SCHOOL OF INFORMATION TECHNOLOGY

ACADEMIC PERSONNEL AS AT 30 SEPTEMBER 2005

DEAN
Prof R.F. Sandenbergh, PrEng MEng DEng(Pret) GSAIMM LSAKorrl

CHAIRPERSON OF THE SCHOOL
Eloff, J.H.P., BSc BSc(Hons) MSc PhD(RAU)

Department of Informatics
De Villiers, C., BSc(PU for CHE) BSc(Hons) DCom(Pret) MEd DTE HED(Unisa) LRVSA LIRWIT MIAIM MACM MAIS ..... Professor (Head)
Burger, A.P., BSc(Hons)(RAU) PhD(Unisa) ..... Honorary Professor
Roode, J.D., BSc(Hons) MSc(Phy) MSc(Maths)(PU for CHE) PhD(Leiden) ACSSA LONSA MACM MSAICSIT CAIS ..... Extraordinary Professor
Smith, A.J., BA(PU for CHE) BSc(Hons) MSc(Unisa) DCom(Pret) ..... Extraordinary Professor
Alexander, P.M., BSc(Hons) MSc(Unisa) PhD(Pret) ..... Associate Professor
Joubert, P., BSc BCom(Hons) MCom(Pret) ..... Senior Lecturer
Kroeze, J.H., BA(Hons) MA PhD ThB(PU for CHE) MIT(Pret). Senior Lecturer
Kruger, C.J., NHD(Tech Pta) MBA MIT(Pret) ..... Senior Lecturer
Leonard, A.C., BSc(Hons)(PU for CHE) MSc(Unisa) DCom(Pret) LRVSA MACM ..... Senior Lecturer
Lotriet, H.H., PrEng BEng(Hons)(Pret) MEng PhD(Stell) ..... Senior Lecturer
Matthee, M.C., BSc(Hons) MSc DCom(Pret) ..... Senior Lecturer
Phahlamohlaka, L.J., BSc(Zululand) MSc(Dalhousie University Canada) PhD(Pret) ..... Senior Lecturer
Ponelis, S., BSc BA(Hons) MIS(Pret) ..... Senior Lecturer
Van Loggerenberg, J.J., BSc MBA(PU for CHE) DCom(Pret) . Senior Lecturer (AST Chair)
Weilbach, E.H., BCom(Hons) MCom(Pret) ..... Senior lecturer
Le Roux, J.G., BSc(Hons) MCom(Pret) ..... Lecturer
Lutu, P.E.N., BSc(Hons) MSc(Univ Manchester) ..... Lecturer
Pretorius, J., BA(Ed) BA(Hons)(Pret) ..... Lecturer
Venter, E., BCur BCom(Hons) MCom(Pret) ..... Lecturer
Dimas, S., BCom BCom(Hons) MCom(Pret) ..... Junior Lecturer
Masoeu, M.A., BSc(Hons)(Ind.Psych) BSc(Hons)(CS)(PU for CHE) MCom(Pret) ..... Junior Lecturer

Department of Information Science
Bothma, T.J.D., BA(Pret) MA DLitt et Phil(Unisa) ..... Professor (Head)
Boon, J.A., BA(PU for CHE) BA(Bibl)(Hons)(Pret) MBibl DLitt et Phil(RAU) HD(Bibl)(Pret) ..... Extraordinary Professor
Lor, P.J., BA(Hons)(Bibl)(Stell) MBibl DPhil(Pret) ..... Extraordinary Professor
Dick, A.L., BBibl(Hons)(UWC) MLS(U Washington, Seattle) PhD(UCT) ..... Professor
Fourie, I., MBibl(UFS) DLitt et Phil(RAU) DTE(Unisa) ..... Associate Professor
Snyman, M.E., BA MA DLitt(Pret) HED(Unisa) ..... Associate Professor
Snyman, M.M.M., BA(Bibl) BBibl(Hons)(Pret) PD(Inf Sc) M(Bibl) DLitt et Phil(RAU) ..... Associate Professor
Cosijn, E., BA(Hons) MA PD(Inf Sc)(RAU) DPhil(Pret) ..... Senior Lecturer

De Wet, K., BA(Hons) BBibl MA(Pret) DLitt(UNW) HED(Pret) ..... Senior Lecturer
Galloway, F.C.J., BA BA(Hons) MA DLitt(UFS) ..... Senior Lecturer
Jacobs, D., BSc BEd(Madras) MSc(Bombay) HDLIS BA(Hons)(UNITRA) BBibl(Hons) MIS PhD(Natal) ..... Senior Lecturer
Botha, D.F., BBibl(Hons)(Stell) MIS(Unisa)..... Lecturer
Holmner, M.A., BA(Hons) MA(Pret) ..... Lecturer
Penzhorn, C.E., BA(Log) BBibl(Hons) MIS(Pret) HD(Bibl)(Unisa)..... Lecturer
Sewdass, N., BBibl BBibl(Hons)(Unisa) MBA(UK) MInf(Unisa) ..... Lecturer
Squier, M.M., BIS(Unisa) BIS(Hons) MIS(Pret)..... Lecturer
Thompson, J.E., BA BEd MIS HD(Bibl) HED(Natal) ..... Lecturer

Department of Computer Science
Eloff, J.H.P., BSc BSc(Hons) MSc PhD(RAU) ..... Professor (Head)
Bishop, J.M., BSc BSc(Hons)(Rhodes) MSc(Natal) PhD(Southampton) ..... Professor
Engelbrecht, A.P., BSc BSc(Hons) MSc PhD(Stell)..... Professor
Kourie, D.G., BSc BSc(Hons) MSc(Pret) MSc(Unisa) PhD(Lancaster)..... Professor
Olivier, M.S., BSc BSc(Hons) MSc PhD BA BA(Hons)(RAU) ..... Professor
Watson, B.W., JB(Math) JB(Math)(Hons)(Waterloo) PhD(Eindhoven)..... Professor
Grant, T.J., BSc Aero Eng(Bristol) C Eng DF(Brunel)PhD(Maastricht) ..... Extraordinary Professor
Van den Heever, R.J., BSc BSc(Hons) MSc(Pret) MS(Stanford) MEng PhD(Calif)..... Extraordinary Professor
Venter, H.S., BSc BSc(Hons) MSc PhD(RAU)..... Senior Lecturer
Franken, C.J., BA BSc(Hons) MSc(Pret) ..... Lecturer
Marshall, L., BSc BSc(Hons) MIT(Pret)..... Lecturer
Masiye, B.S., BSc(Hons) MSc(NUST) ..... Lecturer
Pieterse, V., BSc HED(Pret) BSc(Hons)(Unisa) MSc(Pret) ..... Lecturer
Strauss, M.D., BSc BSc(Hons)(Pret)..... Junior Lecturer
Venter, S.L., BSc BSc(Hons)(Pret) ..... Junior Lecturer

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.

Matriculation certificate
All undergraduate candidates who enroll at the University of Pretoria for the first time, must show their original matriculation certificate at the Student Administration of their faculty before the end of the first semester.

M-score
Degrees may differ in their M-score requirement for admission for the specific degree. The M-score is calculated as follows:

Symbol	Higher Grade	Standard Grade
A-symbol (80% and more)	5	4
B-symbol (70% to 79%)	4	3
C-symbol (60% to 69%)	3	2
D-symbol (50% to 59%)	2	1
E-symbol (40% to 49%)	1	0

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 April 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 information week
Details about the welcoming day, to which all parents are cordially invited, and about the subsequent academic information week, which all new first-year students **should** 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.

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.
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

Department of Informatics
The following degrees are conferred by the Faculty of Economic and Management Sciences:
(a) Baccalaureus Commercii with specialisation in Informatics
(b) Magister Commercii with specialisation in Informatics
(c) Magister Philosophiae with specialisation in Informatics
(d) Doctor Commercii with specialisation in Informatics
(e) Philosophiae Doctor specializing in Informatics

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

(a) Baccalaureus Informationis Scientiae – BIS
  (i) with specialisation in Library Science
  (ii) with specialisation in Information Science
  (iii) with specialisation in Multimedia
  (iv) with specialisation in Publishing
  (v) with specialisation in Information and Knowledge Management
(b) Baccalaureus Informationis Scientiae Honores
  (i) with specialisation in Information Science
  (ii) with specialisation in Multimedia
  (iii) with specialisation in Publishing
(c) Magister Informationis Scientiae (Research)
  (i) with specialisation in Library Science
  (ii) with specialisation in Information Science
  (iii) with specialisation in Multimedia
  (iv) with specialisation in Publishing
(d) Magister Informationis Scientiae (Coursework)
  (i) with specialisation in Library Science
  (ii) with specialisation in Information Science
  (iii) with specialisation in Multimedia
  (iv) with specialisation in Publishing
(e) Doctor Philosophiae (DPhil)
  (i) with specialisation in Library Science
  (ii) with specialisation in Information Science
(f) Philosophiae Doctor (PhD)
  (i) with specialisation in Publishing

The following degrees are conferred by the Faculty of Humanities:
(a) Magister Artium (research) with specialisation in Development Communication
(b) Magister Artium (coursework) with specialisation in Development Communication

Department of Computer Science
The following degrees are conferred by the Faculty of Engineering, Built Environment and Information Technology:
(a) Baccalaureus Scientiae in Information Technology (Information and Knowledge Systems)
(b) Baccalaureus Scientiae in Computer Science
(c) Baccalaureus Scientiae Honores in Computer Science
(d) Magister Scientiae in Computer Science
(e) Philosophiae Doctor 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 2006.

IT.1 Admission to undergraduate study

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

(i) To register for a first bachelor's degree at the University, a candidate must, in addition to the required Grade 12 certificate with full matriculation exemption, comply with the specific admission requirements for particular modules and fields of study as prescribed in the admission regulations and the faculty regulations of the departments.
(ii) All candidates must write the admissions test.
(iii) Applicants are notified in writing of provisional admission. Admission to the School of Information Technology is based on the final matriculation examination results and results of the admissions test.
(iv) The following persons may also be considered for admission:
* A candidate who is in possession of a certificate which is deemed by the University to be equivalent to the required Grade 12 certificate with full matriculation exemption.
* A candidate who has passed the *UP Foundation Year.*
* A candidate who is a graduate from another tertiary institution or has been granted the status of a graduate of such an institution.
* A candidate who passes an entrance examination, which is prescribed by the University from time to time.

Note: A conditional exemption certificate does not grant admission to bachelor's study. However, in certain circumstances some of the faculties do accept a conditional exemption on the basis of mature age and prior learning. Candidates are advised to contact the specific faculty administration in this regard.
(v) 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.
(vi) Subject to faculty regulations and the stipulations of General Regulations G.1.3 and G.62, a candidate will only be admitted to postgraduate bachelor's degree studies, if he or she is already in possession of a recognised bachelor's degree.

IT.2 Requirements for specific modules

A candidate who has:
(a) passed the Grade 12 examination in Mathematics with at least 40%(E) at higher grade or at least 50%(D) at standard grade, will be admitted to the modules GLY 151 and 152 in Geology;
(b) passed the Grade 12 examination in Mathematics with at least 50%(D) at higher grade, will be admitted to WTW114, WTW134 and WTW158 in Mathematics, and to WST111 in Mathematical Statistics (for the Financial Mathematics degree programme, a 60%(C) in Mathematics is recommended);
(c) passed the Grade 12 examination in Mathematics with at least 40%(E) at higher grade or at least 50%(D) at standard grade, or at least 50%(D) in both Statistics 113 and 123, will be admitted to (i) Informatics (excluding INF 153,154, 163, 164 and 271, 272), Statistics, Economics 113, 120, 123, and (ii) modules in Economics at 200 level;
(d) obtained at least 60%(C) in Accounting on higher grade in the Grade 12 examination, may enrol immediately for INF 181, a subject 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%(E) in FRK 111, must enrol for INF 181 in the second semester (14 weeks). Modules FRK 111 and FRK 121 will only be recognised for degree purposes once the student has also passed INF 181;

(e) to obtain admission to COS 110, a candidate should have obtained the following:
  (i) at least 50%(D) in Mathematics at higher grade in the final Grade 12 examinations; and
  (ii) at least 50%(D) in Computer Studies at Higher Grade in the final Grade 12 examinations **or** EPE111/EPE112 **or** COS 130.
  Note: COS 130 is also presented as a short course in January during the Summer School.

(f) passed the Grade 12 examination in Mathematics with at least 40%(E) at higher grade or 50%(D) at standard grade, or passed Geography with at least 50%(D) at higher grade, will be admitted to GGY 153, 154, 132, 162 and 165 in Geography;

(g) passed the Grade 12 examination in Mathematics with at least 50%(D) at higher grade or 60%(C) at standard grade, or passed Mathematics at higher grade with at least 40%(E) or at standard grade with at least 50%(D) as well as Computer Studies with at least 60%(C) at higher grade or 70%(B) at standard grade, or completed IT Special in the Faculty of Engineering, Built Environment and Information Technology will be admitted to Informatics 153, 154, 163, 164.

(h) Students are required to pass at least three Computer Science modules at second-year level, before admission to the Computer Science modules at third-year level will be permitted, unless special permission has been granted by the head of the department.

(i) To obtain admission to COS 130 a candidate should comply to the entry requirements for IT Special.

Please note:

(i) …*the Grade 12 examination*… refers to the final matriculation examination.

(ii) A student who takes a module presented by another faculty must take note of the admission requirements of such module, sub minima required in examination papers, supplementary examinations, etc.

IT.3 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.4 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.5 Requirements for promotion to the following year of study

(a) 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 allowed to the second semester in the School of Information Technology. These students will be notified by the Dean's office, in writing at the end of the relevant semester, of their exclusion from further studies in the Faculty of Engineering, Built Environment and Information Technology. Students who forfeit the right of readmission, may apply in writing to the Admissions Committee of the School of IT for readmission to the Faculty.

(b) A student who has not passed at least 70% of the core credits of the registered year of study must reapply for admission to the School of Information Technology.

A student whose right to readmission has expired, will be notified by the Dean's office, in writing at the end of the relevant year, of their exclusion from further studies in the Faculty of Engineering, Built Environment and Information Technology. Students who forfeit the right of readmission, may apply in writing to the Admissions Committee of the School of IT for readmission to the Faculty.

(c) Written applications must be submitted to the Faculty Administration, not later than the 13th of January. Late applications will be accepted only in exceptional circumstances after approval by the Dean.

(d) Should a student be readmitted, strict conditions of readmission will be determined by the Admissions Committee.

(e) A student, who is repeating his or her year, may by the Dean, on recommendation of the relevant Head(s) of Department, be permitted to enroll for modules of the following year of study in addition to the outstanding modules he or she 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.

(f) Students who fail a module for a second time, forfeit the privilege of registering for any modules of an advanced year of study.

IT.6 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.7 Registration of 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.8 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 students will under no circumstances obtain credits for a module "passed" in this manner and will also not be allowed to register late for the module.

IT.9 Computer and information literacy

Computer and information literacy are offered as compulsory modules. Students will be able to write an exemption examination for CIL 111. No exemption will be given for CIL 121 as the contents will be University specific. Students may only write the exemption examination for CIL 111 once.

IT.10 Academic literacy

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

IT.11 Examinations

11.1 Examinations, projects and essays

(a) An examination in a module may be written and/or oral. Projects and essays 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/January.

11.2 Examination admission

A minimum semester/year mark of 40% is required in order to be admitted to the 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.

11.3 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%. 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 essays, 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 given 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 given 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 at 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 given 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 given 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 given in the study guide of the module. Refer also to General Regulation G.10.3.

11.4 Ancillary examinations
Refer to General Regulation G.12.3.

11.5 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 on first-semester level, where the semester mark is not considered, and where the supplementary examination mark is taken as the final mark, with the proviso 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.

11.6 Special examinations (including the aegrotat)
Refer to General Regulation G.12.5.

11.7 Other special examinations
Refer also to General Regulation G.12.6.

(a) The Dean may, at the recommendation of the head of the 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 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 the 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 clash occurs between modules, 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 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.

(f) If an examination clash occurs between modules, an adjustment of the examination date and/or time will only be considered if the student completes the official application form at the Student Administration offices and submits a copy to the relevant lecturer at least seven (7) days prior to the commencement of the

examination period. A module from a higher year level receives preference to that of a lower year level within the prescribed curriculum.

11.8 Re-marking of examination scripts
Refer to General Regulation G.14.

IT.12 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.

CURRICULA OF THE INFORMATION TECHNOLOGY PROGRAMMES

IT.13 BACHELOR OF INFORMATION TECHNOLOGY (BIT) (Code 02130082)

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

Programme organiser:
Mrs D Taljaard, Information Technology Building, Room 5-82.2,
Tel: 012 420 4095, e-mail: dawn.taljaard@up.ac.za

Admission requirements for candidates with a senior certificate
A Grade 12 certificate with university endorsement; **and**
(a) a minimum M-score of 18 in the final Grade 12 examinations; **and**
(b) a final mark of at least 60%(C) in Mathematics at higher grade in the Grade 12 examinations; **and**
(c) at least 60%(C) in Computer Studies at higher grade in the final Grade 12 examinations;
or
EPE111/EPE112/COS130 (COS 130 is also presented as a short course in January during the Summer School).
or
A candidate who complies with the M-score and Mathematics requirements, but not with the Computer Studies prerequisite, can obtain special permission from the Chairperson of the School of Information Technology to register for this degree.
or
Candidates who do not comply with these requirements are advised to register for IT Special, depending on whether they comply with its admission requirements.

Admission requirements for candidates with a National Senior Certificate (from 2009)
To be admitted to any undergraduate field of study in the School of Information Technology, candidates who wrote the final Grade 12 exams for the National Senior Certificate must comply with the following admission requirements:
1. Obtained a NSC (University Admission); and
2. Written examinations in both Mathematics and Information Technology.

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 633 credits, of which 164 are required at first-year level, 150 at second-year level, at least 159 at third-year level, and at least 160 at fourth-year level. Note: The module credits set out below are in accordance with SAQA requirements and may differ from those set out in other fields of study.

Note:
Minimum requirement
GS Code followed by GS: XYZ 151GS A combined (final) mark of 40% - 49%.
Deviations from these requirements are only permitted with the approval of the Dean, after consultation with the relevant head(s) of department.

(a) First year of study (164 credits)

Fundamental modules (University requirements - 20 credits)

Code	Module	Prerequisites	Credits
Passing of an exemption examination in CIL 111 **or**			
CIL 111	Computer Literacy **and**		4
CIL 121	Information Literacy		4
Passing of an exemption examination in Academic Literacy **or**			
EOT 110	Academic Literacy		6
EOT 120	Academic Literacy		6
and			
EOT 164	Academic Literacy		6
COS 110	Program Design: Introduction	Mathematics HG D and Computer Studies HG D	16
COS 140	Netcentric Computer Systems	COS 110 or (COS 130/COS 131/EPE 111/EPE 112)	16
COS 151	Introduction to Computer Science		8
OBS 110	Business Management		10
FRK 111	Financial Accounting		10
FRK 121	Financial Accounting	FRK 111 GS	12
INF 153	Informatics	Par IT.2(g)	5
INF 163	Informatics	INF 153 GS	5
INL 111	Information Science		6
INL 112	Information Science		6
WTW 115	Discrete Structures	Maths Gr 12 HG (D)	8
WTW 114	Calculus	Maths Gr 12 HG (D)	16
WTW 126	Linear Algebra	Maths Gr 12 HG (D)	8
FIL 120	Philosophy		12

(b) Second year of study (minimum 150 credits)

Code	Module	Prerequisites	Credits
COS 212	Data Structures and Algorithms	COS 214 GS	16
COS 214	Design Patterns	COS 110 or [(COS 130/COS 131/EPE 111/EPE 112) and COS 140]	16
COS 222	Operating Systems	COS 110	16
INF 214	Informatics	CIL 111, 121 (previously CIL 171 – 174)	14
INF 271	Informatics	CIL 111, 121 (previously CIL 171 – 174), INF 163, Par IT.2(g)	14
INF 272	Informatics	CIL 111, 121 (previously CIL 171 – 174), INF 164	14
INY 271	Advanced Mark-up Language (1)		10
INY 272	Advanced Mark-up Language (2)		10
BER 410	Business Law		12
At least **two** of the following:			
INL 211	Information Science	CIL 121	10
INL 212	Information Science	INL 211†	10
INL 221	Information Science		10
WTW 285	Discrete Structures	WTW 115	12

Note:

† *Indicates that the module INL 211 must be passed before or be taken concurrently with INL 212.*

(c) Third year of study (minimum 159 credits)

Code	Module	Prerequisites	Credits
COS 301	Software Engineering	COS 212	27
	or		
INF 370	Information Systems Project	INF 261, 225, 271, 272, Par IT.2(g) or LP	30
	or		
INY 300	Multimedia Project		15
INF 324	Informatics	INF 261, 225, 271, 272 or LP	15
INF 315	Informatics	INF 261, 225, 271, 272	15
INF 354	Informatics	INF 261, 225, 271, 272	15
At least **three** of the following:			
COS 314	Artificial Intelligence	COS 214	18
COS 326	Databases	INF 214	18

COS 332	Computer Networks	COS 140	18
COS 333	Programming Languages	COS 110	18
COS 341	Compiler Construction	COS 212	18
COS 343	Trends in Information Technology	COS 110 / (COS131 and COS140)	18
COS 344	Computer Graphics	COS 214 and (WTW 126 or LP)	18
INL 311	Information Science: Publication formats in a digital environment		15
INL 321	Information Science: Information Management		15
INY 311	Multimedia		15

(d) Fourth year of study (minimum 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 a 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			
INY 7**	Choice of honours modules in consultation with the programme organiser		20 each
Informatics			
INF 7**	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

(e) 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.

IT.14 INFORMATION TECHNOLOGY SPECIAL (Code: 02180004)

Programme organiser:
Mrs D Taljaard, Information Technology Building, Room 5-82.2,
Tel: 012 420 4095, e-mail: dawn.taljaard@up.ac.za

Admission requirements for candidates with a senior certificate
Candidates in possession of the following qualifications will be admitted to this programme:

- A minimum M-score of 12 in the Grade 12 examination
  and
- A Grade 12 certificate with university endorsement
  and
- at least 40%(E) for Mathematics at higher grade or at least 50%(D) for Mathematics at standard grade.

A candidate who does not comply with the requirements may do an admissions test and will be considered on the grounds of the results.
The Dean may, in conjunction with the Chairperson of the School of Information Technology, consider admission to this programme on account of extraordinary circumstances.

Admission requirements for candidates with a National Senior Certificate (from 2009)
To be admitted to any undergraduate field of study in the School of Information Technology, candidates who wrote the final Grade 12 exams for the National Senior Certificate must comply with the following admission requirements:

1. Obtained a NSC (University Admission); and
2. Written examination in Mathematics.

Duration of this introductory year
The duration is six months full-time study (77 credits). No extra modules may be taken and students may not be enrolled for IT Special for more than six months. Students are expected to pass all prescribed modules, with the exception of WTW 101 where a pass mark as promotion mark will be accepted. Students may then apply for admission to any degree in the School of Information Technology for which he/she qualifies.

Six months study (minimum 77 credits)

Fundamental modules (University requirements – 10 credits)

Code	Module	Prerequisites	Credits
Passing of an exemption examination in CIL 111 **or**			
CIL 111	Computer Literacy		4
Passing of an exemption examination in Academic Literacy **or**			
EOT 110	Academic Literacy		6

Core modules (minimum 67 credits)

Code	Module	Prerequisites	Credits
COS 151	Introduction to Computer Science		8
COS 130	Introduction to Programming		16
INF 153	Informatics		5

INL 111	Information Science		6
INL 112	Information Science		6
OBS 110 OBS 113	Business Management **or** Entrepreneurship		10 10
WTW 101 WTW 114	Mathematics **or** Calculus	Mathematics HG (E), SG (D) Mathematics HG (D)	16 16

POSTGRADUATE PROGRAMMES IN INFORMATION TECHNOLOGY

IT.15 MASTER OF INFORMATION TECHNOLOGY (Coursework) (Code 02250082)

Programme organiser:
Mrs D Taljaard, Information Technology Building, Room 5-82.2,
Tel: 012 420 4095, e-mail: dawn.taljaard@up.ac.za

This degree programme is only offered in English.

(a) Admission

(i) Subject to the stipulations of Gen. Reg. G.1.3, G.30 and G.62, an appropriate bachelor's degree is a requirement for admission; and
(ii) A pass mark in Mathematics at grade 12 (matriculation) level or another qualification in Mathematics, Statistics or Mathematical Statistics, which the Chairperson of the School considers to be sufficient; and
(iii) Sufficient appropriate practical experience in the technology field in the opinion of the Chairperson of the School.
(iv) The Chairperson of the School may impose 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 M.IT degree must be completed in a maximum of three years. A student will have to apply with the Dean 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 module	96 credits
Elective modules	24 credits

(d) Pass requirements
At least 50% has to be obtained in the mini-dissertation as well as in the prescribed course modoles.

(e) Degree with distinction
The degree is conferred with distinction on students who have a weighted average final mark of at least 75%.

(f) Curriculum
The curriculum is determined in consultation with the programme coordinator.

IT.16 DOCTOR OF PHILOSOPHY IN 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 issued 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 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 CURRICULUM FOR BCOM WITH SPECIALISATION IN 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, e-mail: cdevill@hakuna.up.ac.za

Total credits required: 470

Admission requirements for candidates with a senior certificate
A grade 12 certificate with matriculation exemption; **and**
(a) a minimum M-score of 15 in the final Grade 12 examinations; **and**

(b) a final mark of at least 50%(D) in Mathematics higher grade or 60%(C) standard grade in the Grade 12 examinations; **OR**
(c) at least 40%(E) in Mathematics higher grade or 50%(D) standard grade **and** 60%(C) in Computer Studies higher grade or 70%(B) standard grade in the final Grade 12 examinations.

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 competence to develop a complete information system to support organisational functions. The holder of this qualification has the skills to advise organisations in empowering and enhancing the quality of work life of the individual workers through the application of information technology.

	Year Level 1	**Year Level 2**	**Year Level 3**
	Credits	Credits	Credits
Fundamental modules	20	10	0
Core modules	106	95	75
Elective modules	20	64	80
Total	146	169	155

Learning programme

YEAR LEVEL:		**1**	**2**	**3**
Fundamental modules *(Compulsory)*				
CIL	Computer Literacy ¤	111, 121		
BPE	Business Ethics		251	
EOT	Academic Literacy §	110, 120		

§ If a student does ***NOT*** pass the academic literacy test at the beginning of the year, he/she must register for and pass EOT 110 and EOT 120 and will then receive 12 credits. On the other hand, a student who passes the academic literacy test, will be exempted from EOT 110 and EOT 120 and has to pass a credit value of 12 of the following modules:

ENG	English	110, 120		
EOT	English	161, 163 162, 164		

Core modules *(Compulsory)*

INF	Informatics[1; 2]	112, 163 153, 164 154	214, 261 225 271, 272	315, 324 354, 370
FRK	Financial Accounting[3]	111, 121		
INF	Informatics	181[4]		
EKN	Economics	110, 120		
BER	Business Law		210, 220	
STK	Statistics	110, 120		
KOB	Communication Management	184		

Elective modules

OBS	Business Management	110, 120	210, 220	310[6], 320
EKN	Economics		214, 224	310, 320 314
FRK	Financial Accounting		211[5], 221[5]	311[5], 321[5]
BEL	Taxation		220[5]	
STK	Statistics		210, 220	310, 320
IOK	Internal Auditing		211, 221	311, 321
KOB	Communication Management		210, 220	310, 320
FBS	Financial Management		210, 220	310, 320
BEM	Marketing Management	110, 121	211, 221	311, 321
BDO	Industrial and Organizational Psychology	110, 120	219, 229 271, 272	319[6], 329[6] 371, 372
PAD	Public Administration	110, 120	210, 220	310, 320
OBS	Entrepreneurship	113, 123	213, 223	313, 323
COS	Computer Science		212[7], 213[7] 283[7], 284[7]	314, 333 341, 343
INL	Information Science		211, 221, 212 and at least one of INY 221, 223, 224	311 and at least one of INY 311, 312; INL 321 and at least one of INY 323, 324, 329

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

Note: See Regulation C.2 for prerequisites of all modules.

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

(1) Only candidates who meet the entrance requirements for the compulsory modules Informatics 153, 154, 163, 164 and 271, 272 i.e. a minimum of 50% in Mathematics (higher grade) in Grade 12, will be admitted to the BCom degree with specialisation in Informatics. Admission to the BCom degree with specialisation in Informatics can also be obtained by complying with the requirements as set out in Reg 1.2(g) of the section **Requirements for specific modules**, in which case the Dean, on the recommendation of the head of department, may allow a student to register simultaneously for Informatics 153, 154, 163, 164 and 271, 272.

(2) In addition to the provisions of the footnote[1] above, candidates who have passed Grade 12 Mathematics with at least 40% Higher Grade or 50% Standard Grade and have passed Informatics 112, may, if their academic performance merits it, be allowed by the Dean, on recommendation of the head of the department, to register for the BCom degree programme with specialisation in Informatics, and to register simultaneously for Informatics 153, 154, 163, 164, 271, 272.

(3) See Reg 1.2 (d).

(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) Students must take COS 110 as an extra module in their first year to be able to take this elective. Students must also comply with the regulations and prerequisites for Computer Science as stipulated in IT. 2 (e).

Specialisation modules: INF 315, 324, 370 and 354.

II. BACCALAUREUS HONORES DEGREES

See General Regulations G.16 to G.29.

IT.18 BCOM(HONS)

(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 BCom(Hons) or the BAdmin(Hons) degree unless he is in possession of a BCom or a BAdmin degree respectively.

(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 the 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 BCom(Hons) fields of specialisation:

1. Mathematics at Grade 12 level or another qualification in Mathematics, Statistics or Mathematical Statistics deemed adequate by the head of department.
2. 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.

(vii) In addition to any other requirements, the following prerequisites apply to the BCom(Hons) and the BAdmin(Hons) degree programmes with specialisation in Economics:

- Mathematics as stipulated in para (iv) 1;
- Statistics 210, 220 or equivalent.

(c) Field of study
BCom(Hons) degree
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 the 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 qualifies for the honours degree by obtaining at least EIGHT semester modules or the equivalent thereof.
(ii) A student compiles his/her curriculum in consultation with the head of department concerned.
(iii) 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, Marketing and Communication Management, Business Management, Statistics, Financial Management, Taxation, Tourism Management and School of Public Management, Auditing and Administration in which 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 or 50% is required for an essay.
(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 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 14 January of the following year, and all examination results must be submitted to Student Administration by 24 January;
(2) honours examinations which do not take place before the end of the first semester, may take place not later than 18 July, and all examination results must be submitted to Student Administration on or before 25 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 or this stipulation, the phrase *"not sit 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 essays are prepared and examined in his 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 essay is 50%. The stipulations regarding pass requirements for dissertations in General Regulation G.60.2.1.2(a), apply mutatis mutandis to essays.

(iii) Subject to the provisions of General Regulation G.12.2.1.3, 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 MCOM

(a) Requirements for admission

(i) Subject to the provisions of General Regulations G.1.3 and G.62, the related B(Hons) 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 the department concerned may set additional admission requirements.

(v) For MCom degrees (with the exception of the field of specialisation Labour Relations Management) as well as for the MAdmin degree with specialisation in Economics: 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 an essay.

(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 an essay is 50%. The provisions regarding pass requirements for dissertations, contained in General Regulation G.60.2.1.2(a), apply mutatis mutandis to essays.

(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 essay.

DEGREE PROGRAMMES IN INFORMATION SCIENCE

IT.20 BACCALAUREUS INFORMATIONIS SCIENTIAE (BIS)

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

Renewal of registration
Students registered for a three-year degree must complete the degree within five years. Students must obtain at least 60 credits during their first year of registration and at least 80 credits during each subsequent year to be able to be readmitted to the Faculty.

IT.20.1 BIS with specialisation in LIBRARY SCIENCE (Code 12131003)

The increasing amount of information available and growing information needs have necessitated trained information intermediaries to facilitate the bringing together of users and their required information. Students are trained as information intermediaries to gather, organise and make information available for use in various environments.

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

Admission requirements for candidates with a senior certificate
A grade 12 certificate with university exemption; **and**

- at least 50%(D) at higher grade in Afrikaans or English or an African language; **and**
- an M-score of at least 12.

Admission requirements for candidates with a National Senior Certificate (from 2009)
To be admitted to any undergraduate field of study in the School of Information Technology, candidates who wrote the final Grade 12 exams for the National Senior Certificate must comply with the following admission requirements:

1. Obtained a NSC (University Admission); and

2. Written examinations in either Afrikaans or English or an African Language.

Minimum credits required: 447	**Year-level 1**	**Year-level 2**	**Year-level 3**	**Total**
Fundamental modules	32	8	0	40
Core modules	68	112	135	315
Elective modules	20*	32*	40*	92*
Total	120	152	175	447*

Note:
** Because credits are not calculated in the same way in all faculties, students should take note that the total amount of credits required for this package must be at least 447. Total credits may be more depending on the choice of elective modules.*

FIRST YEAR OF STUDY

Fundamental modules for year-level 1 (32 credits)

Code	**Module**	**Prerequisites**	**Credits**	**Period**
Passing of an exemption examination in CIL 111 **or**				
CIL 111	Computer Literacy **and**		4	S1
CIL 121	Information Literacy		4	S2
EAG 151	Academic Skills		6	Q1
Passing of an exemption examination in Academic Literacy **or**				
EOT 110	Academic Literacy		6	S1
EOT 120	Academic Literacy		6	S2
RES 151	Research		6	Q3

Core modules for year-level 1 (68 credits)

Code	**Module**	**Prerequisites**	**Credits**	
BIB 111	Library Science: Introduction to information service provision		6	Q1
BIB 112	Library Science: Reading and reading practices		6	Q2
BIB 121	Library Science: Introduction to the use of information sources		6	Q3
BIB 122	Library Science: Library and information services		6	Q4
INL 111	Information Science: Introduction to Information Science		6	Q1
INL 112	Information Science: Representation and organization of information		6	Q2
INL 121	Information Science: Information Technology		6	Q3
INL 122	Information Science: Communication media		6	Q4
Select **one** of the following subjects up to year-level 2				
OBS 110	Business Management **and**		10	S1
OBS 120	Business Management	OBS 110GS	10	S2
or				
OBS 113	Entrepreneurship **and**		10	S1
OBS 123	Entrepreneurship	OBS 110, 113GS or LP	10	S2

Elective modules for year-level 1 (20 credits*)

Code	Module	Prerequisites	Credits	Period
Select a subject (up to year-level three) 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 amount of credits required for this subject must be at least 20.*

SECOND YEAR OF STUDY

Fundamental module for year-level 2 (8 credits)

Code	Module	Prerequisites	Credits	Period
+JCP 202	Community-based Project		8	^

Note:
+ Students who register for the first year during 2006 will be required to successfully 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 for year-level 2 (112 credits)

Code	Module	Prerequisites	Credits	Period
BIB 211	Library Science: User studies		10	Q1
BIB 212	Library Science: Information and the law		10	Q2
BIB 214	Library Science: Cataloguing		10	Q3
BIB 222	Library Science: Information and reference services		10	Q4
INL 211	Information Science: Information retrieval	CIL 121	10	Q1
INL 212	Information Science: Information seeking	INL 211†	10	Q2
INL 221	Information Science: Infopreneurship and information ethics		10	Q3
And select **one** of the following modules				
INY 221	Information Science: System development		10	Q4
INY 223	Information Science: Communication media		10	Q4
INY 224	Information Science: Applied information ethics		10	Q4
Select **one** of the following subjects (the same subject as selected on year-level 1)				
OBS 210 **and** OBS 220	Business Management Business Management	OBS 110	16 16	S1 S2
OBS 213 **and** OBS 223	Entrepreneurship Entrepreneurship	OBS 113	16 16	S1 S2

Elective modules for year-level 2 (32 credits*)

Code	Module	Prerequisites	Credits	Period
Continue with the elective module on year level 2 as selected for year-level 1. Consult the package organiser.				

Note:

** Because credits are not calculated in the same way in all faculties, students should take note that the total amount of credits required for this module must be at least 32.*

† *Indicates that the module INL 211 must be passed before or be taken concurrently with INL 212.*

THIRD YEAR OF STUDY

Core modules for year-level 3 (135 credits)

Code	Module	Prerequisites	Credits	Period
BIB 316	Library Science: Subject cataloguing		15	Q1
BIB 312	Library Science: Advanced cataloguing		15	Q2
BIB 321	Library Science: Information in a digital environment		15	Q3
BIB 322	Library Science: Management of a digital information service		15	Q4
BIB 324^	Library Science: Practical		15	Q4^
INL 311	Information Science: Publication formats in a digital environment		15	Q1
INL 321	Information Science: Information Management		15	Q3
And select **one** of the following modules				
INY 311	Multimedia		15	Q2
INY 312	Information for development		15	Q2
INY 318	Information economics		15	Q2
And select **one** of the following modules				
INY 323	Information: Socio-political context		15	Q4
INY 324	Multimedia		15	Q4
INY 329	Advanced Information Retrieval	INL 211 and INL 212	15	Q4

Note:

^ *Consult the package organiser in Quarter 1 concerning BIB 324.*

Elective modules for year-level 3 (40 credits*)

Code	Module	Prerequisites	Credits	Period
Continue with the elective module on year-level 3 as selected for year-level 1 and 2. Consult the package organiser.				

Note:

** Because credits are not calculated in the same way in all faculties, students should take note that the total amount of credits required for this module must be at least 40.*

IT.20.2 BIS with specialisation in INFORMATION SCIENCE (Code 12131004)

Information is required by most people in order to complete their daily tasks. This package is designed to train students in the management, retrieval and organization of information, as well as adding value to and packaging and distribution of information, with a further focus on the use of information technology and the processing of information products.

Package organiser:
Mrs M Holmner, IT 6-63, Tel: 012 420 5215, e-mail: marlene.holmner@up.ac.za

Admission requirements for candidates with a senior certificate
A grade 12 certificate with university exemption, **and**

- at least 50%(D) at higher grade in Afrikaans or English or an African language; **and**
- an M-score of at least 15*; **and**
- at least 50%(D) in Mathematics at higher grade; **or** 60%(C) in Mathematics at standard grade; or
  at least 40%(E) in Mathematics at higher grade **or** 50%(D) at standard grade **and** 60%(C) in Computer Studies at higher grade **or** 70%(B) at standard grade in the final Grade 12 examination*.

** If the M-score and/or Mathematics prerequisites are not met, application can be made to register for Information Technology (IT) Special.*

Admission requirements for candidates with a National Senior Certificate (from 2009)
To be admitted to any undergraduate field of study in the School of Information Technology, candidates who wrote the final Grade 12 exams for the National Senior Certificate must comply with the following admission requirements:

1. Obtained a NSC (University Admission); and
2. Written examinations in both Mathematics and Information Technology.
3. Written examinations in either Afrikaans or English or an African Language.

Minimum credits required: 401	**Year-level 1**	**Year-level 2**	**Year-level 3**	**Total**
Fundamental modules	32	8	0	40
Core modules	74	135*	60	269*
Elective modules	20*	32*	40*	92*
Total	126	175*	100	401*

Note:
** Because credits are not calculated in the same way in all faculties, students should take note that the total amount of credits required for this package must be at least 401. Total credits may be more depending on the choice of elective modules.*

FIRST YEAR OF STUDY

Fundamental modules for year-level 1 (32 credits)

Code	**Module**	**Prerequisites**	**Credits**	**Period**
Passing of an exemption examination in CIL 111 **or**				
CIL 111	Computer Literacy **and**		4	S1
CIL 121	Information Literacy		4	S2

EAG 151	Academic Skills		6	Q1
Passing of an exemption examination in Academic Literacy **or**				
EOT 110	Academic Literacy		6	S1
EOT 120	Academic Literacy		6	S2
RES 151	Research		6	Q3

Core modules for year-level 1 (74 credits)

Code	Module	Prerequisites	Credits	Period
INL 111	Information Science: Introduction to Information Science		6	Q1
INL 112	Information Science: Representation and organization of information		6	Q2
INL 121	Information Science: Information Technology		6	Q3
INL 122	Information Science: Communication media		6	Q4
INF 112	Informatics	IT.2(c)	10	S1
INF 153	Informatics	IT.2(g)	5	S1
INF 154	Informatics	IT.2(g)	5	S1
INF 163	Informatics	INF 153 GS	5	S2
INF 164	Informatics	INF 154 GS	5	S2
Select **one** of the following subjects up to year-level 2				
EKN 110	Economics		10	S1
and				
EKN 120	Economics	EKN 110 or 113; Math HG E or SG D or STK 113GS	10	S2
	or			
OBS 110	Business Management		10	S1
and				
OBS 120	Business Management	OBS 110	10	S2
	or			
OBS 113	Entrepreneurship		10	S1
and				
OBS 123	Entrepreneurship	OBS 110, 113GS or LP	10	S2

Elective modules for year-level 1 (20 credits*)

Code	Module	Prerequisites	Credits	Period
Select a module (up to year-level three) 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 amount of credits required for this module must be at least 20.*

SECOND YEAR OF STUDY

Fundamental module for year-level 2 (8 credits)

Code	Module	Prerequisites	Credits	Period
+JCP 202	Community-based Project		8	^

Note:

+ Students who register for the first year during 2006 will be required to successfully

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 for year-level 2 (135 credits*)

Code	Module	Prerequisites	Credits	Period
INL 211	Information Science: Information retrieval	CIL 121	10	Q1
INL 212	Information Science: Information seeking	INL 211†	10	Q2
INL 221	Information Science: Infopreneurship and information ethics		10	Q3
And select **one** of the following modules				
INY 221	Information Science: System development		10	Q4
INY 223	Information Science: Communication media		10	Q4
INY 224	Information Science: Applied information ethics		10	Q4
INF 214	Informatics	CIL 111 – 121 (previously CIL 171 – 174)	14	S1
INF 261	Informatics	INF 214 GS	7	S2
INF 225	Informatics	CIL 111 – 121 (previously CIL 171 – 174)	14	S2
INF 271	Informatics	CIL 111 – 121 (previously CIL 171 – 174) INF 163, 164 IT.2(g)	14	Year
INF 272	Informatics	CIL 111 – 121 (previously CIL 171 – 174) INF 163, 164 IT.2(g)	14	Year
Select **one** of the following subjects (the same subject as selected on year-level 1)				
EKN	Select any year-level 2 Economics modules for a minimum of 32 credits	Consult the department	32	
	or			
OBS 210	Business Management	OBS 110	16	S1
and				
OBS 220	Business Management		16	S2
	or			
OBS 213	Entrepreneurship	OBS 113	16	S1
and				
OBS 223	Entrepreneurship		16	S2

Elective modules for year-level 2 (32 credits*)

Code	Module	Prerequisites	Credits	Period
Continue with the elective module on year-level 2 as selected for year-level 1. Consult the package organiser.				

Note:

** Because credits are not calculated in the same way in all faculties, students should take note that the total amount of credits required for this module must be at least 32.*

† Indicates that the module INL 211 must be passed before or be taken concurrently with INL 212.

THIRD YEAR OF STUDY

Core modules for year-level 3 (60 credits)

Code	Module	Prerequisites	Credits	Period
INL 311	Information Science: Publication formats in a digital environment		15	Q1
INL 321	Information Science: Information Management		15	Q3
And select **one** of the following modules				
INY 311	Multimedia		15	Q2
INY 312	Information for development		15	Q2
INY 318	Information economics		15	Q2
And select **one** of the following modules				
INY 323	Information: Socio-political context		15	Q4
INY 324	Multimedia		15	Q4
INY 329	Advanced Information Retrieval	INL 211 and INL 212	15	Q4

Elective modules for year-level 3 (40 credits*)

Code	Module	Prerequisites	Credits	Period
Continue with the elective module on year level 3 as selected for year-level 1 and 2. Consult the package organiser.				

Note:

** Because credits are not calculated in the same way in all faculties, students should take note that the total amount of credits required for this module must be at least 40.*

IT.20.3 BIS with specialisation in MULTIMEDIA (Code 12131005)

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 is thus converging 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, organization 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 combina-

tion 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. The qualification is a new field of study not offered at other local universities.

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

Admission requirements for candidates with a senior certificate
A grade 12 certificate with university exemption; **and**
- at least 50%(D) at higher grade in Afrikaans or English or an African language; and
- an M-score of at least 15*; **and**
- at least 50%(D) in Mathematics at higher grade*; **and**
- at least 50%(D) in Computer Studies at higher grade*.

A candidate with a minimum M-score of 18 and at least 60%(C) in Mathematics HG, who does not comply with the Computer Studies prerequisite, can obtain special permission from the Head of the Information Science Department to register for this degree.
* *If the M-score, Mathematics and/or Computer prerequisites are not met, application can be made to register for Information Technology (IT) Special.*

Admission requirements for candidates with a National Senior Certificate (from 2009)
To be admitted to any undergraduate field of study in the School of Information Technology, candidates who wrote the final Grade 12 exams for the National Senior Certificate must comply with the following admission requirements:
1. Obtained a NSC (University Admission); and
2. Written examinations in either Afrikaans or English or an African Language.
3. Written examinations in both Mathematics and Information Technology.

Minimum credits required: 594	**Year-level 1**	**Year-level 2**	**Year-level 3**	**Total**
Fundamental modules	32	8	0	40
Core modules	156	160	102	418
Elective modules	24	40	72	136
Total	212	208	174	594*

Note:
* *Because credits are not calculated in the same way in all faculties, students should take note that the total amount of credits required for this package must be at least 594.*

FIRST YEAR OF STUDY

Fundamental modules for year-level 1 (32 credits)

Code	**Module**	**Prerequisites**	**Credits**	**Period**
Passing of an exemption examination in CIL 111 **or**				
CIL 111	Computer Literacy **and**		4	S1
CIL 121	Information Literacy		4	S2
EAG 151	Academic Skills		6	Q1
Passing of an exemption examination in Academic Literacy or				
EOT 110	Academic Literacy		6	S1
EOT 120	Academic Literacy		6	S2
RES 151	Research		6	Q3

Core modules for year-level 1 (156 credits)

Code	Module	Prerequisites	Credits	Period
INL 111	Information Science: Introduction to Information Science		6	Q1
INL 112	Information Science: Representation and organization of information		6	Q2
INL 121	Information Science: Information Technology		6	Q3
INL 122	Information Science: Communication media		6	Q4
INY 171	Multimedia: Mark-up languages		6	S1
INY 172	Multimedia: Multimedia for the Web		6	S2
COS 110	Program Design: Introduction	IT.2(e)	16	S1
COS 151	Introduction to Computer Science		8	S1
COS 140	Netcentric Computer Systems	COS 110 or (COS 130/COS 131/ EPE 111/EPE 112)	16	S2
EOS 284	Computer Architecture	COS 110 or (COS 130/COS 131/ EPE 111/EPE 112)	12	S2
VIO 102	Visual Design		24	Year
VKK 110	Introduction to Visual Culture		12	S1
KGK 120	Introduction to Design History		12	S2
Select **one** of the following subjects				
OBS 110 **and**	Business Management		10	S1
OBS 120 **or**	Business Management	OBS 110	10	S2
OBS 113 **and**	Entrepreneurship		10	S1
OBS 123	Entrepreneurship	OBS 110, 113GS or LP	10	S2

Elective modules for year-level 1 (24 credits)

Code	Module	Prerequisites	Credits	Period
	Select a **language** from the language groups 2 to 12, e.g. Afrikaans, English, German, French or an African Language up to year level 2. Select modules to the value of 24 credits on **year-level 1** from the selected language. Also see the alphabetical list at the back of yearbook of the *Faculty of Humanities* when selecting the language modules.		24	

SECOND YEAR OF STUDY

Fundamental module for year-level 2 (8 credits)

Code	Module	Prerequisites	Credits	Period
+JCP 202	Community-based Project		8	^

Note:
+ Students who register for the first year during 2006 will be required to successfully 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 for year-level 2 (160 credits)

Code	Module	Prerequisites	Credits	Period
INY 215	Multimedia: System Development		10	Q1
INY 216	Multimedia		10	Q2
INY 225	Multimedia		10	Q3
INY 226	Multimedia: Editorial handling of Information products		10	Q4
INY 271	Multimedia: Advanced mark-up languages (1)		10	S1
INY 272	Multimedia: Advanced mark-up languages (2)		10	S2
COS 212	Data Structures and Algorithms	COS 214GS	16	S2
COS 214	Design Patterns	COS 110 or [(COS 130/COS 131/EPE 111/EPE 112) and COS 140]	16	S1
COS 222	Operating Systems	COS 110	16	S1
COS 226	Concurrent Systems	COS 110	16	S2
VIO 202	Visual design	VIO 102	40	Year

Elective modules for year-level 2 (40 credits)

Code	Module	Prerequisites	Credits	Period
	Continue with the same **language** as selected on year-level 1 and select modules on year-level 2 to the value of 40 credits. You may substitute 20 credits for LCC 220 Also see the alphabetical list at the back of yearbook of the *Faculty of Humanities* when selecting the language modules.		40	

THIRD YEAR OF STUDY

Core modules for year-level 3 (102 credits)

Code	Module	Prerequisites	Credits	Period
INY 300	Multimedia Project		15	Year
INY 315	Advanced Multimedia		15	Q1
INY 316	Multimedia: Human-computer interaction		15	Q2
INY 325	Multimedia: Interface design		15	Q3
INY 326	Multimedia: Mark-up languages		15	Q4
COS 301	Software Engineering	COS 212	27	Year

Elective modules for year-level 3 (72 credits*)

Code	Module	Prerequisites	Credits	Period
Select at least **four** of the following semester modules: **Note**: The semester in which these modules are offered may vary from year to year				
COS 314	Artificial Intelligence	COS 214	18	S1
COS 326	Database Systems	INF 214 or LP	18	S2
COS 332	Computer Networks	COS 140	18	S1
COS 333	Programming Languages	COS 110	18	S2
COS 341	Compiler Construction	COS 212	18	S1
COS 343	Trends in IT	COS 110 or [COS 130/131 and COS 140]	18	S2
COS 344	Computer Graphics	COS 214 **and** WTW 126 or LP	18	S2
EMK 310	Microprocessors	ERS 220GS or LP	16	S1

IT.20.4 BIS with specialisation in PUBLISHING (Code 12131006)

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 enabled to act as responsible information intermediaries who can add value to publications during the various phases of the publishing process.

Package organiser:
Dr F Galloway, IT 6-34, Tel: 012 420 2426, e-mail: francis.galloway@up.ac.za

Admission requirements for candidates with a senior certificate
A grade 12 certificate with university exemption; **and**
- at least 60%(C) at higher grade in Afrikaans or English or an African language; **and**
- an M-score of at least 14.

Admission requirements for candidates with a National Senior Certificate
To be admitted to any undergraduate field of study in the School of Information Technology, candidates who wrote the final Grade 12 exams for the National Senior

Certificate must comply with the following admission requirements:
1. Obtained a NSC (University Admission); and
2. Written examinations in either Afrikaans or English or an African Language.

Minimum credits required: 452	**Year-level 1**	**Year-level 2**	**Year-level 3**	**Total**
Fundamental modules	38	8	0	46
Core modules	80	127	75	282
Elective modules	24	40	60	124
Total	142	175	135	452*

Note:
** Because credits are not calculated in the same way in all faculties, students should take note that the total amount of credits required for this package must be at least 452.*

FIRST YEAR OF STUDY

Fundamental modules for year-level 1 (38 credits)

Code	**Module**	**Prerequisites**	**Credits**	**Period**
Passing of an exemption examination in CIL 111 **or**				
CIL 111	Computer Literacy **and**		4	S1
CIL 121	Information Literacy		4	S2
EAG 151	Academic Skills		6	Q1
ENG 158	English		6	Q4
Passing of an exemption examination in Academic Literacy or				
EOT 110	Academic Literacy		6	S1
EOT 120	Academic Literacy		6	S2
RES 151	Research		6	Q3

Core modules for year-level 1 (80 credits)

Code	**Module**	**Prerequisites**	**Credits**	**Period**
BIB 111	Library Science: Introduction to information service provision		6	Q1
BIB 121	Library Science: Introduction to the use of information sources		6	Q3
INL 111	Information Science: Introduction to Information Science		6	Q1
INL 112	Information Science: Representation and organization of information		6	Q2
INL 121	Information Science: Information Technology		6	Q3
INY 122	Publishing: An introduction to publishing		6	Q4
VKK 110	Introduction to Visual Culture		12	S1
KGK 120	Introduction to Design History		12	S2
Select **one** of the following subjects				
BEM 110 **and** BEM 121 **or** OBS 110 **and**	Marketing Marketing Business Management		10 10 10	S1 S2 S1

OBS 120	Business Management	OBS 110	10	S2
or				
OBS 113	Entrepreneurship		10	S1
and				
OBS 123	Entrepreneurship	OBS 110, 113GS or LP	10	S2

Elective modules for year-level 1 (24 credits*)

Code	Module	Prerequisites	Credits	Period
	Select a **language** up to year-level 3, from one of the language groups 2-12, e.g. Afrikaans, English, German, French or an African Language#. Select modules to the value of 24 credits on **year-level 1** of the selected language# Also see the alphabetical list at the back of yearbook of the *Faculty of Humanities* when selecting the language modules.		24	
# **Afrikaans**: Select any AFR and/or LCC modules on year-level 1 to the value of 24 credits				

SECOND YEAR OF STUDY

Fundamental module for year-level 2 (8 credits)

Code	Module	Prerequisites	Credits	Period
+JCP 202	Community-based Project		8	^

Note:

+ Students who register for the first year during 2006 will be required to successfully 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 for year-level 2 (127 credits)

Code	Module	Prerequisites	Credits	Period
INL 211	Information Science: Information retrieval	CIL 121	10	Q1
INL 221	Information Science: Infopreneurship and information ethics		10	Q3
INY 213	Publishing: The visual and production dimensions of publishing		10	Q2
INY 222	Publishing: Editorial process and practice		10	Q4
INY 214	Publishing: Practical		15	S2
LCC 220	Document Design		20	S2

KOB 210	Communication Management		16	S1
KOB 220	Communication Management		16	S2
Select **two** of the following modules				
VKK 256	Visual Communication: History of film		10	Q1
VKK 255	Visual Communication: Gender ideology in visual culture		10	Q2
VKK 259	Visual Communication: Type, image and communication		10	Q3
VKK 258	Visual Communication: Visual identity and Branding		10	Q4

Elective modules for year-level 2 (40 credits)

Code	Module	Prerequisites	Credits	Period
	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# Also see the alphabetical list at the back of yearbook of the *Faculty of Humanities* when selecting the language modules.		40	
# **Afrikaans**: Select any AFR and/or LCC modules on year-level 2to the value of 40 credits				

THIRD YEAR OF STUDY

Core modules for year-level 3 (75 credits)

Code	Module	Prerequisites	Credits	Period
INL 311	Information Science: Publication formats in a digital environment		15	Q1
INL 321	Information Science: Information Management		15	Q3
INY 322	Publishing: Commissioning		15	Q2
INY 319	Publishing: An introduction to publishing management		15	Q4
INY 320	Publishing: Practical		15	S2

Elective modules for year-level 3 (60 credits*)

Code	Module	Prerequisites	Credits	Period
	Continue with the same **language** as selected on year-level 1 and 2 on year-level 3. Select modules to the value of 60 credits on **year-level** 3 of the selected language#		60	

	Also see the alphabetical list at the back of yearbook of the *Faculty of Humanities* when selecting the language modules.			
# **Afrikaans**: AFR 358 is strongly recommended				
# **African language**: **AFT 361** is strongly recommended				

Note:

\# *Students who wish to continue with their Language Studies at postgraduate level, should consult the specific department for the selection of their modules and should possibly select additional modules.*

IT.20.5 BIS with specialisation in INFORMATION AND KNOWLEDGE MANAGEMENT (Code 12131007)

The information and knowledge-based economy has brought about radical changes in the job market. The purpose of this degree is to enable students to develop knowledge and skills in die management of one of the most important resources of enterprises, namely information and knowledge. Graduates will have knowledge and skills in the effective management of information and knowledge, will realise the importance of the integration of information content and information technology (IT), and will be able to implement in a professional way, information and knowledge management strategies in enterprises.
Applicable domains are government, community, business, education and SMMEs. Graduates will be trained as information and knowledge managers, information consultants, information-system developers, systems analysts, e-commerce specialists, information technologists and information specialists.
The degree has been developed in consultation with experts in industry and is based on three core subject fields, namely Information Science, Informatics and Entrepreneurship/ Business Management.

Package organiser:
Mrs Deonie Botha, IT 6-56, Tel: 012 420 2963, e-mail: deonie.botha@up.ac.za

Admission requirements for candidates with a senior certificate
A grade 12 certificate with university exemption; **and**

- at least 50%(D) at higher grade in Afrikaans or English or an African language; **and**
- an M-score of at least 15*; **and**
- at least 50%(D) in Mathematics at higher grade; **or** 60%(C) in Mathematics at standard grade; or
  at least 40%(E) in Mathematics at higher grade **or** 50%(D) at standard grade **and** 60%(C) in Computer Studies at higher grade **or** 70%(B) at standard grade in the final Grade 12 examination*.

** If the M-score and/or Mathematics prerequisites are not met, application can be made to register for Information Technology (IT) Special.*

Admission requirements for candidates with a National Senior Certificate (from 2009)
To be admitted to any undergraduate field of study in the School of Information Technology, candidates who wrote the final Grade 12 exams for the National Senior Certificate must comply with the following admission requirements:

1. Obtained a NSC (University Admission); and
2. Written examinations in either Afrikaans or English or an African Language.
3. Written examinations in both Mathematics and Information Technology.

Minimum credits required: 476	**Year-level 1**	**Year-level 2**	**Year-level 3**	**Total**
Fundamental modules	32	8	0	40
Core modules	99	187	130	416
Elective modules	20*	0	0	20*
Total	151	195	130	476*

Note:
** Because credits are not calculated in the same way in all faculties, students should take note that the total amount of credits required for this package must be at least 476. Total credits may be more depending on the choice of elective modules.*

FIRST YEAR OF STUDY

Fundamental modules for year-level 1 (32 credits)

Code	**Module**	**Prerequisites**	**Credits**	**Period**
Passing of an exemption examination in CIL 111 **or**				
CIL 111	Computer Literacy **and**		4	S1
CIL 121	Information Literacy		4	S2
EAG 151	Academic Skills		6	Q1
Passing of an exemption examination in Academic Literacy **or**				
EOT 110	Academic Literacy		6	S1
EOT 120	Academic Literacy		6	S2
RES 151	Research		6	Q3

Core modules for year-level 1 (99 credits)

Code	**Module**	**Prerequisites**	**Credits**	**Period**
INL 111	Information Science: Introduction to Information Science		6	Q1
INL 112	Information Science: Represent-ation and organization of information		6	Q2
INL 121	Information Science: Information Technology		6	Q3
INY 123	Information and Knowledge Management		6	Q4
INF 112	Informatics	IT.2(c)	10	S1
INF 153	Informatics	IT.2(g)	5	S1
INF 154	Informatics	IT.2(g)	5	S1
INF 163	Informatics	INF 153 GS	5	S2
INF 164	Informatics	INF 154 GS	5	S2
FRK 111	Financial Accounting		10	S1
FRK 121	Financial Accounting	FRK 111GS	12	S2
INF 181	Informatics	Par IT. 2(d)	3	S1 or 2
Select **one** of the following subjects up to year-level 3				
OBS 110 **and** OBS 120	Business Management Business Management	 OBS 110	10 10	S1 S2

	or			
OBS 113	Entrepreneurship		10	S1
and				
OBS 123	Entrepreneurship	OBS 110, 113GS or LP	10	S2

Elective modules for year-level 1 (20 credits*)

Code	Module	Prerequisites	Credits	Period
Select any four quarter modules or two semester modules from one module on year-level 1 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 amount of credits required for this module must be at least 20.*

SECOND YEAR OF STUDY

Fundamental module for year-level 2 (8 credits)

Code	Module	Prerequisites	Credits	Period
+JCP 202	Community-based Project		8	^

Note:

+ Students who register for the first year during 2006 will be required to successfully 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 for year-level 2 (187 credits)

Code	Module	Prerequisites	Credits	Period
INL 211	Information Science: Information retrieval	CIL 121	10	Q1
INL 212	Information Science: Information seeking	INL 211†	10	Q2
INL 221	Information Science: Infopreneurship and information ethics		10	Q3
INY 218	Information and the Law		10	Q2
INY 227	Information representation		10	Q3
INY 224	Information Science: Applied information ethics		10	Q4
INF 214	Informatics	CIL 111 & 121 (previously CIL 171 – 174)	14	S1
INF 261	Informatics	INF 214 GS	7	S2
INF 225	Informatics	CIL 111 & 121 (previously CIL 171 – 174)	14	S2
INF 271	Informatics	CIL 111 & 121 (previously CIL 171 – 174) INF 163, 164 IT. 2(g)	14	Year

INF 272	Informatics	CIL 111 & 121 (previously CIL 171 – 174) INF 163, 164 IT. 2(g)	14	Year
KOB 210	Communication Management		16	S1
KOB 220	Communication Management		16	S2
Select **one** of the following subjects (the same subject as selected on year-level 1)				
OBS 210 **and**	Business Management	OBS 110	16	S1
OBS 220 **or**	Business Management		16	S2
OBS 213 **and**	Entrepreneurship	OBS 113	16	S1
OBS 223	Entrepreneurship		16	S2

Note:
† *Indicates that the module INL 211 must be passed before or be taken concurrently with INL 212.*

THIRD YEAR OF STUDY

Core modules for year-level 3 (130 credits)

Code	Module	Prerequisites	Credits	Period
INL 311	Information Science: Publication formats in a digital environment		15	Q1
INL 321	Information Science: Information Management		15	Q3
INY 318	Information economics		15	Q2
INY 327	Information and Knowledge Management	INY 123, INL 321 or LP	15	Q4
INY 328*	Information and Knowledge Management in practice	LP	15	S2*
INF 324	Informatics	INF 261, 262, 271, 272	15	S2
Select **one** of the following subjects (the same subject as selected on year-level 1 and 2)				
OBS 310 **and**	Business Management	OBS 110	20	S1
OBS 320 **or**	Business Management		20	S2
OBS 313 **and**	Entrepreneurship	OBS 113	20	S1
OBS 323	Entrepreneurship		20	S2

Note:
** Consult the package organiser in Quarter 1 concerning INY 328.*

POSTGRADUATE PROGRAMMES IN INFORMATION SCIENCE

IT.21 BACCALAUREUS INFORMATIONIS SCIENTIAE (HONORES), [BIS(Hons)]

Consult General Regulations G.16 to G.29

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

Admission requirements:
(a) BIS specializing in Information Science, Information and Knowledge Management, Library Science, Multimedia or Publishing
(b) Any equivalent first degree.

IT.21.1 BIS(HONS) with specialisation in INFORMATION SCIENCE BIS(Hons) Information Science (Code 12240003)

Package organiser:
Mrs C Penzhorn, IT 6-61, Tel: 012 420 2920, e-mail: cecilia.penzhorn@up.ac.za

Admission requirements:
BIS specializing in Information Science, Information and Knowledge Management, Library Science or an equivalent degree.

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

Fundamental modules (40 credits)

INY 711	Research Methodology	20
INY 712	Research Report	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 719	Read and reading practices	20
INY 720	Digital libraries	20
INY 721	Information literacy	20
INY 722	Information society	20
INY 723	Information philosophy	20
INY 724	Multimedia	20

INY 725	Informetrics	20
INY 726	Competitive intelligence (I)	20
INY 727	Competitive intelligence (II)	20
INY 728	Decision-making theory	20
INY 729	Management of information centres	20
INY 730	Information communication	20
INY 731	Information and communication technology for development	20
INY 732	Knowledge dynamics	20
INY 733	Indigenous Knowledge and Indigenous Knowledge Systems	20

IT.21.2 BIS(HONS) with specialisation in MULTIMEDIA [BIS(Hons) Multimedia] (Code 12240004)

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

Admission requirements
BIS specializing in Multimedia

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 776	Multimedia training and education systems	20
IMY 777	Animation theory and practice	20
IMY 778	Music and sound technology	20
IMY 779	Human-computer interaction	20

IT.21.3 BIS(HONS) with specialisation in PUBLISHING [BIS(Hons) Publishing] (Code 12240005)

Package organiser:
Dr F Galloway, IT 6-34, Tel: 012 420 2426, e-mail: francis.galloway@up.ac.za

Admission requirements
- BIS specializing 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 721	Design and production	20
PUB 722	Publishing management: Management and finances	20
PUB 723	Publishing management: Organization 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

Elective modules (40 credits)

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

PUB 726	Corporate publishing	20
PUB 727	E-publishing	20
PUB 712	Advanced e-publishing	20
PUB 715	Advanced design and production	20
AFT 758	Advanced copy-editing: African languages	20
AFR 767	Editing	20
ENG 777	Editing	20

IT.23 MAGISTER INFORMATIONIS SCIENTIAE [MIS] MAGISTER ARTIUM [MA] (RESEARCH)

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

Programme manager:
Prof TJD Bothma, IT 6-73, Tel: 012 420 2293, e-mail: theo.bothma@up.ac.za
Prof Archie Dick, IT 6-72, Tel: 012 420 2294, e-mail: archie.dick@up.ac.za

Admission requirements

For IT.23.1 – IT.23.4

BIS and BIS(Hons) specializing 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.23.5

An appropriate BA(Hons) or an appropriate B degree plus at least two years' 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 with specialisation in LIBRARY SCIENCE (Research) [MIS (Library Science)] (Code: 12254001)
BIB 890 Dissertation: Library Science

IT.23.2 MIS with specialisation in INFORMATION SCIENCE (Research) [MIS (Information Science)] (Code 12254003)
INL 890 Dissertation: Information Science

IT.23.3 MIS with specialisation in IN MULTIMEDIA (Research) [MIS (Multimedia)] (Code 12254005)
IMY 890 Dissertation: Multimedia

IT.23.4 MIS with specialisation in PUBLISHING (Research) [MIS (Publishing)] (Code 12254007)
PUB 890 Dissertation: Publishing

IT.23.5 MA with specialisation in DEVELOPMENT COMMUNICATION (Research) [MA (Development Communication)] (Code 01252044)*
OKT 890 Dissertation: Development Communication
*Registration for this degree is done on Level 6 of the Human Sciences Building.

IT.24 MAGISTER INFORMATIONIS SCIENTIAE [MIS], MAGISTER ARTIUM [MA] (COURSEWORK)

Consult General Regulations G.30 to G.44

Programme manager:
Prof TJD Bothma, IT 6-73, Tel: 012 420 2293, e-mail: theo.bothma@up.ac.za
Prof I Fourie, IT 6-65, Tel: 012 420 5216, e-mail: ina.fourie@up.ac.za

Admission requirements
For IT.24.1
(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 option of the Selection Committee.
(iii) The Head of the Department may impose 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.24.2– IT.24.4
BIS and BIS(Hons) specializing in any of the specific packages for:
* Information Science
* Multimedia
* Publishing
or any equivalent honours degree.

For IT.24.5
An appropriate BA(Hons) degree or an appropriate B degree plus at least two years' 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.24.1 MIS with specialisation in LIBRARY SCIENCE (Coursework) [MIS (Library Science)] (Code 12254002)

Minimum credits required: 240				**NQF Level 7**			
Fundamental modules	0	Research	60	Core modules	180	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.24.2 MIS with specialisation in INFORMATION SCIENCE (Coursework) [MIS (Information Science)] (Code 12254004)

IT.24.3 MIS with specialisation in MULTIMEDIA (Coursework) [MIS (Multimedia)] (Code 12254006)

IT.24.4 MIS with specialisation in PUBLISHING (Coursework) [MIS (Publishing)] (Code 12254008)

IT.24.5 MA with specialisation in DEVELOPMENT COMMUNICATION (Coursework) [MA (Development Communication)] (Code 01252045)
*Registration for this degree is done on Level 6 of the Human Sciences Building.

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
Core module		
IMY 801	Multimedia (coursework): Coursework component	120

Publishing

Research		
PUB 895	Mini-dissertation: Publishing	120
Core module		
PUB 801	Publishing (coursework): Coursework component	120

Development Communication

Research		
OKT 895	Mini-dissertation: Development Communication	120
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.25 DOCTOR PHILOSOPHIAE, PHILOSOPHIAE DOCTOR [DPhil, PhD] (RESEARCH)

Consult General Regulations G.45 to G.62

Programme manager:
Prof TJD Bothma, IT 6-73, Tel: 012 420 2293, e-mail: theo.bothma@up.ac.za
Prof Archie Dick, IT 6-72, Tel: 012 420 2294, e-mail: 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.25.1 DPHIL with specialisation in LIBRARY SCIENCE [DPhil Library Science] (Code 12264001)

BIB 990	Thesis: Library Science
BIB 900	Examination/justification of thesis

IT.25.2 DPHIL with specialisation in INFORMATION SCIENCE [DPhil Information Science] (Code 12264002)

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

IT.25.3 PhD with specialisation in PUBLISHING [PhD: Publishing)] (Code 12264003)

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

DEPARTMENT OF COMPUTER SCIENCE

Admission requirements for the degree Baccalaureus Scientiae (Computer Science)(Code 12134000)

(i) For candidates with a senior certificate
To obtain admission to this degree programme, a candidate should have obtained the following:
(a) a minimum M score of 18 in the final Grade 12 examinations; and
(b) at least 60%(C) in Mathematics at higher grade in the final Grade 12 examinations; and
(c) at least 60%(C) in Computer Studies at higher grade in the final Grade 12 examinations;
or
COS130/COS 131 (COS 130 is also presented as a short course in January during the Summer School).

Candidates who comply with requirements (a) and (b) above but not with (c), can obtain special permission from the Head of Department to register for BSc(CS).
Candidates who do not comply with these requirements are advised to register for either BSc (IT) or IT Special, depending on whether they comply with the admission requirements for these two programmes.

(ii) Admission requirements for candidates with a National Senior Certificate
To be admitted to any undergraduate field of study in the School of Information Technology, candidates who wrote the final Grade 12 exams for the National Senior Certificate must comply with the following admission requirements:
1. Obtained a NSC (University Admission); and
2. Written examinations in both Mathematics and Information Technology.

Admission requirements for the degree Baccalaureus Scientiae (Information Technology)(Information and Knowledge Systems) (Code 12133211)

(i) For candidates with a senior certificate
To obtain admission to this degree programme, a candidate should have obtained the following:
(a) a minimum M score of 15 in the final Grade 12 examinations; and
(b) at least 50%(D) in Mathematics at higher grade in the final Grade 12 examinations; and
(c) COS130/COS131 which is presented during the Summer School in January of the first year of registration. A candidate who obtained a minimum of a D symbol for Computer Studies HG in the final Grade 12 examinations, is waived from this requirement.

Candidates who do not comply with these requirements are advised to register for IT Special, depending on whether they comply with its admission requirements.

(ii) Specific requirements for candidates with a National Senior Certificate (from 2009)

To be admitted to any undergraduate field of study in the School of Engineering, candidates who wrote the final Grade 12 examinations for the National Senior Certificate must have complied with the following admission requirements:

1. Obtained a NSC (University Admission); and
2. Written examinations in both Mathematics and Information Technology.

CURRICULA OF PROGRAMMES IN COMPUTER SCIENCE

IT.26 BACCALAUREUS SCIENTIAE [BSc(CS)](Code 12134000)

Curriculum

The curriculum of the BSc(CS) degree programme is outlined below. It comprises fundamental, core and elective modules in each year of study. The degree is awarded after a minimum of 443 credits have been obtained successfully. The following credit requirements apply to the different study-year levels:

Year-level 1:

Fundamental modules:	at least 8 credits
Core modules:	84 credits
Elective modules:	at least 24 credits
Total:	at least 125 credits and at most 155 credits

Year-level 2:

Core modules:	90 credits
Elective modules:	at least 40 credits
Total:	at least 130 credits

Year-level 3:

Core modules:	at least 99 credits
Elective modules:	at least 45 credits
Total:	at least 144 credits

Enrichment modules: - Compulsory: JCP 202 (8 credits)
- Own choice: if another 8 credits is needed

Total credits for the degree: **at least 443 credits**

Notes:

1) In addition to complying with all the requirements specified at the different year levels below, one or more *enrichment modules* to the value of between 8 and 16 credits must be taken at some stage during the degree programme. These modules may be chosen freely and constitute the enrichment credits. Such modules may, however, not be taken if presented by any department offering the modules mentioned below. Neither may such modules be presented by any other department in the Faculty of Engineering, Built Environment and Information Technology, nor by any other department in the Faculty of Economic and Management Sciences.

2) *Required elective modules* at each year-level are classified into coherent groups. In order to obtain credits for specified modules in a selected group, all modules in the group have to be passed. (For example, OBS110 and OBS120 should both be passed if their total of 20 credits is to contribute towards the 24-credit requirement for core modules at year-level 1.)
3) Any single required elective module (in blocks) may serve as an *additional elective* module. Therefore the additional elective modules do not have to be passed as a group. (For example, OBS 110 may be passed on its own and contribute 10 credits towards the requirements for *elective* modules at year level 1)
4) The code in the "Period" column in the tables below indicates when the module is *normally* presented. "Q" indicates Quarter, and "S" indicates Semester. In certain years, these times may change in certain departments.

Requirements for promotion to the following year of study:
Refer to School of Information Technology regulation IT.9

First year of study (at least 125 credits and maximum of 155)

Fundamental modules (at least 8 credits)

Code	Module	Prerequisite	Credits	Period
Passing of an exemption examination in CIL 111 **or**				
CIL 111	Computer Literacy **and**		4	S1
CIL 121	Information Literacy		4	S2

Code	Module	Prerequisite	Credits	Period
Passing of an exemption examination in Academic Literacy **or**				
EOT 110	Academic Literacy		6	S1
EOT 120	Academic Literacy		6	S2

Core modules for year-level 1 (84 credits):

Code	Module	Prerequisites	Credits	Period
COS 110	Program Design: Introduction	Mathematics HG D and M-score of 15 and (Computer Studies HG D or COS 130/COS 131)	16	S1
COS 151	Introduction to Computer science		8	S1
COS 140	Netcentric Computer Systems	COS 110 or (COS 130/COS 131/EPE 111/ EPE 112)	16	S2
EOS 284	Computer Architecture	COS 110 or (COS 130/COS 131)	12	S2
WTW 114	Calculus		16	S1
WTW 115	Discrete Structures		8	S1
WTW 126	Linear Algebra		8	S2

Elective modules for year-level 1:
A minimum of 24 credits from the following required elective module groups should be selected:

Code	Module	Prerequisite	Credits	Period
FRK 111 **and** FRK 121 **and** INF 181	Financial Accounting Financial Accounting Informatics	 FRK 111 GS IT.2 (d)	10 12 3	S1 S2 S1 or 2
OBS 110	Business Management	-	10	S1
OBS 120	Business Management	OBS 110 GS	10	S2
OBS 113	Entrepreneurship	-	10	S1
OBS 123	Entrepreneurship	OBS 110, 113 GS or LP	10	S2
KOB 181	Communications Management	-	5	Q1, 2 or 4
INL 111	Information Science	-	6	Q1
INL 112	Information Science	-	6	Q2
WST 111	Mathematical Statistics		16	S1
WST 121	Mathematical Statistics		16	S2
WTW 123	Numerical Analysis	WTW 114 GS	8	S2
WTW 128	Calculus	WTW 114 GS	8	S2
WTW 152	Mathematical Modelling	Par IT.2(b)	8	S1

Additional elective credits from the following module groups may be taken at any year-level:
16 credits for COS 130, for candidates who did not initially comply with the entry requirements of COS 110.
Any modules at year-level 1 from Chemistry
Any modules at year-level 1 from Mathematics
Any modules at year-level 1 from Physics

Code	Module	Prerequisites	Credits	Period
FIL 120	Philosophy		12	S2
INF 153	Informatics	Par IT.2(g)	5	S1
INF 163	Informatics	INF 153 GS	5	S2

Second year of study (at least 130 credits)
Core modules for year-level 2 (90 credits):

Code	Module	Prerequisites	Credits	Period
COS 212	Data Structures and Algorithms	COS 214 GS	16	S2
COS 214	Design Patterns	COS 110 or [(COS 130/COS 131) and COS 140]	16	S1
COS 222	Operating Systems	COS 110	16	S1
COS 226	Concurrent Systems	COS 110	16	S2
INF 214	Informatics	CIL 111, 121 (previously CIL 171 – 174)	14	S1
WTW 285	Discrete Structures	WTW 115	12	S2

Elective modules for year-level 2:
A minimum of 40 required elective credits from the following module groups should be selected:

Code	Module	Prerequisites	Credits	Period
ERS 220	Digital Systems		16	S2
INL 221	Information Science		10	Q3
INY 224	Applied Information Ethics		10	Q4
WTW 218	Calculus	WTW 114 **and** WTW 128	12	S1
WTW 220	Analysis	WTW 126 **or** WTW 102, WTW 211	12	S2
WTW 211	Linear Algebra		12	S1
WTW 221	Linear Algebra		12	S2
FBS 200 **or** FBS 210 **and** FBS 220 **or** FRK 211 **and** FRK 221 **or** FRK 201	Financial Management Financial Management Financial Management Financial Accounting Financial Accounting Financial Accounting	FRK 100 **or** FRK 101 FRK 111, 121 FRK 111, 121 FRK 111,121 FRK 211 GS **and** INF 181 FRK 100 or 101 **and** STK 110, 120	32 16 16 18 18 32	Year S1 S2 S1 S2 Year
GGY 283	Introductory GIS	-	12	Q1
GIS 220	Geographic data analysis	-	12	S2
INF 271	Informatics	CIL 111, 121 (previously CIL 171 – 174), INF 163, 164 or LP	14	Year

Additional elective credits from the following module groups may be taken at any year-level:

Any modules at year-level 2 from Mathematics				
Any modules at year-level 2 from Mathematical Statistics				
Any modules at year-level 2 from Physics				
Code	**Module**	**Prerequisites**	**Credits**	**Period**
FIL 253	Cognitive philosophy	-	10	Q3
FIL 254	Science and world views	-	10	Q4
INL 211	Information Science	CIL 121(previously CIL 174)	10	Q1
INL 212	Information Science		10	Q2
INY 271	Advanced Mark-up Languages (1)	Departmental selection	10	S1
INY 272	Advanced Mark-up Languages (2)	Departmental selection	10	S2
KOB 210	Communication Management	-	16	S1
KOB 220	Communication Management	-	16	S2

Third year of study (minimum 144 credits)
Core modules for year-level 3 (99 credits):

Code	Module	Prerequisites	Credits	Periods
COS 301	Software Engineering	COS 212	27	Year
At least **four** of the following semester modules:				
Note: The semester in which these modules are offered may vary from year to year.				
COS 314	Artificial Intelligence	COS 214	18	S1
COS 326	Databases	INF 214	18	S2
COS 332	Computer Networks	COS 140	18	S1
COS 333	Programming Languages	COS 110	18	S2
COS 341	Compiler Construction	COS 212	18	S1
COS 343	Trends in IT	COS 110 **or** COS 130/COS 131 and COS 140	18	S2
COS 344	Computer Graphics	COS 214 **and** WTW 126 or LP	18	S2
EMK 310	Microprocessors	ERS 220GS or LP	16	S1

Elective modules for year-level 3:
Modules for a minimum of 24 required elective credits should be selected from the following module groups:

Any two computer science modules not selected under the list of core modules for year-level 3.
Any module group of at least 36 credits at year-level 3 from Mathematics that includes WTW 385.

Code	Module	Prerequisites	Credits	Period
GIS 310	Geographic Information Systems	GGY 283	24	S1
GIS 320	Spatial Analysis	GIS 310	24	S2
Any three of the following modules: (**Note**: * Admission to these modules requires departmental selection.)				
INY 315	Advanced Multimedia	*	15	Q1
INY 316	Human-computer Interaction	*	15	Q2
INY 325	Interface Design	INY 316	15	Q3
INY 326	Mark-up Languages	*	15	Q4

Select additional elective modules for the remainder of credits from the following:

Any additional modules at year-level 3 in Computer Science				
Any additional modules at year-level 3 in Mathematics				
Any additional modules at year-level 3 Mathematical Statistics				
Code	**Module**	**Prerequisites**	**Credits**	**Period**
INF 324	Informatics	INF 261, 262, 271, 272, **or** LP	15	S2
FBS 300	Financial Management **or**	FBS 200	40	Year
FBS 310 FBS 320	Financial Management **or**	FBS 210, 220 with a GS in the other	20 each	S1 **and** S2
FRK 311 FRK 321	Financial Accounting **or**	FRK 211,221 FRK 311GS	22 each	S1 **and** S2
FRK 300	Financial Accounting	FRK 201	42	Year
At most three INL 3** / INY 3** modules selected from the INY 3** core modules and from the list below, **provided that** the INY3** modules have not been selected as core modules.				

INL 311	Information Science	-	15	Q1
INL 321	Information Science	-	15	Q3
INY 311	Multimedia	-	15	Q2
INY 312	Information for Development	-	15	Q2
INY 323	Information: Social-political Context	-	15	Q4

IT.27 BACCALAUREUS SCIENTIAE [BSc IT(Information and Knowledge Systems)] (Code 12133321)

Curriculum

The curriculum of the BSc IT (Information and Knowledge Systems) consists of fundamental, core and elective modules in each year of study. The degree is awarded upon successful completion of a *minimum number of credits* that comply with the study programmes as given below.

Year level	Credits												
			Electives										
	Fundamentals	Core	Applied Mathematics	Bioinformatics	Geographical Information Sciences	IT and Enterprises	IT and Law	IT and Music	Operational Research	Philosophy	Psychology	Software Development
1	8	64	56	64	48	53	56	74	72	52	48	55
2	8	90	72	36	36	38	52	53	28	50	40	41
3		27	108	126	126	134	124	103	119	114	129	114
TOTAL	***16***	***181***	***236***	***226***	***210***	***225***	***232***	***230***	***219***	***216***	***217***	***210***
TOTAL for the option:			**433**	**423**	**407**	**422**	**429**	**427**	**416**	**413**	**414**	**407**

* This is the minimum total number of credits for the option.

Requirements for promotion to the following year of study:
Refer to School of Information Technology Regulation IT.9

FUNDAMENTAL MODULES

Year-level 1 (at least 8 credits)

Code	Module	Prerequisites	Credits	Period
Passing of an exemption examination in CIL 111 **or**				
CIL111	Computer and Information Literacy		4	S1
CIL121	Computer and Information Literacy		4	S2
Passing of an exemption examination in Academic Literacy **or**				
EOT 110	Academic Literacy		6	S1
EOT 120	Academic Literacy		6	S2

Year-level 2 (8 credits)

Code	Module	Prerequisites	Credits	Period
JCP202	Community-based Project		8	Year

CORE MODULES

Year-level 1 (64 credits)

Code	Module	Prerequisites	Credits	Period
COS110	Program Design: Introduction	Mathematics HG(D) and M-Score of 15 and (Computer Studies HG(D) or COS 130/ COS 131)	16	S1
COS140	Netcentric Computer Systems	COS 110 or (COS 130/ COS 131)	16	S2
COS151	Introduction to Computer Science		8	S1
WTW114	Calculus	Par 1.2 – Natural Sciences	16	S1
WTW115	Discrete Structures	Par 1.2 – Natural Sciences	8	S1

Year-level 2 (90 credits)

Code	Module	Prerequisites	Credits	Period
COS212	Data Structures and Algorithms	COS214 GS	16	S2
COS214	Design Patterns	COS110 or (COS130/COS131 and COS140)	16	S1
COS222	Operating Systems	COS110	16	S1

COS226	Concurrent Systems	COS110	16	S2
INF214	Informatics	CIL 111 & 121	14	S1
WTW285	Discrete Structures	WTW115	12	S2

Year-level 3 (27 credits)

Code	Module	Prerequisites	Credits	Period
COS301	Software Engineering	COS212	27	Year

ELECTIVE MODULES

Select **one** of the following **options**:

Applied Mathematics option **Year-level 1 (56 credits)**				
Code	**Module**	**Prerequisites**	**Credits**	**Period**
WST111	Mathematical statistics	Par 1.2 – Natural Sciences	16	S1
WST121	Mathematical statistics	WST111	16	S2
WTW123	Numerical Analysis	WTW114 GS/101GS	8	S2
WTW126	Linear Algebra	Par 1.2 - Natural Sciences	8	S2
WTW128	Calculus	WTW114/101	8	S2
Year-level 2 (72 credits)				
Code	**Module**	**Prerequisites**	**Credits**	**Period**
WST211	Mathematical statistics	WST111, WST121, WTW114/101, WTW126/102, WTW128/102	24	S1
WST221	Mathematical statistics	WST211	24	S2
WTW211	Linear Algebra	WTW126/102	12	S1
WTW218	Calculus	WTW114/101, WTW128/102	12	S1
Year-level 3 (108 credits)				
Code	**Module**	**Prerequisites**	**Credits**	**Period**
Any 3 other COS module on year-level 3			54	
WTW354	Financial Engineering	WST211, WTW211, WTW218	18	S1
WTW383	Numerical Analysis	WTW114/101, WTW128, WTW211	18	S2
WTW389	Geometry	WTW211	18	S2

Bioinformatics option **Year-level 1 (64 credits)**				
Code	**Module**	**Prerequisites**	**Credits**	**Period**
BME120	Biometry	[STK113 GS] and [STK123 GS] and [or at least 40%(HG) or 50% (SG) Grade 12 Maths or an equivalent Mathematics achievement]	16	S2
BOT161	Plant Biology	MLB111 GS or TDH	8	S2
GTS161	Introductory Genetics	MLB111 GS or TDH	8	S2
MBY161	Introduction to Microbiology		8	S2
MLB111	Molecular and cell biology	Physical Science HG(D)	16	S1
WTW126	Linear Algebra	Par 1.2 - Natural Sciences	8	S2
Year-level 2 (36 credits)				
Code	**Module**	**Prerequisites**	**Credits**	**Period**
GTS251	Organisation of Genes and Chromosomes	GTS161 GS	12	S1
GTS261	Genetic Analysis and Manipulation	GTS161 GS or TDH	12	S2
MBY251	Growth diversity and control/bacteria		12	S1
MBY261	Growth activity and control/fungi		12	S2
Year-level 3 (126 credits)				
Code	**Module**	**Prerequisites**	**Credits**	**Period**
BIF310	Bioinformatics (Will be presented for the first time in 2008)	WTW114, BME120 and GTS251	9	S1
BIF320	Bioinformatics (Will be presented for the first time in 2008)	BIF310	18	S2
COS314	Artificial Intelligence	COS214	18	S1
COS326	Database Systems	INF214	18	S2
COS344	Computer Graphics	COS214 and (WTW126 or LP)	18	S2
Choice of either				
GTS353	Population Genetics	GTS251 GS and GTS261 GS or TDH	18	S1
GTS363	Evolutionary and Phylo-Genetics	GTS353 GS or TDH	18	S2

OR				
GTS352	Genomes	GTS251 GS and GTS261 GS or TDH	18	S1
GTS366	Plant Genetics and Biotechnology	GTS251 GS and GTS261 GS or TDH and GTS351 GS is recommended and GTS352 GS is recommended	18	S2

Geographical Information Sciences option				
Year-level 1 (48 credits)				
Code	**Module**	**Prerequisites**	**Credits**	**Period**
GGY132	Cartographic skills	(Maths HG(E) or SG(D)) or Geography HG(D)	4	S1
GGY153	Geography of Cities	(Maths HG(E) or SG(D)) or Geography HG(D)	6	Q1
GGY155	Human Geography of SADC	(Maths HG(E) or SG(D)) or Geography HG(D)	6	Q2
GGY162	Remote sensing	(Maths HG(E) or SG(D)) or Geography HG(D)	4	S2
GGY165	Principles of Physical Geography	(Maths HG(E) or SG(D)) or Geography HG(D)	6	Q3
GGY164	Physical geography of SA	(Maths HG(E) or SG(D)) or Geography HG(D)	6	Q4
GMC110	Cartography	GGY132	8	S1
WTW126	Linear Algebra	Par 1.2 - Natural Sciences	8	S2
Year-level 2 (36 credits)				
Code	**Module**	**Prerequisites**	**Credits**	**Period**
GGY283	Introductory GIS	None	12	S1
GIS220	Geographical Data Analysis	None	12	S2
GMC210	Cartography	GMC110	12	S1

Year-level 3 (126 credits)				
Code	**Module**	**Prerequisites**	**Credits**	**Period**
COS326	Database Systems	INF214	18	S1
COS344	Computer Graphics	COS214 and (WTW126 or LP)	18	S2
One other COS module on year-level 3			18	
GIS310	Geographical Information Systems	GGY283 or TDH	24	S1
GIS320	Spatial Analysis	GIS310 or TDH	24	S2
GMC310	Cartography	GMC210	24	S1

IT and Enterprises option **Year-level 1 (53 credits)**				
Code	**Module**	**Prerequisites**	**Credits**	**Period**
BEM110	Marketing Management		10	S1
BEM121	Marketing Management		10	S2
OBS110	Business Management		10	S1
OBS120	Business Management	OBS110 GS	10	S2
STK110	Statistics		13	S1
Year-level 2 (38 credits)				
Code	**Module**	**Prerequisites**	**Credits**	**Period**
BPE251	Business Ethics		6	S1
OBS210	Logistics Management	OBS110 or OBS120 with GS in the other	16	S1
OBS220	Project Management	OBS110 or OBS120 with GS in the other	16	S2
Year-level 3 (134 credits)				
Code	**Module**	**Prerequisites**	**Credits**	**Period**
COS326	Database Systems	INF214	18	S2
COS343	Trends in IT	COS 110 or (COS 130/ COS 131 and COS 140)	18	S2
One other COS module on year-level 3			18	
OBS311	Entrepreneurship	OBS110 or OBS113	20	S1
OBS321	Entrepreneurship	OBS311 GS	20	S2
One of the following combinations to be taken either in 2nd or 3rd year				
OBS315	E-business	OBS110 or OBS120 with GS in the other	20	S1

OBS325	E-commerce	OBS110 or OBS120 with GS in the other	20	S2
OR				
OBS359	International Business Management	OBS110 or 120 with GS in the other	20	S1
OBS369	International Financial Management	OBS110 or 120 with GS in the other; OBSS359 GS	20	S2
OR				
OBS310	Human Resource Management	OBS110 or OBS120 with GS in the other	20	S1
OBS320	Business Management	OBS110 or OBS120 with GS in the other	20	S2

IT and Law option **Year-level 1 (56 credits)**				
Code	**Module**	**Prerequisites**	**Credits**	**Period**
FIL110	Philosophy		12	S1
KRG110	Commercial Law		10	S1
KRG120	Commercial Law	Admission to examination in KRG110	10	S2
KRM110	Fundamental Criminology and Violent Crimes		12	S1
KRM120	Penology and Crime Prevention and Control		12	S2
Year-level 2 (52 credits)				
Code	**Module**	**Prerequisites**	**Credits**	**Period**
KRG200	Commercial Law	Admission to examination in KRG120	32	Year
KRM251	Forensic Criminalistics	None	10	Q1
KRM253	Victimology	None	10	Q3
Year-level 3 (124 credits)				
Code	**Module**	**Prerequisites**	**Credits**	**Period**
Any 3 other COS modules on year-level 3			54	
KRM351	Psychocriminology		15	Q1
KRM353	Female Crime	KRM355	15	Q3
KRM355	Theories of Crime		15	Q2
KRM356	Contemporary Criminology Issues		15	Q4

KUB420	Cyber Law	The head of department may set the subject prerequisites.	10	S2

IT and Music option				
Year-level 1 (74 credits)				
Code	**Module**	**Prerequisites**	**Credits**	**Period**
DFK110	Drama and Film Studies		12	S1
EOS284	Computer Architecture	COS110 or (COS130/COS131)	12	S2
MOP172	Music Literacy		30	Year
MPE170	Music Education	Closed - Requires departmental selection	10	Year
WTW126	Linear Algebra	Par 1.2 - Natural Sciences	8	S2
WTW128	Calculus	WTW114/101	8	S2
Year-level 2 (53 credits)				
Code	**Module**	**Prerequisites**	**Credits**	**Period**
DFK253	Realism and performance	None	10	Q3
ERS220	Digital Systems	None	16	S2
MPE270	Music Education	Closed - Requires departmental selection	15	Year
WTW218	Calculus	WTW114/101, WTW128/102	12	S1
Year-level 3 (103 credits)				
Code	**Module**	**Prerequisites**	**Credits**	**Period**
Any 3 other COS modules on year-level 3			54	
EMK310	Microprocessors	ERS220 or LP	16	S1
MCS300	Music Technology	Closed - Requires departmental selection	15	Year
WTW386	Partial Differential Equations	WTW218 and WTW286	18	S1

Operational Research option **Year-level 1 (72 credits)**				
Code	**Module**	**Prerequisites**	**Credits**	**Period**
FRK101	Financial Accounting		24	Year
WST111	Mathematical statistics		16	S1
WST121	Mathematical statistics	WST111	16	S2
WTW126	Linear Algebra	Par 1.2 - Natural Sciences	8	S2
WTW128	Calculus	WTW114/101	8	S2
Year-level 2 (28 credits)				
Code	**Module**	**Prerequisites**	**Credits**	**Period**
BAN222	Industrial Analysis	BES210 GS	8	S2
BES210	Engineering Statistics	None	8	S1
WTW211	Linear Algebra	WTW126/102	12	S1
Year-level 3 (119 credits)				
Code	**Module**	**Prerequisites**	**Credits**	**Period**
BOZ311	Operational Research	BAN222	16	S1
BOZ321	Operational Research	BOZ311	16	S2
COS314	Artificial Intelligence	COS214	18	S1
COS326	Database Systems	INF214	18	S2
One other COS module on year-level 3			18	
SOC353	Industrial Sociology	None	15	Q4
WTW383	Numerical Analysis	WTW114/101, WTW128, WTW211	18	S2

Philosophy option **Year-level 1 (52 credits)**				
Code	**Module**	**Prerequisites**	**Credits**	**Period**
FIL110	Philosophy		12	S1
FIL120	Philosophy		12	S2
SCI154/ 164	Exploring the Universe		16	S1/S2
SLK120	Psychology		12	S2
Year-level 2 (50 credits)				
Code	**Module**	**Prerequisites**	**Credits**	**Period**
FIL251	Western Intellectual History		10	Q1
FIL252	History and Society		10	Q2
FIL253	Cognitive Philosophy		10	Q3
FIL254	Philosophy of Science		10	Q4
INL221	Information Science: Infopreneurship and ethics		10	Q3

Year-level 3 (114 credits)				
Code	**Module**	**Prerequisites**	**Credits**	**Period**
Any 3 other COS modules on year-level 3			54	
FIL351	Philosophical hermeneutics		15	Q1
FIL352	Political Philosophy		15	Q2
FIL354	Postmodernism, ethics and society		15	Q4
FIL355	Ethics		15	Q3

Psychology option **Year-level 1 (48 credits)**				
Code	**Module**	**Prerequisites**	**Credits**	**Period**
KRM110	Fundamental Criminology and Violent Crimes		12	S1
KRM120	Penology and Crime Prevention and Control		12	S2
SLK110	Psychology		12	S1
SLK120	Psychology		12	S2
Year-level 2 (40 credits)				
Code	**Module**	**Prerequisites**	**Credits**	**Period**
KRM251	Forensic Criminalistics		10	Q1
KRM252	Youth Misbehaviour		10	Q2
SLK251	Personology	SLK151, 152	10	Q1
SLK254	Social Psychology		10	Q3
Year-level 3 (129 credits)				
Code	**Module**	**Prerequisites**	**Credits**	**Period**
Any 3 other COS3			54	
KRM351	Psychocriminology		15	Q1
KRM355	Theories of Criminology		15	Q2
SLK352	Abnormal Psychology		15	Q3
SLK353	Critical Perspectives		15	Q4
SLK362	Child Psychopathology		15	Q2

Software Development option **Year-level 1 (55 credits)**				
Code	**Module**	**Prerequisites**	**Credits**	**Period**
COS130	Introduction to Programming		16	S1
FRK101	Financial Accounting		24	Year
INF153	Informatics	IT.2(g)	5	S1
INF163	Informatics	INF153 GS	5	S2
INF164	Informatics	INF154 GS	5	S2

Year-level 2 (41 credits)				
Code	**Module**	**Prerequisites**	**Credits**	**Period**
INF261	Informatics	INF214	7	S2
INF272	Informatics	INF163, INF164	14	Year
INY271	Advanced Markup Languages	Closed – Requires departmental selection	10	S1
INY272	Advanced Markup Languages	Closed – Requires departmental selection	10	S2
Year-level 3 (114 credits)				
Code	**Module**	**Prerequisites**	**Credits**	**Period**
COS326	Database Systems	INF214	18	S2
COS333	Programming Languages	COS110	18	S2
One other COS module on year-level 3			18	
INF354	Informatics		15	S1
INY300	Multimedia Project	Closed - Requires departmental selection	15	Year
INY316	Human-computer interaction	Closed - Requires departmental selection	15	Q2
INY325	Interface Design	Closed - Requires departmental selection	15	Q3

POSTGRADUATE PROGRAMMES IN COMPUTER SCIENCE

Details for postgraduate modules are available at the home page www.cs.up.ac.za.

IT.28 BACCALAUREUS SCIENTIAE HONORES IN COMPUTER SCIENCE [BSc(Hons) Computer Science] (Code12244000)

This degree programme is offered in English.
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 SA Qualifications Authority (SAQA) before admission will be considered. The Head of the Department may prescribe additional conditions for admission.

(b) Minimum duration of study period
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 the 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 BSc(Hons) degree is awarded with distinction to a candidate who obtains a weighted average of at least 75% in all the prescribed modules and 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. The degree consists of 160 credits organised as follows:

> 100 credits chosen from computer science with 80 from the list of core modules
> 60 credits chosen from any (other honours) modules on offer in the Department of Computer Science or elsewhere within the School of Information Technology
> modules from other departments (e.g. Electronic Engineering, Mathematics) may be taken pending approval by the Head of Department
> only full-time students may earn 20 credits by submitting a project.

(g) Curriculum
The curriculum is determined in consultation with the Head of Department.

IT.29 MAGISTER SCIENTIAE IN COMPUTER SCIENCE [MSc(Computer Science)] (Research) (Code 12255000)

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 BSc(Hons) 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 the 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 the Department is submitted to the Student Administration offices.

(e) Duration
Consult General Regulation G.32.4 regarding the maximum period of registration allowable.

(f) Curriculum
A student is required to demonstrate, by means of a dissertation, the ability to plan, institute and execute a scientific investigation. Unless decided otherwise by the Dean, on the recommendation of the Head of Department, a student shall submit at least one draft article, based on the research undertaken and approved by the supervisor, to a refereed journal or conference for publication, before or concurrent with the submission of the dissertation.

IT.30 PHILOSOPHIAE DOCTOR IN COMPUTER SCIENCE PhD (Computer Science) (Code 12266000)

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) Draft article

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 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.

(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.

IT.31 SYLLABI FOR THE SCHOOL OF INFORMATION TECHNOLOGY

This section comprises an alphabetical list of all the modules offered by the School of Information Technology as well as alphabetical lists of the modules offered by other faculties. The alphabetical lists are set out as follows:

Column 1: the module code, which consists of an alpha code (a combination of three capitals which indicate the discipline of the study field) and a numerical code (which indicates the year level and the position of the module in the series).
Column 2: the department or discipline under which the module falls.
Column 3: the credits that apply to the specific module.
Column 4: the language of presentation (A = Afrikaans; E = English) and the number of periods per week during which lectures and/or practicals for the specific module are presented.
Column 5: the language of presentation (A = Afrikaans; E = English) and whether the module is presented within a flexilearn mode. **Note that not all modules are presented by means of flexilearning.** Flexilearn modules can be presented, for example, by means of contact tuition (lectures/ practicals as arranged by the department), or WebCT assisted, or as paper-based distance education, or a combination of presentation modes. The flexilearn student has to consult with the department offering the specific flexilearn module before registration to make sure of the mode of presentation.
Column 6: the term (first, second, third or fourth) in which the module is offered (in some cases a semester or a year module is indicated). **Note:** The quarter in which a module is offered is not indicated in the alpha code.
Column across: the name and a short description of the content of the module.

Abbreviations:
lpw = lectures per week
ppw = practicals per week
dpw = discussion classes per week
hpw = hours per week
hpr = hours practical
LP = Lecturer's permission

IT.31.1 THE MODULES LISTED BELOW FALL UNDER THE SCHOOL OF ENGINEERING

Module code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
EMK 310	**Computer Science**	**16**	**E 3 lpw + 1 ppw**		**Sem 1**
Microprocessors 310 Covers the following areas of the 80x86 IBM PC and compatible computers: microprocessors and supporting chips, memory and memory interfacing, input/output and interfacing, timer and music, interrupts, device drivers, buses, programming in C and assembly language. **Prerequisite:** ERS 220 or LP					

EOS 284	**Computer Science**	**12**	**A&E 3 lpw + 1 ppw**		**Sem 2**
Computer Architecture 284 The aim of this module is to gain a deeper understanding of computers by studying their underlying components. The CPU is studied in great detail, covering design decisions such as CISC/RISC architectures, paging and pipelining. Cache, memory and bus architectures will also be scrutinized. IO architectures will be covered (i.e. polling vs. interrupt driven or DMA). Topics such as parallel processing (SIMD) are also touched. A brief review of number systems, combinatorial circuits, and sequential circuits (latches, counters, etc.). To illustrate many of the concepts in practice, the practicals will cover an assembly language. This will cover topics like interrupts, IO and video memory. **Prerequisite:** COS 110 or (COS 130/EPE 111/EPE 112)					
ERS 220	**Computer Science**	**16**	**A&E 3 lpw + 1 ppw**		**Sem 2**
Digital Systems 220 Introduction to digital circuit design, digital representation of numbers, representation and simplification of logic functions, analysis and design of combinatorial circuits, components of sequential circuits, programmable components for combinatorial and sequential logic, microprocessor fundamentals.					

IT.31.2 THE MODULES LISTED BELOW FALL UNDER THE SCHOOL FOR INFORMATION TECHNOLOGY

Module code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
BIB 111	**Information Science**	**6**	**A&E 3 lpw + 1 ppw**	**WebCT**	**Quarter 1**
Library Science 111 *Introduction to information service provision:* Development of information services, information provision and information services in Southern Africa, information infrastructure, national information policy, cooperation and resource sharing.					
BIB 112	**Information Science**	**6**	**E 3 lpw + 1 ppw**	**WebCT**	**Quarter 2**
Library Science 112 *Reading and reading practices:* Background to user studies, reading as a form of communication, people as users of information, a general frame of reference for the usage of media, reading and media usage in an electronic era, user needs, motives and interests and the promotion of reading and literacy. There is also a practical component.					
BIB 121	**Information Science**	**6**	**A&E 3 lpw + 1 ppw**	**WebCT**	**Quarter 3**
Library Science 121 *Introduction to the use of information sources:* Introduction to sources of information, format of information sources, creation of information sources, types of information sources, use of selected printed and electronic reference sources.					
BIB 122	**Information Science**	**6**	**E 3 lpw + 1 ppw**	**WebCT**	**Quarter 4**
Library Science 122 *Library and Information services:* Community organisation services, MPCCs, telecentres, public libraries, school libraries, national libraries, provincial libraries, academic libraries, special libraries, hybrid libraries, virtual information services.					

Module code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
BIB 211	**Information Science**	**10**	**E 3 lpw + 3 ppw**	**WebCT**	**Quarter 1**
Library Science 211 *User studies:* Information service provision, instructing and educating library users, advice to users (including guidance and extension services), bibliotherapy. There is also a practical component.					
BIB 212	**Information Science**	**10**	**E 3 lpw + 3 ppw**	**WebCT**	**Quarter 2**
Library Science 212 *Information and the law:* Passing of laws, Legal Deposit Act, Copyright Act, Films and Publications Act, Promotion of Access to Information Act.					
BIB 214	**Information Science**	**10**	**E 3 lpw + 3 ppw**	**WebCT**	**Quarter 3**
Library Science 214 *Cataloguing:* Bibliographic control, bibliographic standards, catalogues, creation of bibliographic records, use of Anglo American Cataloguing Rules. There is also a practical component.					
BIB 222	**Information Science**	**10**	**E 3 lpw + 3 ppw**	**WebCT**	**Quarter 4**
Library Science 222 *Information and reference services:* Nature and development of reference services, specialized information sources, current awareness services, user education.					
BIB 312	**Information Science**	**15**	**E 3 lpw + 3 ppw**	**WebCT**	**Quarter 2**
Library Science 312 *Advanced cataloguing:* The online catalogue, exchange of bibliographic data, bibliographic formats, MARC21, UNIMARC, Dublin Core, Z39.50, cataloguing of videos, CD-ROMs, serial publications, electronic sources, coding of bibliographic data with MARC21.					
BIB 316	**Information Science**	**15**	**E 3 lpw + 3 ppw**	**WebCT**	**Quarter 1**
Library Science 316 *Subject Cataloguing:* Introduction to subject cataloguing, bibliographic classification, Dewey Decimal Classification System (DDC), classification process, verbal subject cataloguing, Library of Congress Subject Headings, Sears list of Subject Headings, assigning subject headings, ontology.					
BIB 321	**Information Science**	**15**	**E 3 lpw + 3 ppw**	**WebCT**	**Quarter 3**
Library Science 321 *Information in a digital environment:* Significant aspects on the nature, organisation, storage, distribution, availability, accessibility, use and preservation of records of human knowledge and information in a digital environment.					
BIB 322	**Information Science**	**15**	**E 3 lpw + 3 ppw**	**WebCT**	**Quarter 4**
Library Science 322 *Management of a digital information service:* The economics of management of digital information services. The management of various advanced information technologies such as high-performance computers and networks, multimedia/hypermedia, artificial intelligence, shared cataloguing, portals, co-operative document delivery, best practices, etc.					
BIB 324	**Information Science**	**15**			**Quarter 4^**
Library Science 324 Practical work under supervision at approved institutions, as well as other relevant activities. ^ Consult the department in Quarter 1 regarding this module.					
BIB 896	**Information Science**	**120**			
Mini-dissertation and research portfolio: Library Science					

Module code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
BIB 801	**Information Science**	**120**			
Library Science (coursework): Coursework component					
BIB 890	**Information Science**				
Library Science: Dissertation 890					
BIB 900	**Information Science**				
Library Science: Examination 900					
BIB 990	**Information Science**				
Library Science: Thesis 990					
CIL 111	**School of IT**	**4**	**A&E 2 lpw**	**WebCT**	**Semester 1**
Computer Literacy 111 Computing Concepts, Windows 2003, Internet & World Wide Web, What will word processing do for me?, Gaining Proficiency Editing & Formatting, Enhancing a document & the web and other resources, Advanced features: Outlines, Styles & selections & Tables, Introduction to PowerPoint, Presentations made easy, Gaining Proficiency – Slide Show Tools, The web & Slide Masters, Introduction to MS Excel: What is a spreadsheet, Gaining Proficiency – The web and business applications, Spreadsheets in Decision Making: What if?, Graphs and Charts: Delivering a Message, Introduction to MS Access: What is a Database?, Tables and Forms: Designs, Properties, Views and Wizards, Information from the Database: Reports and Queries An exemption examination may be written in the first week of semester 1.					
CIL 121	**School of IT**	**4**	**A&E 2 lpw**	**WebCT**	**Semester 2**
Information Literacy 121 Why computers matter to you, Networking, Information resources (include the Academic Information Services), Quality of Information, Ethics, plagiarism and copy right, Searching the Internet, Information Seeking Strategies, Location & Access, Specific Search Environments (include all electronic databases and journals in the AIS applicable to the relevant faculties), Referencing techniques, Use synthesis and evaluation of information, New trends. Content specific to University of Pretoria. No exemption examination.					
COS 110	**Computer Science**	**16**	**A&E 4 lpw + 1 ppw**		**Sem 1**
Program Design: Introduction 110 Object oriented programming, graphical user interfaces and event handling. Teaches sound program design, leading to well structured, robust and documented programs. **Prerequisite:** [IT.2(e)]					
COS 130	**Computer Science**	**16**	**A&E 4 lpw + 1 ppw**		**Sem 1**
Introduction to Programming 130 The aim of this module is to acquire a sound knowledge of basic computer programming concepts. The theory of these concepts, as well as design methodologies, will be investigated. Understanding rather than memorising is emphasized in order to stimulate creative thinking and the development of innovative skills amongst students in the field of computer programming. The C programming language is used to implement these concepts. After completing this module, a student should be able to design and write structured, efficient programs using the C language, be familiar with the basic data structures, pointers and file processing, and have an introductory knowledge of advanced data structures. **Prerequisite:** [IT.2(i)]					

Module code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
COS 131	**Computer Science**	**16**	**A&E 4 lpw + 1 ppw**		**Sem 1**

Introduction to Programming 131
The aim of this module is to acquire a sound knowledge of basic computer programming concepts and an introductory knowledge of data structures. The theory of these concepts, as well as design methodologies, will be investigated. Understanding rather than memorising is emphasized in order to stimulate creative thinking and the development of innovative skills amongst students in the field of computer programming. The C programming language is used to implement these concepts. At the end of the module a short introduction to object-oriented programming using C++ will be given.
After completing this module, a student should be able to design and write structured, efficient programs using the C programming language, be familiar with the basic data structures, pointers and file processing, and have an introductory knowledge of advanced data structures and object-orientation.

COS 140	**Computer Science**	**16**	**A&E 4 lpw + 1 ppw**		**Sem 2**

Netcentric Computer Systems 140
This module introduces the principles of netcentric computing that can be applied to the WWW and internet as well as to distributed applications. The main focus is on the concepts of client and server side programming, web-based applications, port and socket interaction, writing programs that require remote function calls, and achieving database connectivity using the appropriate technology. The supporting technologies of mark-up languages and scripting languages are also studied. It will also test the ability of a student to use, integrate and maintain the necessary software and hardware required to illustrate the concepts specified.
Students who pass this module may not enrol for INY 324.
Prerequisites: COS 110 or (COS 130/COS 131/EPE 111/EPE 112)

COS 151	**Computer Science**	**8**	**A&E 2 lpw + 1 ppw**		**Sem 1**

Introduction to Computer Science 151
This module introduces concepts and terminology related to the hardware of computers, system software and communication systems. It also provides an understanding of basic algorithmic concepts, number systems and binary logic.

COS 212	**Computer Science**	**16**	**A&E 4 lpw + 1 ppw**		**Sem 2**

Data Structures and Algorithms 212
The primary objective of this module is to introduce students to the classic data structures and algorithms found in computer programs. Data abstraction is an important concept in producing correct and reusable software. In this module it is shown how abstract data types can be designed for the classic data structures, i.e. stacks, queues, lists, trees and graphs. Variations that can be made to the implementation of the structures without changing their interfaces are discussed as well as how to choose the appropriate version for efficiency. Classic algorithms for sorting, searching and traversing are investigated and their efficiency assessed. Recursion is also dealt with and some of the algorithms are implemented recursively. The meaning of algorithmic complexity is introduced to gain an appreciation of the limits of computing through examples of problems that cannot be solved in reasonable time.
Prerequisite: COS 110

Module code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
COS 214	**Computer Science**	**16**	**A&E 4 lpw + 1 ppw**		**Sem 1**

Design Patterns 214
This module teaches programming using design patterns. The focus of the module is on the theory and implementation of design patterns, in order to write modular and re-usable code. Popular object-oriented languages are used as implementation medium.
Prerequisites: COS 110 or [(COS 130/EPE 111/EPE 112) & COS 140]

COS 222	**Computer Science**	**16**	**A&E 4 lpw + 1 ppw**		**Sem 1**

Operating Systems 222
Fundamental concepts of modern operating systems in terms of their structure and the mechanisms they use are studied in this module. Real Time, Multimedia and Multiple Processor Systems are defined and analysed. This module also deals with modern design issues of process management, deadlock, memory management, input/output management, file systems and security.
Prerequisite:COS 110 or LP

COS 226	**Computer Science**	**16**	**A&E 4 lpw + 1 ppw**		**Sem 2**

Concurrent Systems 226
Computer science courses mostly deal with sequential programs. This module looks at concurrency, what it means, how it can be exploited, and what facilities are available for proving programs correct and deadlock free. In the process we learn the Finite State Processes (FSP) language and run specifications on the Labelled State Transition Analyser (LTSA). These programs can be translated into Java implementations and tested for a variety of classic control and synchronisation processes, and some interesting modern examples.
Prerequisite: COS 110 or LP

COS 301	**Computer Science**	**27**	**E 1 lpw + 1 ppw**		**Year**

Software Engineering 301
The module exposes students to problems associated with software development on an industrial scale. Overall goals of the module are: To understand the software engineering process and to appreciate its complexity. To be exposed to a variety of methodologies for tackling different stages of the software lifecycle. To become familiar with the latest trends in software engineering. To experience the advantages and problems of working in a group. To take responsibility for a variety of roles within a group, and to understand the different requirements for these. To complete the development of a fairly large object orientation-based software product.
The focus of the module is on a project that lasts the whole year. The project is tackled in groups of approximately 4 students.
Prerequisite: COS 214 or LP.

COS 314	**Computer Science**	**18**	**E 2 lpw + 1 ppw**		**Sem 1**

Artificial Intelligence 314
In this module, classical themes in AI are studied such as planning, searching, image recognition, machine learning, etc. A particular focus is placed on the modern AI term of computational intelligence, with reference to neural networks, intelligent agents, genetic and evolutionary algorithms, etc. Concepts are consolidated through homework and practical assignments.
Prerequisites: COS 214 and WTW 128

Module code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
COS 326	**Computer Science**	**18**	**E 1 lpw + 1 ppw**		**Sem 2**
Database Systems 326 This module builds on a prior introductory module on database technology and provides more advanced theoretical and practical study material. **Prerequisites:** INF 214 or LP					
COS 332	**Computer Science**	**18**	**E 2 lpw + 1 ppw**		**Sem 1**
Computer Networks 332 The objective of this module is to acquaint the student with the terminology of communication systems and to establish a thorough understanding of exactly how data is transferred in such communication networks, as well as applications that can be found in such environments. The study material includes: concepts and terminology, the hierarchy of protocols according to the OSI and TCP/IP models, protocols on the data level, physical level and network level as well as higher level protocols. The practical component of the module involves programming TCP/IP sockets using a high level language. **Prerequisite:** COS 214 or LP					
COS 333	**Computer Science**	**18**	**E 2 lpw + 1 ppw**		**Sem 2**
Programming Languages 333 The overall goal of the module is to survey characteristics of the most important kinds of programming languages. Three paradigms are studied: imperative, functional and logic. The syntax, semantics and implementation of various languages within these paradigms are studied, critiqued and cross-compared. This module will include an in-depth study and practical use of at least one new state-of-the-art programming language. Students are given practical exercises in each of these programming language paradigms, as well as in scripting languages. **Prerequisite:** COS 110					
COS 341	**Computer Science**	**18**	**E 2 lpw + 1 ppw**		**Sem 1**
Compiler Construction 341 The module illustrates how to build a complete compiler for a mini-language based on Java using a compiler generator. It covers LL and LR parsing, abstract syntax trees, semantic analysis, error recovery and code generation. Emphasis is placed on back-end analysis including intermediate codes, basic blocks, register allocation, liveness analysis and garbage collection. **Prerequisite:** COS 212					
COS 343	**Computer Science**	**18**	**E 2 lpw + 1 ppw**		**Sem 2**
Trends in Information Technology 343 The content of this module is specifically intended to keep students abreast of new and important trends in IT. The module focuses on relevant topics that vary from year to year at the discretion of the department. **Prerequisite:** COS 110					
COS 344	**Computer Science**	**18**	**E 2 lpw + 1 ppw**		**Sem 2**
Computer Graphics 344 The aim of this module is to acquire a sound knowledge of the basic theory of interactive computer graphics and basic computer graphics programming techniques. The theory will cover graphics systems and models, graphics programming, input and interaction, geometric objects and transformations, viewing in 3D, shading, rendering techniques, and introduce advanced concepts, such as object oriented computer graphics and discrete techniques. The module includes a practical component that enables students to apply and test their knowledge in computer graphics. The OpenGL graphics library and the C programming language will be used for this purpose. **Prerequisites:** COS 214 and WTW 126					

Module code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
IMY 761	**Information Science**	**40**			
Applied Multimedia 761 *Closed module* Development and production of a multimedia product; product life-cycle management and documentation; the student submits a proposal which is evaluated and if approved, produces a working multimedia product.					
IMY 771	**Information Science**	**20**			
Multimedia Trends History of multimedia ideas and technology; current trends in multimedia, latest technologies and future trends of multimedia.					
IMY 772	**Information Science**	**20**			
Hypermedia and Mark-up languages A study of hypermedia systems, specifically adaptive hypermedia systems, as well as data modelling, storage and retrieval, database structures and metadata. A study of different mark-up languages and their role in multimedia products with the emphasis on data structuring, hyper linking theories and models.					
IMY 773	**Information Science**	**20**			
Multimedia technology The theory and practice of multimedia technology, such as compression techniques; image processing; delivery systems such as CD-ROM, DVD, digital TV, immersive systems, interaction with virtual worlds and other relevant technologies. An overview of important multimedia standards.					
IMY 774	**Information Science**	**20**			
Virtual environments Theory and components of virtual environments (VE); human interaction in VE; VE technologies; lighting techniques, props, landscapes and other related concepts.					
IMY 776	**Information Science**	**20**			
Multimedia training and education systems Theory and practice of multimedia systems aimed at training and education. An overview of learning theories.					
IMY 777	**Information Science**	**20**			
Animation theory and practice History of animation theory and techniques; 2-D and 3-D animation; capturing, kinematic behaviours (e.g. movement, expressions), human artefacts (e.g. clothing, hairdressing) and other related themes.					
IMY 778	**Information Science**	**20**			
Music and sound technology A theoretical and practical study of the role of sound in multimedia products, compression techniques, and standards such as MIDI, MP3, MPEG.					
IMY 779	**Information Science**	**20**			
Human-computer interaction A theoretical and practical study of human-computer interaction, interface design and usability testing.					
IMY 801	**Information Science**	**120**			
Multimedia (coursework): Coursework component 801					
IMY 890	**Information Science**				
Multimedia: Dissertation 890					

Module code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
IMY 895	**Information Science**	**120**			
Multimedia (coursework): Mini-dissertation 895					
INF 112	**Informatics**	**10**	**A&E 3 lpw**		**Sem 1**
Informatics 112 Introduction to information systems, information systems in organizations, hardware: input, processing, output, software: systems and application software, organization of data and information, telecommunications and networks, the Internet and Intranet. Transaction processing systems, management information systems, decision support systems, information systems in business and society, systems analysis, systems design, implementation, maintenance and revision. **Prerequisite:** [IT.2(c)]					
INF 153	**Informatics**	**5**	**A&E 2 lpw**		**Sem 1**
Informatics 153 General systems theory, creative problem solving, softsystems methodology. **Prerequisite:** [IT.2(g)]					
INF 154	**Informatics**	**5**	**A&E 1 lpw + 2 ppw**		**Sem 1**
Informatics 154 Introduction to programming. **Prerequisite:** [IT.2(g)]					
INF 163	**Informatics**	**5**	**A&E 2 lpw**		**Sem 2**
Informatics 163 The systems analyst, systems development building blocks, systems development, systems analysis methods, process modelling. **Prerequisite:** INF 153 GS					
INF 164	**Informatics**	**5**	**A&E 1 lpw + 2 ppw**		**Sem 2**
Informatics 164 Advanced programming, use of a computer-aided software engineering tool. **Prerequisite:** INF 154 GS					
INF 214	**Informatics**	**14**	**A&E 3 lpw + 2 ppw**		**Sem 1**
Informatics 214 Database design: the relational model, structured query language (SQL), entity relationship modelling, normalization, data base development life cycle; practical introduction to database design. Databases: advanced entity relationship modelling and normalization, object-oriented databases, data base development life cycle, advanced practical data base design. **Prerequisites:** CIL 111, 121 (previously CIL 171 – 174)					
INF 261	**Informatics**	**7**	**A&E 1 lpw + 2 ppw**		**Sem 2**
Informatics 261 Database management; transaction management, concurrent processes, recovery, database administration: new developments: distributed databases, client-server databases: practical implementation of databases. **Prerequisite:** INF 214GS					

Module code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
INF 225	**Informatics**	**14**	**A&E 3 lpw + 2 ppw**		**Sem 2**
Informatics 225 Systems infrastructure and integration.					
INF 271	**Informatics**	**14**	**A&E 2 lpw**		**Year**
Informatics 271 Systems analysis. Systems design: construction, application architecture, input design, output design, interface design; Systems design: internal controls, program design, object design; project management, system implementation, use of computer-aided development tools. **Prerequisites:** CIL 111, 121 (previously CIL 171 – 174) and INF 163 and INF 164 and [IT.2(g)]					
INF 272	**Informatics**	**14**	**A&E 2 ppw + exercise class**		**Year**
Informatics 272 Use of computer-aided development tools, advanced programming. **Prerequisites:** CIL 111, 121 (previously CIL 171 – 174) and INF 163 and INF 164 and [IT.2(g)]					
INF 315	**Informatics**	**15**	**A&E 3 lpw + 2 ppw**		**Sem 1**
Informatics 315 A review of current trends that are relevant to the application of information systems within a business environment. **Prerequisites:** LP					
INF 324	**Informatics**	**15**	**A&E 3 lpw + 2 ppw**		**Sem 2**
Informatics 324 Information systems in organisations, social and ethical responsibilities, the role of the Informatician. IT end-user relationships, IT management. **Prerequisites:** INF 261, 262, 271, 272					
INF 354	**Informatics**	**15**	**A&E 2 lpw + 2 ppw**		**Sem 1**
Informatics 354 Advanced programming **Prerequisites:** INF 261, 262, 271, 272					
INF 370	**Informatics**	**30**	**A&E 2 lpw + 2 ppw**		**Year**
Informatics 370 Application of systems analysis and design in a practical project, programming, use of computer-aided development tools. **Prerequisites:** INF 261, 262, 271, 272					
INL 111	**Information Science**	**6**	**A&E 3 lpw + ½ ppw**	**WebCT**	**Quarter 1**
Information Science 111 *An introduction to Information Science:* Information and the information community as concepts, information in a development context, the meaning of the information community for and the influence thereof on enterprises and individuals as well as the socio-ethical implications.					

Module code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
The lifecycle of information: processes, products and role players, description of the information mediator, introduction to value adding. Practical: An introduction to web-based tutoring with WebCT.					
INL 112	**Information Science**	**6**	**A&E 3 lpw + ½ ppw**	**WebCT**	**Quarter 2**
Information Science 112 *Representation and organization of information:* Information objects, document-surrogates, databases, multimedia, metadata. The use of Dublin Core as metadata standard. Practical: Basic HTML and the design of a web page with metadata.					
INL 121	**Information Science**	**6**	**A&E 3 lpw + 1 ppw**	**WebCT**	**Quarter 3**
Information Science 121 *Information technology:* An overview of computer hardware and software, telecommunication technology, LAN, WAN and Intranet, the information highway, the Internet and WWW, and computer ethics. Practical: Multimedia and the web, and style sheets.					
INL 122	**Information Science**	**6**	**A&E 3 lpw + 1 ppw**	**WebCT**	**Quarter 4**
Information Science 122 *Communication media:* The process of human communication; analyses of the communication process; levels of communication; settings of communication; verbal and non-verbal communication, mass communication: the elements and functions of various forms of mass media.					
INL 211	**Information Science**	**10**	**A&E 3 lpw + 3 ppw**	**WebCT**	**Quarter 1**
Information Science 211 **Requires CIL 121* *Information retrieval*: The theoretical component deals with various aspects of the online industry and facets of online searching such as search strategies, search techniques, vocabulary problems, database and search engine selection, database structures, the evaluation of search results and information overload. The practical component deals with sophisticated information retrieval.					
INL 212	**Information Science**	**10**	**A&E 3 lpw + 3 ppw**	**WebCT**	**Quarter 2**
Information Science 212 **Requires INL 211*† *Information Seeking:* Introduction to information retrieval research and the major research paradigms, namely the traditional or systems based approach, user-centered, cognitive and socio-cognitive approaches. Relevance is covered as a key issue. Entity representation, database design and information seeking behaviour are covered in the practical sessions. † *Indicates that the module INL 211 must be passed before or be taken concurrently with INL 212.*					
INL 221	**Information Science**	**10**	**A&E 3 lpw + 3 ppw**	**WebCT**	**Quarter 3**
Information Science 221 *Infopreneurship and information ethics:* The various ethical problems applicable to the profession of the information professional, codes of conduct and ethical norms. Infopreneurship: the economic characteristics of information, basic guidelines on how to					

Module code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
start an own information business, the business plan, the marketing and pricing of information products and services, the various legal and ethical aspects with regard to the infopreneur.					
INL 311	**Information Science**	**15**	**A&E 3 lpw + 3 ppw**	**WebCT**	**Quarter 1**
Information Science 311 *Publication formats in the digital environment:* The module studies the terrain of multimedia, hypermedia and hypertext fiction with reference to the theories of e.g. Landow, Nielsen, Aarseth and Hall. The method in which the Internet and WWW influence the publication and handling of digital information is studied, with special reference to the difference between paper based and digital text, as well as the role that portals and intranets play.					
INL 321	**Information Science**	**15**	**A&E 3 lpw + 3 ppw**	**WebCT**	**Quarter 3**
Information Science 321 *Information management:* Tools and techniques of information management, strategy for information management in organisations, quality management, value-adding, formulation and implementation of an information policy, information audit, information consultation, data warehousing and data mining.					
INL 802	**Information Science**	**50**			
Information and Knowledge Management 802 The module focuses on an in-depth study of new tendencies and complex concepts in the field of Information and Knowledge Management.					
INL 803	**Information Science**	**20**			
Information ethics and information law 803 This module focuses on the relationship between poverty and information and the effect that it has on the lives of people in South Africa; the Promotion of Access to Information Act; and the philosophical background of Intellectual Property Rights (Hegel, Marx and Lock) and how this Western concept has influenced the digital divide between the information rich and information poor.					
INL 804	**Information Science**	**20**			
Information for development 804 This module focuses on human development and the importance of disseminating information effectively to developing communities. It includes aspects of participatory communication, the role of communication within the strategic management processes of the development project, elements of participatory message design as well as the role of Information Resource Centres in disseminating information.					
INL 806	**Information Science**	**20**			
Information society 806 In this module the technological, social and globalisation aspects of the development of information in societies is investigated on three levels: Societies as a whole, organisations that produce information products; render information services; and the individual citizens.					
INL 809	**Information Science**	**20**			
Informetrics 809 *(Requires: Knowledge of Statistics – Consult the department in this regard)* Informetrics investigates the quantitative aspects of information (communication) processes, particularly those using text. It incorporates the old field of Bibliometrics, and the new areas of Cybermetrics and Webometrics. Topics covered are: citation indexing, citation networks and citation matrices, bibliographic					

Module code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
coupling, co-citation graphs, science policy applications, informetric laws and approximations.					
INL 810	**Information Science**	**20**			
Competitive intelligence 810 *"The next best thing to knowing all about your own business is to know all about the other fellow's business"* – John D Rockefeller Establishing an effective competitive intelligence program is an integral part of every enterprise that wants to survive in the new millennium. This module focuses on the competitive intelligence strategy, intelligence management, intelligence processes, the intelligence resources, competitive technology intelligence and security.					
INL 811	**Information Science**	**20**			
Advanced decision-making theory 811 Advanced decision-making theory within information and knowledge management is studied in depth. Processes and systems that are used for the management of information and knowledge are analysed concerning decision-making theory. Organisational sense making and scenario building are also addressed.					
INL 812	**Information Science**	**30**			
Organisation and retrieval of information 812 Theoretical approaches for the organisation and retrieval of information are studied including metadata, ontologies and taxonomies. Organisation of information as well as storage, access and searching of desired information as required by individuals.					
INL 813	**Information Science**	**20**			
Management of information centres 813 This module covers a study of information centres as business organisations. The focus, therefore, is on the survival of information centres in the business environment, e.g. change management, business processes, re-engineering, strategic human resource management, the impact of technological innovations and modern business practices, focussing on information centres.					
INL 890	**Information Science**				
Information Science: Dissertation 890					
INL 895	**Information Science**	**120**			
Information Science: Mini-dissertation 895					
INL 900	**Information Science**				
Information Science: Examination 900					
INL 990	**Information Science**				
Information Science: Thesis 990					
INY 122	**Information Science**	**6**	**A&E 3 lpw + 1 ppw**		**Quarter 4**
Publishing 122 **Closed – requires departmental selection* *An introduction to publishing studies:* This module provides a basic introduction to the publishing industry. The following aspects are highlighted: the concept "publishing"; the publishing value-chain; processes, tasks and people involved; the role of the publisher in society; the different sectors of the book publishing industry; current trends and issues.					
INY 123	**Information Science**	**6**	**E 3 lpw + 1 ppw**	**WebCT**	**Quarter 4**
Information and Knowledge Management (1) 123 Nature and essence of information and knowledge management, impact of socio-economic					

Module code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
trends, current problems and constraints in information management, information management in various milieus, responsibilities of the information manager.					
INY 171	**Information Science**	**6**	**E 2 lpw + 2 ppw**		**Sem 1**
Mark-up languages 171 **Closed – requires departmental selection and closed to COS 140, COS 214 and INY 324 students.* The role of mark-up languages in the information environment, the difference between the logical structure and appearance of documents; the study of HTML, CSS; and XHTML, the building of web sites.					
INY 172	**Information Science**	**6**	**E 2 lpw + 2 ppw**		**Sem 2**
Multimedia for the Web 172 ** Closed – requires departmental selection.* The role of multimedia in information products; the use of graphic and animation programmes; introduction to basic scripts (for example, JavaScript) and an introduction to scripting development environments (for example, Microsoft Visual Studio .NET).					
INY 213	**Information Science**	**10**	**E 3 lpw + 2 ppw**		**Quarter 2**
Publishing 213 **Closed – requires departmental selection.* *The visual and production dimensions of publishing:* A theoretical positioning of graphic design, reproduction and printing within the publishing process. The following themes are addressed: an introduction to graphic design practice; the historical development of the relationship between reproduction and printing innovations and graphic design styles; the use of visual elements in order to add value to the editorial handling of publications; the management role of the (commissioning) editor regarding this phase in the publishing process.					
INY 214	**Information Science**	**15**	**E 2 ppw**		**Sem 2**
Publishing 214 **Closed – requires departmental selection.* *Practical*: During the first seven weeks students are introduced to selected applications of DTP software and the practical aspects of the production process. During the following seven weeks students are equipped with practical skills in copy-editing, including editing on screen and technical exercises.					
INY 215	**Information Science**	**10**	**E 3 lpw + 3 ppw**		**Quarter 1**
System development 215 **Closed – requires departmental selection.* Database construction, project planning and management, determination of consumer needs, systems specifications and an introduction to interface development.					
INY 216	**Information Science**	**10**	**E 3 lpw + 3 ppw**		**Quarter 2**
Multimedia 216 **Closed – requires departmental selection* An introduction to the theory of multimedia, hypermedia and hypertext fiction, which includes the evaluation of hypermedia databases. The influence of digital (hyper) media on the information landscape is also studied, e.g. in terms of e-texts, intranets and portals.					
INY 218	**Information Science**	**10**	**E 3 lpw + 1 ppw**	**WebCT**	**Quarter 2**
Information and the law 218 Passing of laws, Legal Deposit Act, Copyright Act, Films and Publications Act, Promotion of Access to Information Act.					

Module code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
INY 221	**Information Science**	**10**	**E 3 lpw + 3 ppw**	**WebCT**	**Quarter 4**
System development 221 Project planning and management, user needs assessment, system specifications, interface development.					
INY 222	**Information Science**	**10**	**E 3 lpw + 1 ppw**		**Quarter 4**
Publishing 222 **Closed – requires departmental selection.* *Editorial process and practice:* The personality profile of the copy-editor; the levels of copy-editing; the responsibilities of the copy-editor towards the manuscript, the author and the publishing house; the responsibilities and skills of the proof-reader; typical problems in texts; proof-reading symbols and the mark-up of texts; legal and ethical aspects.					
INY 223	**Information Science**	**10**	**E 3 lpw + 1 ppw**	**WebCT**	**Quarter 4**
Communication media 223 An encompassing module on the use of mass media as communication medium; including communication processes, technology, research and effect studies. The use of mass media in Africa and the role of mass media in development.					
INY 224	**Information Science**	**10**	**E 3 lpw + 1 ppw**	**WebCT**	**Quarter 4**
Applied information ethics 224 Cyber ethics: the right to privacy, the right of access to information, moral responsibility of Internet service providers, information poverty, cyber porn.					
INY 225	**Information Science**	**10**	**E 3 lpw + 3 ppw**		**Quarter 3**
Multimedia 225 **Closed – requires departmental selection.* A detailed study of multimedia and hypermedia with the emphasis on applications, hardware and software, the architecture of hypermedia systems, the principles involved in the construction of such databases and the practical creation of a multimedia and hypermedia databases.					
INY 226	**Information Science**	**10**	**E 3 lpw + 3 ppw**		**Quarter 4**
Editorial handling of information products 226 **Closed – requires departmental selection.* Introduction to copy-editing and mark-up of information products, aspects of the handling of visual materials and text (including principles of typography and page lay-out) with the emphasis on accessibility of information to the end user.					
INY 227	**Information Science**	**10**	**E 3 lpw + 1 ppw**	**WebCT**	**Quarter 3**
Information representation 227 Organization, storage and retrieval of information are important challenges for the modern information society. The basic structure of information representation in social and scientific applications is the topic of this module.					
INY 271	**Information Science**	**10**	**E 2 lpw + 2 ppw**		**Sem 1**
Advanced mark-up languages (1) 271 ** Closed – requires departmental selection.* Study of new generation mark-up-languages (XML); building multimedia products with the XML family.					
INY 272	**Information Science**	**10**	**E 2 lpw + 2 ppw**		**Sem 2**
Advanced mark-up languages (2) 272 **Closed – requires departmental selection.* The building of a complex multimedia product with the XML family and related technologies.					

Module code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
INY 300	**Information Science**	**15**	**E 1 ppw**		**Year**
Multimedia project 300 **Closed – Requires departmental selection.* The module exposes students to problems associated with software development on an industrial scale. The goal of the module is develop and complete a fairly large multimedia project. The focus of the module is on a project that lasts the whole year. The project is tackled in groups of two to three students.					
INY 311	**Information Science**	**15**	**E 3 lpw + 3 ppw**	**WebCT**	**Quarter 2**
Multimedia 311 Detailed study of multimedia and hypermedia, the application thereof, software and hardware, architecture of hypermedia systems, principles of constructing these databases, the creation of a multimedia and hypermedia database.					
INY 312	**Information Science**	**15**	**E 3 lpw + 1 ppw**	**WebCT**	**Quarter 2**
Information for development 312 Literacy and information literacy, ICT and development, media for the provision of information to developing communities with specific reference to the participatory approach.					
INY 315	**Information Science**	**15**	**E 3 lpw + 3 ppw**		**Quarter 1**
Advanced multimedia 315 **Closed – requires departmental selection.* Technical aspects of multimedia hardware and software, version management, practical multimedia project.					
INY 316	**Information Science**	**15**	**E 3 lpw + 3 ppw**		**Quarter 2**
Human-computer interaction 316 **Closed – requires departmental selection.* A study of human-computer interaction and human-information interaction, humans as computer and information users, ethical aspects relating to the creation of multimedia information products.					
INY 318	**Information Science**	**15**	**E 3 lpw + 1 ppw**	**WebCT**	**Quarter 2**
Information economics 318 Economic characteristics of information, information as a national asset, contribution of the information sector to the economy of a country, methods for measuring the size of the information sector in a country, interaction between the information sector and the rest of the economy in a country, the marketing and pricing of information products and services, business intelligence, electronic commerce.					
INY 319	**Information Science**	**15**	**E 3 lpw + 1 ppw**		**Quarter 4**
Publishing 319 **Closed – requires departmental selection.* *An introduction to publishing management:* This module provides an introduction to the different facets of management in the publishing environment, including editorial organisation and management; financial management and marketing management.					
INY 320	**Information Science**	**15**	**E 2 ppw**		**Sem 2**
Publishing 320 **Closed – requires departmental selection.* *Practical:* During the first seven weeks students will develop individual manuscript proposals. During the following seven weeks students will be equipped with practical skills needed for the management of a publishing list; basic costing; budgeting; and scheduling.					

Module code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
INY 322	**Information Science**	**15**	**E 3 lpw + 1 ppw**		**Quarter 2**
Publishing 322 **Closed – requires departmental selection.* *Commissioning:* A theoretical introduction to the processes involved in market research and manuscript commissioning; list building; the management of the manuscript development phase; editorial project management; scheduling; the costing of individual publications; and the development of marketing and promotion strategies.					
INY 323	**Information Science**	**15**	**E 3 lpw + 1 ppw**	**WebCT**	**Quarter 4**
Information: socio-political context 323 Theories about the information society, globalisation and localization and information poverty and information wealth.					
INY 324	**Information Science**	**15**	**E 3 lpw + 3 ppw**	**WebCT**	**Quarter 4**
Multimedia 324 **Closed to COS 140, COS 214 and INY 171 students.* A detailed study of multimedia in the WWW environment and mark-up languages such as HTML and XML. An introduction to SGML, other document formats and electronic style specifications.					
INY 325	**Information Science**	**15**	**E 3 lpw + 3 ppw**		**Quarter 3**
Interface design 325 **Closed – requires departmental selection as well as INY 316.* A detailed study of the role, composition and functioning of an interface, underlying principles in the design and evaluation of interfaces.					
INY 326	**Information Science**	**15**	**E 3 lpw + 3 ppw**		**Quarter 4**
Mark-up languages 326 **Closed – requires departmental selection.* A detailed study of HTML and XML, an introduction to SGML, other electronic and document formats and electronic style specifications.					
INY 327	**Information Science**	**15**	**E 3 lpw + 1 ppw**	**WebCT**	**Quarter 4**
Information and knowledge management 327 Creating a knowledge-based organisation, relationship between knowledge and organisational learning, roles and responsibilities of the knowledge manager, knowledge management strategies and policies, critical success factors for knowledge management, tools and techniques for knowledge management. Competitive intelligence.					
INY 328	**Information Science**	**15**	**E 1 lpw + 2 ppw**	**WebCT**	**Sem 2**
Information and knowledge management in practice 328 **Closed – requires departmental selection.* Project and experiential training in co-operation with industry.					
INY 329	**Information Science**	**15**	**E 3 lpw + 3 ppw**		**Quarter 4**
Advanced information retrieval 329 **Requires: INL 211 and INL 212* Information is growing exponentially, diversifying into many forms. Information retrieval covers issues regarding the effective storage, access and searching of information in all media. This module builds on the principles of retrieval covered in INL 211 and INL 212 and covers certain aspects of the systems approach to Information retrieval in more detail.					
INY 711	**Information Science**	**20**			
Research methodology Research methodology and the application thereof to resolve research problems and to create new knowledge, is a valued advantage to any student. The module is compiled with					

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the following objectives in mind: to instruct the student in the basic principles of research and to avail them the opportunity to execute research projects in a professional manner. Students are guided from the selection of a problem to the presentation of a complete research report with practical suggestions based on a solid theoretical framework.					
INY 712	**Information Science**	**20**			
Information management **Research Report** *Closed module* Students are expected to write a research report (5000-7000 words) on a topic to be selected in collaboration with the lecturers.					
INY 713	**Information Science**	**20**			
Information and Knowledge Management (I) This module consists of two main sections. A theoretical framework of information and knowledge management will be addressed in section one. Section two covers the enablers of information and knowledge management. These include: leadership, corporate culture, organisational learning, strategy, laws and policies, measurement and information technology.					
INY 714	**Information Science**	**20**			
Organisation, retrieval and seeking of information Information retrieval covers the problems relating to the effective storage, access, and searching of information required by individuals. This module will introduce students to the theory and operative requirements of information organisation and retrieval and the evaluation of information retrieval systems, as well as information seeking behaviour.					
INY 715	**Information Science**	**20**			
Information ethics This module focuses on the main moral issues pertaining to information and ICT, globalisation, privacy and knowledge flow. It covers amongst others the following fields: · Data mining and privacy · Computer security · The use of spyware and malware · Software piracy · Globalisation and the impact on society · The formulation of ethical codes of conduct					
INY 716	**Information Science**	**20**			
Information and Knowledge Management (II) This module offers the student the opportunity to become conversant with various knowledge management programmes as well as the development, implementation and evaluation of knowledge management strategies. Knowledge representation and the development of an Intranet will be covered. New key issues in the field of knowledge management conclude this module.					
INY 717	**Information Science**	**20**			
Information retrieval *"Information is continuing to grow exponentially, diversifying into many forms and media. In this complex labyrinth there is a definite need for increased effort aimed at tailoring IR performance to user demands"* (Ingwersen, 1992). In this module students will study information retrieval from a systems perspective, but with the human user in mind. Best-match and Boolean systems will be studied in some detail, focussing on the different aspects of human and machine relevance. Information seeking					

Module code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
behaviour studies that can support the enhancement of IR performance will also be covered.					
INY 718	**Information Science**	**20**			
Information economy This module critically examines aspects of information economics within national and global contexts. It aims to promote an understanding of the commodity and public good qualities of information, and their consequences for the production and distribution of information goods and services. The dynamics of information industries are a central element of the module.					
INY 719	**Information Science**	**20**			
Read and reading practices This module focuses on issues such as the renewed awareness of the importance of reading. It also includes a review of reading levels and reading culture in SA as well as national and international initiatives and policies on reading. Communities of readers; reading promotion; libraries and reading; bibliotherapy and reading in an electronic environment are additional topics that will be investigated.					
INY 720	**Information Science**	**20**			
Digital libraries This module provides an introduction to the nature, characteristics and functioning of digital libraries. The development of the field is studied and existing practical examples are researched and evaluated.					
INY 721	**Information Science**	**20**			
Information literacy This module provides an overview of essential issues in the effective use of information and the related issues of information literacy and the information society. The educative function as well as the design of information literacy courses by the information professional will be examined.					
INY 722	**Information Science**	**20**			
Knowledge society This module evaluates approaches to and concepts of the information/knowledge society. It questions the origins and political motives for the promotion of an information/knowledge society, and examines a number of relevant themes in the literature.					
INY 723	**Information Science**	**20**			
Information philosophy In this module we study the following core philosophical acts and the practical relevance thereof to information science: the act of thought (from logic to invention); the act of understanding the knowledge/information complexity; the act of a continuous search for and connection of ideas; the act of reflection on the assumptions prevalent in the diverse sub-disciplines of information science and in the field of technical developments; and the act of sense-making and invention with a view to the creation of a future.					
INY 724	**Information Science**	**20**			
Multimedia This module focuses on the use and application of multimedia and hypermedia in the digital environment. Topics include: aspects of human-computer interaction and interface design, principles and practice of usability engineering and usability testing, the role of metadata, adaptive hypermedia, portals, digital libraries, mobile computing and virtual reality. The module includes the hands-on development of a multimedia/hypermedia project.					

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INY 725	**Information Science**	**20**			
Informetrics Informetrics is concerned with the application of information science principles and technology in science research and productivity. It investigates the quantitative and qualitative aspects of information processes. It covers citation indexing, informetric approximations, citation networks and citation analysis of scientific journals.					
INY 726	**Information Science**	**20**			
Competitive intelligence (I) Establishing an effective competitive intelligence programme is an integral part of every enterprise that wants to survive in the new millennium. This module focuses on the competitive nature of the business environment, the aim of competitive intelligence, Porter's Competitive Forces Model, the distinction between competitive intelligence and industrial espionage, the intelligence process as well as the tools and techniques for the development and implementation of a competitive intelligence programme.					
INY 727	**Information Science**	**20**			
Competitive intelligence (II) Competitive intelligence provides the decision maker with analysed information about the competitive environment, aimed at satisfying decision-making needs. This module focuses on the role of analysis in the intelligence cycle, applying analysis techniques to a case study, CI and corporate governance, the setting up of a CI capability in an organisation and the problems facing CI professionals in South Africa.					
INY 728	**Information Science**	**20**			
Decision-making theory Aspects such as the following will be studied: theory of decision making, decision-making support systems, processing of decision making, organisational sense making and decision-making theory with regard to information and knowledge management.					
INY 729	**Information Science**	**20**			
Management of information centres Information centres are now regarded as similar to any other type of business organisation. It is therefore important for them to be managed in the same way that other businesses are managed. This module focuses on the management of information centres within the greater business environment and highlights areas of management that can lead to the success of the information centres. These include change management, business processes, re-engineering, strategic human resources management and the impact of technological innovation in the IT environment.					
INY 730	**Information Science**	**20**			
Information communication Informed by the participatory approach to communication this module reflects in depth on methods for the effective communication of information. Students will learn how to create a target audience profile to determine the appropriate media and content for the dissemination of information. Communicating information to developing communities will form a central focus of this module. Therefore the role of traditional, interpersonal, as well as modern media will be addressed. The processes of creating meaningful and effective messages for the communication of information will also be addressed.					
INY 731	**Information Science**	**20**			
Information and communication technology for development In this module modern information and communication technologies (ICTs) that are used in a developing context will be defined. The various theories as well the literacies needed in					

Module code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
such a context, namely basic literacy, information literacy and technological literacy will be studied. The focus will fall on the current use and/or misuse of ICT in the developing world with specific references to the South African situation, including the telecentre approach. The module will include a study of the diverse views on ICTs for development as well as future possibilities with regard to ICT for development including open source and satellite technology.					
INY 732	**Information Science**	**20**			
Knowledge dynamics The module on knowledge dynamics focuses on complexity science. Complexity science is a new field of knowledge based on how groups of livings things such as people animals, organizations, communities and the economy behave in an emerging reality. Enterprises and organizations are using complexity science to transform the way they work into new patterns of structure, relationships and activities, which they find extremely beneficial. In this module students will be introduced to the manner in which the domains of the known, knowable, complex and chaotic impact on the structures, relationships and activities of modern organizations.					
INY 733	**Information Science**	**20**			
Indigenous Knowledge and Indigenous Knowledge Systems This module focuses on indigenous knowledge and indigenous knowledge systems. The following aspects will be addressed: · Definition, scope and epistemology of IK; · Recording, capturing, digitization, access and dissemination of IK; · Databases for IK; · Legal issues regarding IK with the emphasis on intellectual property right and copyright.					
JCP 202	**Faculty of Engineering, Built Environment and Information Technology**	**8**			**Year**
Community-based Project This project-orientated module is a form of applied learning which is directed at specific community needs and is integrated into all undergraduate academic programmes offered by the Faculty of Engineering, Built Environment and Information Technology. The main objectives with the module are as follows: (1) The execution of a community related project aimed at achieving a beneficial impact on a chosen section of society, preferably but not exclusively, by engagement with a section of society which is different from the student's own social background. (2) The development of an awareness of personal, social and cultural values, an attitude to be of service, and an understanding of social issues, for the purpose of being a responsible professional. (3) The development of important multidisciplinary and life skills, such as communication, interpersonal and leadership skills. Assessment in the module will include all or most of the following components: evaluation and approval of the project proposal, assessment of oral and/or written progress reports, peer assessment in the event of team projects, written report-back by those at which the project was aimed at, and final assessment on grounds of the submission of a portfolio and a written report.					
OKT 880	**Information Science**	**30**			
Theory of Development Communication 880 This module will focus on human development and the principle of participatory communication. It will examine communication theory and processes especially with regard					

Module code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
to communication and change. The student should be able to work effectively with others in establishing participative development communication principles, collect, analyse and critically evaluate existing literature on development communication, and demonstrate that communication forms an integral part of community development practices.					
OKT 881	**Information Science**	**30**			
Management of Development Communication 881 This module will be offered from a management perspective and will examine the role of development within the strategic management processes of an organisation. It will include the evaluation of development projects to suit the strategic objectives of the organisation and how to manage communication within a development project.					
OKT 882	**Information Science**	**30**			
The Practice of Development Communication 882 The focus of this module is the practical side of development communication. It includes: methods to research the target audience, action programmes for communication campaigns in communities and the different channels that can be used for the dissemination of development messages. It also contains a component in which a development message must be designed by taking into account target group, appropriate channel and distribution.					
OKT 883	**Information Science**	**30**			
Information Centres and Development Communication 883 This module will focus on the role of information centres in disseminating development information. Centres that will be studied as possible distribution points will include community libraries, telecentres and multi-purpose community centres.					
OKT 890	**Information Science**				
Development Communication: Dissertation 890 A comprehensive report (100-150 pages) on an approved research project.					
OKT 895	**Information Science**	**120**			
Development Communication (coursework): Mini-dissertation 895 A report (80-100 pages) on an approved research project.					
OKT 900	**Information Science**				
Examination: Development Communication 900					
OKT 990	**Information Science**				
Thesis: Development Communication 990					
PUB 712	**Information Science**	**20**			
Advanced electronic publishing The aim of this module is to teach and enable the student to build and mark up a document in XML (eXtensible Mark-up Language) or SGML (Standard Generalized Mark-up Language) for electronic publication.					
PUB 715	**Information Science**	**20**			
Advanced design and production An advanced module that explores the creation and preparation of integrated design solutions for paper and screen-based publications, taking account of specific functions, subject matter, composition and production processes, target audiences and budgeting constraints. Critical evaluation of visual manifestations and the communication and interpersonal skills needed to transmit creative ideas to other people are emphasized.					
PUB 721	**Information Science**	**20**			
Design and production A basic module that introduces the key disciplines, terminologies and professional contexts					

Module code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
necessary for the planning and management of the visual design, production and technological processes that a project will pass through during its development from concept to final product. Fundamental principles, elements and functions underlying the effective application and integration of typography, illustration, photography, visual design and technology are examined.					
PUB 722	**Information Science**	**20**			
Publishing management: Management and finance This module focuses on the theory and practice of publishing management. Issues addressed include the following: personal skills; general management skills; financial skills; new product development; costing; editorial issues.					
PUB 723	**Information Science**	**20**			
Publishing management: Organisation and processes This module focuses on the theory and practice of publishing management. Issues addressed include the following: human resources; legal skills; project management; sales and marketing; communication skills; logistics; leadership.					
PUB 724	**Information Science**	**20**			
The publishing environment: Developments and trends in the South African book industry This module is research-based. The focus is on developments and trends impacting on the value chain and supply chain of the local book industry. The overall objective of the module is to generate research that can contribute to information on the shape and size of this cultural industry.					
PUB 725	**Information Science**	**20**			
The publishing environment: Global developments and trends in book publishing This module is research-based. The focus is on global developments and trends impacting on book publishing as a cultural industry. The research parameters will be determined yearly by a selection of relevant global practices impacting on local developments and trends.					
PUB 726	**Information Science**	**20**			
Corporate Publishing This module offers an introduction to the corporate publishing environment. Themes that are addressed include the following: • Contextualising the corporate publishing environment (marketing and advertising; communication; identity; branding; forms of publications; process; team; contemporary key issues) • Writing for a corporate environment (persuasive writing; reporting; feature articles; interviewing; style and editing; ethics) • Liaising with the media (roles; strategy; types of media releases) • Workflow processes in a corporate publishing environment • Planning and designing a corporate publication programme.					
PUB 727	**Information Science**	**20**			
E-publishing This module focuses on characteristics, advantages and pitfalls of e-publications and e-publishing – both on the WWW, via the internet, or on other delivery platforms. Students are introduced to specific topics such as the role and function of a publisher in the e-environment; hypertext fiction; e-dictionaries; publishing and marketing e-journals; new publishing and delivery models because of e-technology; and technical aspects of e-publications.					

Module code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
PUB 801	**Information Science**	**120**			
Publishing (coursework): Coursework component 801					
PUB 890	**Information Science**				
Dissertation: Publishing 890 A comprehensive report on an aspect of Publishing.					
PUB 895	**Information Science**				
Mini-dissertation: Publishing 895					
PUB 900	**Information Science**				
Examination: Publishing 900 Justification of thesis/examination on thesis.					
PUB 990	**Information Science**				
Thesis: Publishing 990 A comprehensive and advanced report on an approved project. Expert, highly specialised and interdisciplinary research within Publishing.					

IT.31.3 THE FOLLOWING MODULES FALL UNDER THE FACULTY OF ECONOMIC AND MANAGEMENT SCIENCES

Module-code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
BEM 110	**Marketing Management**	**10**	**A&E 3 lpw**		**Sem 1**
Marketing Management 110 *Fundamentals of marketing management and marketing instruments:* General overview of marketing management, including the marketing concept, the process of marketing management, evolution of marketing and the marketing environment. Consumer entity, market segmentation, positioning and marketing information. Perspective on various marketing instruments in the marketing mix, for example, product decisions, distribution decisions, marketing communication decisions and pricing decisions.					
BEM 121	**Marketing Management**	**10**	**A&E 3 lpw**		**Sem 2**
Consumer behaviour and Services marketing 121 **Part 1** *Consumer behaviour* Internal and external influencing factors of consumer behaviour. The consumer's decision process and application fields of consumer behaviour. Consumerisms and social responsibility. **Part 2** *Introduction to the marketing of services* Acquiring basic marketing skills will enhance the capabilities of marketers of services. This module provides an overview of the seven marketing instruments of a professional services marketing mix. The focus will fall on the practical implications of the characteristics of intangible products and the pricing, promotion, placement, physical evidence, process and people dimensions of services marketing.					

Module-code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
BEM 211	**Marketing Management**	**16**	**A&E 3 lpw**		**Sem 1**

Product and distribution decisions 211

Part 1

Product decisions

Problem statement and concept determination of product decisions, management strategies of the organisation, organisational and product strategy, implementation of the product strategy, product and market development strategy and the product life cycle.

Part 2

Distribution decisions

The development and management of distribution channels - strategic aims, conventional marketing systems, the main role players, the integration of distribution with the other marketing instruments and relationship marketing; the influence of the external environment on channel design and management; the management of horizontal and vertical marketing systems and the forming of strategic alliances.

BEM 221	**Marketing Management**	**16**	**A&E 3 lpw**		**Sem 2**

Integrated marketing communication and pricing decisions 221

Part 1

Marketing communication decisions

Integrated marketing communication (IMC) approach; objectives and budgets for IMC programmes; management of advertising; sales promotion; personal selling; direct marketing; sponsorship, interactive media and internet marketing. Evaluation of IMC effectiveness.

Part 2

Pricing decisions

Influence of cost, demand and competition on effective pricing decisions; financial analysis of market-based pricing; value and price sensitivity; competitive influences on price determination; psychological aspects of pricing and strategic pricing decisions.

BEM 311	**Marketing Management**	**20**	**A&E 3 lpw**		**Sem 1**

Brand management and Marketing research 311

Part 1

Brand management

The scope of brand awareness, brand name associations and customer-brand relationships. The development of brand name concept management, brand name extensions and co-branding. Exploring direct marketing and brand name management, brand name architecture and brand name custodianship.

The brand name communication process, brand name decisions, brand name identity, brand name loyalty and brand name equity. The design of marketing strategies to establish and extend brand name equity.

Part 2

Marketing research

The use of marketing research in marketing decision making; the process of marketing research, research designs, random tests, consumer surveys, questionnaires, experimentation, observation, data analysis and analyses of marketing models. Scientific approach to marketing information, the influence of modern trends (computers, Internet). Integrated application of marketing research principles are assessed.

Module-code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
BEM 321	**Marketing Management**	**20**	**A&E 3 lpw**		**Sem 2**
Strategic issues in marketing and Strategic Marketing 321 **Part 1** *Strategic issues in marketing* Multi-level marketing; relationship marketing; e-marketing; brand loyalty; generation segmentation; knowledge management and ethics in marketing. Case studies, group discussions, seminars, and visits to/by organisations for meaningful integration of the theory and practice. **Part 2** *Strategic marketing* Strategic analysis; customer management; market strategies; globalization; strategy implementation; marketing planning and strategy evaluation and control. Case studies, group discussions, seminars, and visits to/by organisations for meaningful integration of the theory and practice.					
EKN 110	**Economics**	**10**	**A&E 3 lpw**		**Sem 1**
Economics 110 Conceptualise the interrelationships of the different sectors in South African economy. The functioning of international trade, government economics and policy, the labour market, monetary economics, economic development, and environmental economics with specific reference to the South African context. The impact of national and international decisions and events on the South African economy.					
EKN 113	**Economics**	**15**	**A&E 3 lpw**		**Sem 1**
Economics 113 *Introduction to economics and principles of microeconomics.* The scope of economics; the basic theory of demand and supply; price, income and cross elasticity of demand; consumer utility, the utility function and case studies in terms of the utility function; the theory of the firm in the short and long run; market structures namely the perfect market, monopoly, oligopoly and monopolistic competition; public sector finances; microeconomics vs macroeconomics and economic statistics.					
EKN 120	**Economics**	**10**	**A&E 3 lpw**		**Sem 2**
Economics 120 The economic environment and problem: working and course of the South African economy; functioning and interrelationships of the different economic sectors. Macroeconomic theory and analysis. Analyse and interpret economic performance criteria: economic growth, inflation, job creation, balance of payments and exchange rate stability, income distribution. Calculate and interpret core economic indicators. Basic microeconomic principles: demand analysis (consumer theory); supply analysis (producer theory). Market analysis: market equilibrium; price determination; market forms; market failure; calculate and interpret price, income and cross elasticities.					
EKN 123	**Economics**	**15**	**A&E 3 lpw**		**Sem 2**
Economics 123 *National income and principles of macroeconomics* The mechanics of national income accounts, the Keynesian macroeconomic model, the money market, demand for money and money supply, money and credit creation and the role of the monetary authorities. The IS-LM model of macroeconomic equilibrium and monetary and fiscal policy applications; The aggregate demand and supply models with the debate between the classical school, the monetarists and the Keynesian school. The					

Module-code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
problems of inflation and unemployment. Macroeconomic issues namely: macroeconomic policy, international trade, the balance of payments and economic growth.					
EKN 214	**Economics**	**16**	**A&E 3 lpw**		**Sem 1**
Economics 214 *Macroeconomics* From Wall and Bay Street to Diagonal Street, a thorough understanding of the mechanisms and theories explaining the workings of the economy is essential. Macroeconomic insight is provided on the real market, the money market, two market equilibrium, monetarism, growth theory, cyclical analysis, inflation, Keynesian general equilibrium analysis and fiscal and monetary policy issues. Mathematics for economics and econometric analysis of macroeconomic issues.					
EKN 215	**Economics**	**16**	**A&E 3 lpw**		**Sem 1**
Economics 215 *Monetary economics* The role and elements of the financial system in the economy economic description, functions, historic development, legal framework and asset and liability structures of financial institutions in South Africa. Financial instruments in the money market, financial instruments in the capital market, fixed interest securities market, variable interest securities market, stock market (shares), capital market instruments, foreign exchange market and instruments, futures market and contracts, options market and contracts. The meaning and functions of money, understanding interest rates, portfolio choice, the behaviour of interest rates, risk and term structure of interest rates, an economic analysis of the financial structure, multiple deposit creation and the money supply process, determinants of the money supply, the demand for money (different schools of thought) transmission mechanisms of monetary policy, money and inflation, theory of rational expectations and efficient capital markets, rational expectations and implications for policy. Global finance and the world economic environment, International Monetary System, Eurocurrency market and offshore banking, overview of the global financial markets the current monetary policy framework and policy process in South Africa possible future developments (including inflationary targets and modern central banking trends), bank regulation: the key role banks must play in the financial system and the basic reason for bank regulation and electronic banking					
EKN 224	**Economics**	**16**	**A&E 3 lpw**		**Sem 2**
Economics 224 *Microeconomics* Micro-economic insight is provided into: Consumer and producer theory, general micro-economic equilibrium, Pareto-optimality and optimality of the price mechanism, welfare economics, market forms and the production structure of South Africa. Statistical and econometric analysis of microeconomic issues.					
EKN 225	**Economics**	**16**	**A&E 3 lpw**		**Sem 2**
Economics 225 *Economic thought and development* History of economic thought and capita selecta of development issues. Economic systems: types, origin and historical development, history of economic thought, the history of western and other economic systems.					
EKN 310	**Economics**	**20**	**A&E 3 lpw**		**Sem 1**
Economics 310 *Public finance* Role of government in the economy. Welfare economics and theory of optimality. Ways of					

Module-code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
correcting market failures. Government expenditure theories, models and programmes. Government revenue. Models on taxation, effects of taxation on the economy. Assessment of taxation from an optimality and efficiency point of view. South African perspective on public finance.					
EKN 314	**Economics**	**20**	**A&E 3 lpw**		**Sem 1**
Economics 314 *International trade/finance* International economic insight is provided into international economic relations and history, theory of international trade, international capital movements, international trade politics, economic and customs unions and other forms or regional co-operation and integration, international monetary relations, foreign exchange markets, exchange rate issues and the balance of payments, as well as open economy macroeconomic issues.					
EKN 320	**Economics**	**20**	**A&E 3 lpw**		**Sem 2**
Economics 320 *Economic analyses* Identification, collection and interpretation process of relevant economic data; the national accounts (i.e. income and production accounts, the national financial account, the balance of payments and input-output tables); economic growth; inflation; employment, unemployment, wages, productivity and income distribution; business cycles; financial, fiscal and social indicators; international comparisons; relationships between economic time series - regression analysis; long-term future studies and scenario analysis; overall assessment of the South African economy over the period from 1960 onwards.					
EKN 325	**Economics**	**20**	**A&E 3 lpw**		**Sem 2**
Economics 325 *Economic development: capita selecta* Political economy: Several macroeconomic policy issues such as fiscal and monetary policy, international trade policy, labour policy and competition policy. Economic development is studied from the perspective of South Africa as a developing nation. Several capita selecta is covered with the focus on sustainability of development in the South African and regional context.					
FBS 200	**Financial Management**	**32**	**3 lpw**		**Year**
Financial Management 200 The purpose and functioning of management accounting, cost classification. The determination of product costs including raw material costs, labour costs, overheads and the allocation thereof according to traditional and activity-based costing methods, inventory management, the accumulation of costs according to job and process costing systems, the treatment of joint and by-products and the determination of costs according to a direct and absorption costing approach. Decision-making with reference to cost-volume-profit ratios, relevant costs, risk and uncertainty, decision trees, linear programming and capital investment budgets. Planning and control through the application of quantitative techniques, budgets and standard costing. **Prerequisite:** [FRK 100 or 101]					
FBS 210	**Financial Management**	**16**	**3 lpw**		**Semester 1**
Financial Management 210 Framework and purpose of financial management; understanding financial statements; analysis of financial statements for decision making; time value of money; risk and return relationships; business valuation; short-term planning; current asset management; long-term financing decisions. **Prerequisite:** [FRK 111 and 121]					

Module-code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
FBS 220	**Financial Management**	**16**	**3 lpw**		**Semester 2**
Financial Management 220 The purpose and functioning of management accounting, cost classification; the determination of product costs including raw material costs, labour costs, overheads and its allocation according to traditional and activity-based costing methods, inventory management, the accumulation of costs according to job and process costing systems, the treatment of joint and by-products and the determination of costs according to a direct and absorption costing approach; decision-making with reference to cost-volume-profit ratios, relevant costs, risk and uncertainty. **Prerequisite:** [FRK 111 and 121]					
FBS 300	**Financial Management**	**40**	**4 lpw**		**Year**
Financial Management 300 The purpose and functioning of management accounting, cost classification. The determination of product costs including raw material costs, labour costs, overheads and the allocation thereof according to traditional and activity-based costing methods, the accumulation of costs according to job and process costing systems, the treatment of joint and by-products and the determination of costs according to a direct and absorption costing approach. Decision-making with reference to cost-volume-profit ratios, relevant costs, risk and uncertainty, decision trees, linear programming and capital investment budgets, principles of project management. Planning and control through the application of quantitative techniques, budgets and standard costing. Performance measurement by means of the principles of responsibility accounting and the determination of transfer prices. Financial Management by taking cognisance of the purpose of Financial Management, working capital management, financing decisions, cost of capital, dividend policy, capital structure decisions, share valuation. The student should be capable of applying the underlying theory to advance case studies. **Prerequisite:** [FBS 200]					
FBS 310	**Financial Management**	**20**	**3 lpw**		**Semester 1**
Financial Management 310 Standard costing with reference to application and evaluation; preparation and evaluation of plans, budgets and forecasts; techniques for allocating and managing resources; costing and accounting systems evaluation; techniques used in management decision making; new developments in business and management accounting; case study perspective. **Prerequisite:** [FBS 210, 220]					
FBS 320	**Financial Management**	**20**	**3 lpw**		**Semester 2**
Financial Management 320 Cost of capital; determination of capital requirements and the financing of a business to maintain the optimal capital structure; the investment decision and the study of financial selection criteria in the evaluation of capital investment projects; impact of inflation and risk on capital investment decisions; evaluation of leasing decisions; dividend decisions; international financial management. **Prerequisite:** [FBS 310GS]					
FRK 111	**Financial Accounting**	**10**	**A&E 4 lpw**		**Semester 1**
Financial Accounting 111 The nature and functioning of Accounting; the development of Accounting; financial position; financial result; the recording process; processing of Accounting data; elementary income statement and balance sheet; flow of documents; accounting systems; introduction to internal control and internal control measures; bank reconciliations; control accounts; adjustments; financial statements of a sole proprietorship.					

Module-code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
FRK 121	**Financial Accounting**	**12**	**A&E 4 lpw**		**Semester 2**
Financial Accounting 121 Elements of financial statements in detail. The conceptual framework. Income statement, balance sheet, cash flow statement and analysis and interpretation of financial statements of clubs, partnerships, close corporations. Introduction to companies. **Prerequisites:** [FRK111 GS]					
FRK 201	**Financial Accounting**	**32**	**A&E 4 lpw**		**Year**
Financial Accounting 201 Accounting for investment transactions, debentures and instalment sale agreements. Consolidation techniques and preparation of group financial statements. Preparation and presentation of company annual financial statements in compliance with the requirements of the Companies Act and certain statements of generally accepted accounting practice. Contents of interim reports and provisional financial statements in compliance with Companies Act requirements. **Prerequisite:** [FRK 100 or 101 and STK 110, 120]					
FRK 211	**Financial Accounting**	**16**	**A&E 4 lpw**		**Semester 1**
Financial Accounting 211 Accounting aspects of the Companies Act and the Fourth Schedule, conceptual framework. Income Recognition. Earnings and dividends per-share. Income tax. Fundamental errors and changes in accounting policies. Events and contingencies. Cash flow statements. Branches. **Prerequisite:** [FRK 111, 121; IT.2(d)]					
FRK 221	**Financial Accounting**	**16**	**A&E 4 lpw**		**Semester 2**
Financial Accounting 221 Tangible and intangible assets. Interest bearing investments. Speculative Investments. Inventories. Change in organizational form. Introduction to group statements. Joint Ventures. Associated enterprises. **Prerequisite:** [FRK 211 GS, INF 181]					
FRK 300	**Financial Accounting**	**40**	**A&E 4½ lpw**		**Year**
Financial Accounting 300 Revision of accounting requirements of the Companies Act with advanced problems, introduction to company tax. Viewpoints regarding generally accepted accounting practice. Introduction to group statements (consolidated accounts), with minority shareholders as well as horizontal, vertical and mixed groups. Analysis and interpretation of financial statements (including cash-flow statement) with reporting for the various purposes which such reports are used for. The technical ability to apply the aforementioned theory to complex problems, is essential. **Prerequisite:** [FRK 201]					
FRK 311	**Financial Accounting**	**20**	**A&E 4 lpw**		**Semester 1**
Financial Accounting 311 Aspects of general accepted accounting practice. Overview of the related taxation and auditing aspects. **Prerequisites:** [FRK 211, 221, BEL 220]					
FRK 321	**Financial Accounting**	**20**	**A&E 4 lpw**		**Semester 2**
Financial Accounting 321 Integrated group statements. Minority interest in horizontal, vertical and complex groups. Foreign entities. Integrated group statements, including associated and joint entities. Consolidated cash flow statements. Segmental reporting. **Prerequisites:** [FRK 311 GS, BEL 220]					

Module-code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
INF 181	**Financial Accounting**	**3**	**A&E 2 lpw**		**Sem 1 or 2**
Financial Accounting 181 (Presented in both the first and second semester.) Computer processing of accounting information. **Prerequisites:** [IT.2(d)]					
KOB 181-184	**Marketing and Communication Management**	**5**	**A&E 3 lpw**		**Sem 1, 2, 3, 4**
Communication Management 181-184 *(Module content will be adapted in accordance with the appropriate degree programme.)* *Applied business communication skills* Acquiring basic business communication skills will enhance the capabilities of employees, managers and leaders in the business environment. An overview of applied skills on the intrapersonal, dyadic, interpersonal, group (team), organisational, public and mass communication contexts is provided. The practical part of the module (for example, the writing of business reports and presentation skills) concentrates on the performance dimensions of these skills as applied to particular professions.					
KOB 210	**Marketing and Communication Management**	**16**	**A&E 3 lpw**		**Sem 1**
Communication Management 210 *Management communication* Based on the paradigm of Integrated Communication (IC), this semester covers management communication theory, leadership and supervisory communication, as well as the management of change and transformation through communication. Management communication in the global arena focuses on the dynamics and celebration of diversity and intercultural relations. Managers should take cognisance of the importance of development communication in both a business and community context. The importance of ethical considerations in managerial and leadership communication is emphasized. After explaining quantitative and qualitative research designs, appropriate communication research techniques are explored.					
KOB 220	**Marketing and Communication Management**	**16**	**A&E 3 lpw**		**Sem 2**
Communication Management 220 *Organisational communication management* Through the utilisation of organisational communication management theories, a study is made of group and team communication, with specific emphasis on facilitation, negotiation and innovation. Knowledge management, internal communication, culture and organisational climate are core components of the complex dynamics of the sharing of meaning within the organisation. The function of strategic communication is emphasised throughout. Ethical considerations in organisational communication management are also stressed and appropriate research techniques are presented.					
KOB 310	**Marketing and Communication Management**	**20**	**A&E 3 lpw**		**Sem 1**
Communication Management 310 *Strategic communication management* Integrated Communication (IC) presupposes the alignment and subsequent implementation					

Module-code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
of the enterprise, corporate and corporate communication strategies of the organisation. The corporate positioning that results from these strategies is communicated through the organisation's unique reputation, image, identity and brand. Environmental scanning furthermore enables the organisation to identify and address issues, risks and possible crises that can influence this positioning. Current corporate governance thinking supports the principle of a symbiotic relationship between business and society by emphasising economic, environmental and social sustainability (the triple bottom-line). This culminates in a new realisation of the organisation's corporate social responsibility and its role as a corporate citizen. Ethics in strategic management are highlighted and applicable research techniques are analysed.					
KOB 320	**Marketing and Communication Management**	**20**	**A&E 3 lpw**		**Sem 2**
Communication Management 320 *Strategic relationship management* The strategic management of internal and external relationships are essential for the organisation's 'licence to operate'. Stakeholder theories provide a framework for managing relationships with stakeholders such as employees, investors, media and the government. The growing significance and potential impact of activism on organisational performance, justifies the management of such pressure groups through communication. Deontological and teleological ethical approaches are investigated in the strategic management of relationships. The complexity of ethical decision-making in the modern business environment, as well as anti-ethics and African ethics amongst others, are also studied. Perception, social and stakeholder audits are examples of idiosyncratic research designs undertaken in strategic reputation management.					
OBS 110	**Business Management**	**10**	**A&E 3 lpw**		**Sem 1**
Business Management 110 Introduction to Business Management as a science, the environment in which the enterprise operates, the field of business, the mission and goals of an enterprise, management and entrepreneurship. The choice of a form of enterprise, the choice of products and/or services, profit and cost planning for different sizes of operating units, the choice of location, the nature of production processes and the layout of the plant or operating unit.					
OBS 113	**Entrepreneurship**	**10**	**A&E 3 lpw**		**Sem 1**
Entrepreneurship 113 Introduction to the South African entrepreneurship environment. Entrepreneurship: the construct including the culture of entrepreneurship. Characteristics of South African entrepreneurs, entrepreneurship in the informal sector.					
OBS 120	**Business Management**	**10**	**A&E 3 lpw**		**Sem 2**
Business Management 120 Introduction to and overview of general management, especially regarding the five management tasks, strategic management, contemporary developments and management issues, financial management, marketing, public relations. (Note: For marketing students, marketing is replaced by financial management, and public relations by small business management.) Introduction to and overview of the value chain model, management of the inputs, management of the purchasing function, management of the transformation process with specific reference to production and operations management, human resources management, and information management.					

Module-code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
(Note: For information management students, information management is replaced by small business management.) **Prerequisite:** [OBS 110 GS]					
OBS 123	**Entrepreneurship**	**10**	**A&E 3 lpw**		**Sem 2**
Entrepreneurship 123 Feasibility of new opportunities, the business plan and its subsections: Marketing plan, operational plans, financial plan, purchasing plan and administrative plan. Importance of entrepreneurship in South Africa, case studies of successful entrepreneurs, female entrepreneurs. **Prerequisite:** [OBS 113GS]					
OBS 210	**Business Management**	**16**	**A&E 3 lpw**		**Sem 1**
Business Management 210 *Logistics management.* The role of logistics in an enterprise, definition and scope of customer service, electronic and other logistics information systems, inventory management, materials management with special reference to Japanese systems, management of the supply chain. Methods of transport and transport costs, types and costs of warehousing, electronic aids in materials handling, cost and price determination of purchases, organising for logistics management, methods for improving logistics performance. **Prerequisite:** [OBS 110 or 120 with a GS in the other]					
OBS 213	**Entrepreneurship**	**16**	**A&E 3 lpw**		**Sem 1**
Entrepreneurship 213 Creativity, innovation and identification of opportunities: synopsis of creativity, techniques to facilitate creativity, barriers to creativity, creative thinking versus critical thinking. Creative problem solving and identification of opportunities: identification of opportunities; development of ideas, evaluation and prioritizing of ideas. Reinforcement of personal attributes: personal attributes and actions to facilitate creativity, enhancement of intuitive abilities. **Prerequisite:** [OBS 113 or 123 with a GS in the other]					
OBS 220	**Business Management**	**16**	**A&E 3 lpw**		**Sem 2**
Business Management 220 *Project management – introductory.* Project management concepts, needs identification, the project, the project manager and the project team, types of project organizations, project communication and documentation. planning and control: Planning, scheduling and schedule control of projects, resource considerations and allocations, cost planning and performance evaluation. **Prerequisite:** [OBS 110 or 120 with a GS in the other]					
OBS 223	**Entrepreneurship**	**16**	**A&E 3 lpw**		**Sem 2**
Entrepreneurship 223 Entrepreneurial process, new ideas, identification of opportunities, the entrepreneurial mind in action, the entrepreneurial manager, new business plans. Ethics and the entrepreneur, management of growth, entrepreneurs in unsuccessful businesses, closure of the entrepreneurial process (harvesting). **Prerequisite:** [OBS 213 GS]					
OBS 313	**Entrepreneurship**	**20**	**A&E 3 lpw**		**Sem 1**
Entrepreneurship 313 Nature of small business management, management of entrepreneurial opportunities, management of the business plan, small business marketing, purchasing, operational and financial management. Social and legal small business environment in South Africa: all					

Module-code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
legal requirements entrepreneurial businesses have to comply with. **Prerequisite:** [OBS113, 123, 213, 223 GS]					
OBS 315	**Business Management**	**20**	**A&E 3 lpw**		**Sem 1**
Business Management 315 **Introduction to electronic business** An introduction to the field of electronic business in which the implications of electronic business on the enterprise and existing business models are dealt with. Some business applications concerning aspects of e-law are also dealt with. **Prerequisite:** [OBS 110, or 120 with a GS in the other]					
OBS 323	**Entrepreneurship**	**20**	**A&E 3 lpw**		**Sem 2**
Entrepreneurship 323 Development of performance motivation, development of positive motives, role models, level of performance motivation, reinforcement of performance motivation, strategies and action plans. Franchising, small business consultation, business acquisitions, mentorship, female entrepreneurs, family business, home industries and management of growth. **Prerequisite:** [OBS 313 GS]					
OBS 325	**Business Management**	**20**	**A&E 3 lpw**		**Sem 2**
Business Management 325 **Introduction to electronic commerce** An introduction to the domain of electronic commerce in which the implications of online trading on the enterprise and existing business models are studied. Strategic positioning of the enterprise via electronic commerce activities will be introduced. Some business applications concerning e-law with regard to e-commerce are also dealt with. **Prerequisite:** [OBS 110, or 120 with a GS in the other]					
PAD 110	**School: Public Management**	**10**	**3 lpw**		**Sem 1**
Public Administration 110 *Introduction and Constitutional Framework of Public Administration* South African system of government. Dynamic nature of Public Administration. Public and judicial institutions. Human Rights Commission. Commission on Gender Equality, Bill of Rights. The roles of public administration, Focus of public administration. Politics, government and administration. Origin, development and contents of the discipline. Approaches in public administration. Relationships between public administration and other academic disciplines. Administrative functions.					
PAD 120	**School: Public Management**	**10**	**3 lpw**		**Sem 2**
Public Administration 120 *Delivery of public services and standards setting in Public Administration* Service motive. Public administration: its services and customers. Relations amongst legislative, executive and judicial institutions. Problems and possibilities of development. Development of the state Education, Cultural development. Creation of wealth. Utilisation of resources. Change and modernization. *Protective role of state* Health services. Welfare services. Environmental affairs. Social services. The judiciary and judicial institutions. Security services. Crime in the public service. The constitutional state's protective role. Normative guidelines and ethical conduct. Practices of public administration. Rights and obligations of the state. Authority of the State.					

Module-code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
PAD 210	**School: Public Management**	**16**	**3 lpw**		**Sem 1**

Public Administration 210

Public Organisational Dynamics and Policy Studies

Organisation and management concepts. Bureaucratization. Organisational culture. Departmentalisation in the various governmental spheres. Delegation, communication, Organisational change and development. Organisational behaviour. Organisational conflict. Political and organizational analysis. Group dynamics. Structural design of organizations. Organisation development. Roleplayers in public policy. Policy and programme formulation. Decision-making and problem solving. Legislation and public policy. Policy-making process. Public opinion. Policy implementation. Policy effectiveness and evaluation. Policy alternatives. The press and public policy. Decision analysis in the public sector. Policy making and governance. Quantative tools for policy making. Policy analysis. Analytical policy studies. Tools of policy analysis.

PAD 220	**School: Public Management**	**16**	**3 lpw**		**Sem 2**

Public Administration 220

Public Sector Financial Management and Human Resource Management

Role of the public sector manager in public sector finance. Administration of financial process. Accounting systems. State revenue (taxes, service fees, subsidies borrowing). Regulation and competition policy. Debt management. Cooperative government. Fiscal relations. Growth and development. Financing of the Reconstruction and Development Programme. Public sector competitiveness and productivity. Resource utilisation and management. Cost benefit analysis. Financial accountability. Contracting and provisioning. Analysis of fiscal policy (inflation, deficit, government debt). Role of the Auditor-General. Change management. Utilisation of personnel, personnel training and career development. Conditions of service. Labour relations. Negotiations, Women in public administration. Professionalism, Job analysis, Job evaluation. Wage and salary management. Performance appraisal systems. Compensation systems. Pension systems and other issues of retirement.

PAD 310	**School: Public Management**	**20**	**3 lpw**		**Sem 1**

Public Administration 310

Public sector managerial techniques and validity requirements

Knowledge and skills requirements for public managers. Management techniques. Management of and for Administrative modernization. Conflict resolution in the public Management of and for Administrative quality and innovation. System analysis. Project management. Risk management. Management of change. Bureaucracy. Strategic planning. Management practices. Accountability and democracy. Democratic public accountability. Democratic public responsibility. Accounting officers. Ombudsman systems. Role of the public protector. Cost benefit. Cost effectiveness analysis. Validity requirements in public institutions.

PAD 320	**School: Public Management**	**20**	**3 lpw**		**Sem 2**

Public Administration 320

Public Sector Ethics and E-government

The state, the individual, ethics and service rendering and professionalism. Electronic transactions and electronic service delivery. Public sector communication.

Module-code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
STK 110	**Statistics**	**13**	**A&E 3 lpw + 1 ppw**		**Sem 1**

Statistics 110
Descriptive Statistics
Sampling and the collection of data, frequency distributions and graphical representations. Descriptive measures of location and dispersion.
Probability and inference
Introductory probability theory and theoretical distributions. Sampling distributions. Estimation theory and hypothesis testing of sampling averages and proportions (one- and two-sample cases). Identification, use, evaluation and interpretation of statistical computer packages and statistical techniques.
Prerequisite: Mathematics 50%(D) HG or 70%(B) SG

STK 113	**Statistics**	**11½**	**A&E 3 lpw + 1 ppw**		**Sem 1**

Statistics 113
Data operations and transformations
Introductory concepts: the role of Statistics, various types of data and the number system. Concepts underlying linear, quadratic, exponential, hyperbolic and logarithmic transformations of quantitative data: graphical representations, solving of equations and interpretations. Determining linear equations in practical situations. Characteristics of logarithmic functions. The relationship between the exponential and logarithmic functions in economic and related problems. Systems of equations in equilibrium. Additional concepts relating to data processing: functions and inverse functions, sigma notation, factorial notation, sequences and series, inequalities (strong, weak, absolute, conditional and double) and absolute values.
Descriptive Statistics – Univariate
Sampling and the collection of data, frequency distributions and graphical representations. Descriptive measures of location and dispersion. Identification, use, evaluation and interpretation of statistical computer packages and statistical techniques.

STK120	**Statistics**	**13**	**A&E 3 lpw + 1 ppw**		**Sem 2**

Statistics 120
Multivariate statistics:
Analysis of variance, categorical data analysis, distribution-free methods, curve fitting, regression and correlation, the analysis of time series and indices. Statistical and economical applications of quantitative techniques: Systems of linear equations:
drafting, matrices, solving and application. Optimisation: linear functions (two and more independent variables), non-linear functions (one and two independent variables). Marginal and total functions. Stochastic and deterministic variables in statistical and economical context: producers' surplus, consumers' surplus, distribution functions, probability distributions and probability density functions. Identification, use, evaluation and interpretation of statistical computer packages and statistical techniques.
Prerequisite: [STK110 GS]

STK 123	**Statistics**	**11½**	**A&E 3 lpw + 1 ppw**		**Sem 2**

Statistics 123
Optimization techniques with economic applications
Data transformations and relationships with economic applications: operations and rules, linear, quadratic, exponential, hyperbolic and logarithmic functions, systems of equations in

Module-code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
equilibrium, system of linear inequalities, solving of linear programming problems by means of the graphical and extreme point methods. Applications of differentiation and integration in statistic and economic related problems: the limit of a function, continuity, rate of change, the derivative of a function, differentiation rules, higher order derivatives, optimization techniques, the area under a curve and applications of definite integrals. *Probability and inference* Introductory probability theory and theoretical distributions. Sampling distributions. Estimation theory and hypothesis testing of sampling averages and proportions (one- and two-sample cases). Identification, use, evaluation and interpretation of statistical computer packages and statistical techniques. **Prerequisite:** [STK113 GS]					

IT.31.4 THE FOLLOWING MODULES FALL UNDER THE FACULTY OF HUMANITIES

Module-code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
AFR 110	**Afrikaans**	**12**	**A 2 lpw**	**WebCT**	**Semester 1**
Afrikaans 110 Ou mod.: AFR 159+160: Taal- en Teksvaardigheid I en II ***Taal- en teksvaardigheid:*** Taalvaardigheid (norme vir Afrikaans) en voorbereiding vir die skryfprosess (met inagnemning van o.a. verskillende tekssoorte, teksdoelwitte, interne teksstrukture, argumentasieskemas, stilistiese eise vir tekste, bronverwysing en taalversorging). Akademiese skryfvaardigheid kom ook aan bod.					
AFR 120	**Afrikaans**	**12**	**A 2 lpw**	**WebCT**	**Semester 2**
Afrikaans 120 Ou mod.: AFR 162+163: Inleiding tot teksstudie ***Inleiding tot teksstudie:*** Inleiding tot literatuursoorte, verhaalteorie en poësieteorie met toespitising op verhaal- en eietydse poësietekste.					
AFR 114	**Afrikaans**	**12**	**A 2 lpw**		**Semester 1**
Afrikaans 114 Ou mod.: AFR 164+165: Afrikaans vir Sprekers van ander tale 1 en 2 ***Afrikaans vir Sprekers van ander tale 1*** Geïntegreerde praat-, luister-, lees- en skryfvaardighede vir gevorderde aanleerders.					
AFR 124	**Afrikaans**	**12**	**A 2 lpw**		**Semester 2**
Afrikaans 124 Ou mod.: AFR 166+167: Afrikaans vir Sprekers van ander tale 3 en 4 ***Afrikaans vir Sprekers van ander tale II*** Geïntegreerde praat-, luister-, lees- en skryfvaardighede vir gevorderde aanleerders.					
AFR 265	**Afrikaans**	**10**	**A 1 lpw**	**WebCT**	**Sem 1**
Leer Nederlands 265 Die verwerwing van Nederlands as 'n tweede en 'n vreemde taal binne goed omlynde algemene beginsels, met die klem op spreekvaardighede.					
AFR 266	**Afrikaans**	**10**	**A 2 lpw**	**WebCT**	**Qr 1**
Afrikaanse letterkunde (1) 266 'n Ondersoek na teoretiese, literêr-historiese en tematiese aspekte van die Afrikaanse verhaaltradisie.					

Module-code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
AFR 267	**Afrikaans**	**10**	**A 2 lpw**	**WebCT**	**Qr 2**
Afrikaanse letterkunde (2) 267 'n Ondersoek na teoretiese, literêr-historiese en tematiese aspekte van die Afrikaanse poësietradisie.					
AFR 268	**Afrikaans**	**10**	**A 2 lpw**	**WebCT**	**Qr 1**
Nederlandse letterkunde (1) 268 'n Keuse uit eietydse Nederlandstalige literatuur; analitiese teksondersoeke met aandag aan agtergrond- en resepsieaangeleenthede.					
AFR 269	**Afrikaans**	**10**	**A 2 lpw**	**WebCT**	**Qr 3**
Afrikaans vir die onderwys 269 Studie van uitkomsgebaseerde onderwys; literêre vaardigheid; funksies van taal- en literatuuronderwys; insigte uit die moderne taal- en literatuurwetenskap; Afrikaanse tekste.					
AFR 358	**Eenheid vir Akademiese Geletterdheid**	**15**	**A 2 lpw**	**WebCT**	**Qr 4**
Redigering 358 Versorging van Afrikaanse tekste met betrekking tot korrekte taal- en leestekengebruik, feitelike korrektheid, bibliografiese versorging, teksstruktuur, en skryf vir verskillende teikengroepe.					
AFR 362	**Afrikaans**	**15**	**A 2 lpw**	**WebCT**	**Qr 3**
Afrikaanse letterkunde (3) 362 'n Gevorderde ondersoek na teoretiese, literêr-historiese en tematiese aspekte van die Afrikaanse verhaaltradisie.					
AFR 363	**Afrikaans**	**15**	**A 2 lpw**	**WebCT**	**Qr 1**
Afrikaanse letterkunde (4) 363 'n Gevorderde ondersoek na teoretiese, literêr-historiese en tematiese aspekte van die Afrikaanse poësietradisie.					
AFR 364	**Afrikaans**	**15**	**A 2 lpw**	**WebCT**	**Qr 4**
Nederlandse letterkunde (2) 364 'n Gevorderde studie van eietydse Nederlandstalige literatuur.					
AFR 365	**Afrikaans**	**15**	**A 2 lpw**	**WebCT**	**Qr 2**
Afrikaanse taalkunde 365 *Capita selecta* uit die Afrikaanse taalkunde: Afrikaanse fonetiek, morfologie, sintaksis, leksikologie en leksikografie; Afrikaanse diversiteit; Afrikaanse pragmatiek en die diachronie van Afrikaans.					
AFR 366	**Afrikaans**	**15**	**Nederlands 1 lpw**		**Sem 2**
Leer Nederlands (2) 366 ** Vereiste: AFR 265* Die verwerwing van Nederlands as 'n tweede en vreemde taal binne die kader van goed omlynde algemene beginsels. Hierdie module bou voort op AFR 265 met die verdere uitbreiding van woordeskat en grammatiese strukture. Skryfvaardigheid kom in hierdie module aan bod.					
EAG 151	**Academic**	**6**	**A&E 2 lpw**	**A&E 2 lpw**	**Quarter 1**
Academic skills 151 Develop academic skills to be able to set goals, manage time, take notes, study effectively and solve problems through analytical and critical thinking.					

Module-code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
ENG 158	**English**	**6**	**E 2 lpw 1 dpw**		**Qr 4**
English for specific purposes 158 This module is intended to equip students with a thorough knowledge of English grammar, and is particularly useful for those interested in a career in teaching, editing, document design or other forms of language practice.					
ENG 110	**English**	**12**	**E 2 lpw 1 dpw**	**E 2 dpw**	**Sem 1**
English 110 ENG 151 + ENG 154 ***Introduction to Literature in English (1)*** This module introduces the study of literature by examining a number of texts representing different genres (poetry, prose, drama). The texts studied here will be mainly from the pre-twentieth century era and may include texts written in English from both Africa and other parts of the world. The aim of this module is to equip students with the critical and analytical skills required for a perceptive reading of poetry, novels and plays.					
ENG 120	**English**	**12**	**E 2 lpw 1 dpw**	**E 2 dpw**	**Sem 2**
English 120 ENG 153 + ENG 162 ***Introduction to Literature in English (2)*** This module introduces the study of post-nineteenth century literature by examining a number of texts representing different genres (poetry, drama, prose). Texts will be from both Africa and other parts of the world. By the end of this module students should have the background and analytical skills to perceptively read modern and contemporary poetry, novels and plays.					
ENG 251	**English**	**10**	**E 2 lpw 1 dpw**	**E 2 dpw**	**Qr 4**
Poetry after 1798 251 ** Requires ENG 151* In this module, students will study the work of poets ranging from the Romantic period to the Modern. The general characteristics and techniques of specific poets will be discussed in relation to developments in aesthetic theory and socio-historical changes.					
ENG 252	**English**	**10**	**E 2 lpw 1 dpw**	**E 2 dpw**	**Qr 2**
Language studies 252 In this module, students will be introduced to basic linguistic and socio-linguistic disciplines including the study of English phonetics and syntax. The history and development of the English language will be outlined and various areas of applied linguistics highlighted.					
ENG 253	**English**	**10**	**E 2 lpw 1 dpw**	**E 2 dpw**	**Qr 3**
The modern novel 253 ** Requires ENG 153* In this module, students will read a representative selection of late 19th-century and 20th-century English novels. They will also be introduced to the key principles of the modernist movement, elementary narratology and other relevant theoretical and critical concepts.					
ENG 254	**English**	**10**	**E 2 lpw 1 dpw**	**E 2 dpw**	**Qr 1**
Twentieth-century drama 254 ** Requires ENG 154* In this module, an overview of significant trends in British and American drama, exemplified in key texts, is given. At the end of this module, students should have an understanding of the development of Anglo-American drama within the period.					
ENG 351	**English**	**15**	**E 2 lpw 1 dpw**	**E 2 dpw**	**Qr 2**
Poetry before 1798 351 ** Requires ENG 251* In this module, students will study the works of representative poets from Chaucer to Pope.					

Module-code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
The general characteristics and techniques of specific poets will be discussed in relation to developments in aesthetic theory and socio-historical change.					
ENG 353	**English**	**15**	**E 2 lpw 1 dpw**	**E 2 dpw**	**Qr 3**
The rise of the novel 353 ** Requires ENG 253* In this module, students will read a representative selection of 18th and 19th-century novels in English. Various literary theories will inform the reading of these texts. By the end of this module, students should be able to read, discuss and analyse novels written during this period with enhanced understanding and sophistication.					
ENG 354	**English**	**15**	**E 2 lpw 1 dpw**	**E 2 dpw**	**Qr 1**
Shakespeare 354 ** Requires ENG 254* This module will examine several of Shakespeare's plays in the genres of comedy, tragedy, history and romance. By the end of the module, students should have an understanding of Shakespeare's dramatic oeuvre, be able to discuss characteristic features of his work and write informed analyses of scenes taken from his plays.					
ENG 355	**English**	**15**	**E 2 lpw 1 dpw**	**E 2 dpw**	**Qr 4**
African literature 355 This module will examine a variety of African and South African texts in English, including poetry, drama and prose. Texts will be placed in their socio-historical contexts, and characteristic features of and developments in African literature as well as theoretical debates in this field will be highlighted.					
ENG 356	**English**	**15**	**E 2 lpw**		**Qr 3**
Introduction to Teaching English to students of other languages (1) 356 ** Requires ENG 158* ** Requires a minimum of 64 credits ENG* This module introduces both the theoretical and practical dimensions of TESOL (Teaching English to Speakers of Other Languages). The emphasis of this module is theoretical, covering: (i) the nature of the foreign/second-language learning process; and (ii) the grammar and sound system of English from the perspective of foreign/second-language learning.					
ENG 357	**English**	**15**	**E 2 lpw**		**Qr 4**
Introduction to Teaching English to students of other languages (2) 357 ** Requires ENG 356* This module extends the introduction to TESOL. Its emphasis is practical, covering: (i) the major approaches and methods of foreign/second-language teaching; (ii) available resources for teaching English as a foreign/second-language; and (iii) the international TESOL community (journals, organisations, websites, examining authorities, etc.).					
ENG 358	**English**	**15**	**E 2 lpw**		**Qr 1**
Editing principles and practice 358 ** Requires a minimum of 64 credits in ENG modules, with a minimum average of 65% in the second year ENG modules OR a pass mark in a departmental entrance test.* ** Requires ENG 158.* This module develops language-editing skills on a variety of texts from different fields and of varying levels of complexity for a specific target audience. Students are required to edit work, to produce grammatical, idiomatic and logical English texts, taking into account peculiarities of South African English and local needs. They will learn to adjust work to meet the needs of a specified target audience.					

Module-code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
ENG 359	**English**	**15**	**E 2 lpw**		**Qr 2**

Editing principles and practice 359

** Requires ENG 358*

This module practises advanced language-editing skills on a variety of texts from different fields and of varying levels of complexity for a specific target audience. The principles of plain language editing are applied, in addition to strategies for overcoming textual complexity for given audiences, ranging from academics to neo-literate. A specialist focus is the editing of translations.

EOT 110	**Unit for Academic Literacy**		**A&E 2 lpw Tutorial 1 lpw**	**A&E 2 lpw**	**Sem 1**

Academic literacy (1) 110

An introduction to academic literacy that considers various language learning styles and strategies, and provides an initial exploration of the characteristics of academic language. The course focuses initially on academic listening and speaking. Practice in collecting information for academic tasks, as well as in the processing of academic information. In addition, the module has a focus on the enhancement of academic vocabulary, and some initial and elementary academic writing is attempted.

EOT 120	**Unit for Academic Literacy**	**6**	**A&E 2 lpw Tutorial 1 lpw**	**A&E 2 lpw**	**Sem 2**

Academic literacy (2) 120

While retaining an emphasis on the collection and processing of academic information, this module also provides sustained practice in academic reading. Similarly, we concentrate on building up an academic vocabulary specific to certain fields of study. The final part of the module brings together academic listening, reading and writing. The production of academic information in the form of argumentative writing is the focus here, i.e. we concentrate on producing academic discourse that is rational, coherent, clear and precise.

FIL 110	**Philosophy**	**12**	**A&E 2 lpw**		**Sem 1**

Philosophy 110 FIL 151 + FIL 152

Introduction to Philosophy and Ethics

This module introduces learners to the discipline of Philosophy and the subfield of Philosophical Ethics. Learners will discover the nature of philosophical reflection by exploring a number of classical philosophical themes such as the nature of human beings (philosophical anthropology), the question on the meaning of life as well as moral philosophy. In the latter theme the question on what is good or right in human behaviour and interaction will be examined. This will be done by studying some classical ethical theories and then applying them to contemporary moral issues. Throughout the module there will be an emphasis on developing those critical thinking, reading and writing skills that are required in Philosophy.

FIL 120	**Philosophy**	**12**	**A&E 2 lpw**		**Sem 2**

Philosophy 120 FIL 153 + FIL 254

Philosophy of Science and Logic

The focus is on the nature of science. The relationship between hypotheses, theories and observation is explored. Views on rationality, truth and objectivity are discussed. Theories of evolution and chaos/complexity are investigated. The phenomenon of paradigm shifts in science is examined as well as the relation between values, interpretation and knowledge in the human sciences. Science is largely a question of correct argumentation and critical thinking. This is the focus of the second part of this module*, Critical thinking and Logic*. The nature of arguments is discussed. Distinctions are drawn between valid, invalid, strong and

Module-code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
weak arguments. A further focus is on recognising and avoiding fallacies such as circular arguments, straw man and slippery slope arguments, and appeal to fear, spite and pity. Also arguments by analogy and causal arguments are evaluated. Other problems that occur in argumentation such as vagueness, contradictions and contraries, dilemmas and false dilemmas, slanders, innuendos, loaded questions and unjustified generalisation are also explored.					
KGK 120	**Visual Arts**	**12**	**A/E 3 lpw**		**Sem 2**
History of Art 120 KGK 157 ***Introduction to design history*** Overview of design in the twentieth century as both product and process. Four themes are briefly outlined: the development of the profession; the arena of production; the history of consumption and the impact of design on everyday life. Following the overview particular consideration is given to the history of graphic design, reproduction and representation from the Industrial Revolution to the present.					
KRM 110	**Criminology**	**12**	**A&E 2 lpw**		**Sem 1**
Criminology 110 ***Fundamental criminology*** Introduction to criminology, definition of crime, crime tendencies, classical, and positivistic explanations of crime. Commercial crime, white collar crimes and public order offences are also included. ***Violent crime*** Murder: serial and mass murder, necklacing and farm murders. Assault: threat of assault, assault with the intent to injure. Family violence: child battering, wife battering, battering of the aged. Rape.					
KRM 120	**Criminology**	**12**	**A&E 2 lpw**		**Sem 2**
Criminology 120 ***Penology*** In Penology attention is given to the criminal justice system to emphasise the importance of using an integrated approach in the handling of offenders. Emphasis is placed on aspects such as legality, elements of crime and accountability. Attention is given to a theoretical framework for the treatment of offenders. The impact of overpopulation in prisons is critically evaluated. Attention is also given to awaiting trial offenders, the importance of community-based sentences as well as the re-integration of offenders in the community. ***Crime prevention and control*** Responsibilities of the police and the community in crime prevention and control. Primary, secondary and tertiary crime prevention, crime prevention and reduction in South Africa.					
KRM 251	**Criminology**	**10**	**A&E 2 lpw**		**Qr 1**
Forensic criminalistics 251 Crime investigation; obtaining information through communication; post-mortem examinations; serological examinations; fingerprints.					
KRM 252	**Criminology**	**10**	**A&E 2 lpw**		**Qr 2**
Youth misbehaviour 252 Influence of the family, school and peer group; gang behaviour; use of drugs; theoretical explanations.					
KRM 253	**Criminology**	**10**	**A&E 2 lpw**		**Qr 3**
Victimology 253 Accountability and complicity of victims; position of the victim within the criminal justice system; types of crime victims; compensation and restitution.					

Module-code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
KRM 255	**Criminology**	**10**	**A/E 2 lpw**		**Qr 4**
Political offences 255 The state as offender; crime directed at the state; formal and informal suppression; riots; terrorism; assassination; treason.					
KRM 351	**Criminology**	**15**	**A&E 2 lpw**		**Qr 1**
Psychocriminology 351 Nature of human behaviour; aggression and violence; mentally disordered offenders; sexual offences; bombings, arson, hostage taking.					
KRM 353	**Criminology**	**15**	**A&E 2 lpw**		**Qr 3**
Female crime 353 ** Requires KRM 355* Nature and extent of female crime; crimes committed by women; theoretical explanations.					
KRM 355	**Criminology**	**15**	**A&E 2 lpw**		**Qr 2**
Theories of crime 355 An overview of theories explaining the causes and different aspects of crime.					
KRM 356	**Criminology**	**15**	**A&E 2 lpw**		**Qr 4**
Contemporary criminology issues 356 Contemporary crime phenomena such as hate crimes, road rage, corruption, white-collar crimes, organised crime, ecological crime as well as the problems associated with contemporary crimes (e.g. babies behind bars and HIV/AIDS) are addressed. In conjunction with this attention is given to forensic report writing, preparation of children and youths to testify in court and restorative justice.					
LCC 152	**Afrikaans**	**6**	**A&E 2 lpw**	**WebCT**	**Quarter 2**
Introduction to language, culture and industry 152 An introduction to the role of language in culture and industry.					
LCC 110	**Afrikaans**	**12**	**A&E 2 lpw**	**WebCT**	**Sem 1**
Taal, Kultuur en Kommunikasie 110 Ou mod.: LCC 153 Inl.tot mediageletterdh.+LCC 254 Mediatekste ***Inleiding tot mediageletterdheid*** 'n Inleidende studie van eietydse gedrukte en elektroniese media met 'n fokus op representasie en sosiale praktyke eerder as abstrakte teorieë. Die uitganspunt is dat kontemporêre mediakultuur tans 'n dominante vorm van kultuur is wat ons sosialiseer en materiaal bied vir identiteitsvorming in terme van beide sosiale reproduksie en transformasie. Aan die hand van 'n genregerigte analise van verskillende tipes mediatekste soos dit voorkom in koerant-, tydskrif-, rolprent-, internet-, televisie- en radioverband, word daar gefokus op 'n kritiek van die soiale konteks, sosio-politieke stryd en die kulturele industrieë (bv. SABC, M-Net, News24, ens.)					
LCC 120	**A frikaans**	**12**	**A&E 2 lpw**	**WebCT**	**Sem 2**
Taal, Kultuur en Kommunikasie 120 Ou mod.: LCC 151:Inleid.tot Taalstudie+LCC 154:Inl.Kruiskult.Kommunikasie ***Inleiding tot taal en kruiskulturele kommunikasie*** Die aard van taal en taalkennis; grammatikastudie en taalgebruikstudie; inleiding tot die grammatikateorie: fonetiek en fonologie, morfologie, sintaksis, leksikologie en semantiek. Die aard en werking van die talige kommunikasieproses; faktore wat daarin 'n rol speel; kommunikatiewe intensies, teksinterpretasie en tekskepping, die onderhandeling van betekenis; die rol van sosio-kulturele praktyke (diskoersvoeringskonvensies; interpersoonlike verhoudings en magsrelaies); kruiskulturele wankommunikasie (konflikterende interpretatiewe skemas, stereoties en diskriminasie).					

Module-code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
LCC 111	**Afrikaans**	**6**	**A&E 2 lpw**	**WebCT**	**1**
Taal, Kultuur en Kommunikasie 111 Ou mod.: LCC 152:Inleid.tot Taal, bedryf en kultuur ***Taal, kultuur en bedryf*** Verskillende sienings oor kultuur; die verhouding tussen taal en kultuur; kultuur en mag; kulturele, literêre en korporatiewe identiteit; literêre en kulturele sisteme; teoretiese literatuurwetenskap; literêre kommunikasie; kanons, kanonvorming en magsuitoefening; die relevansie van kulturele kennis in verskillende bedrywe/beroepe.					
LCC 251	**Afrikaans**	**10**	**A&E 2 lpw**	**WebCT**	**Qr 1**
Principles of document design 151 The design and use of heuristics for evaluating and writing informative, instructional and persuasive documents (paper and online), with special reference to content, structure and style.					
LCC 252	**Afrikaans**	**10**	**A&E 2 lpw**	**WebCT**	**Qr 1**
Politics of language 252 The relationship between language and politics (broadly spoken); the main functions of the politics of language; construction of language and identity; language and bonding; language and separation; language and power; language elaboration, maintenance and death/decline; language shift; language and the public domain; language contact and language conflict.					
LCC 253	**Afrikaans**	**10**	**A&E 2 lpw**	**WebCT**	**Qr 3**
Contemporary text studies 253 A study of contemporary texts, with reference to inter alia gender, ecological and political issues.					
LCC 254	**Afrikaans**	**10**	**A&E 2 lpw**	**WebCT**	**Qr 4**
Media texts 254 A genre-based analysis of media texts with reference to newspapers, magazines, film, television and radio.					
LCC 255	**Afrikaans**	**10**	**A&E 2 lpw**	**WebCT**	**Qr 2**
Approaches in and to the media 255 Critical approaches to the discourse of the media.					
LCC 256	**Afrikaans**	**10**	**A&E 2 lpw**	**WebCT**	**Qr 3**
Grammar (1) 256 A description of the sound system (phonetics), word-formation system (morphology), and word order system (syntax) of human languages, with special reference to South African languages.					
LCC 257	**Afrikaans**	**10**	**A&E 2 lpw**	**WebCT**	**Qr 4**
Grammar (2) 257 A description of linguistic meaning (lexicology and semantics) and contextual meaning (pragmatics), with special reference to South African languages.					
LCC 258	**Afrikaans**	**10**	**A&E 2 lpw**	**WebCT**	**Qr 2**
Language and development (1) 258 The concept of language and development; the tools languages need for facilitation of development and use in the public domain; the South African languages as instruments of development; strategies of language promotion.					
LCC 321	**Afrikaans**	**30**	**A&E 2 lpw**	**WebCT**	**Qr 2**
Language, Culture and Communication 321 **Writing for the electronic media** Strategies for creating effective texts for film, television and the internet.					

Module-code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
LCC 351	**Afrikaans**	**15**	**A&E 2 lpw**	**WebCT**	**Qr 2**
Document design 351 *Persuasive documents:* The process of persuasion – a cognitive perspective: classifying, evaluating and designing persuasive texts. *Instructional documents:* Mental processes playing a role in following and remembering verbal and visual instructions; the structure, style and layout of selected instructional text types: e.g. manuals, forms, examination papers and patient information leaflets.					
LCC 352	**Afrikaans**	**15**	**A&E 2 lpw**	**WebCT**	**Qr 1**
Language planning 352 The nature of language planning; language stipulations of the SA Constitution; the national language policy and its implementation; the sociolinguistic character of SA; language attitudes; language promotion; corpus, status and acquisition planning; language management (PANSALB), provincial and national language committee.					
LCC 353	**Afrikaans**	**15**	**A&E 2 lpw**	**WebCT**	**Qr 3**
Critical discourse analysis 353 Critical discourse analysis as a socially relevant theory of language in context; the role of language in the construction of social relationships and social identities (subject positions, types of self, etc.); the construction of knowledge systems and social relationships between individuals; the elements of discourse: text, discursive event (production, interpretation, distribution) and social practice (e.g. political, cultural); ideology and power in discourses.					
LCC 354	**Afrikaans**	**15**	**A&E 2 lpw**	**WebCT**	**Qr 4**
Comparative literary studies 354 A comparative study of texts from post-colonial literature, e.g. from Africa, the Americas, Asia, Australia and Europe.					
LCC 355	**Afrikaans**	**15**	**A&E 2 lpw**	**WebCT**	**Qr 1**
Comparative cultural and media studies 355 A comparative study of cultural and media phenomena in the world today.					
LCC 357	**Afrikaans**	**15**	**A&E 2 lpw**	**WebCT**	**Qr 2**
Language and development (2) 357 The concepts language and development and the interaction between these; multilingualism and development; an overview of the role of language and multilingualism in the following spheres of development: education, the economy, politics and state administration.					
LCC 358	**Afrikaans**	**15**	**A&E 1 dpw**	**WebCT**	**Qr 1/2/3/4**
Independent research (1) 358 An independent research project: students make a choice from the departmental focal areas in consultation with the head of the department.					
LCC 359	**Afrikaans**	**15**	**A&E 1 dpw**	**WebCT**	**Qr 1/2/3/4**
Independent research (2) 359 An independent research project: students make a choice from the departmental focal areas in consultation with the head of the department.					
LCC 321	**Afrikaans**	**30**	**A&E 2 lpw**	**WebCT**	**2**
Taal, Kultuur en Kommunikasie 322 Ou mod.: LCC 356 Skryf vir die media ***Skryf vir die elektroniese media* (vanaf 2006 aangebied)** Strategieë vir die skep van effektiewe tekste vir bv. rolprente, die televisie en die internet.					
RES 151	**Academic**	**6**	**A&E 2 lpw**	**E 2 lpw**	**Quarter 3**
Introduction to research 151 ** This module is only presented during Quarter 3.* The module introduces the student to basic research in the social sciences and humanities.					

Module-code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
Various approaches to research, problem-solving strategies, interpretation of results, critical reading and thinking skills, and report writing are included. The focus is on practical application, gathering, analysing and synthesizing of research literature, and for representation of scholarly efforts.					
SLK 110	**Psychology**	**12**	**A&E 2 lpw 1 dpw**		**Sem 1**
Psychology 110 SLK 151 + SLK 154 ** Compulsory introduction module for BSocSci (Psychology and Sport Psychology) and BA* ***Psychological perspectives*** This module is a general orientation to Psychology. An introduction is given to various theoretical approaches in Psychology, and the development of Psychology as a science is discussed. Selected themes from everyday life are explored and integrated with psychological principles. ***Health psychology*** This module is an introduction to psychological aspects related to illness and health. Themes such as the following are explored: the patient-helper relationship, stress and stress-related illnesses, lifestyle and illness/health, psychological aspects of physical illnesses, coping with emotional distress associated with illness, and psychological processes related to loss and death.					
SLK 120	**Psychology**	**12**	**A&E 2 lpw 1 dpw**		**Sem 2**
Psychology 120 SLK 152 + SLK 157 ** Compulsory introduction module for BSocSci (Psychology & Sport Psychology) & BA* ***Biological basis of behaviour*** This module introduces the student to a basic knowledge and understanding of the biological bases of human behaviour. The module addresses the key concepts and terminology related to the biological subsystem, the rules and principles guiding biological psychology, and identification of the interrelatedness of different biological systems and subsystems. ***Cognitive processes*** In this module, various cognitive processes are studied, including perception, memory, thinking, intelligence and creativity. Illustrations are given of various thinking processes, such as problem solving, critical, analytic and integrative thinking.					
SLK 251	**Psychology**	**10**	**A&E 2 lpw**	**E 2 lpw**	**Quarter 1**
Personology 251 In the module on Personology, various theories of personality are studied, including the psychoanalytical and social learning theories, the person-oriented approaches, and the ecosystemic approach. An African perspective is also discussed. These approaches are compared and critically evaluated with regard to their basic assumptions, view of the person, and philosophy of science, as well as their contribution towards understanding and explaining human behaviour within contemporary contexts.					
SLK 252	**Psychology**	**10**	**A&E 2 lpw**	**E 2 lpw**	**Quarter 2**
Child Development 252 In this module human development from conception to adolescence is discussed with reference to various psychological theories.					
SLK 253	**Psychology**	**10**	**A&E 2 lpw**	**E 2 lpw**	**Quarter 3**
Development Psychology 253 In this module, the areas and determinants of early, middle and late adulthood development are studied. Incorporated are the developmental changes related to cognitive, physical,					

Module-code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
emotional and social functioning of the individual and the context of work. Traditional and contemporary theories of human development explaining and describing these stages are studied in order to address the key issues related to adulthood.					
SLK 254	**Psychology**	**10**	**A&E 2 lpw**	**E 2 lpw**	**Quarter 4**
Social Psychology 254 This module is a social-psychological perspective on interpersonal and group processes. Themes that are covered include communication, pro-social behaviour, social influence and persuasion, political transformation, violence, and group behaviour.					
SLK 351	**Psychology**	**15**	**A&E 2 lpw**	**E 2 lpw**	**Quarter 1**
Community Psychology 351 This module deals with a community psychological perspective on human behaviour and psychological interventions. The module focuses on themes such as definitions of key concepts, principles and aims of community psychology, and the role of the community psychologist. The application of these principles within the South African society, social change and psychological problems are investigated from a cross-cultural perspective.					
SLK 352	**Psychology**	**15**	**A&E 2 lpw**	**E 2 lpw**	**Quarter 3**
Abnormal Behaviour 352 This module provides an introduction to psychopathology and symptomatology of adult abnormal behaviour. Terminology, definitions of abnormal behaviour, problems in diagnosis, labelling, and myths regarding abnormal behaviour are discussed. Neurosis as a specific mental disorder is studied critically from a multi-dimensional perspective, including intrapsychic, interpersonal and social-cultural explanations.					
TRL 151	**Translation (African Languages)**	**6**	**A/E 2 lpw**	**A/E ** 2 lpw**	**Quarter 3**
Introduction to translation 151 **Translation in any two languages offered by the School of Languages, provided that the particular language combination can be accommodated during any given year.* *** Flexilearning: Mode of presentation will be determined by student numbers.* Translation and basic translation skills such as source text analysis, translation methods and translation aids. Translation in South Africa. Practical translations of a variety of texts of limited scope.					
TRL 251	**Translation (African Languages)**	**10**	**A/E 2 lpw**	**A/E ** 2 lpw**	**Quarter 2**
Equivalence in translation 251 **Requires TRL 151.* **Translation in any two languages offered by the School of Languages, provided that the particular language combination can be accommodated during any given year.* *** Flexilearning: Mode of presentation will be determined by student numbers.* Equivalence at word level and above word level. Equivalence at text level. Problems of equivalence in a variety of texts. Practical translations.					
TRL 351	**Translation (African Languages)**	**15**	**A/E 2 lpw**	**A/E ** 2 lpw**	**Quarter 4**
Intercultural translation 351 **Requires TRL 251.* **Translation in any twe languages offered by the School of Languages, provided that the particular language combination can be accommodated during any given year.* *** Flexilearning: Mode of presentation will be determined by student numbers.*					

Module-code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
Translation and language varieties such as dialects, code-switching, sociolects, etc. Translation of culture-bound texts. Translation in a multilingual speech community such as South Africa. Practical translations of a variety of different text types.					
TRL 352	**Translation (ULD)**	**15**	**A/E 2 lpw**	**A/E ** 2 lpw**	**Quarter 3**
Literary translation 352 **Requires TRL 251.* **Translation in any two languages offered by the School of Languages, provided that the particular language combination can be accommodated during any given year.* *** Flexilearning: Mode of presentation will be determined by student numbers.* Theories of and strategies for literary translation; study of translated texts; practical translation (prose and poetry). The source and target languages are chosen by the student from any of the languages offered by the School of Languages, provided that the particular language combination can be accommodated during any given year.					
VIO 102	**Visual Arts**	**24**	**1 lpw + 1 bpw + 1 ppw**		**Year**
Visual design (1) 102 ** Requires: Mathematics HG 50%; Computer Studies HG 50%* ** Only for students who specialize in BIS Multimedia.* Introduction to elements and principles of design, typography and layout. Application of visual principles and techniques. Media characteristics. The design process.					
VIO 202	**Visual Arts**	**40**	**1 lpw + 1 bpw + 1 ppw**		**Year**
Visual design (2) 202 ** Only for students who specialize in BIS Multimedia.* Visual analysis and interpretation. Design function and specific applications in the electronic environment. Aesthetic, functional and communicative evaluation of design.					
VKK 110	**Visual Arts**	**12**	**A/E 3 lpw**		**Sem 1**
Introduction to Visual Culture 110 VKK 155 Foundations of visual language + VKK 153 Cultural myths & icons Introduction to visual culture studies; study of the form, content and aims of static and moving images in diverse media (e.g. advertising, music video). Introduction to terminology and modes of analysis in visual culture (e.g. formalism, feminism, Marxism, semiotics). Investigation of the relationship between popular culture and the mass-media. Interpretation of cultural icons such as the hero in relation to cultural codes, stereotypes and myths. Reference to figures such as Barbie, Madonna, the Marlboro man, Mandela, and soap opera stereotypes.					
VKK 120	**Visual Arts**	**12**	**A/E 3 lpw**		**Sem 2**
Photography and the moving image 120 VKK 158 The photographic image + VKK 256 History of film Exploration of the static and moving photographic image as the centre point on which the modern, technocratic world pivots. Traces the history and ideological evolution of photography and film. Examines photography as: erotica/pornography, political propaganda, art and advertising (photo journalism, Modernist photography and fashion photography). Theorises the relationship between film, photography, digital media and advertising. Positions the photographic and filmic image within the discourses of Barthes, Benjamin, Sontag, Baudrillard and Mulvey.					

Module-code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
VKK 255	**Visual Arts**	**10**	**A/E 2 lpw**		**Qr 2**
Gender ideology in visual culture 255 Introduction to gender as an ideological system. Terminology and history of feminism and masculinism. Interpretation of images from the mass-media and art in terms of themes and issues in gender theory.					
VKK 256	**Visual Arts**	**10**	**A/E 2 lpw**		**Qr 1**
History of film 256 Contextual approach to history of film. Aspects of history of film up to present. Reciprocal influence between art movements, art styles and films of the 20th century.					
VKK 258	**Visual Arts**	**10**	**A/E 2 lpw**		**Qr 4**
Visual identity and branding 258 The aims and functions of visual communication in the marketing context. Visual communication as foundation for the creation of corporate, product and brand identity, as well as advertising and promotion. Methods of analysis and evaluation of advertisements and visual identity. Influence of target audience and media characteristics on visual communication.					
VKK 259	**Visual Arts**	**10**	**A/E 2 lpw**		**Qr 3**
Type, image and communication 259 This module considers how type and image function separately and in unison to facilitate and mediate the communication and understanding of predefined information and messages. Particular emphasis is placed and the critical review of issues such as the presentation of scientific data, way-finding systems and public information.					
VKK 352	**Visual Arts**	**15**	**A/E 2 lpw**		**Qr 1**
Visual image and ideology 352 Investigation at more advanced level of theoretical frameworks that can be used in the interpretation, analysis and evaluation of visual culture. Influence of methods of analysis, such as Post-structuralism, Marxism, and Feminism, is explained in terms of the interpretation of contemporary visual culture. Ideologies as embodied in cultural expressions. Application to advertisements and television texts; kitsch and the ideology of taste.					
VKK 356	**Visual Arts**	**15**	**A/E 2 lpw**		**Qr 4**
Virtual culture 356 The influence of technology on new visual paradigms. History and development of virtual reality. Virtual communities. Cyberpunk and William Gibson. The cyborg. The visual culture of virtual reality; examples from various fields of visual culture, for example computer games, advertisements, film and television. Images of technology.					
VKK 357	**Visual Arts**	**15**	**A/E 2 lpw**		**Qr 3**
Decoding visual space 357 ** Requires VKK 352* Critical decoding of culturally encoded ideas and ideologies embodied in construction of space and place in selected modernist and postmodernist spatial practices and visual culture. Creation of identity in themes, narratives, styles, myths, and codes used in places such as shopping malls, theme parks, and casinos. Topics such as space, gender and power; consumption and space; the myth of Africa in entertainment landscapes; surveillance and the panopticon; and the architecture of fear.					
VKK 358	**Visual Arts**	**15**	**A/E 2 lpw**		**Qr 2**
Users and contexts 358 This module focuses on user-centred thinking and methods in the creation and reception of					

Module-code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
mediated communication. Physical, symbolic and cognitive human factors and increasingly complex environments of use are reviewed through the consideration of theoretical models and methods of user research and analysis.					

IT.31.5 THE FOLLOWING MODULES FALL UNDER THE FACULTY OF NATURAL AND AGRICULTURAL SCIENCES

Module code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
GGY 132	**Geography**	**4**	**A/E 1 lpw**		**Sem 1**
Cartographic Skills 132 Principles of cartography. Map reading, analysis and interpretation; introductory survey techniques. **Prerequisite:** [IT.2]					
GGY 153	**Geography**	**6**	**A&E 4 lpw**		**Quarter 2**
Geography of Cities 153 An introduction to the forms and functions of cities from ancient times to the 17th Century as a basis for understanding early South African towns. The essence of the segregated and apartheid forms of the modern South African city. **Prerequisite:** [IT.2]					
GGY 154	**Geography**	**6**	**A&E 4 lpw**		**Quarter 2**
Geography of Tourism 154 Geography of tourism: conceptualisation; basic elements; classification; international and South African context; ecotourism: resources; urban tourism. **Prerequisite:** [IT.2]					
GGY 155	**Geography**	**6**	**E 4 lpw**		**Quarter 1**
Human Geography of SADC 155 Foundations for understanding contemporary human geographic processes in Southern Africa. The module will trace the major changes in the economic, political and population geography of Southern Africa including those associated with the formation of SADC.					
GGY 162	**Geography**	**4**	**A&E 1 ppw**		**Sem 2**
Remote Sensing 162 Use, interpretation and analysis of satellite imagery, aerial photography and other remotely sensed data. **Prerequisite:** [IT.2]					
GGY 163	**Geography**	**6**	**A&E 4 lpw**		**Quarter 3**
Biogeography of SA 163 Introduction to the biogeography of South Africa; the environment as ecological system; ecological laws and processes; natural regions and biomes; humans as ecological elements; resource utilisation, management and mismanagement in South Africa. **Prerequisite:** [IT.2]					
GGY 164	**Geography**	**6**	**E 4 lpw**		**Quarter 4**
Physical Geography of SA 164 Introduction to the physical geography of South Africa including climate and weather patterns, landscape evolution and topographical distribution. Landscaping processes within					

Module code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
arid, semi-arid and coastal environments; fluvial systems and processes; mountain environments.					
GGY 252	**Geography**	**12**	**E 4 lpw + 2 ppw**		**Qaurter 2**
Process Geomorphology 252 Physical processes that influence the earth's surface and management. Specific processes and their interaction in themes such as weathering; soil erosion; slope, mass movement and fluvial processes					
GGY 263	**Geography**	**12**	**E 4 lpw + 2 ppw**		**Quarter 3**
Urban Modelling 263 The utility of existing models for urban planning for cities in developing countries, and the challenges presented by urban realities will be examined using empirical case studies of cities and planning in Africa. Themes discussed include urban agriculture, peri-urban settlement, tenure insecurity, and the importance of the informal economy. In light of the realities of the aforementioned factors, the development of new, more appropriate urban models will be considered.					
GGY 264	**Geography**	**12**	**E 4 lpw + 2 ppw**		**Quarter 4**
Urban Social Morphology 264 The structure and spatial distribution of class, income, ethnicity, age and other demographic variables in urban environments in South Africa and other parts of the world. Qualitative and quantitative analyses of social change and transformation in cities, including segregation, desegregation and gentrification. Other themes include urban perception, urban living, social area analysis, and spatial strategies for social integration.					
GGY 283	**Geography**	**12**	**E 4 lpw + 2 ppw**		**Sem 1**
Introductory GIS 283 Introduction to Geographic Information Systems (GIS), types of GIS, data input, data analysis and associated technology. GIS applications and data analysis techniques in practicals comprise concepts presented in lectures. The practical application of GIS is emphasised rather than mastering software. This module is also presented in the second semester.					
GGY 353	**Geography**	**18**	**E 4 lpw + 2 ppw**		**Quarter 2**
Urban Development Studies 353 Relationships between land values and land uses under changing conditions affected by corporations, super corporations, powerful individuals, and local authorities with selected examples from London, Paris, and Johannesburg.					
GGY 354	**Geography**	**18**	**E 4 lpw + 2 ppw**		**Quarter 1**
Development Geography 354 Principles of development, perspectives on development. Aspects of development strategy such as population growth, urbanisation, rural development. Development in Third World cities. Frameworks for development in South Africa.					
GGY 361	**Geography**	**18**	**E 4 lpw + 2 ppw**		**Quarter 3**
Environmental Geomorphology 361 Interactions of geomorphic processes within the physical and built environments; themes such as geomorphology and environmental change, slope processes and the environment, geomorphic risks and hazards, soil erosion and conservation, geomorphology in environmental management, weathering in urban environments, preservation of buildings, and deterioration and preservation of indigenous rock art. Practicals involve fieldwork and subsequent laboratory analysis.					

Module code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
GGY 362	**Geography**	**18**	**E 4 lpw + 2 ppw**		**Quarter 4**
Natural Resource Management 362 The biosphere as an environmental system; environmental degradation due to mismanagement; principles and approaches to sustainable resource management; ecosystem management in South Africa; solutions to environmental degradation; terrain potential and impact assessment. Special emphasis is placed on tourism as a land-use.					
GIS 220	**Geography**	**12**	**E 3 lpw + 1 ppw**		**Sem 2**
Geographic Data Analysis 220 Collection, management, analysis and representation of geographic data; data sampling, and preparation; geographic referencing; interpolation; data integration; presentation.					
GIS 310	**Geography**	**24**	**E 3 lpw + 1 ppw**		**Sem 1**
Geographic Information Systems 310 Advanced theory and practice of Geographic Information Systems; GIS applications; design and implementation of GIS applications. **Prerequisite:** [GGY283] or [LP]					
GIS 320	**Geography**	**24**	**E 3 lpw + 1 ppw**		**Sem 2**
Spatial Analysis 320 Introduction to spatial analysis techniques classification, interpolation, extrapolation, geo-referencing, kriging, topology, visualisation, networks, spatial interaction, spatial statistics and general spatial systems analysis. **Prerequisite:** [GIS 310] or [LP]					
WST 111	**Mathematical Statistics**	**16**	**A&E 4 lpw + 1 ppw**		**Sem 1**
Mathematical Statistics 111 Introductory statistical concepts: Sampling and descriptive methods, elementary probability theory and elementary distribution theory. Special statistical distributions. Statistical inference: Point and interval estimation. Identification, use, evaluation and interpretation of statistical computer packages and statistical techniques. **Prerequisite:** [IT.2]					
WST 121	**Mathematical Statistics**	**16**	**A&E 4 lpw + 1 ppw**		**Sem 2**
Mathematical Statistics 121 Distribution theory: Expectation and generating functions. Statistical inference: Point and interval estimation. Hypothesis testing with applications in one and two-sample cases. Analysis of variance. Distribution-free testing methods. Curve fitting. Correlation and regression. Introductory categorical data analysis. Indices. Identification, use, evaluation and interpretation of statistical computer packages and statistical techniques. Report writing. **Prerequisite:** [WST 111 GS]					
WTW 101	**Mathematics and Applied Maths**	**16**	**A&E 4 lpw + 1 ppw + 1 dpw**		**Year**
Mathematics 101 This module includes the syllabus of Calculus 114, as well as enrichment. Enrichment includes computer-based modules. Real numbers and the coordinate plane. Functions and their zeros. Polynomials. Exponential and logarithmic functions. Vector algebra. Functions, limits and continuity. Differential calculus of single variable functions, rate of change, graph sketching, optimisation and applications. The mean value theorem, the rule of L'Hospital.					

Module code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
Definite and indefinite integrals, the fundamental theorem of Calculus, the mean value theorem for integrals, integration techniques. **Prerequisite:** [IT.2]					
WTW 114	**Mathematics and Applied Maths**	**16**	**A&E 4 lpw + 1 tutorial of 3 hrs**		**Sem 1**
Calculus 114 Vector algebra with applications to geometry. Functions, limits and continuity. Differential calculus of single variable functions, rate of change, graph sketching, applications. The mean value theorem, the rule of L'Hospital. Definite and indefinite integrals, the fundamental theorem of Calculus, the mean value theorem for integrals, integration techniques. This module also includes a formal technique-mastering programme. This module serves as preparation for students majoring in Mathematics (including all students who intend to enrol for WTW 218 and WTW 220). Students will not be credited for more than one of the following modules for their degree: WTW 114, WTW 158 and WTW 134. **Prerequisite:** [IT.2]					
WTW 115	**Mathematics and Applied Maths**	**8**	**2 lpw + 1 tutorial of 1½ hrs**		**Sem 1**
Discrete Structures 115 Propositional logic: truth tables, logical equivalence, implication, arguments. Mathematical induction and well-ordering principle. Counting techniques: elementary probability, multiplication and addition rules, permutations and combinations, binomial theorem, inclusion-exclusion rule. **Prerequisite:** [IT.2]					
WTW 123	**Mathematics and Applied Maths**	**8**	**A&E 2 lpw + 1 tutorial of 1½ hrs**		**Sem 2**
Numerical Analysis 123 Non-linear equations, numerical integration, initial value problems for differential equations, systems of linear equations. Algorithms for elementary numerical techniques are derived and implemented in computer programs. Error estimates and convergence results are treated. **Prerequisite:** [WTW 114 GS or WTW 101 GS]					
WTW 126	**Mathematics and Applied Maths**	**8**	**A&E 2 lpw + 1 tutorial of 1½ hrs**		**Sem 2**
Linear Algebra 126 Vector algebra with applications, matrix algebra, systems of linear equations, the vector space R^n, bases, and determinants. Mathematical induction. Complex numbers and factorisation of polynomials. Conic sections. This module serves as preparation for students majoring in Mathematics (including all students who intend to enrol for WTW 211). Students will not be credited for more than one of the following modules for their degree: WTW 126, WTW 161. This module also includes a formal technique-mastering programme. **Prerequisite:** [IT.2]					
WTW 128	**Mathematics and Applied Maths**	**8**	**A&E 2 lpw + 1 tutorial of 1½ hrs**		**Sem 2**
Calculus 128 Integration techniques, improper integrals. Applications of integration, introduction to					

Module code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
differential equations. Elementary power series and Taylor's theorem. Vector functions, space curves and arc lengths. Quadric surfaces and multivariable functions. This module serves as preparation for students majoring in Mathematics (including all students who intend to enrol for WTW 218 and WTW 220). Students will not be credited for more than one of the following modules for their degree: WTW 128, WTW 168. This module also includes a formal technique-mastering programme. **Prerequisite:** [WTW 114 GS or WTW 101 GS]					
WTW 152	**Mathematics and Applied Maths**	**8**	**A&E 2 lpw and 1 tutorial of 1½ hrs**		**Sem 1 (also offered in Sem 2)**
Mathematical Modelling 152 Introduction to the modelling of dynamic processes using difference equations. Continuous dynamic systems. Applications to real-life situations in, among others, finance, economics and ecology. **Prerequisite:** [IT.2]					
WTW 211	**Mathematics and Applied Maths**	**12**	**A&E 2 lpw and 1 tutorial of 1½ hrs**		**Sem 1**
Linear Algebra 211 Matrices and linear equations, linear independence, real vector spaces and subspaces, eigenvalues, eigenvectors, diagonalisation of matrices, applications of eigenvalue problems, linear transformations. **Prerequisite:** [WTW 126]					
WTW 218	**Mathematics and Applied Maths**	**12**	**A&E 2 lpw + 1 tutorial of 1½ hrs**		**Sem 1**
Calculus 218 Calculus of multivariable functions, directional derivatives. Extrema and Lagrange multipliers. Multiple integrals, polar, cylindrical and spherical coordinates. Line integrals and the theorem of Green. Surface integrals and the theorems of Gauss and Stokes. **Prerequisites:** [WTW 114 or WTW 101] and [WTW 128 or WTW 102]					
WTW 220	**Mathematics and Applied Maths**	**12**	**A&E 2 lpw + 1 tutorial of 1½ hrs**		**Sem 2**
Analysis 220 Properties of real numbers. Analysis of sequences and series of real numbers. Power series and theorems of convergence. The Bolzano-Weierstrass theorem and the intermediate value theorem. Analysis of real-valued functions on an interval. **Prerequisites:** [WTW 114 or WTW 101] and [WTW 128 or WTW 102]					
WTW 221	**Mathematics and Applied Maths**	**12**	**A&E 2 lpw + 1 tutorial of 1½ hrs**		**Sem 2**
Linear Algebra 221 Change of basis, diagonalisability of linear transformations, orthogonal vectors, unitary and orthogonal transformations, canonical forms, applications. **Prerequisite:** [WTW 211]					

Module code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
WTW 285	**Mathematics and Applied Maths**	**12**	**A&E 2 lpw + 1 tutorial of 1½ hrs**		**Sem 2**
Discrete Structures 285 Counting techniques: combinations with repetition, functions. Pigeon-hole principle. Countability and computability. Setting up and solving recurrence relations. Graphs: paths, cycles, trees, isomorphism. Graph algorithms: Kruskal, Prim, Fleury, loop invariants. **Prerequisite:** [WTW 115]					

IT.31.6THE FOLLOWING MODULE FALLS UNDER THE FACULTY OF LAW

Module code	Department	Credits	Full-time	Flexi-learning	Quarter Semester Year
BER 410	**Mercantile Law**		**4 lpw**		
Mercantile Law 410 Introduction to law; general principles of contract law; specific contracts: purchase contracts, employment contracts, job contracting, representative law; general aspects of business law; dispute resolution – mediation and arbitration.					

IT.32 PRIZES AND MEDALS IN THE FACULTY OF ENGINEERING, BUILT ENVIRONMENT AND INFORMATION TECHNOLOGY

Name	Donor	Award
General		
Medal of the Vice-Chancellor and Principal	University of Pretoria	A silver medal as well as a cash prize awarded to candidates for outstanding academic achievement during the undergraduate years of study for any first Bachelor's degree in a faculty.
S_2A_3 Bronze Medal	The South African Society for the Promotion of Science	The medal is awarded to a student who has completed an exceptionally meritorious Master's study in a field traditionally linked to the activity of the South African Society for the Promotion of Science (S_2A_3)
Nokia Best MSc/MEng Dissertation Award on ICT	Nokia	For the best MSc/MEng dissertation awarded at the first graduation ceremony following the year in which the dissertation has been completed (R10 000).
Nokia Distinguished PhD/PhD(Eng) Thesis Award in ICT	Nokia	For the best PhD/PhD(Eng) thesis, awarded at the first graduation ceremony following the year in which the thesis has been completed (R20 000).

PRIZES AND MEDALS IN THE SCHOOL OF INFORMATION TECHNOLOGY

Name	Donor	Award
School of Information Technology		
Accenture Second Year BIT Award	Accenture	For the best student in BIT on second year level R1 500
Accenture Third Year BIT Award	Accenture	For the best student in BIT on third year level R2 000
Accenture Fourth Year BIT Award	Accenture	For the best student in BIT on fourth year level R3 000

Accenture BIT/CS Project Award	Accenture	For the best project in COS 301 with at least one BIT student as a group member R1500
Accenture BIT/Informatics Project Award	Accenture	For the best project in INF 370 with at least one BIT student as a group member R1500

Department of Computer Science		
Roelf van den Heever/ EPIUSE Prize	EPIUSE	For the best student in Computer Science at honours level
Microsoft Third-Year Computer Science Prize	Microsoft	For the best female student in Computer Science at 300 level
The Microsoft Second Year Operating Systems Prize	Microsoft	For the best student in the module Operating Systems at 200 level
The Microsoft First-Year Computer Science Prize	Microsoft	For the best student in Computer Science at 100 level

Department of Informatics		
AST Prize	AST	Best achievement in Informatics on 100 level
AST Prize	AST	Best achievement in Informatics on 200 level
AST Prize	AST	Best achievement in Informatics on 300 level
Inbekon Prize	Inbekon Pty Ltd	For the best project in Informatics 370
ABSA Bank Prize	ABSA	For the best achievement over the three years of study in BCom with specialisation in Informatics
Future Enterprise Prize	Gerrie Lewies	For the best honours student in Informatics
Informatics Prize	Department of Informatics	For the best honours project in Informatics