTW 133+	Pre-calculus		8	S1
WTW 143+	Calculus	WTW 133	8	S2
+ Students who have at least level 4 (50-59%) in Mathematics are exempted from these modules.				
Other compulsory modules (16 credits)				
ERA 284 (previously EOS 284)	Computer architecture	COS 110 or COS 130 or COS 131 or COS 132	16	S2

SECOND YEAR OF STUDY

Code	Module	Prerequisites	Credits	Period
Core modules (72 credits)				
IMY 110	Multimedia: Mark-up languages	COS 130 and WTW 133 and WTW 143	12	S1
IMY 120	Multimedia: Multimedia for the web	IMY 110	12	S2
COS 135	Introduction to programming-continuation	COS 110GS	8	S2
COS 121	Software modelling	COS 130GS or COS 131GS or COS 132GS	16	S2
COS 222	Operating systems	COS 130 or COS 131 or COS 132	16	S2
WTW 153+	Calculus	WTW 143	8	S1
+ Students who have obtained at least level 4 (50-59%) in Mathematics in Grade 12 are exempted from this module.				
Other compulsory module (24 credits)				
VIO 102	Visual design	Mathematics 4 or WTW 114 or WTW 101 or WTW 133 and 143	24	Year

THIRD YEAR OF STUDY				
Code	Module	Prerequisites	Credits	Period
Fundamental module 2 (8 credits)				
+JCP 202	Community-based project		8	^
Note:				
+ Students who register for the first time during 2005 or thereafter will be required to success-fully complete the above module as part of the requirements for the bachelor's degree. A student may register for the module during the second or third year of study in accordance with departmental requirements.				
^ Consult the department at the beginning of the year.				
Core modules (120 credits)				
IMY 210	Multimedia: Advanced mark-up languages (1)	Departmental selection	16	S1
IMY 211	Multimedia: Multimedia and hypermedia theory	Departmental selection	20	S1
IMY 220	Multimedia: Advanced mark-up languages (2)	IMY 210	16	S2
PUB 210	Publishing: Copy-editing		20	S1
COS 216 (previously COS 140)	Netcentric computer systems	COS 110 or COS 131	16	S1
COS 226	Concurrent systems	COS 130 or COS 131 or COS 132	16	S2
COS 212	Data structures and algorithms	COS 110 or COS 131	16	S1
Other compulsory module (40 credits)				
VIO 202	Visual design	VIO 102	40	Year

FOURTH YEAR OF STUDY				
Code	Module	Prerequisites	Credits	Period
Core modules (105 credits)				
IMY 300	Multimedia: Project	Departmental selection	45	Year
IMY 310	Multimedia: Human-computer interaction	Departmental selection	30	S1
IMY 320	Multimedia: Trends	Departmental selection	30	S2
Elective modules (36 credits*)				
Select at least two ^ of the following semester modules:				
COS 301	Software engineering	COS 110 and COS 121	27	Year
COS 314	Artificial intelligence	COS 131 or COS 110	18	S1*
COS 326	Database systems	INF 214 or TDH	18	S2*
COS 332	Computer networks	COS 216	18	S1*
COS 330	Computer security and ethics	COS 110	18	S2*
COS 333	Programming languages	COS 110	18	S2*

COS 341	Compiler construction	COS 212	18	S1*
COS 344	Computer graphics	COS 110 and WTW 126	18	S1*

Note:

The semester in which these modules are offered may vary from year to year.

Students who wish to continue with a BSc(Hons)(CS) should consult the Computer Science department for the correct admission requirements to the degree. COS 301 and three electives are compulsory admission requirements for BSc(Hons) (CS).

IT.20.4	BIS in Publishing (Code 12131006)
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This package contextualises the South African publishing industry, with specific application to book publishing and corporate publishing. The objectives are to equip students with background knowledge on the industry, role players and trends, as well as with specific skills linked to the publishing value chain. These skills include: the commissioning of manuscripts aimed at specific markets; the management of the design, reproduction and printing phase; copy-editing and proofreading; financial and marketing management. Students are empowered to act as responsible information intermediaries who can add value to publications during the various phases of the publishing process.

Package organiser:

Prof TJD Bothma, IT 6-73, Tel: 012 420 2293, email: theo.bothma@up.ac.za

Admission requirements for candidates with a National Senior Certificate

To obtain admission to this degree programme, a candidate should have obtained the following:

- a valid National Senior Certificate with admission for degree purposes; and
- a minimum APS of 24 in the final Grade 12 examinations; and
- compliance with the NSC minimum requirements; additionally one of these languages must be Afrikaans or English at level 5 (60%-69%); and
- at least level 3 (40-49%) in Mathematics or Mathematical literacy; and
- at least level 4 (50-59%) in Life orientation (excluded when calculating the APS).

Minimum credits required: 440	Year-level 1	Year-level 2	Year-level 3	Total
Fundamental modules	38	8	0	46
Core modules	80	100	120	300
Elective modules	24	40	30	94
Total	142	148	150	440

FIRST YEAR OF STUDY

Code	Module	Prerequisites	Credits	Period
Fundamental modules (26 credits)				
Pass an exemption examination in CIL 111 or				
CIL 111	Computer literacy		4	S1
CIL 121 [^]	Information literacy ([^] compulsory)		4	S2

ENG 158	English for specific purposes		6	Q4
VKK 110	Visual communication		12	S1
Pass an academic literacy test or				
EOT 110	Academic literacy		6	S1
EOT 120	Academic literacy		6	S2
Core modules (92 credits)				
INL 110	Information science: Introduction to information science		12	S1
INL 130	Information science: Personal information management		12	S1
INL 140	Information science: Information and communication technology		12	S2
PUB 120	Publishing: The book publishing environment		12	S2
KGK 120	Introduction to design history		12	S2
BEM 110	Fundamentals of marketing management and marketing instruments		10	S1
BEM 121	Consumer behaviour and services marketing	BEM 110GS	10	S2
Elective modules (24 credits)				
<ul style="list-style-type: none"> • Select a language up to year-level 3, from one of the language module groups set out below, e.g. Afrikaans, English, German, French or an African language in consultation with the package organiser. A language for beginners may not be selected. • Select modules to the level of 24 credits on year-level 1 of the selected language. • * Compulsory for that language group • See also the alphabetical list at the back of the yearbook of the Faculty of Humanities when selecting the language modules. 				
Afrikaans	Group 2: Afrikaans			
AFR 110	Afrikaans		12	S1
AFR 120	Afrikaans		12	S2
German	Group 3: German			
DTS 113	Cultural-professional (1)		12	S1
DTS 123	Cultural-professional (2)		12	S2
English	Group 4: English			
ENG 110	English		12	S1
ENG 120	English		12	S2
French	Group 5: French			
FRN 113	Cultural-professional (1)		12	S1
FRN 123	Cultural-professional (2)		12	S2
isiNdebele	Group 9: isiNdebele			
NDE 110*	Orthography and phonetics and grammar		12	S1
AFT 120	'Ubuntu/Botho' and traditional life		12	S2
TRL 151	Introduction to translation		6	S2
isiZulu	Group 10: isiZulu			
ZUL 153*	Writing system of isiZulu		6	Q3

AFT 120	'Ubuntu/Botho' and traditional life		12	S2
TRL 151	Introduction to translation		6	S2
Sepedi	Group 11: Sepedi			
SEP 120*	Writing system of Sepedi		6	Q3
AFT 120	'Ubuntu/Botho' and traditional life		12	S2
TRL 151	Introduction to translation		6	S2
Setswana	Group 12: Setswana			
STW 153*	Writing system of Setswana		6	Q3
AFT 120	'Ubuntu/Botho' and traditional life		12	S2
TRL 151	Introduction to translation		6	S2

SECOND YEAR OF STUDY

Code	Module	Prerequisites	Credits	Period
Fundamental module (8 credits)				
+JCP 202	Community-based project		8	^
Note:				
+ All students registered as first-year students from 2005 onwards, must complete the above module as part of the requirements for the bachelor's degree. A student may register for the module during the second or third year of study in accordance with departmental requirements.				
^ Consult the department at the beginning of the year.				
Core modules (100 credits)				
INL 240	Information science: Social and ethical impact		20	S1
PUB 210	Publishing: Copy-editing		20	S1
PUB 220	Publishing: The visual and production dimensions of publishing		20	S2
LCC 220	Text design		20	S2
VKK 220	Visual communication: Type, image and applications		20	S1
Elective modules (40 credits)				
<ul style="list-style-type: none"> • Continue with the same language as selected on year-level 1 up to year-level 3. • Select modules to the value of 40 credits on year-level 2 of the selected language. • *Compulsory for that language group • See also the alphabetical list at the back of the yearbook of the Faculty of Humanities when selecting the language modules. 				
Afrikaans	Group 2: Afrikaans			
AFR 214	Afrikaanse letterkunde (1)		20	S1
AFR 220	Afrikaanse taalkunde (1)		20	S2
LCC 210	The politics of language and language planning		20	S1
German	Group 2: German			
DTS 261	Cultural-professional (3)		10	S1
DTS 262	Cultural-professional (4)		10	S1
DTS 263	Cultural-professional (5)		10	S2
DTS 264	Cultural-professional (6)		10	S2

English	Group 4: English			
ENG 210	English	ENG 110, 120	20	S1
ENG 220	English	ENG 110, 120	20	S2
French	Group 5: French			
FRN 261	Cultural-professional (3)		10	S1
FRN 262	Cultural-professional (4)		10	S1
FRN 263	Cultural-professional (5)		10	S2
FRN 264	Cultural-professional (6)		10	S2
isiNdebele	Group 9: isiNdebele			
NDE 210*	isiNdebele literature and grammar		20	S1
AFT 251	Literary history		10	Q4
AFT 252	'Tsotsitaal' and other varieties		10	Q3
TRL 251	Equivalence in translation	TRL 151	10	Q2
IsiZulu	Group 10: isiZulu			
ZUL 253*	isiZulu speech sounds		10	Q3
AFT 251	Literary history		10	Q4
AFT 252	'Tsotsitaal' and other varieties		10	Q3
TRL 251	Equivalence in translation	TRL 151	10	Q2
Sepedi	Group 11: Sepedi			
SEP 253*	Sepedi speech sounds		10	Q3
AFT 251	Literary history		10	Q4
AFT 252	'Tsotsitaal' and other varieties		10	Q3
TRL 251	Equivalence in translation	TRL 151	10	Q2
Setswana	Group 12: Setswana			
STW 253*	Setswana speech sounds		10	Q3
AFT 251	Literary history		10	Q4
AFT 252	'Tsotsitaal' and other varieties		10	Q3
TRL 251	Equivalence in translation	TRL 151	10	Q2

THIRD YEAR OF STUDY				
Code	Module	Prerequisites	Credits	Period
Core modules (120 credits)				
PUB 310	Publishing: Publishing in the digital environment		30	S1
PUB 311	Publishing: Commissioning		30	S1
PUB 320	Publishing: Management in the publishing environment		30	S2
PUB 321	Publishing: Publishing in the magazine and corporate environment		30	S2
Elective modules (30 credits*)				
<ul style="list-style-type: none"> Continue with the same language on year-level 3 as selected on year-levels 1 and 2. Select modules to the value of 30 credits on year-level 3 of the selected language. See also the alphabetical list at the back of the yearbook of the Faculty of Humanities when selecting the language module(s). Students who wish to continue with language studies at postgraduate level should consult the specific department for the selection of their modules and may possibly have to select additional modules. 				
Afrikaans	Group 2: Afrikaans			
AFR 311	Afrikaanse letterkunde (2)		30	S1
AFR 312	Afrikaanse drama		30	S1

AFR 321	Afrikaanse taalkunde (2)		30	S2
AFR 358	Redigering		15	S1
LCC 311	Key words in media and cultural studies research (to be discontinued in 2011)		30	S2
LCC 320	Language, culture and communication		30	S2
LCC 321	An investigation into selected media topics (to be discontinued in 2011)		30	S2
German	Group 3: German			
DTS 361	Cultural-professional (3)		10	S1
DTS 362	Cultural-professional (4)		10	S1
DTS 363	Cultural-professional (5)		10	S2
DTS 364	Cultural-professional (6)		10	S2
English	Group 4: English			
ENG 310	English	ENG 210, 220	30	S1
ENG 311	English	Refer to the yearbook of Humanities	30	S1
ENG 320	English	ENG 210, 220	30	S2
ENG 322	English	Refer to the yearbook of Humanities	30	S2
French	Group 5: French			
FRN 361	Cultural-professional (3)		10	S2
FRN 362	Cultural-professional (4)		10	S2
FRN 363	Cultural-professional (5)		10	S1
FRN 364	Cultural-professional (6)		10	S1
African language			30	
isiNdebele	Group 9: isiNdebele			
NDE 310	isiNdebele		30	S1
AFT 351	African languages: Oral literature		15	Q3
AFT 352	African languages dictionaries		15	Q4
AFT 355	Classification of Nguni languages		15	Q4
AFT 361	Copy-editing African languages	NDE 110 or ZUL 153 or SEP 153 or STW 153 and PUB 210	15	Q4
TRL 351	Intercultural translation	TRL 251	15	Q4
IsiZulu	Group 10: isiZulu			
ZUL 310	IsiZulu		30	S1
AFT 351	African languages: Oral literature		15	Q3
AFT 352	African languages dictionaries		15	Q4
AFT 355	Classification of Nguni languages		15	Q4
AFT 361	Copy-editing African languages	NDE 110 or ZUL 153 or SEP 153 or STW 153 and PUB 210	15	Q4
TRL 351	Intercultural translation	TRL 251	15	Q4
Sepedi	Group 11: Sepedi			
SEP 310	Sepedi		30	S1

AFT 351	African languages: Oral literature		15	Q3
AFT 352	African languages dictionaries		15	Q4
AFT 355	Classification of Nguni languages		15	Q4
AFT 361	Copy-editing African languages	NDE 110 or ZUL 153 or SEP 153 or STW 153 and PUB 210	15	Q4
TRL 351	Intercultural translation	TRL 251	15	Q4
Setswana	Group 12: Setswana			
STW 310	Setswana		30	S1
AFT 351	African languages: Oral literature		15	Q3
AFT 352	African languages dictionaries		15	Q4
AFT 355	Classification of Nguni languages	NDE 110 or ZUL 153 or SEP 153 or STW 153 and PUB 210	15	Q4
AFT 361	Copy-editing African languages		15	Q4
TRL 351	Intercultural translation	TRL 251	15	Q4

POSTGRADUATE PROGRAMMES IN INFORMATION SCIENCE

IT.21 Bachelor of Information Science Honours [BISHons]

Consult General Regulations G.16 to G.29.

Programme manager:

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IT.21.1 BISHons in Information Science [BISHons (Information Science)] (Code 12240003)

Package organiser:

Dr C Penzhorn, IT 6-61, Tel: 012 420 2920, email: cecilia.penzhorn@up.ac.za

Admission requirements:

- BIS in Information Science, Information and Knowledge Management, Library Science or an equivalent degree.
- A minimum average of 60% in the undergraduate studies.

Minimum credits required: 160				NQF Level 7			
Fundamental modules	40	Research	0	Core modules	40	Elective modules	80

Fundamental modules (40 credits)		Prerequisites	Credits
INY 711	Research methodology		20
INY 712	Research report	INY 711	20
Core modules (40 credits)			
INY 714	Organisation, retrieval and seeking of information		20
INY 713	Information and knowledge management (I)		20

Elective modules (80 credits)		
Select any four modules of the following in collaboration with the package organiser. (A maximum of two modules may also be selected from the other departments in the School of Information Technology.)		
INY 715	Information ethics	20
INY 716	Information and knowledge management (II)	20
INY 717	Information retrieval	20
INY 718	Information economy	20
INY 720	Digital libraries	20
INY 721	Information literacy	20
INY 722	Information society	20
INY 726	Competitive intelligence (I)	20
INY 727	Competitive intelligence (II)	20
INY 729	Management of information centres	20
INY 730	Information communication	20
INY 733	Indigenous knowledge and indigenous knowledge systems	20

IT.21.2 BISHons in Multimedia [BISHons (Multimedia)] (Code 12240004)

Programme manager:

Prof TJD Bothma, IT 6-73, Tel: 012 420 2293, email: theo.bothma@up.ac.za

Admission requirements

- BIS in Multimedia.
- A minimum average of 60% in the undergraduate studies.

Minimum credits required: 160				NQF Level 7			
Fundamental modules	20	Research		Core modules	60	Elective modules	80

Fundamental modules (20 credits)		
INY 711	Research methodology	20
Core modules (60 credits)		
IMY 772	Hypermedia and mark-up languages	20
IMY 761	Applied multimedia	40
Elective modules (80 credits)		
Select any four modules of the following in collaboration with the package organiser. (A maximum of two modules may also be selected from the other departments in the School of Information Technology.)		
IMY 771	Multimedia trends	20
IMY 773	Multimedia technology	20
IMY 774	Virtual environments	20
IMY 777	Animation theory and practice	20
IMY 779	Human-computer interaction	20

IT.21.3 BISHons in Publishing [BISHons (Publishing)] (Code 12240005)

Package organiser:

Prof TJD Bothma, IT 6-73, Tel: 012 420 2293, email: theo.bothma@up.ac.za

Admission requirements

- BIS in Publishing or any related package or equivalent degree;
- A minimum average of 65% in the undergraduate studies.

Minimum credits required: 160				NQF Level 7			
Fundamental modules	20	Research	0	Core modules	100	Elective modules	40

Fundamental modules (20 credits)		
INY 711	Research methodology	20

Core modules (100 credits)

PUB 722	Publishing management: Management and finances	20
PUB 723	Publishing management: Organisation and processes	20
PUB 724	The publishing environment: Developments and trends in the South African book industry	20
PUB 725	The publishing environment: Global developments and trends in book publishing	20
PUB 728	Editorial Practice: Advanced copy-editing and editorial project management	20

Elective modules (40 credits)

Select **any two** of the following or any other relevant modules in collaboration with the package organiser.

PUB 712	Advanced e-publishing	20
PUB 729	Editorial practice: List building and acquisition of rights	20
VIO 701	Design and production (1)	20
VIO 702	Design and production (2) Prerequisite: VIO 701	20

<p>IT.22 Master of Information Science [MIS] Master of Arts [MA] (Research)</p>
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Consult General Regulations G.30 to G.44 and G.57 to G.62

Programme managers:

Prof TJD Bothma, IT 6-73, Tel: 012 420 2293, email: theo.bothma@up.ac.za
 Prof A Dick, IT 6-72, Tel: 012 420 2294, email: archie.dick@up.ac.za

Admission requirements

For IT.22.1 – IT.22.4

BIS and BISHons specialising in any of the specific packages for:

1. Library Science
2. Information Science
3. Multimedia
4. Publishing
5. **or** any equivalent honours degree.

For IT.22.5

An appropriate honours degree plus at least two years' relevant work experience. In specific cases it may be required of candidates to complete additional preparatory work in order to achieve the required level of competence in the specific discipline.

**IT.22.1 MIS in Library Science (Research)
[MIS (Library Science)] (Code: 12254001)**

BIB 890 Dissertation: Library science

**IT.22.2 MIS in Information Science (Research)
[MIS (Information Science)] (Code 12254003)**

INL 890 Dissertation: Information science

**IT.22.3 MIS in Multimedia (Research)
[MIS (Multimedia)] (Code 12254005)**

IMY 890 Dissertation: Multimedia

**IT.22.4 MIS in Publishing (Research)
[MIS (Publishing)] (Code 12254007)**

PUB 890 Dissertation: Publishing

**IT.22.5 MA in Development Communication (Research)
[MA (Development Communication)] (Code 01252044)***

OKT 890 Dissertation: Development communication

*Registration for this degree is done by the student administration of the Faculty of Humanities in the IT building, ground floor.

IT.23 Master of Information Science [MIS] Master of Arts [MA] (Coursework)

Consult General Regulations G.30 to G.44 and G57 to G62

Programme managers:

Prof TJD Bothma, IT 6-73, Tel: 012 420 2293, email: theo.bothma@up.ac.za

Prof I Fourie, IT 6-65, Tel: 012 420 5216, email: ina.fourie@up.ac.za

Admission requirements

For IT.23.1

- (i) Subject to the stipulations of General Regulations G.1.3, G.30 and G.62, an appropriate three-year university bachelor's degree and honours degree in Information or Library science, or a four-year university degree in Information or Library science is a requirement for admission.
- (ii) Management experience in a library or information centre, appropriate and sufficient in the opinion of the selection committee.
- (iii) The head of department may set additional requirements for admission. In particular, this will apply to candidates with insufficient academic background in the specific field of study or insufficient management experience.
- (iv) Selection of candidates will take place.
- (v) The result of the selection is final and no correspondence will be entered into.

For IT.23.2– IT.23.4

BIS and BISHons specialising in any of the specific packages:

* Information Science

* Multimedia

* Publishing

or any equivalent honours degree.

For IT.23.5

An appropriate honours degree plus at least two years' relevant work experience. In specific cases it may be required of candidates to complete additional preparatory work in order to achieve the required level of competence in the specific discipline.

**IT.23.1 MIS in Library Science (Coursework)
[MIS (Library Science)] (Code 12254002)**

Minimum credits required: 240				NQF Level 7			
Fundamental modules	0	Research	120	Core modules	120	Elective modules	0

Research		
BIB 896	Mini-dissertation and research portfolio: Library science	120
Core module		
BIB 801	Library science (coursework): Coursework component	120

**IT.23.2 MIS in Information Science (Coursework)
[MIS (Information Science)] (Code 12254004)**

**IT.23.3 MIS in Multimedia (Coursework)
[MIS (Multimedia)] (Code 12254006)**

**IT.23.4 MIS in Publishing (Coursework)
[MIS (Publishing)] (Code 12254008)**

**IT.23.5 MA in Development Communication (Coursework)
[MA (Development communication)] (Code 01252045)***

*Registration for this degree is done by the student administration of the Faculty of Humanities in the IT building, ground floor.

Minimum credits required: 240				NQF Level 7			
Fundamental modules	0	Research	120	Core modules	120	Elective modules	0

The coursework for the curriculum is identified and compiled in consultation with industry, individual students and according to the student's research interest.

Information Science

Research		
INL 895	Mini-dissertation: Information science	120
Core modules		
INL 802	Information and knowledge management	50
INL 812	Organisation and retrieval of information	30
And select any <u>two</u> from the following modules		

INL 803	Information ethics and information law	20
INL 804	Information for development	20
INL 806	Information society	20
INL 809	Informetrics	20
INL 810	Competitive intelligence	20
INL 811	Advanced decision-making theory	20
INL 813	Management of information centres	20

Multimedia

Research

IMY 895	Mini-dissertation: Multimedia	120
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Core module

IMY 801	Multimedia (coursework): Coursework component	120
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Publishing

Research

PUB 895	Mini-dissertation: Publishing	120
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Core module

PUB 801	Publishing (coursework): Coursework component	120
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Development Communication

Research

OKT 895	Mini-dissertation: Development communication	120
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Core modules

OKT 880	Theory of development communication	30
OKT 881	Management of development communication	30
OKT 882	Practice of development communication	30
OKT 883	Information centres and development communication	30

IT.24 Doctor of Philosophy [DPhil, PhD] (Research)

Consult General Regulations G.45 to G.62

Programme managers:

Prof TJD Bothma, IT 6-73, Tel: 012 420 2293, email: theo.bothma@up.ac.za

Prof A Dick, IT 6-72, Tel: 012 420 2294, email: archie.dick@up.ac.za

Admission requirements

1. MIS (Library Science)
2. MIS (Information Science)
3. MIS (Multimedia)
4. MIS (Publishing)
5. MIS (Development Communication)
6. or an equivalent master's degree

IT.24.1 DPhil in Library Science [DPhil Library Science] (Code 12264003)

BIB 990 Thesis: Library science

BIB 900 Examination/justification of thesis

**IT.24.2 DPhil in Information Science
[DPhil Information science] (Code 12264002)**

INL 990 Thesis: Information science
INL 900 Examination/justification of thesis

**IT.24.3 PhD in Publishing
[PhD (Publishing)] (Code 12264004)**

PUB 990 Thesis: Publishing
PUB 900 Examination/justification of thesis

DEPARTMENT OF COMPUTER SCIENCE

**IT.25 Bachelor of Science in Computer Science
[BSc (Computer Science)](Code 12134000)**

**Admission requirements for the degree Bachelor of Science (Computer Science)
(Code 12134000)**

Admission requirements for candidates with a National Senior Certificate:

To obtain admission to this degree programme, a candidate should have obtained the following:

- (a) a valid National Senior Certificate with admission for degree purposes; and
- (b) a minimum APS of 27 in the final Grade 12 examinations; and
- (c) compliance with the NSC minimum requirements; additionally one of these languages must be Afrikaans or English at level 5(60-69%); and
- (d) at least level 5 (60-69%) in Mathematics; and
- (e) at least level 4 (50-59%) in Life orientation (excluded when calculating the APS)

Note that additional admission requirements may result from certain elective groups.

Candidates who do not comply with these requirements are advised to register for BScIT or BScIT (Four-year programme), depending on whether they comply with the admission requirements for these programmes.

Requirements for promotion to the following year of study:

Refer to School of Information Technology Regulation IT.5 and IT.2(f).

Curriculum

The curriculum for the BScCS degree programme comprises of fundamental, core and elective modules in each study year. The degree is awarded after a minimum of 480 credits have been obtained successfully. The following minimum credit requirements apply to the different study year levels:

	Year-level 1	Year-level 2	Year-level 3
Fundamental modules	20	8	0
Core modules	120	110	81
Elective modules	78	0	63

Curriculum

FUNDAMENTAL MODULES				
Code	Module	Prerequisites	Credits	Period
Year-level 1 (at least 20 credits)				
Pass an exemption examination in CIL 111 or				
CIL 111	Computer literacy and		4	S1
CIL 121	Information literacy		4	S2
Pass an exemption examination in Academic literacy and				
EOT 162	Academic writing skills		6	Q2
EOT 164	Communication in organisations		6	Q3-4
OR				
EOT 110	Academic literacy		6	S1
EOT 120	Academic literacy		6	S2
Year-level 2 (8 credits)				
JCP 202	Community-based project		8	Year

CORE MODULES				
Code	Module	Prerequisites	Credits	Period
Year-level 1 (120 credits)				
COS 110	Program design: Introduction	COS 130GS or COS 131GS or COS 132GS and Maths level 4 or WTW 133	16	S2
COS 121	Software modelling	COS 130GS or COS 131GS or COS 132GS	16	S2
COS 132	Imperative programming		16	S1
COS 151	Introduction to computer science		8	S1
ERA 284 (previously EOS 284)	Computer architecture	COS 110 or COS 130 or COS 131 or COS 132	16	S2
WTW 114	Calculus	Par 1.2 – Natural sciences (Maths level 5)	16	S1
WTW 115	Discrete structures	Par 1.2 – Natural sciences (Maths level 4)	8	S1
WTW 126	Linear algebra	Par 1.2 – Natural sciences (Maths level 4)	8	S2
WTW 128	Calculus	WTW 114GS or WT W 101GS	8	S2
WTW 152	Mathematical modelling	Par 1.2 – Natural sciences (Maths level 4)	8	S1
Year-level 2 (110 credits)				
COS 212	Data structures and algorithms	COS 110 or COS 131	16	S1

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COS 222	Operating systems	COS 130 or COS 131 or COS 132	16	S2
COS 226	Concurrent systems	COS 130 or COS 131 or COS 132	16	S2
COS 216 (previously COS 140)	Netcentric computer systems	COS 110 or COS 131	16	S1
INF 214	Informatics	CIL 111 and CIL 121	14	S1
INL 240	Information science: social and ethical impact		20	S1
WTW 285	Discrete structures	WTW 115	12	S2
Year-level 3 (81 credits)				
COS 301	Software engineering	COS 110 and COS 121	27	Year
COS 330	Computer security and ethics	COS 110	18	S2
COS 332	Computer networks	COS 216	18	S1
COS 333	Programming languages	COS 110	18	S2

ELECTIVE MODULES				
Code	Module	Prerequisites	Credits	Period
Year-level 1 (at least 78 credits)				
Statistics (at least 26 credits)				
<i>A choice between Mathematical statistics or Statistics subject to the grade 12 Mathematics level</i>				
WST 111	Mathematical statistics	Maths level 5	16	S1
WST 121	Mathematical statistics	WST 111GS	16	S2
OR				
STK 110	Statistics	Maths level 4	13	S1
STK 120	Statistics	STK 110GS	13	S2
Science (32 credits)				
<i>Students with Physical science level 4 in grade 12 can choose between Physics, Chemistry or Biological sciences</i>				
Physics				
PHY 171	First course in physics	Physical science level 4, Maths level 4	32	Year
OR				
Chemistry				
CMY 117	General chemistry	Physical science level 4, Maths level 4	16	S1
CMY 127	General chemistry	CMY 117GS	16	S2
OR				
Biological sciences				
MLB 111	Molecular and cell biology	Physical science level 4, Maths level 4	16	S1
BOT 161	Plant biology		8	S2
MBY 161	Introduction to microbiology		8	S2

OR				
<i>Students without Physical science in grade 12 are required to take Geology</i>				
GLY 151	Introductory geology	Refer to Regulation 1.2	8	Q1
GLY 152	Physical geology	GLY 151GS	8	Q2
GLY 161	Historical geology	GLY 151GS and GLY 152GS	8	Q4
GLY 162	Environmental geology	Refer to Regulation 1.2	8	Q3
Other (at least 20 credits)				
At least 20 credits from the faculties of Humanities or Economic and Management Sciences for which the student has the prerequisites.				
Year-level 2				
<i>Additional electives from second year modules in order to satisfy third-year module prerequisites</i>				
Year-level 3 (at least 63 credits)				
At least 63 credits on third year level from the following modules (students must comply with prerequisites): Computer science including EMK 310 Information science Mathematics Mathematical statistics Physics Chemistry				

IT.26 Bachelor of Science Information Technology in Information and Knowledge Systems [BScIT (Information and Knowledge Systems)] (Code 12133211)
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Admission requirements for the degree BScIT (Information and Knowledge Systems):

Admission requirements for candidates with a National Senior Certificate:

To obtain admission to this degree programme, a candidate should have obtained the following:

- a valid National Senior Certificate with admission for degree purposes; and
- a minimum APS of 24 in the final Grade 12 examinations; and
- compliance with the NSC minimum requirements; additionally one of these languages must be Afrikaans or English at level 4(50-59%); and
- at least level 4 (50-59%) in Mathematics; and
- at least level 4 (50-59%) in Life orientation (excluded when calculating the APS).

Note that additional admission requirements may result from certain elective groups.

Candidates who do not comply with these requirements are advised to register for BScIT (Four-year programme) if they comply with the admission requirements for the programme.

Requirements for promotion to the following year of study:

Refer to School of Information Technology Regulation IT.5 and IT.2(f).

Curriculum

The curriculum for the BScIT (Information and Knowledge Systems) degree programme comprises of fundamental, core and elective modules in each study year. The degree is awarded after a minimum of 477 credits have been obtained successfully. The following minimum credit requirements apply to the different study year levels:

	Year-level 1	Year-level 2	Year-level 3
Fundamental modules	20	8	0
Core modules	96	110	111
Elective modules	According to Elective group: min 132		

Curriculum

FUNDAMENTAL MODULES				
Code	Module	Prerequisite	Credits	Period
Year-level 1 (at least 20 credits)				
Pass an exemption examination in CIL 111 or				
CIL 111	Computer literacy and		4	S1
CIL 121	Information literacy		4	S2
Pass an exemption examination in Academic literacy and				
EOT 162	Academic writing skills		6	Q2
EOT 164	Communication in organisations		6	Q3-4
OR				
EOT 110	Academic literacy		6	S1
EOT 120	Academic literacy		6	S2
Year-level 2 (8 credits)				
JCP 202	Community-based project		8	Year

CORE MODULES				
Code	Module	Prerequisites	Credits	Period
Year-level 1 (96 credits)				
COS 110	Program design: Introduction	COS 130GS or COS 131GS or COS 132GS and Maths level 4 or WTW 133	16	S2
COS 121	Software modelling	COS 130GS or COS 131GS or COS 132GS	16	S2
COS 132	Imperative programming		16	S1
COS 151	Introduction to computer science		8	S1
ERA 284 (previously EOS 284)	Computer architecture	COS 110 or COS130 or COS 131 or COS 132	16	S2
WTW 115	Discrete structures	Par 1.2 – Natural sciences (Maths level 4)	8	S1
Either WTW 114 (Mathematics level 5) or WTW 134 (Mathematics level 4) Students wishing to follow the Applied mathematics, IT and Music or Operational research groups must take WTW 114.				

WTW 134	Calculus	Par 1.2 – Natural sciences (Maths level 4)	16	S1
OR				
WTW 114	Calculus	Par 1.2 – Natural sciences (Maths level 5)	16	S1
Year-level 2 (110 credits)				
COS 212	Data structures and algorithms	COS 110 or COS 131	16	S1
COS 222	Operating systems	COS 130 or COS 131 or COS 132	16	S2
COS 226	Concurrent systems	COS 130 or COS 131 or COS 132	16	S2
COS 216 (previously COS 140)	Netcentric computer systems	COS 110 or COS 131	16	S1
INF 214	Informatics	CIL 111 and CIL 121	14	S1
INL 240	Information science: Social and ethical impact		20	S1
WTW 285	Discrete structures	WTW 115	12	S2
Year-level 3 (111 credits)				
COS 301	Software engineering	COS 110 and COS 121	27	Year
COS 330	Computer security and ethics	COS 110	18	S2
COS 332	Computer networks	COS 216	18	S1
COS 333	Programming languages	COS 110	18	S2
IMY 310	Multimedia: Human-computer interaction	Requires departmental selection	30	S1

ELECTIVE MODULESSelect **one** of the following elective groups:**Applied Mathematics elective group**

Code	Module	Prerequisites	Credits	Period
Year-level 1 (56 credits)				
WST 111	Mathematical statistics	Mathematics level 5	16	S1
WST 121	Mathematical statistics	WST 111GS	16	S2
WTW 123	Numerical analysis	WTW 114GS or WTW 101GS	8	S2
WTW 126	Linear algebra	Par 1.2 - Natural sciences (Maths level 4)	8	S2
WTW 128	Calculus	WTW 114GS or WTW 101GS	8	S2
Year-level 2 (72 credits)				
WST 211	Mathematical statistics	WST 111, 121; WTW 114GS, 126GS and WTW 128GS	24	S1
WST 221	Mathematical statistics	WST 211GS	24	S2
WTW 211	Linear algebra	WTW 126	12	S1

WTW 218	Calculus	WTW 114 or WTW 101 and WTW 128	12	S1
Year-level 3 (54 credits)				
WTW 354	Financial engineering	WST 211 and WTW 211 and WTW 218	18	S1
WTW 383	Numerical analysis	WTW 114 and WTW 128 and WTW 211	18	S2
WTW 389	Geometry	WTW 211	18	S2

Bioinformatics elective group				
Code	Module	Prerequisites	Credits	Period
Year-level 1 (64 credits)				
BME 120	Biometry	STK 113 and STK 123, Maths level 3	16	S2
BOT 161	Plant biology		8	S2
GTS 161	Introduction to genetics	MLB 111GS or TDH	8	S2
MBY 161	Introduction to microbiology		8	S2
MLB 111	Molecular and cell biology	Physical science level 4 and Maths level 4	16	S1
WTW 126	Linear algebra	Par 1.2 – Natural sciences, Maths level 4	8	S2
Year-level 2 (48 credits)				
GTS 251	Organisation of genes and chromosomes	GTS 161GS or TDH	12	S1
GTS 261	Genetic analysis and manipulation	GTS 161GS or TDH	12	S2
MBY 251	Growth diversity and control of bacteria	MBY 161 GS	12	S1
MBY 261	Growth activity and control of fungi	MBY 161	12	S2
Year-level 3 (59 credits)				
BIF 310	Bioinformatics	BME 120 and GTS 251 and [WTW 114GS or WTW 134GS] or TDH	9	S1
BIF 320	Bioinformatics	BIF 310	18	S2
<i>Choice of either</i>				
COS 314	Artificial intelligence	COS 110 or COS 131	18	S1
COS 344	Computer graphics	COS 110 and WTW 126	18	S1
OR				
GTS 353	Advanced population genetics	GTS 251GS and GTS 261GS or TDH	18	S1
GTS 363	Evolution and phylo-genetics	GTS 353GS or TDH	18	S2
OR				
GTS 352	Genomes	GTS 251GS and GTS 261GS or TDH	18	S1

GTS 366	Plant genetics and biotechnology	GTS 251GS and GTS 261GS or TDH and GTS 351 and GTS 352GS are recommended	18	S2
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Geographical Information Systems elective group				
Code	Module	Prerequisites	Credits	Period
Year-level 1 (44 credits)				
GGY 156	Introduction to human geography		6	Q2
GGY 157	Introduction to environmental sciences		6	Q1
GGY 158	Geographical skills		4	S1
GGY 166	Southern African global geomorphology		8	Q3
GMC 110	Cartography		12	S1
WTW 126	Linear algebra	Par 1.2 - Natural sciences, Maths level 4	8	S2
Year-level 2 (36 credits)				
GGY 283	Introductory GIS		12	S1
GIS 220	Geographical data analysis		12	S2
GMC 210	Cartography	GMC 110	12	S1
Year-level 3 (84 credits)				
COS 326	Database systems	INF 214 or TDH	18	S2
COS 344	Computer graphics	COS 110 and WTW 126	18	S1
GIS 310	Geographical information systems	GGY 283 or GIS 221	24	S1
GIS 320	Spatial analysis	GIS 310 or TDH	24	S2

IT and Enterprises elective group				
Code	Module	Prerequisites	Credits	Period
Year-level 1 (53 credits)				
BEM 110	Marketing management		10	S1
BEM 121	Marketing management	BEM 110GS	10	S2
OBS 114	Business management		10	S1
OBS 124	Business management	OBS 114	10	S2
STK 110	Statistics	Maths level 4	13	S1
Year-level 2 (42 credits)				
BPE 251	Business ethics		6	Q2-4
OBS 210	Logistics management	OBS 114 and OBS 124GS	16	S1

OBS 220	Project management	OBS 114 and OBS 124	16	S2
Year-level 3 (40 credits)				
<i>One of the following combinations to be taken</i>				
OBS 311	Entrepreneurship	OBS 114	20	S1
OBS 321	Entrepreneurship	Admission to the examination in OBS 311	20	S2
OR				
OBS 315	E-business	OBS 114 or 124 with admission to the examination in the other	20	S1
and OBS 325	and E-commerce	OBS 114 or 124 with admission to the examination in the other	20	S2
OR				
OBS 359	International business management	OBS 114 or 124 with admission to the examination in the other	20	S1
and OBS 369	and International financial management	Admission to the examination in OBS 359	20	S2
OR				
OBS 310	Human resource management	OBS 114 or 124 with admission to the examination in the other	20	S1
and OBS 320	and Business management	OBS 114 or 124 with admission to the examination in the other	20	S2

IT and Law elective group				
Code	Module	Prerequisites	Credits	Period
Year-level 1 (44 credits)				
KRG 110	Commercial law		10	S1
KRG 120	Commercial law	KRG 110	10	S2
KRM 110	Criminology		12	S1
KRM 120	Criminology	KRM 110 and RES 151 recommended	12	S2

Year-level 2 (72 credits)				
KRG 200	Commercial law	KRG 120	32	Year
KRM 210	Criminology	KRM 110, 120	20	S1
KRM 220	Criminology	KRM 110, 120	20	S2
Year-level 3 (70 credits)				
KRM 310	Criminology	KRM 110 and KRM 220	30	S1
KRM 320	Criminology	KRM 210, 220 and KRM 310	30	S2
KUB 420	Cyber law	The head of department may set prerequisites.	10	S2

IT and Music elective group				
Code	Module	Prerequisites	Credits	Period
Year-level 1 (41 credits)				
MPE 170	Music education	Closed - requires departmental selection	15	Year
IMG 110	Introduction to history of music	Closed - requires departmental selection	10	Year
WTW 126	Linear algebra	Par 1.2 - Natural sciences, Maths level 4	8	S2
WTW 128	Calculus	WTW 114GS or WTW 101GS	8	S2
Year-level 2 (58 credits)				
ERS 220	Digital systems		16	S2
IMG 210	Introduction to history of music	Closed - requires departmental selection	15	Year
MCS 302	Music (Capita selecta)	Closed - requires departmental selection	15	Year
WTW 218	Calculus	WTW 114 or WTW 101 and WTW 128	12	S1
Year-level 3 (66 credits)				
EMK 310	Microprocessors	ERS 220GS	16	S1
MCS 402	Music (Capita selecta)	Closed - requires departmental selection	50	Year

Operational research elective group				
Code	Module	Prerequisites	Credits	Period
Year-level 1 (64 credits)				
FRK 111	Financial accounting		10	S1

FRK 121	Financial accounting	FRK 111 GS	12	S2
STK 110	Statistics	Maths level 4	16	S1
STK 120	Statistics	STK 110GS	16	S2
WTW 126	Linear algebra	Par 1.2 - Natural sciences, Maths level 4	8	S2
WTW 128	Calculus	WTW 114GS or WTW 101 GS	8	S2
Year-level 2 (28 credits)				
BES 220	Engineering statistics	WTW 161 and WTW 168	16	S2
WTW 211	Linear algebra	WTW 126	12	S1
Year-level 3 (60 credits)				
BAN 313	Industrial analysis	BAN 222	16	S1
BOZ 312	Operational research	BES 220	16	S1
COS 314	Artificial intelligence	COS 110 or COS 131	18	S1
WTW 383	Numerical analysis	WTW 114, 128 and WTW 211	18	S2

Philosophy elective group				
Code	Module	Prerequisites	Credits	Period
Year-level 1 (36 credits)				
FIL 110	Philosophy		12	S1
FIL 120	Philosophy		12	S2
SLK 120	Psychology		12	S2
Year-level 2 (64 credits)				
FIL 210	Philosophy		12	S1
FIL 220	Philosophy		12	S2
SLK 210	Psychology	SLK 110, 120GS and recommended RES 151	20	S1
SLK 220	Psychology	SLK 110, 120GS and recommended RES 261	20	S2
Year-level 3 (75 credits)				
FIL 310	Philosophy	FIL 210	30	S1
FIL 320	Philosophy	FIL 210	30	S2

Psychology elective group				
Code	Module	Prerequisites	Credits	Period
Year-level 1 (48 credits)				
KRM 110	Criminology		12	S1
KRM 120	Criminology	KRM 110, RES 151 is recommended	12	S2
SLK 110	Psychology		12	S1
SLK 120	Psychology		12	S2

Year-level 2 (80 credits)				
KRM 210	Criminology		20	S1
KRM 220	Criminology	KRM 210	20	S2
SLK 210	Psychology	SLK 110, 120GS and recommended RES 151	20	S1
SLK 220	Psychology	SLK 110, 120GS and recommended RES 261	20	S2
Year-level 3 (60 credits)				
SLK 310	Psychology	SLK 210GS, 220GS and recommended RES 361	30	S1
SLK 320	Psychology	SLK 310GS	30	S2

Software development group				
Code	Module	Prerequisites	Credits	Period
Year-level 1 (46 credits)				
INF 153	Informatics	IT.3(e)	5	S1
INF 154	Informatics	IT.3(e)	5	S1
INF 163	Informatics	INF 153	5	S2
INF 164	Informatics	INF 154	5	S2
STK 110	Statistics	Maths level 4	13	S1
STK 120	Statistics	STK 110GS	13	S2
Year-level 2 (53 credits)				
INF 261	Informatics	INF 214	7	S2
INF 272	Informatics	CIL 111 and CIL 121 and INF 163 and INF 164	14	Year
IMY 210	Multimedia: Advanced markup languages (1)	Requires departmental selection	16	S1
IMY 220	Multimedia: Advanced markup languages (2)	Requires departmental selection	16	S2
Year-level 3 (33 credits)				
COS 326	Database systems	INF 214 or TDH	18	S2
INF 354	Informatics	INF 261 and INF 225 and INF 271 and INF 272	15	S1

IT.27 Bachelor of Science Information Technology in Information and Knowledge Systems
[BScIT (Information and Knowledge Systems)](Four-year programme)
(Code 12133212)

Admission requirements for the Four-year programme of the degree BScIT (Information and Knowledge Systems)

(i) Admission requirements for candidates with a National Senior Certificate:

To obtain admission to this degree programme, a candidate should have obtained the following:

- a valid National Senior Certificate with admission for degree purposes; and
- a minimum APS of 22 in the final Grade 12 examinations; and
- compliance with the NSC minimum requirements; additionally one of these languages must be Afrikaans or English at level 4(50-59%); and
- at least level 3 (40-49%) in Mathematics; and
- at least level 4 (50-59%) in Life orientation (excluded when calculating the APS)

Requirements for promotion to the following year of study:

Refer to School of Information Technology regulation IT.5 and IT.2(f).

The curriculum of BScIT (Information and Knowledge Systems) (Four-year programme) consists of fundamental, core and elective modules in each year of study. The degree is awarded upon successful completion of at least 513 credits as specified in the curriculum given below.

Curriculum

STUDY YEAR 1 (at least 124 credits)				
Code	Module	Prerequisites	Credits	Period
Fundamental modules (20 credits)				
Passing of an exemption examination in CIL 111 or				
CIL111	Computer literacy and		4	S1
CIL121	Information literacy		4	S2
Passing of an exemption examination in Academic literacy and				
EOT 162	Academic writing skills		6	Q2
EOT 164	Communications in organisations		6	Q3-4
OR				
EOT 110	Academic literacy		6	S1
EOT 120	Academic literacy		6	S2
Core modules (104 credits)				
COS 151	Introduction to computer science		8	S1
COS 130	Introduction to programming	APS 22, Maths level 3	16	S1
COS 110	Program design: Introduction	COS 130GS or COS 131GS or COS 132GS and Maths level 4 or WTW 133	16	S2
ERA 284 (previously EOS 284)	Computer architecture	COS 110 or COS 130 or COS 131 or COS 132	16	S2
SIT 110	Information technology orientation		16	S1
SIT 120	Information technology orientation (continuation)	SIT 110	16	S2
WTW 133	Pre-calculus		8	S1
WTW 143	Calculus	WTW 133	8	S2

STUDY YEAR 2 (122 credits)				
Code	Module	Prerequisites	Credits	Period
Fundamental modules (8 credits)				
JCP 202	Community-based project		8	Year
Core modules(68 credits)				
COS 135	Introduction to programming (continuation)	COS 110GS	8	S2
COS 121	Software modelling	COS 130GS or COS 131GS or COS 132GS	16	S2
COS 222	Operating systems	COS 130 or COS 131 or COS 132	16	S2
INL 240	Information science: Social and ethical impact		20	S1
WTW 153	Calculus	WTW 143	8	S1
Elective modules (46 credits)				
INF 153	Informatics	IT.3(e)	5	S1
INF 154	Informatics	IT.3(e)	5	S1
INF 163	Informatics	INF 153	5	S2
INF 164	Informatics	INF 154	5	S2
STK 110	Statistics	Maths level 4	13	S1
STK 120	Statistics	STK 110GS	13	S2

STUDY YEAR 3 (123 credits)				
Code	Module	Prerequisites	Credits	Period
Core modules (70 credits)				
COS 212	Data structures and algorithms	COS 110 or COS 130 or COS 131	16	S1
COS 216 (previously COS 140)	Netcentric computer systems	COS 110 or COS 130 or COS 131	16	S1
COS 226	Concurrent systems	COS 130 or COS 131 or COS 132	16	S2
INF 214	Informatics	CIL 111 and CIL 121	14	S1
WTW 115	Discrete structures	Par.1.2 Natural science (Maths level 4)	8	S1
Elective modules (53 credits)				
INF 261	Informatics	INF214	7	S2
INF 272	Informatics	CIL 111 and CIL 121 and INF 153 and INF 164	14	Year
IMY 210	Multimedia: Advanced mark-up languages (1)	Departmental selection	16	S1

IMY 220	Multimedia: Advanced mark-up languages (2)	Departmental selection	16	S2
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STUDY YEAR 4 (144 credits)				
Code	Module	Prerequisites	Credits	Period
Core modules (111 credits)				
COS 301	Software engineering	COS 110 and 121	27	Year
COS 330	Computer security and ethics	COS 110	18	S2
COS 332	Computer networks	COS 216	18	S1
COS 333	Programming languages	COS110	18	S2
IMY 310	Multimedia: Human-computer interaction	Departmental selection	30	S1
Elective modules (33 credits)				
COS 326	Database systems	INF 214 or TDH	18	S2
INF 354	Informatics	INF 261 and INF 225 and INF 271 and INF 272	15	S1

POSTGRADUATE PROGRAMMES IN COMPUTER SCIENCE

Details regarding postgraduate modules are available at www.cs.up.ac.za.

IT.28 Bachelor of Science Honours in Computer Science [BScHons (Computer Science)] (Code12244000)

This degree programme is offered in English only.

Consult General Regulations G.16 to G.29

(a) **Admission**

Subject to the stipulations of General Regulations G.1.3, G.16 and G.62, a BSc degree, majoring in computer science from a South African university (or equivalent) with an average of 60% over all third-year computer science modules, is required for admission to this degree programme. Students from outside South Africa need to obtain a certificate from the South African Qualifications Authority (SAQA) before admission will be considered. The head of department may prescribe additional conditions for admission.

(b) **Minimum duration of study**

A student is required to complete his/her studies within one year (full-time) or within two years (part-time). However, the dean, on the recommendation of the head of department, may approve a stipulated limited extension of this period.

(c) **Pass requirements**

In calculating marks, General Regulation G.12.2 is applicable. However, a student is required to obtain at least 50% in an examination in a module where no semester or year mark is required. In those cases where a year mark or semester mark is available, a subminimum of 40% must be obtained in the examination.

- (d) **Examinations**
The dean may, on the recommendation of the admissions committee, cancel the studies of a student who fails more than one module in an academic year. A module may only be repeated once. No supplementary examinations are granted at postgraduate level.
- (e) **Degree with distinction**
The BScHons degree is awarded with distinction to a candidate who obtains a weighted average of at least 75% in all the prescribed modules and who did not fail any module.
- (f) **Conferment of degree**
The degree is conferred on a student who successfully completes at least 160 credits of coursework in Computer science at honours level.
- (g) **Curriculum**
The curriculum is determined in consultation with the head of department.

IT.29 Master of Science in Computer Science [MSc (Computer Science)] (Research) (Code 12255000)
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Consult General Regulations G.30 to G.44 and G.57 to G.62.

- (a) **Admission**
Subject to the stipulations of General Regulations G.1.3, G.30 and G.62, an appropriate BScHons or equivalent degree is required for admission. In addition, to be considered for admission, an average of 65% should have been obtained for the modules passed for the honours degree. The dean, on the recommendation of the supervisor and the head of department, may approve additional requirements and conditions.
- (b) **Conferment of degree**
The MSc degree is conferred on grounds of a dissertation and such additional postgraduate coursework as may be prescribed. A student works under the guidance of a supervisor and is expected to identify and complete a research project. The research results are to be fully reported in an MSc dissertation.
- (c) **Degree with distinction**
The MSc degree is conferred with distinction on candidates who obtain a final average mark of at least 75%.
- (d) **Progress requirements**
If the supervisor affirms that a candidate has progressed satisfactorily, registration may be renewed for the second year (full-time) or for the second to fourth year (part-time). Re-registration thereafter will only take place if a written motivation from the candidate, supported by the head of department is submitted to the student administration offices.
- (e) **Duration**
Consult General Regulation G.32.4 regarding the maximum period of registration allowed.

(f) **Curriculum**

A student is required to demonstrate, by means of a dissertation, the ability to plan, institute and execute a scientific investigation.

(g) **Article for publication**

Unless the Senate, on the recommendation of the supervisor, decides otherwise, a student, before or on submission of a dissertation, must submit proof of submission of an article by an accredited journal to the Head: Student administration.

The draft or submitted article, as the case may be, should be based on the research that the student has conducted for the dissertation/thesis and be approved by the supervisor if the supervisor is not a co-author.

The supervisor shall be responsible for ensuring that the paper is taken through all the processes of revision and resubmission, as may be necessary. Conferment of the degree may be made subject to compliance with the stipulations of this regulation.

Also consult General Regulation G.61.

IT.30 Doctor of Philosophy in Computer Science [PhD (Computer Science)] (Code 12266000)
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Consult General Regulations G.45 to G.62

(a) **Admission**

Subject to the stipulations of General Regulations G.1.3, G.45 and G.62, admission to doctoral studies requires that the candidate should have obtained at least 75% for a master's degree in computer science.

(b) **Curriculum**

The department offers a research-based PhD degree. The student works under guidance of a supervisor and is expected to identify and complete a research project. The research results are to be fully reported in a PhD thesis.

(c) **Conferment of degree**

Unless otherwise decided by the dean, on the recommendation of the supervisor, the PhD(Computer Science) degree is awarded on the basis of a thesis and an examination on the thesis.

(d) **Article for publication**

Unless the senate, on the recommendation of the supervisor, decides otherwise, a student, before or on submission of a thesis, must submit proof of submission of an article by an accredited journal to the Head: Student Administration.

The draft or submitted article, as the case may be, should be based on the research that the student has conducted for the dissertation/thesis and be approved by the supervisor if the supervisor if the supervisor is not a co-author.

The supervisor shall be responsible for ensuring that the paper is taken through all the processes of revision and resubmission, as may be necessary. Conferment of the degree may be made subject to compliance with the stipulations of this regulation.

(e) **Pass requirements**

The thesis and examination thereof should prove that the candidate has carried out

advanced original research and/or creative work, which make a real and substantial contribution to the discipline of computer science.

SYLLABI

Note:

The list of modules and the module descriptions are available at
<http://web.up.ac.za/modules>