DUT
DURBAN
UNIVERSITY OF
TECHNOLOGY

2018 HANDBOOK
INFORMATION TECHNOLOGY

FACULTY OF
ACCOUNTING
& INFORMATICS

HANDBOOK FOR 2018

FACULTY OF ACCOUNTING AND INFORMATICS

DEPARTMENT of INFORMATION TECHNOLOGY

Faculty of Accounting & Informatics

Vision

A globally recognised faculty for academic excellence.

Mission

"Developing Leaders for the Information Society" through:

- Excellence in teaching and learning
- Relevant research and creative innovation
- Social entrepreneurship

Values

- **Fairness**: We treat people equitably with respect. Our decisions are impartial. We embrace diversity and inclusion.
- **Accountability**: We accept responsibility for activities, decisions, actions and disclose outcomes in a transparent way.
- **Integrity**: We enhance our reputation with consistent trustworthy conduct.

Departmental Mission

Vision

Promoting leadership in business and related technology through real world education

Mission

- Promoting quality in teaching and learning
- Encourage a culture of ongoing research and technology transfer
- Engage the business professions and other relevant stakeholders to provide relevant career focused education

Values

The Department prides itself as being innovative, participative, accountable, committed, and productive.

Goals

The goals of the Department are:

- To continuously produce a critical mass of quality IT graduates from sound teaching, learning, and assessment practices
- To produce and publish high quality applied research output in IT
- To significantly contribute to the empowerment of communities, society, and humanity, using IT as an enabler.

What is a University of Technology?

A university of technology is characterized by being research informed rather than research driven where the focus is on strategic and applied research that can be translated into professional practice. Furthermore, research output is commercialized thus providing a source of income for the institution. Learning programmes, in which the emphasis on technological capability is as important as cognitive skills, are developed around graduate profiles as defined by industry and the professions.

IMPORTANT NOTICE

The departmental rules in this handbook must be read in conjunction with the University's General Rules included in the Student Handbook. *The University reserves the right to change the contents without prior notice.*

NOTE TO ALL REGISTERED STUDENTS

Your registration is in accordance with all current rules of the Institution. If, for whatever reason, you do not register consecutively for every year/semester of your programme, your existing registration contract with the Institution will cease. Your re-registration anytime thereafter will be at the discretion of the Institution and, if permitted, will be in accordance with the rules applicable at that time.

CONTENTS **Page**

1. DEPARTMENT AND FACULTY CONTACT DETAILS

All Departmental queries to:

Secretary:	Ms W Xulu
Tel No:	031 373 5446
Fax No:	031-373 5598
Location of Department:	2nd Floor IT block (East and West Wing) Ritson Campus

Faculty Query:	Information Technology / ICT in Applications Development
All Faculty queries to:	Ms D Small
Faculty officer:	Ms N Singh-Sakichand
Tel No:	031-3735418/5152
Fax to Email:	086 2626836
Location of Faculty office:	East Wing, Hotel School Building, Ritson Campus

Faculty Query:	Financial Information Systems
All Faculty queries to:	Mrs B Nkosi
Faculty officer:	Ms N Singh-Sakichand
Tel No:	031-3735670/5152
Fax to Email:	086 6760873
Location of Faculty office:	East Wing, Hotel School Building, Ritson Campus

Executive Dean:	Prof Olugbara, Oludayo O,
Secretary:	Ms B Martin
Tel No:	031- 3735597
Location of Executive Dean's office:	North Wing, Hotel School Building, Ritson Campus

2. STAFFING	Name and Qualification	
Head of Department	Mrs Singh K	BSc (Hons) Comp Sc, BEd (Hons) UHDE [UDW]
Professor	Prof Olugbara, Oludayo O	PhD (Computer Science) [University of Zululand]
Associate Professors	Prof Eyono Obono S D	PhD (Computer Science) [University of Rouen, France]
	Prof Richard C Millham	PhD (Computer Science) [De Montfort University]
Associate Directors	Mrs Khan F T	MSc [University of Sydney], BTech IT [MLST]
	Mr Ally M I	ND EDP [MLST], NHD CDP [MLST]
	Dr Heukelman D	DTech (IT) [DUT], M.Ed Computers [Rhodes], BSc (Hons) [RAU], BSc (Ed) [RAU]
Senior Lecturers	Asmal E	NHD CDP [MLST]
	Foolchand S	BSc (Hons), BCom [UNISA],UDE [UDW]
	Hansrajh A	BSc (Hons) [Unisa] JSED (SCE),
	Khalili P	MSc, BSc [Cal. State Univ] (USA)
	Gonsalves N	MA [UND], ND IT [MLST], BA (Hons) [UDW]
	Naidoo SC	BTech IT [MLST]
	Pancham J	MICT (DUT) ND Telecom [Telkom], BSc (Hons) [UDW]
	Dr Singh A	DTech (IT) [DUT], MTech (IT) [DIT], BTech IT [TN]
	Dr Wing J W	PhD (DUT)
Lecturers	Bhoola N	MCom [UKZN], BSc (Hons) [UDW]
	Boamah-Abu C	MCom (IS) [UCT], BSc (Hons) Comp Sc [Rhodes]
	Bugwandin R	BTech IT [DUT]
	Dwarika, J	MSc (IS) cum laude [UNISA], BSc (Hons) [UNISA], BTech IT [DIT]
	Dlalisa FS	MCom (IS&T) [UKZN], BTech IT [DUT]
	Govender A	BTech IT [MLST]
	Govender T P	MEd [UKZN], BTech IT [MLST], BSc [UNISA]
	Hoosen S	BSc (Hons) [UDW]
	Jackson P	MICT (DUT), BTech IT (DUT)
	Joseph S	MTech (IT) [DUT]
	Lingwati L	MICT [DUT], BTech IT [DUT], PGDBM [MANCOSA]
	Moodley S G	BTech IT [DUT]
	Moodley U	BTech IT [DIT]
	Naicker E	BTech IT (DUT)
	Naicker N	MSc, BSc (Hons),Dip Data Metrics [UNISA], HED (SCE)

	Ngxata B	MCom (IS&T) [UKZN], BTech IT [MLST], Dip IT [WSU]
	Ramnarain A	MCom (IS&T) [UKZN], BTech IT [TSA]
	Singh RS	BSc [UNISA], Dip Data Metrics, HDE [UN]
	Soobramoney R	BSc (Hons) [UND]
	Soobramoney S	BTech IT [TN]
	Sosibo NS	MTech (IT) [DUT], BTech IT [DUT]
	Thompson R C	MICT (DUT), NH Dip [TN]
	Vanker C	MCom (IS&T) [UKZN], BTech IT [MLST]
	Vilakazi Z	BTech IT [DIT]
	White C R	BSc (Hons),HDE (PG) [Rhodes]
	Zincume X	MCom (IS&T) [UKZN], BTech IT [DIT], BTech FIS [DIT]
Co-Ordinator: Deaf Programme	Kanaye N	L.S.T.D -Springfield Col of Educ; Dip in Spec Ed: Aurally Handicapped -UNISA; BA: Eng, Psych -UNISA; MA:Advanced Deaf Educ Gallaudet Univ (Washington, DC, USA)
South African Sign Language Interpreters		Phakathi, I N N JPTD-Mpumalanga, Dip Rem Ed, BEd (Univ of Potch)
Administrative Staff:	Secretary:	Ms W Xulu
	Administrative Assistants:	Ms F Naidoo
		Mr N Ngcobo
	Senior Technician Networks:	Mr A Ramdass
	Senior Technician Desktop:	Mr R M Nepaul
	Technicians:	Mr M Womack
		Mrs G Pursan
		Mr BNM Mbuthuma
		Mr R Govender
		Mr B Mhlongo

3. PROGRAMMES OFFERED BY THE DEPARTMENT

Programmes are offered in this Department which, upon successful completion, lead to the awarding of the following qualifications:

Qualification Name	Qualification Code	SAQA NLRD	Current Status
NEW Programme offerings			
Diploma in ICT in Applications Development	DIIAD1	94697	Replaces ND: IT (Software Development)
Diploma in ICT in Business Analysis	DIIBA1	97709	Replaces ND: IT (Business Applications)
Diploma in ICT in Applications Development (4-year Foundation)	DIIAF1	94697	Replaces ND: IT Foundation
Masters in ICT	MICMT1	96833	Replaces MTECH: IT
PhD in IT	DPINF1	96804	Replaces DTECH: IT
CURRENT AND PHASE-OUT Programme offerings			
ND: Information Technology (Software Development)	NDINS1	72241	Last new intake in 2015
ND: Information Technology (Business Applications)	NDINB1	72241	Last new intake in 2015
ND: Information Technology (Foundation)	NDISF1	72241	Last new intake in 2015
ND: Financial Information Systems	NDFIS2	72234	Last new intake in 2015
BTECH: Financial Information Systems	BTFIS2	72134	Last new intake in 2018*
BTECH: Information Technology	BTINF2	72142	Last new intake in 2019*

**Numbers permitting*

4. PROGRAMME INFORMATION (*New* programme offerings)

4.1 GENERAL

Student attendance

The department does not hold itself responsible for the recording of attendance of its students.

Conduct of students in laboratories

Rules of conduct pertaining to the specific laboratory as instituted by the head of the department, shall apply to all students registered for that subject.

- Eating, playing music, smoking or drinking in any lecture venue or laboratory is forbidden.
- Safety rules are to be strictly adhered to at all times.
- Mobile phones are to be switched off during lecture, laboratory and assessment sessions.

Course/ year marks

- With reference to Rule G15, the calculation of the year/semester mark for each subject will be indicated within the learner guide of each subject.
- In addition to the general requirements for a year mark as stipulated in Rule G15 the department reserves the right to recommend at the end of a reasonable portion of the course that a student withdraw from the course, either due to poor performance in the majority of subjects, or due to inadequate presentation of assigned work.
- A year/semester mark is valid only for the main examination in the year/semester in which a student is registered, plus the supplementary examination in that subject, if granted to the student in terms of Rule G16.

4.2 UNDER-GRADUATE PROGRAMME

4.2.1 General Education

All undergraduate programmes at DUT include a General Education component which adds value by providing learning opportunities to help students think critically, develop values, understand traditions, respect diverse cultures and opinions, create an awareness of the environment and their role in protecting it, and most importantly, put that knowledge to use. The knowledge is holistic, not specialised; integrative, not fragmented.

In line with the embedded values of DUT (as outlined in the DUT Strategic Plan) the aim of General Education is:-

- To build a student-centred educational experience embedded in the local context.
- To prepare students for an increasingly diverse and complex globalised work environment.
- To cultivate an engaged and critical citizenry in the context of an emerging and fragile democracy in an ever changing world order.

4.2.2 Diploma in ICT in Applications Development

This new CHE-accredited Diploma offering in ICT (Applications Development) commenced in 2016. An augmented 4-year curriculum is devised in order to enhance student development and to improve the student's chances of successful completion. The department may accept a limited number of students into the second or third year of study, who's ICT Programme aligns with the University, subject to availability of space.

Normal duration

3 years full-time

4.2.3 Diploma in ICT in Business Analysis

This new CHE-accredited Diploma offering in ICT (Business Analysis) is offered for the first time in 2017. The department may accept a limited number of students into the second or third year of study, who's ICT Programme aligns with the University, subject to availability of space.

Normal duration
3 years full-time

4.2.4 Diploma in ICT in Applications Development (4 year Foundation)

An augmented 4-year curriculum is devised in order to enhance student development and to improve the student's chances of successful completion.

Normal Duration
3 years full-time

4.2.5 Career Opportunities

Software developers, Analyst/Programmers, IT Managers, Business Analysts Information systems specialists with numerous entrepreneurial opportunities.

4.3 POST-GRADUATE PROGRAMMES

The department offers two post graduate qualifications namely, the Master of Information and Communication Technology (MICT) and the Doctor of Philosophy in Information Technology (PhD). Both post graduate programmes are full research programmes requiring submission of a full-thesis for examination. There is no coursework.

Normal Duration

MICT	**PhD**
Minimum 1 year	Minimum 2 years
Maximum 3 years	Maximum 4 years

4.4 MINIMUM ADMISSION REQUIREMENTS

4.4.1 Diplomas in ICT

The requirement below represents the minimum into either a three-year **Diploma in ICT in Applications Development** or a three-year **Diploma in ICT in Business Analysis**.

ITD1 In addition to the requirements of the General Rules (Rules G7 and G21 (b)), the minimum entrance requirement is a national Senior Certificate (NSC) or Senior Certificate (SC) or a National Certificate Vocational (NCV) that is valid for entry into a Diploma and must meet the following requirements:

Compulsory Subjects	NSC Rating	Senior Certificate		NCV
		HG	SG	
English (Home Language)	3 (40-49%)	E	C	50%
OR				
English (1st Additional Language)	4 (50-59%)	n/a	n/a	n/a
Mathematics	3 (40-49%)	E	C	50%
OR				
Mathematical Literacy	6 (70- 79%)	n/a	n/a	n/a
Two 20 credit subjects (Life Orientation or more than one additional language is excluded)	3 (40-49%)	n/a	n/a	(a) At least 50% in one fundamental subject, in addition to English & Mathematics. (b) At least 60% in three compulsory vocational subjects

Note: This requirement represents the minimum and students will be ranked according to a points system based on the rating code in General Rule 7

4.4.2 Diploma in ICT in Applications Development (4-year Foundation)

ITF1 In addition to the requirements of the General Rules (Rules G7 and G21 (b)), the minimum entrance requirement is a national Senior Certificate (NSC) or Senior Certificate (SC) or a National Certificate Vocational (NCV) that is valid for entry into a Diploma and must meet the following requirements:

Compulsory Subjects	NSC Rating	Senior Certificate		NCV
		HG	SG	
English (Home Language)	3 (40-49%)	E	D	50%
OR	3 (40-49%)	n/a	n/a	n/a
English (1st Additional Language)				
OR **Mathematics**	3 (40-49%)	E	D	50%
Mathematical Literacy	5 (60- 69%)	n/a	n/a	n/a
Two 20 credit subjects (Life Orientation or more than one additional language is excluded)	3 (40-49%)	n/a	n/a	(a) At least 50% in one fundamental subject, in addition to English & Mathematics. (b) At least 60% in three compulsory vocational subjects

In addition, a combination of alternative access and placement tests may be administered to gauge the level of preparedness for the academic demand of the programme. **Note**: This requirement represents the minimum and students will be ranked according to a points system based on the rating code in General Rule 7

4.4.3 Masters in Information and Communications Technology (MICT)

In addition to the General Rule G24(1), the minimum entry requirement is Honours Degree in ICT OR Post Graduate Diploma in ICT OR Bachelor of Technology in Information Technology OR equivalent. Students are selected for this programme based on the quality of a submitted draft proposal.

4.4.4 Doctor of Philosophy in Information Technology (PhD)

In addition to the General Rule G25 (1), the minimum entry requirement is a Master of Information and Communications Technology Degree OR equivalent. Students are selected for this programme based on the quality of a submitted draft proposal.

5. PROGRAMME RULES

5.1 ITG1 UNSATISFACTORY ACADEMIC PROGRESS

The DUT general rules G17* and G19* – G25* apply.

5.2 ITD2 PROGRESSION RULES

In addition to Rules G14*, G16*, G17* and G21* the following is applicable:

End of Year	Minimum Credits
1	50
2	120
3	200
4	280

- The student shall pass and accumulate the minimum number of credits at the end of each year of registration, as indicated in the table above
- This gives the student five years to complete the three year qualification ***without*** intervention as required within DUT general rules G17* and G21*.
- At the end of any year, if the student has not met the progression rules, he/ she may appeal.

5.3 ITG2 RE-MARKING OF PRACTICAL EXAMS

Students may apply for re-marking of practical examinations where the examination script is stored on electronic media.

5.4 ITG3 INTERRUPTION OF STUDIES

Should a student interrupt their studies by more than three (3) years, the student will be required to prove currency of appropriate knowledge prior to being given permission to re-register.

5.5 ITG4 ASSESSMENT RULES

Course marks are awarded for written (or oral) tests and assignments during the academic year. The number and duration of subject tests are set out in the subject study (learner) guides issued to students at the first lecture.

5.6 ITG5 COURSE MARK WEIGHTING

The weighting of Course mark versus Exam mark for examinable subjects offered by the Department of Information Technology is 40/60.

5.7 ITG6 GENERAL EDUCATION SUBJECT RULES

The General Education component is compulsory and covers 30% of the total credits of an under-graduate diploma and degree programme. These module offerings and its pre-requisites may be found in section 6.

5.8 ITG7 PHASE-OUT SUBJECT RULES

Phase out subject offerings may not be offered on *both* full-time and part-time bases.

5.9 ITG8 PART-TIME SUBJECT RULES

Part time students may have to write tests and/or examinations during full-time (normal working hours).

6. PROGRAMME STRUCTURE (*New* programme offerings)

6.1 Diploma in ICT in Applications Development

Year 1 – Semester 1

Code	Subjects	Core/ Fundamental/ General Education	Assessment Method	NQF Level
CSTN101	Cornerstone101	(GE) Institution	CA	5
ICTL101	ICT Literacy & Skills	(GE) Institution	CA	5
BFND101	Business Fundamentals 1	(GE) Faculty	CA	5
APDA101	Applications Development 1A	(C)	Exam	5
FCSC101	Fundamentals of Computer	(F)	Exam	5
INSS101	Information Systems 1	(C)	Exam	5

Year 1 – Semester 2

Code	Subjects	Core/ Fundamental/ General Education	Assessment Method	NQF Level	Prerequisites (P) Co-Requisites (C) Exposure (E)
MWMU101	Me, My World, My Universe	(GE) Institution	CA	5	
OSYS101	Operating Systems	(F)	Exam	5	
APDP101	Applications Development Project 1	(GE) Program	CA	5	Applications Development 1A (E) Applications Development 1B (C)
APDB101	Applications Development 1B	(C)	Exam	5	Applications Development 1A (E)
CNTW101	Communications Networks 1	(F)	Exam	5	

Year 2 – Semester 1

Code	Subjects	Core/ Fundamental/ General Education	Assessment Method	NQF Level	Prerequisites (P) Co-Requisites (C) Exposure (E)
BFND201	Business Fundamentals 2	(GE) Faculty	CA	6	Business Fundamentals 1 (P)
MCPA201	Mobile Computing 2A	(C)	Exam	6	
ISYA201	Information Systems 2A	(C)	Exam	6	Information Systems 1(P)
APDA201	Applications Development 2A	(C)	Exam	6	Applications Development 1A (P) Applications Development 1B (P)
ITPM101	IT Project Management	(C)	Exam	6	
INMA201	Information Management 2A	(C)	Exam	6	

Year 2 Semester 2

Code	Subjects	Core/ Fundamental/ General Education	Assessment Method	NQF Level	Prerequisites (P) Co-Requisites (C) Exposure (E)
CMEP101	Community Engagement Project	(GE) Institution	CA	6	
MCPB201	Mobile Computing 2B	(C)	Exam	6	Mobile Computing 2A (E)
ISYB201	Information Systems 2B	(C)	Exam	6	Information Systems 2A (E)
APDB201	Applications Development 2B	(C)	Exam	6	Applications Dev 2A (E)
INMB201	Information Management 2B	(C)	Exam	6	Information Management 2A (E)
APDP201	Applications Development Project 2	(GE) Program	CA	6	Applications Dev Proj 1 (P) Applications Dev 2A (E) Information Systems 2A (E)

Year 3 Semester 1

Code	Subjects	Core/ Fundamental/ General Education	Assessment Method	NQF Level	Prerequisites (P) Co-Requisites (C) Exposure (E)
ADPA301	Applications Development 3A	(C)	Exam	6	Applications Development 2A (P) Applications Development 2B (P)
ISYA301	Information Systems 3A	(C)	Exam	6	Information Systems 2A (P) Information Systems 2B (P)
APDA301	Applications Development Project 3A	(GE) Program	CA	6	Applications Development Projects 2 (P)
HCIN101	Human Computer Interaction	(C)	Exam	6	
TIPP301	Theory of ICT Professional Practice 3	(GE) Program	Exam	6	

Year 3 Semester 2

Code	Subjects	Core/ Fundamental/ General Education	Assessment Method	NQF Level	Prerequisites (P) Co-Requisites (C) Exposure (E)
ENSP101	Entrepreneurial Spirit	(GE) Faculty	CA	6	Business Fund 1 (P) Business Fund 2 (P)
APDB301	Applications Development 3B	(C)	Exam	6	Applications Dev 3A (P)
ISYB301	Information Systems 3B	(C)	Exam	6	Information Systems 3A (P)
ADPB301	Applications Development Project 3B	(GE) Program	CA	6	Applications Dev Proj 3A (P)

6.2 Diploma in ICT in Business Analysis

Year 1 – Semester 1

Code	Subjects	Core/ Fundamental/ General Education	Assessment Method	NQF Level
CSTN101	Cornerstone101	(GE) Institution	CA	5
ICTL101	ICT Literacy & Skills	(GE) Institution	CA	5
BFND101	Business Fundamentals 1	(GE) Faculty	CA	5
APDA101	Applications Development 1A	(C)	Exam	5
FCSC101	Fundamentals of Computer Security	(F)	Exam	5
MWMU101	Me, My World, My Universe	(GE) Institution	CA	5

Year 1 – Semester 2

Code	Subjects	Core/ Fundamental/ General Education	Assessment Method	NQF Level	Prerequisites (P) Co-Requisites (C) Exposure (E)
LWLF101	Law for Life	(GE) Institution	CA	5	
APDB101	Applications Development 1B	(C)	Exam	5	Applications Dev 1A (E)
FINA101	Financial Accounting 1	(C)	Exam	5	
BSAP101	Business Analysis Project 1	(GE) Program	CA	5	
BSIS101	Business Information Systems 1	(C)	Exam	5	

Year 2– Semester 1

Code	Subjects	Core/ Fundamental/ General Education	Assessment Method	NQF Level	Prerequisites (P) Co-Requisites (C) Exposure (E)
BFND201	Business Fundamentals 2	(GE) Institution	CA	6	Business Fundamentals 1 (P)
BSAA201	Business Analysis 2A	(C)	Exam	6	Financial Accounting 1 (P)
APDA201	Applications Development 2A	(C)	Exam	6	Applications Development 1A (P) Applications Development1B (P)
INMA201	Information Management 2A	(C)	Exam	6	
CABF201	Computer Applications in Business and Finance 2	(C)	Exam	6	
BSIS201	Business Information Systems 2	(C)	Exam	6	Business Information Systems 1 (P)

Year 2– Semester 2

Code	Subjects	Core/ Fundamental/ General Education	Assessment Method	NQF Level	Prerequisites (P) Co-Requisites (C) Exposure (E)
THIA201	Theory of Internal Auditing 2	(C)	Exam	6	
BSAB201	Business Analysis 2B	(C)	Exam	6	Business Analysis 2A (E)
APDB201	Applications Development 2B	(C)	Exam	6	Applications Dev 2A (E)
INMB201	Information Management 2B	(C)	Exam	6	Info Management 2A (E)
BSAP201	Business Analysis Project 2	(GE) Program	CA	6	Business Anal Proj 1 (P) Business Info Sys 2 (E)
ITPM101	IT project Management	(C)	Exam	6	

Year 3 – Semester 1

Code	Subjects	Core/ Fundamental/ General Education	Assessment Method	NQF Level	Prerequisites (P) Co-Requisites (C) Exposure (E)
BSAA301	Business Analysis 3A	(GE) Program	Exam	7	Business Analysis 2A (P) Business Analysis 2B (P)
BISA301	Business Information Systems 3A	(C)	Exam	7	Business Info Sys 2 (P)
BAPA301	Business Analysis Project 3A	(GE) Program	CA	6	Business Anal 2A (P) Business Anal 2B (P) Business Anal Proj 2 (P)
TIPP301	Theory of ICT Professional Practice 3	(C)	CA	6	

Year 3 – Semester 2

Code	Subjects	Core/ Fundamental /General Education	Assessment Method	NQF Level	Prerequisites (P) Co-Requisites (C) Exposure (E)
ENSP101	Entrepreneurial Spirit	(GE) Faculty	CA	6	Business Fundamentals 1 (P) Business Fundamentals 2 (P)
BSAB301	Business Analysis 3B	(GE) Program	Exam	7	Business Analysis 3A (E)
BISB301	Business Information Systems 3B	(C)	Exam	7	Business Info Systems 3A(P)
BAPB301	Business Analysis Project 3B	(GE) Program	CA	6	Business Anal Proj 3A (P) Business Analysis 3A (P)

6.3 Diploma in Information and Communications Technology in Applications Development (4-year Foundation)

Year 1 – Semester 1

Code	Subjects	Core/ Fundamental/ General Education	Assessment Method	NQF Level
CSTN101	Cornerstone101	(GE) Institution	CA	5
FCSC101	Fundamentals of Computer Security	(F)	Exam	5
ICTL101	ICT Literacy & Skills	(GE) Institution	CA	5
ILGA101	IT Logic & Technology 1A	(F)	CA	5
SKDA101	Skills Development 1 A	(F)	CA	5

Year 1 – Semester 2

Code	Subjects	Core/ Fundamental/ General Education	Assessment Method	NQF Level	Prerequisites (P) Co-Requisites (C) Exposure (E)
OSYS101	Operating Systems	(F)	Exam	5	
ILGB101	IT Logic & Technology 1B	(F)	CA	5	IT Logic & Technology 1A (E)
SKDB101	Skills Development 1 B	(F)	CA	5	
INSS101	Information Systems 1	(C)	Exam	5	

Year 2 – Semester 1

Code	Subjects	Core/ Fundamental/ General Education	Assessment Method	NQF Level	Prerequisites (P) Co-Requisites (C) Exposure (E)
CNTW101	Communications Networks 1	(F)	Exam	5	
APDA101	Applications Development 1A	(C)	Exam	5	
ILGA201	IT Logic & Technology 2A	(F)	CA	5	IT Logic & Technology 1A (P) IT Logic & Technology 1B (P)
SKDA201	Skills Development 2A	(F)	CA	5	Skills Development 1A (P) Skills Development 1B (P)
BFND101	Business Fundamentals 1	(GE) Faculty	CA	5	

Year 2 – Semester 2

Code	Subjects	Core/ Fundamental/ General Education	Assessment Method	NQF Level	Prerequisites (P) Co-Requisites (C) Exposure (E)
MWMU101	Me. My World, My Universe	(GE) Institution	CA	5	
APDP101	Applications Development Project 1	(GE) Program	CA	5	Applications Development 1A (E) Applications Development 1B (C)
APDB101	Applications Development 1B	(C)	Exam	5	Applications Development 1A (E)
ILGB201	IT Logic & Technology 2B	(F)	CA	5	IT Logic & Technology 2A(E)
SKDB201	Skills Development 2B	(F)	CA	5	Skills Development 1A (P) Skills Development 1B (P)

Year 3 - Semester 1

Code	Subjects	Core/ Fundamental/ General Education	Assessment Method	NQF Level	Prerequisites (P) Co-Requisites (C) Exposure (E)
BFND201	Business Fundamentals 2	(GE)Faculty	CA	6	Business Fundamentals 1 (P)
MCPA201	Mobile Computing 2A	(C)	Exam	6	
ISYA201	Information Systems 2A	(C)	Exam	6	Information Systems 1 (P)
APDA201	Applications Development 2A	(C)	Exam	6	Applications Development 1A (P) Applications Development 1B (P)
INMA201	Information Management 2A	(C)	Exam	6	
ITPM101	IT Project Management	(C)	Exam	6	

Year 3 - Semester 2

Code	Subjects	Core/ Fundamental/ General Education	Assessment Method	NQF Level	Prerequisites (P) Co-Requisites (C) Exposure (E)
CMEP101	Community Engagement Project	(GE) Institution	CA	6	
MCPB201	Mobile Computing 2B	(C)	Exam	6	Mobile Computing 2A (E)
ISYB201	Information Systems 2B	(C)	Exam	6	Information Systems 2A (E)
APDB201	Applications Development 2B	(C)	Exam	6	Applications Development 2A (E)
INMB201	Information Management 2B	(C)	Exam	6	Information Management 2A (E)
APDP201	Applications Development Project 2	(GE) Program	CA	6	App Dev Proj 1(P) App Dev 2A (E) Info Sys 2A (E)

Year 4 - Semester 1

Code	Subjects	Core/ Fundamental/ General Education	Assessment Method	NQF Level	Prerequisites (P) Co-Requisites (C) Exposure (E)
APDA301	Applications Development 3A	(C)	Exam	6	App Dev 2A (P) App Dev 2B (P)
ISYA301	Information Systems 3A	(C)	Exam	6	Info Systems 2A (P) Info Systems 2B (P)
ADPA301	Applications Development Project 3A	(GE) Program	CA	6	App Dev Project 2(P)
HCIN101	Human Computer Interaction	(C)	Exam	6	
TIPP301	Theory of ICT Professional Practice 3	(GE) Program	Exam	6	

Year 4 - Semester 2

Code	Subjects	Core/ Fundamental/ General Education	Assessment Method	NQF Level	Prerequisites (P) Co-Requisites (C) Exposure (E)
ENSP101	Entrepreneurial Spirit	(GE) Faculty	CA	6	Business Fund 1 (P) Business Fund 2 (P)
APDB301	Applications Development 3B	(C)	Exam	6	Applications Dev 3A (P)
ISYB301	Information Systems 3B	(C)	Exam	6	Info Systems 3A (P)
ADPB301	Applications Development Project 3B	(GE) Program	CA	6	App Dev Project 3A (P)

7. SUBJECT CONTENT ABRIDGED SYLLABI (New programme offerings)

Applications Development 1A
Introduction .Net Platform
Introducing the C# Programming Language
Getting start with .Net developing using C#
Language Essentials
Expressions and Operators
Primer on Types and Objects
Simple Flow Control
Basics of Exception and Resource Management
Introduction Types
Methods
Introduction To Unit Testing

Applications Development 2A
Introduction to ASP.NET MVC
ASP.NET MVC in Detail
Session Hijacking
Cross Site Request Forgery / SQL Injection
Using the MVC Framework Securely

Applications Development 3A
Introduction to Azure Features and Services
Scalability, Fault tolerance, Security
Uploading and testing Azure applications
Developing Azure Applications with Visual Studio
Saving data with Azure blob storage
Storing structured data using Azure table
Migrating ASP.NET Applications to Azure
Customizing Web Forms security for Azure
Enabling ASP.NET sessions and profiles for Azure

Applications Development Project 1
Structure of Report
Basic Research Methodology
Project Presentation

Applications Development Project 3A
Identify the expected outcomes of the project.
Provide a well-documented description of the problem to be addressed and why it is important.
Indicate the expected outcomes of the project, preferably in measurable terms.
List key personnel who will work on the project and include their cv's.
Describe how long (days, months) specific tasks or components of the project will take.
Show the annual and overall cost of the project. A detailed budget should be divided into categories such as salaries, fringe benefits, travel, supplies, equipment, etc.
Construct a plan of action for how the objectives will be achieved.
Draw up a checklist that provides the means to determine if the project has accomplished its objectives.

Applications Development 1B
Fields, Properties & Indexers
Constructors and Finalizes
Operators, Overloading and Conversions
Object Oriented Programming
Generic Types and Methods Collection Types
Delegates
Events
Language Integrated Query Essentials
Exceptions
Working with IO

Applications Development 2B
Filters, Controller Extensibility, Views
Model Templates, Model Validation
Unobtrusive Ajax, JQuery
Security and Vulnerability
Authentication and Authorization Deployment

Applications Development 3B
Building Service-Oriented Azure Applications
Building interoperable Azure services
Leveraging Azure for Asynchronous Computing
Implementing queue storage for messaging
SQL Azure Cloud-Based Storage
Migrating to a SQL Azure database
Controlling access using AppFabric

Applications Development Project 2
Planning and Analysis: Documents and Presentation
Design: documents and Presentation
Implementation and Testing
Applications must include the use of either a relational model database server or an object-relational database. Examples of these database servers are:
Oracle, MS SQL/ MY SQL, DB4objects
All applications must be developed as either web/mobile based and designed for the use of Asynchronous JavaScript and XML (Ajax) Technology

Applications Development Project 3B
Understanding and application of concepts in application development
Application Development Methodology: Agile/Scrum, Waterfall, RAD, etc. Introduction to Project Management
The project management and Information Technology Context
The project management process groups
Project Integration Management
Project Scope Management
Project Time Management
Project Cost Management
Project Quality Management
Project Human Resource Management

Business Fundamentals 1
Efficiently manage key aspects of academic life
Basic business communication, written and verbal
Information Literacy
Basic Business Finance
Critical Citizenry in a business environment

Business Information Systems 1
Basic Concepts- an introduction to business information systems
Selection of appropriate hardware for a BIS
Selection of appropriate software for a BIS
Networks, telecommunications and the Internet as related to a BIS
Enterprise and functional BIS

Business Information Systems 3A
Information systems strategy
Information systems management
Managing information security
Providing end user services
Ethical, legal and moral constraints on information systems

Communication Networks 1
Introduction to Networking,
Networking fundamentals
Networking Media
Cabling Testing, Cabling LANs and WANs
Ethernet Fundamentals & Technologies
OSI/TCP/IP network model
TCP/IP & IP Addressing
Routing Fundamentals and Subnets
TCP/IP Transport & Application Layers
CASE STUDY--Structured Cabling

Computer Applications in Business and Finance 2
Application Installation
End user functionality of the different modules in the application
Accessing an existing database
Input-process-output
Generate end user reports
Security features of the applications

Business Fundamentals 2
Introduction to research methodology (research terms and concepts e.g. qualitative; quantitative; research ethics; types of research)
Business Communication
Societal consequences of technological developments
Appropriate technologies for business practices
Current social issues (Energy, Health and Agriculture)

Business Information Systems 2
An introduction to acquiring and developing BIS
Initiating systems development
BIS project Management
Systems Analysis
Identifying the requirements
Focus on requirements determination in a lean or agile environment
Documenting the findings
Focus on soft systems methodology
Software tools for systems analysis
Case study
Systems Design
Aims of Design
Constraints on system design
The relationship between analysis

Business Information Systems 3B
The Internet, Intranets, and Extranets
E-commerce
Global Information Systems
Enterprise Systems
Management Support Systems
Intelligent Information Systems
Emerging Trends, Technology and Applications

Community Engagement project
The principles of community engagement.
Working in groups (being an effective team player).
Guidelines for undertaking a community engagement project.
The community as a main factor in community engagement.
Skills for community engagement.
Ethical issues in community engagement.
Planning a community engagement project.
Implementing a community engagement project. Evaluating a community engagement project.

Cornerstone 101

The module content will be developed around the concept of journeys, across time, across space, and across human relationships. It will take the journey of the UMgeni River (which is close to all DUT campuses) as a metaphor bringing different disciplinary perspectives to this content-environmental, historical and sociological in particular.

The metaphor of the journey will be sustained across the module and will be applied to personal journeys, historical, political and environmental journeys, and social journeys, with a specific focus on gender. Each section will draw in issues of ethics, diversity and critical citizenry. The design team may later take a different metaphor or theme, but with the same outcomes and attributes.

At each stage of the module, activities such as weekly online journey and class discussion will involve reflection and build communicative practices. There will be concluding section in which students will identify their learning and examine the implications for their roles as students and as citizens.

Financial Accounting 1

Basic concepts in accounting
Transactions
Ledger accounts
The accounting cycle
Trial Balance
Presentation and disclosure of financial statements
The adjusting and closing process
Applications of accounting systems
Receivables and payables
Inventories
Cash equivalents
Non-current assets

Human Computer Interaction

Database systems
The Database Approach
Database Development Process
Database Alternatives
Database Models
Relational Models Characteristics
Database Design
Data Modelling with Entity Relationship Diagrams
Data Modelling Advanced Concepts
Introduction to Structured Query Language
Data Definition Commands
Data Manipulation Commands
Select Queries
Additional Data Definition Commands
Additional Select Query Keywords Basic Database Table Joins

Information Management 2B

Advanced Structured Query Language
Implementation Alternatives Database Management

Entrepreneurial Spirit

Orientation to Entrepreneurial Spirit (Course Expectations)
Spirit of Entrepreneurship
Operations
Project Management
Team Management
Business and Finance
Investigating the Business Environment/Architecture
Financing (Cost and Profit analysis, projected pro-forma statements, budgets, Working Capital Management and Capital
Budgeting) outcome 4
Marketing (Advertising, Promotions etc.)
Risk Management
Entrepreneurial Case study Analysis (Creativity enhancement)
ICT Enablers (Excel, , social media, M&E commerce)

Fundamentals of Computer Security

Basic Security Principles & Terms
Computer System Security
Network Security
Internet & Email Security
Application Security
Human & Physical Security
User Security
Malware
Law, Ethics, & Privacy
Policies/Procedures & Documentation
Basic Cryptography
Best Security Practices

ICT literacy and Skills

Basics of ICTs Hardware, Software, and Users
Internet Search
Word Processing
Spreadsheets
Presentations
Referencing
Security, Legal, Ethical, and Societal Issues
Economics of ICTs

Information Management 2A

Database systems
The Database Approach
Database Development Process
Database Alternatives
Database Models
Relational Models Characteristics
Database Design
Data Modelling with Entity Relationship Diagrams
Data Modelling Advanced Concepts
Normalizing Database Designs
Introduction to Structured Query Language

Information Systems 1
An Overview of systems analysis and design
The role of the systems analyst
Investigating systems requirements
Use Cases
Domain Modelling
Extending the Requirements models
Project planning and Project Management

Information Systems 2B
The Software life cycle models
Software Security
Software Maintenance
Agile development using SCRUM as a tool
History of agile methods
Philosophy of agile methods

Information Systems 3B
Fundamentals of Software Testing
Ensuring Testing throughout the Software Life Cycle
Recognizing key concepts in maintenance testing
Comparing the four test types
Coping with the psychology of testing
Implementing Static Analysis Techniques
Leveraging Test-Design Techniques
Differentiating various "specifications"
Applying specification-based techniques
Utilizing structure-based techniques
Deploying experience-based knowledge
Test Management, Structuring a test plan
Interpreting a test summary report
Managing incidents, Addressing project and product risks
Implementing Configuration Management (CM)
Defining the functions of CM
Evaluating objectives of CM
Adopting Test Support Tools

IT Logic & Technology 2 B
Methods
1D arrays
Objects and classes
GUI interface
Problem Solving using a programming tool

IT Project Management
Backdrop: The Science of Scrum
New Management Responsibilities
The Scrum Master
Bringing Order from Chaos
The Product Owner
Planning a Scrum Project
Project Reporting— Keeping Everything Visible
The Team
Scaling Projects Using Scrum Rules

Information Systems 2A
Essentials of Design and the Design Activities
Designing the User and Systems Interfaces
Object oriented design principles
Object oriented design: Use Case realization
Database, Controls, and Security Making the system Operational

Information Systems 3A
The Scope of Software Engineering
The Software Process and its Attendant Problems
Software Life-Cycle Models
Software Quality Assurance
Current Trends in Systems Development

IT Logic & Technology 1A
Computer Technology Concepts
Logic skills & Problem solving techniques
Pseudocode with variables and constructs
Problem solving with puzzles
Critical Reasoning – logic
Deductive and Inductive reasoning
Problem solving using pseudocode, trace tables
Input, Process, Output
Simple Algorithms
Flowchart

IT Logic & Technology 1 B
Structured algorithms
Flowcharts
Trace tables
Introduction to Compiler, programming language
Loops
Arrays

IT Logic & Technology 2A
Introduction to Programming
Levels / generations of Language
Explore different Software Packages
Introduce Programming Tool
Syntax – Variable
Decision constructs
Repetition constructs

Law for Life
Introduction
Civil and criminal law
Law of insurance
Road accident fund
Law of contract
Marriage
Succession

Me, My World, My universe

The module will be developed within the context of decision making and consequences of these on the self, the world and the universe.
The module will start with a "refresher" on the appropriate mathematical computations and solving of simple, single context applications in the following areas of mathematics:
Numbers and Operations, Functional Relationships. Space, Shape, Measurement and Data handling
Broader issues involving the quantitative literacies/reasoning will be addressed by examining relevant/current case studies within the themes indicated above. Not all themes maybe addressed in a particular year. But at least two issues will be analysed and discussed from a quantitative reasoning perspective.

Mobile Computing 2B

Wireless Devices and Services
XML and Web Services
Session Initiation Protocol
Responses
Multimedia
Advanced Multimedia
Security and transactions Smartcards? Really?
Testing SATSA Applications with the Emulator Basic Smartcard Communication
Smart Card Communication with Java Card RMI
Generating Signatures
Managing Certificates
Cryptography

Skills Development 1 B

Business English
Communication
Life Skills

Skills Development 2 B

Business Processes
Enterprise Systems Knowledge for Business
Sales processes
Purchasing processes
ERP foundation scenarios using SAP

Mobile Computing 2A

Overview of Mobile technologies and platforms
Basic User Interface design
Advanced **User** interface Design
Working with Files and Directories
Understanding Protocol Independent Multicast Technology
Mobile Internationalization
Generic connection framework
Text and multimedia messaging
Sending and receiving messages (binary and multipart)

Operating Systems

Introduction
Multi-Programming
Concurrency
Memory Management Device Management
File Systems
Inter process Communication
Network Organisation Concepts
Management of Network Functions

Skills Development 1 A

Academic Literacy
Information Literacy
Language Skills
Numeracy

Skills Development 2 A

Basic Accounting Skills Accounting concepts
Basic Business Skills

Theory of Internal Auditing

Basic introduction to Internal Auditing
The role of the internal auditor
Basic audit concepts internal control
Elementary systems of internal control
Evaluation of internal control system cycles internal audit reports

8. PROGRAMME INFORMATION (Current programme offerings)

8.1 GENERAL

Student attendance

The department does not hold itself responsible for the recording of attendance of its students.

Conduct of students in laboratories

Rules of conduct pertaining to the specific laboratory as instituted by the head of the department, shall apply to all students registered for that subject.

- Eating, playing music, smoking or drinking in any lecture venue or laboratory is forbidden.
- Safety rules are to be strictly adhered to at all times.
- Mobile phones are to be switched off during lecture, laboratory and assessment sessions

Course/ year marks

- With reference to Rule G15, the calculation of the year/semester mark for each subject will be indicated within the learner guide of each subject.
- In addition to the general requirements for a year mark as stipulated in Rule G15 the department reserves the right to recommend at the end of a reasonable portion of the course that a student withdraw from the course, either due to poor performance in the majority of subjects, or due to in- adequate presentation of assigned work.
- A year/semester mark is valid only for the main examination in the year/semester in which a student is registered, plus the supplementary examination in that subject, if granted to the student in terms of Rule G16.

8.2 DEGREE PROGRAMMES

8.2.1 BTECH: Information Technology (Software Development)

This instructional programme will have a final intake of new students in 2019 (numbers permitting).

Normal duration

1 year full time or 2 years part time

8.2.2 BTECH: Financial Information Systems

This instructional programme is an annual programme run over two year's part time.

This programme will have a final intake of new students in 2018 (number permitting). Insufficient student numbers may result in the programme *not* being offered.

Normal duration

2 years part time

8.3 MINIMUM ADMISSION REQUIREMENTS

8.3.1 Bachelor of Technology in Information Technology (BTECH: IT)

A student may register for the B Tech: Information Technology provided that the student has:

- Successfully completed the National Diploma: Information Technology (Software Development). This includes the completion of the prerequisite subjects Technical Programming 2 (or equivalent) and Development Software 3 (project) or its equivalent.
- Obtained an average of 60% or greater for third level subjects or has at least two years appropriate industry experience.
- In exceptional cases, variations in these requirements shall be considered by the Head of Department.

8.3.2 Bachelor of Technology in Financial Information Systems (BTECH: FIS)

A National Diploma or University Degree with Financial Accounting III and Financial Information Systems III or the equivalents. In exceptional cases, variations in these requirements shall be considered by the Head of Department.

8.4 PROGRAMME RULES (B TECH IT AND B TECH FIS)

Slow progress

A student who is unable to graduate within the allowed time period will be given a warning of slow progress.

Re-admission

After the first year of study a student has to have successfully passed 50% of the registered subjects in the B Tech Degree in order to re-register for the programme.

Appeals

Students may appeal for registration through the student portal.

8.5 PROGRAMME STRUCTURE

8.5.1 Bachelor of Technology in Information Technology (BTECH: IT)

The programme shall consist of 10 modules completed during one year of fulltime study or two years part-time study. Project 4 counts as 2 modules. The offering of each module / instructional programme will be subject to availability of resources. In order to qualify one of the modules is required to be completed at advanced level e.g. Advanced Development Software 4. Students are responsible for selecting subjects in order to qualify for graduation.

Please note that the last possible registration for this qualification is January 2019.

FULL TIME - STUDY PERIOD 1

Code	Subjects	*C/O	Semester/ Year	Assessment Method	NQF Level	Pre-requisite	Co-Req.
DBSY404	Database Systems 4	C	Semester	Exam	7		
DSFW401	Development Software 4	C	Semester	Exam	7		
INTM401	Information & Technology Mgt 4	C	Semester	Exam	7		
OSYS404	Operating Systems 4	C	Semester	CA	7		
RMIT101	Research Methodology	C	Semester	CA	7		

FULL TIME - STUDY PERIOD 2

Code	Subjects	*C/O	Semester/ Year	Assessment Method	NQF Level	Pre-requisite	Co-Req.
ADSW401	Advanced Development	C	Semester	Exam	7		DSFW401
INSC401	Information Security 4	O	Semester	Exam	7		
NETW404	Networks 4	O	Semester	Exam	7		
PRJT402	Project 4 *	O	Semester	CA	7	RMIT101 Pass mark >= 60%	
RMIT121	Research Methodology 2nd	C	Semester	CA	7	RMIT101	
SWED401	Software Engineering &	O	Semester	Exam	7		
USRI401	User Interfaces 4	O	Semester	Exam	7		

* Registration for Project 4 is only available for students who meet the Pre-requisite and whose application is approved by the department. Space is limited and determined by the availability of resources.

SUBJECTS ACCEPTED FOR EXEMPTION FROM OTHER UNIVERSITIES OF TECHNOLOGY FOR GRADUATION PURPOSES

Code	Subjects	*C/O	Semester/ Year	Assessment Method	NQF Level	Pre-requisite	Co- Req.
ARIN402	Artificial Intelligence 4	O	Semester	Exam	7		
ESYS401	Expert Systems 4	O	Semester	Exam	7		

PART TIME - THIS PROGRAMME RUNS ON A TWO YEAR CYCLE. CHOOSE SUBJECTS INDICATED BY A # AS THESE ARE ONLY OFFERED EVERY SECOND YEAR

PART TIME SEMESTER 1 (EVEN YEARS) 2018, 2020 (Max 3)

Code	Subjects	*C/O	Semester/ Year	Assessment Method	NQF Level	Pre-requisite	Co-Req.
DSFW401	Development Software 4	C	Semester	Exam	7		
OSYS404	Operating Systems 4#	O	Semester	CA	7		
RMIT101	Research Methodology	C	Semester	CA	7		
INTM401	Information & Technology Mgt 4	O	Semester	Exam	7		

PART TIME SEMESTER 2 (EVEN YEARS) 2018, 2020 (Max 3)

Code	Subjects	*C/O	Semester / Year	Assessment Method	NQF Level	Pre-requisite	Co-Req.
ADSW401	Advanced Development Software 4	C	Semester	Exam	7	DSFW401	
PRJT402	Project 4	O	Semester	CA	7	RMIT101 pass mark >= 60%	
RMIT121	Research Methodology 2nd registration	C	Semester	CA	7	RMIT101 < 50%	
SWED401	Software Engineering & Design 4 #	O	Semester	Exam	7		
USRI401	User Interfaces 4 #	O	Semester	Exam	7		

PART TIME SEMESTER 1 (2019) (Max 3)

Code	Subjects	*C/O	Semester/ Year	Assessment Method	NQF Level	Pre-requisite	Co-Req.
DBSY404	Database Systems 4 #	O	Semester	Exam	7		
DSFW401	Development Software 4	C	Semester	Exam	7		
INTM401	Information & Technology Mgt 4	C	Semester	Exam	7		
RMIT101	Research Methodology	C	Semester	CA	7		

PART TIME SEMESTER 2 (2019) (Max 3)

Code	Subjects	*C/O	Semester/ Year	Assessment Method	NQF Level	Pre-requisite	Co-Req.
ADSW401	Advanced Development Software 4	C	Semester	Exam	7	DSFW401	
INSC401	Information Security 4 #	O	Semester	Exam	7		
PRJT402	Project 4	O	Semester	CA	7	RMIT101 pass mark >= 60%	
RMIT121	Research Methodology 2nd registration	C	Semester	CA	7	RMIT101 < 50%	
NETW404	Network 4 #	O	Semester	Exam	7		

8.5.2 Bachelor of Technology in Financial Information Systems (BTECH: FIS).

This is a two year part time programme. Students may register on a full time basis in an odd year, given the odd year subjects are offered in the PART TIME slot only.

Even Years (2018)

Code	Subjects	*C/O	Semester/ Year	Assessment Method	NQF Level	Pre-requisite	Co-Req.
FNMT101	Functional Management	C	Semester	Exam	7		
AMCS201	Advanced Management Communication Skills 2	C	Semester	Exam	7		
FNLM413	Financial Management IV mod1	C	Semester	Exam	7		
FNLM423	Financial Management IV mod2	C	Semester	Exam	7		
FACC412	Financial Accounting 4 mod1	C	Semester	Exam	7		
FACC422	Financial Accounting 4 mod 2	C	Semester	Exam	7		

Odd Years (2019)

Code	Subjects	*C/O	Semester/ Year	Assessment Method	NQF Level	Pre-requisite	Co-Req.
FISY402	Financial Information Systems IV	C	Annual	CA	7		
RMIT101	Research Methodology	C	Semester	CA	7		
RMIT121	Research Methodology 2nd registration	C	Semester	CA	7	RMIT101 < 50%	
INLW101	Industrial Law	C	Semester	Exam	7		
FNLM413	Financial Management IV mod 1	C	Semester	Exam	7		
FNLM423	Financial Management IV mod 2	C	Semester	Exam	7		

Phase Out Plan – B Tech IT (BTINF2) NO NEW intake in 2020 - Phased Out			
Subject Code	***Subject**	**Semester/ Year**	**** Last possible Registration**
DBSY404	Database Systems 4	Semester	January 2019 (Full Time and Part Time)
DSFW401	Development Software 4	Semester	January 2019 (Full Time and Part Time)
INTM401	Information & Technology Management 4	Semester	January 2019 (Full Time and Part Time)
OSYS404	Operating Systems 4	Semester	January 2020 (Part Time only, returning students)
RMIT101	Research Methodology	Semester	January 2020 (Part Time only, returning students)
ADSW401	Advanced Development Software 4	Semester	July 2019 (Full Time and Part Time)
INSC401	Information Security 4	Semester	July 2019 (Full Time and Part Time)
NETW404	Networks 4	Semester	July 2019 (Full Time and Part Time)
PRJT402	Project 4 *	Semester	July 2019 (Full Time and Part Time)
RMIT121	Research Methodology 2nd registration	Semester	July 2020 (Part Time only, returning students)
SWED401	Software Engineering & Design 4	Semester	July 2020 (Part Time only, returning students)
USRI401	User Interfaces 4	Semester	July 2020 (Part Time only, returning students)

* Subjects may be offered part-time depending on class size and resources

** Last year of offering will be dependent on registration numbers - minimum class size of 15

8.6 ABRIDGED SYLLABUS (*Current* BTECH programme offerings)

ADVANCED DEVELOPMENT SOFTWARE 4
SAPSE Code 60704606
Subject Code ADSW401
Theory
Advanced Java Programming Data Structures Java
Design Patterns and/or Graphical Applications
Practical:
Practical work shall consist of tutorials, assignments and a group project.

ARTIFICIAL INTELLIGENCE 4
SAPSE Code 69900706
Subject Code ARIN402
Theory
Not currently offered.
Method of Evaluation:
Course mark - 40%; Exam mark - 60% (one three hour exam)

DATABASE SYSTEMS 4
SAPSE Code 60503306
Subject Code DBSY404
Theory
Database Background
The relational model and languages Database analysis and design Methodology
Selected database issues Business Intelligence
Practical:
Practical work shall consist of tutorials, assignments and a group project.

FINANCIAL INFORMATION SYSTEMS IV
SAPSE Code 060504006
Subject Code FISY401
Theory
The theory covered in Research Methodology is applied. As there is no contact time, students are required to apply sound research principles to complete a proposal and implement the research.
Practical:
None
Method of Evaluation:
NO EXAM. 100% Course Mark

FINANCIAL MANAGEMENT IV Module 2
SAPSE Code 040923106
Subject Code FNLM423
(Module 2)
Cost of Capital Capital Budgeting. Sources of Finance
Working Capital Management
Mergers and Take-overs International managerial finance

ADVANCED MANAGEMENT COMMUNICATION SKILLS 2
SAPSE Code 059901222
Subject Code AMCS201
Theory
Problem Solving
Conflict Management and Leadership Negotiation
Organisational Communication
Job Application, Interviews, Business letter writing, Memos
Motivation and Persuasion
Advertisement
Meeting Procedures and Minutes of a meeting
Practical:
Power Point Presentations.
Oral Presentations

DEVELOPMENT SOFTWARE 4
SAPSE Code 60703706
Subject Code DSFW401
Theory
Advanced Data Structures
Advanced Programming Techniques with Java programming
Practical:
Practical work shall consist of tutorials and assignments

EXPERT SYSTEMS 4
SAPSE Code 69900606
Subject Code ESYS401
Theory
Knowledge Representation and Acquisition Knowledge Engineering
Building Expert Systems
Inferences, Explanations and Uncertainty in Expert Systems
Software Evaluation in Expert Systems Fuzzy Logic
Practical:
There will be some Expert System development using shells.
Method of Evaluation:
Course mark 40% and Exam mark 60% (One three hour paper).

FINANCIAL MANAGEMENT IV Module 1
SAPSE Code 040923106
Subject Code FNLM413
(Module 1)
The role and environment of financial management. Time value of money. Risk and return.
Valuation of capital assets (bonds and shares) Dividend Policy
Analysis and interpretation of financial statements
Method of Evaluation:
Course mark - 40%; Exam mark - 60% (one three hour exam)

FUNCTIONAL MANAGEMENT

SAPSE Code 040926212
Subject Code FNMT101
Theory
Managers and Management
The Historical Roots of Contemporary Management
The Management Environment Foundations of Planning
Foundations of Decision-Making Basic Organization Designs
Managing Change, Stress, and Innovation Motivating and Rewarding Employees Leadership and Trust
Communication and Interpersonal Skills Foundations of control

INFORMATION SECURITY 4

SAPSE Code 60705306
Subject Code INSC401
Theory
Data Encryption
Internet Security Access Control Software security
Security policies Legal issues
Practical:
Practical work shall consist of tutorials and assignments.
Method of Evaluation:
Course mark 40% and Exam mark 60% (One three hour paper).

NETWORKS 4

SAPSE Code 60301906
Subject Code NETW404
Theory
Top-down approach to Computer Networking (featuring the Internet)
Advanced topology and design issues relating to TCP and UDP.
Network Protocols (HTTP, FTP, SMTP, DNS)
In-depth study of the five Internet layers, viz. Application, Transport, Network, Link and Physical.
Advanced network issues: Delay, Congestion, Reliability, Routing (algorithms), Security, Wireless and mobile networks, and network management.
Practical:
One project to cover the practical aspects of networking.
Method of Evaluation:
Course mark 40% and Exam mark 60% (One three hour paper).

INFORMATION AND TECHNOLOGY MANAGEMENT 4

SAPSE Code 060207106
Subject Code INTM401
Theory
Managers and Management
The Historical Roots of Contemporary Management
The Management Environment Foundations of Planning
Foundations of Decision-Making Basic Organization Designs
Managing Change, Stress, and Innovation
Motivating and Rewarding Employees Leadership and Trust
Communication and Interpersonal Skills Foundations of control
Method of Evaluation:
Course mark 40% and Exam mark 60% (One three hour paper).

INDUSTRIAL LAW

SAPSE Code 130306712
Subject Code INLW101
Theory
Intellectual Property Law
Labour Law
Computer-related Law
Practical:
None
Method of Evaluation: Course mark - 40%; Exam mark - 60% (one three hour exam)

OPERATING SYSTEMS 4

SAPSE Code 60801506
Subject Code OSYS404
Theory
Computer System & Operating System Overview
Process Description and Control Threads, SMP and Micro Kernels Concurrency: Deadlock and Starvation Memory Management & Virtual Memory Uni-processor Scheduling
Method of Evaluation: 100% Course Mark

PROJECT 4
SAPSE Code 69900206
Subject Code PRJT402
Theory
Theories and concepts relevant to the project are covered in the Research Methodology course (229900012) **Practical:**
Practical work shall consist of the design and execution of a research project with the following research phases: proposal development, Implementation of the proposal, write up of findings, including literature review, data collection, analysis and discussion.
Method of Evaluation:
NO EXAM
100% Course Mark
The student's project will be evaluated by means of a proposal and research dissertation. Semester 1 and 2.

SOFTWARE ENGINEERING AND DESIGN 4
SAPSE Code 60705106
Subject Code SWED401
Theory
Intro to Software Engineering Revision of classic process models Agile process models
IT project management frameworks
Software quality frameworks Requirements engineering
Systems methods in software analysis
Cost estimation
Software architectural design Software team organization **Method of Evaluation:** Course mark 40% and Exam 60%

RESEARCH METHODOLOGY
SAPSE Code 229900012
Subject Code RMIT101
Theory
Research methods aim to equip the student with the basic skills to do academic research. It is a compulsory prerequisite for MTECH studies. Topics such as research approaches, methods and data collection methods are covered. The assessment of the subject consists of tests, assignments and a full proposal. It is an annual subject with contact time during semester 1 and the development of the proposal during semester 2.
Method of Evaluation:
NO EXAM. 100% Course Mark
NB: Students to read this section in conjunction with the relevant learner guides.

USER INTERFACES 4
SAPSE Code 60703206
Subject Code USRI401
Theory
Interface standardization Computer graphics
Computer user interfaces Input/output peripherals
Practical:
Practical work shall consist of self-study assignments.
Method of Evaluation:
Course mark 40% and Exam mark 60% (One three hour
paper). None

9. PROGRAMME INFORMATION (*Phase-out* programme offerings)

9.1 GENERAL

Student attendance

The department does not hold itself responsible for the recording of attendance of its students.

Conduct of students in laboratories

Rules of conduct pertaining to the specific laboratory as instituted by the head of the department, shall apply to all students registered for that subject.

- Eating, playing music, smoking or drinking in any lecture venue or laboratory is forbidden.
- Safety rules are to be strictly adhered to at all times.
- Mobile phones are to be switched off during lecture, laboratory and assessment sessions

Course/ year marks

- With reference to Rule G15, the calculation of the year/semester mark for each subject will be indicated within the learner guide of each subject.
- In addition to the general requirements for a year mark as stipulated in Rule G15 the department reserves the right to recommend at the end of a reasonable portion of the course that a student withdraw from the course, either due to poor performance in the majority of subjects, or due to inadequate presentation of assigned work.
- A year/semester mark is valid only for the main examination in the year/semester in which a student is registered, plus the supplementary examination in that subject, if granted to the student in terms of Rule G16.

9.2 DIPLOMA PROGRAMMES

National Diploma in Information Technology

The National Diploma in Information Technology had TWO STREAMS namely:-

National Diploma in Information Technology (Software Development)
AND
National Diploma in Information Technology (Business Applications)

The **Software Development** stream provides students with computer software development skills as well as theoretical and practical grounding for work in the information technology sector as dictated by industry needs.

Career Opportunities:

Software developers, Analyst/Programmers, IT Managers, Information systems specialists with numerous entrepreneurial opportunities.

The **Business Applications** stream covers Enterprise Resource Planning (ERP) systems. Topics include integration of business processes and transactions in ERP. The University, being an active member of the SAP University Alliances (UA), uses the SAP software as the training tool in the course for students to gain insights into the best practices on how information can be leveraged to optimize the integration of business processes for improved business performances.

Career Opportunities:

Analyst/Programmers, Business Analysts, Information systems specialists with numerous entrepreneurial opportunities.

Normal duration

Minimum 3 years' full time or minimum 4 years' part time

9.3 PROGRAMME RULES

With regards to the Progression rules for ND: IT, ND: FIS and FOUNDATION programme a student needs to be aware of the Programme Rules listed on pages 10 and 11.

9.4 PROGRAMME STRUCTURE

ND: Information Technology (Software Development) [NDINS1]
ND: Information Technology (Software Development) 4-year Foundation [NDISF1]
ND: Information Technology (Business Applications) [NDINB1]

The three National Diplomas indicated above are in a process of being phased out. The last new intake for all these diplomas was in January 2015.

The following table provides each of the modules for the respective diplomas and its last date of offering.

Module Code	Module Name	* C/O	** S/A	NQF Level	Prerequisite	Diploma(s)	*** Last offering Date
ILGT101	IT Logic & Technology 1	C	A	4		NDISF1	Phased out
SKDV101	Skills Development 1	C	A	4		NDISF1	Phased out
ISYS113	Information Systems 1 [mod 1]	C	S	5		NDISF1, NDINS1, NDINB1	Phased out
DSFW112	Development Software 1 [mod 1]	C	S	5		NDISF1, NDINS1, NDINB1	Phased out
SSFT111	System Software 1 [mod 1]	C	S	5		NDISF1, NDINS1, NDINB1	Phased out
TPRG111	Technical Programming 1 [mod 1]	C	S	5		NDISF1, NDINS1	Phased out
FACC113	Financial Accounting 1 [mod 1]	C	S	5		NDINB1	Phased out
ISYS123	Information Systems1 [mod 2]	C	S	5		NDISF1, NDINS1, NDINB1	Phased out
DSFW122	Development Software 1 [mod 2]	C	S	5		NDISF1, NDINS1, NDINB1	Phased out
SSFT121	System Software 1 [mod 2]	C	S	5		NDISF1, NDINS1, NDINB1	Phased out
TPRG121	Technical Programming 1 [mod 2]	C	S	5		NDISF1, NDINS1	Phased out
FACC123	Financial Accounting 1 [mod 2]	C	S	5		NDINB1	Phased out
ILGT201	IT Logic & Technology 2	C	A	5	ILGT101	NDISF1	Phased out
SKDV201	Skills Development 2	C	A	5	SKDV201	NDISF1	Phased out
ISYS213	Information Systems 2 [mod 1]	C	S	6	ISYS113, ISYS123	NDISF1, NDINS1, NDINB1	January 2018
DSFW212	Development Software 2 [mod 1]	C	S	6	DSFW112, DSFW122	NDISF1, NDINS1, NDINB1	January 2018
SSFT213	System Software 2 [mod 1]	O	S	5	SSFT111, SSFT121	NDISF1, NDINS1, NDINB1	January 2018
SSFT223	System Software 2 [mod 2]	O	S	5	SSFT111. SSFT121	NDISF1, NDINS1, NDINB1	January 2018
TPRG211	Technical Programming 2 [mod 1]	C	S	6	TPRG111,	NDISF1, NDINS1	January 2018

Module Code	Module Name	* C/O	** S/A	NQF Level	Prerequisite	Diploma(s)	*** Last offering Date
					TPRG121		
BSAN212	Business Analysis 2 [mod 1]	C	S	6	ISYS113, ISYS123	NDINB1	Phased out
ISYS223	Information Systems 2 [mod 2]	C	S	6	ISYS213	NDISF1, NDINS1, NDINB1	July 2018
DSFW222	Development Software 2 [mod 2]	C	S	6	DSFW112, DSFW122	NDISF1, NDINS1, NDINB1	July 2018
TPRG221	Technical Programming 2 [mod 2]	C	S	6	TPRG111, TPRG121	NDISF1, NDINS1	July 2018
ITSK111	IT Skills 1 [mod 1]	C	S	5		NDISF1, NDINS1, NDINB1	July 2018
ITSK121	IT Skills 1 [mod 2]	C	S	5		NDISF1, NDINS1, NDINB1	July 2018
BSAN222	Business Analysis 2 [mod 2]	C	S	6	ISYS113, ISYS123	NDINB1	Phased out
ISYS314	Information Systems 3 [mod 1]	C	S	6	ISYS213, ISYS223	NDISF1, NDINS1, NDINB1	January 2019
BSAN312	Business Analysis 3 [mod 1]	C	S	6	BSAN212, BSAN222	NDINB1	January 2018
DSFW302	Development Software 3	C	A	6	DSFW212, DSFW222, ISYS213, ISYS223	NDISF1, NDINS1, NDINB1	January 2019
CMPG101	Commercial Programming 1	O	A	6	ISYS213, ISYS223, DSFW112, DSFW122	NDISF1, NDINS1	January 2019
IPRO201	Internet Programming 2	O	A	6	TPRG111 TPRG121	NDISF1, NDINS1	January 2019
ISYS324	Information Systems 3 [mod 2]	C	S	6	ISYS213, ISYS223	NDISF1, NDINS1, NDINB1	July 2019
BSAN322	Business Analysis 3 [mod 2]	C	S	6	BSAN322	NDINB1	July 2018

* Compulsory or Optional

** Semester module or Annual

*** Subject offering will be dependent on registration numbers - minimum class size of 15
Subjects may be offered part-time depending on class size and resources

ND: Financial Information Systems [NDFIS2]

The National Diploma Financial Information Systems is in the process of being phased out. The last new intake for this diploma was in January 2015.

The table below provides the modules for the diploma and the corresponding last date of offering.

Module Code	Module Name	* C/O	** S/A	NQF Level	Prerequisite	*** Last offering Date
BCAL101	Business Calculations 1	C	S			Phased out
CMUN101	Communications 1	C	S			Phased out
ENSK103	Entrepenual Skills	C	S			Phased out
FACC113	Financial Accounting 1 [mod 1]	C	S			Phased out
FISY111	Financial Information Systems 1 [mod 1]	C	S			Phased out
IAUD118	Internal Auditing 1 [mod 1]	C	S			Phased out
CLAC101	Commercial Law for Accountants	C	S			Phased out
CTAC101	Cost Accounting 1	C	S			Phased out
FACC123	Financial Accounting 1 [mod 2]	C	S			Phased out
FISY121	Financial Information Systems 1 [mod 2]	C	S			Phased out
IAUD128	Internal Auditing 1 [mod 2]	C	S			Phased out
FACC213	Financial Accounting 2 [mod 1]	C	S	6	Financial Accounting 1	Phased out
FISY211	Financial Information Systems 2 [mod 1]	C	S	6	Financial Info Systems 1	Phased out
IAUD214	Internal Auditing 2 [mod 1]	C	S	6	Financial Accounting 1 Internal Auditing 1	Phased out
CTAC211	Cost Accounting 2 [mod 1]	C	S	6	Cost Accounting 1	Phased out
SWSK111	Software Skills [mod 1]	C	S	6		Phased out

Module Code	Module Name	* C/O	** S/A	NQF Level	Prerequisite	*** Last offering Date
FACC223	Financial Accounting 2 [mod 2]	C	S	6	Financial Accounting 1	Phased out
FISY221	Financial Information Systems 2 [mod 2]	C	S	6	Financial Info Systems 1	Phased out
IAUD224	Internal Auditing 2 [mod 2]	C	S	6	Financial Accounting 1 Internal Auditing 1	Phased out
CTAC221	Cost Accounting 2 [mod 2]	C	S	6	Cost Accounting 1	Phased out
SWSK121	Software Skills [mod 2]	C	S	6	Software Skills 1 [mod 1]	Phased out
FACC313	Financial Accounting 3 [mod 1]	C	S	6	Financial Accounting 2	January 2018
FISY321	Financial Information Systems 3 [mod 2]	C	S	6	Financial Information Systems 2	January 2018
IAUD314	Internal Auditing 3 [mod 1]	O	S	6	Internal Auditing 2 Financial Accounting 2	January 2018
MGTA312	Management Accounting 3 [mod 1]	O	S	6	Cost Accounting 2	January 2018
PROG113	Programming 1 [mod 1]	C	S	6	Software Skills 1	January 2018
FACC323	Financial Accounting 3 [mod 2]	C	S	6	Financial Accounting 2	July 2018
FISY311	Financial Information Systems 3 [mod 1]	C	S	6	Financial Information Systems 2	July 2018
IAUD324	Internal Auditing 3 [mod 2]	O	S	6	Internal Auditing 2 Financial Accounting 2	July 2018
MGTA322	Management Accounting 3 [mod 2]	O	S	6	Cost Accounting 2	July 2018
PROG123	Programming 1 [mod 2]	C	S	6	Software Skills 1	July 2018
TAXN102	Taxation 1	C	S	5	Financial Accounting 1	July 2018

* Compulsory or Optional

** Semester module or Annual

*** Subject offering will be dependent on registration numbers - minimum class size of 15
Subjects may be offered part-time depending on class size and resources

9.5 SUBJECT CONTENT ABRIDGED SYLLABI

Business Analysis 2 [Mod 1 and 2]
The module focuses on an introduction to business concepts. It entails the use of Enterprise Resource Planning (ERP) software programs which manage companywide business processes using a central database.
Describe how ERP systems can solve the problems in accounting in disintegrated systems.
Describe Enron scandal affected accounting information systems.
Use similar South African examples.
Explain accounting and Management reporting benefits from ERP systems.
Method of Evaluation:
Course mark 40% and Exam mark 60% (One two hour paper).

Commercial Programming 1 (60702512) (Annual)
Commercial Programming 1 is a 3rd year course that covers database design and interaction, using the Oracle product. You will learn how to create relational tables, how to create relationships and how to manipulate the data in a database. Some Oracle specific functions will also be covered. You will be exposed to SQL & PL/SQL, in order to implement the concepts taught. Since Oracle is a programming tool and language, the practical component forms a crucial aspect in the course. This course should be studied in conjunction with Information Systems 3, as both courses deal with Databases and SQL programming code. You will be required to apply your knowledge gained in Information Systems 2 to the database programming being covered and will need to have good programming knowledge to cope with the PL/SQL component.
Method of Evaluation:
NO EXAM, 100% Course Mark

Development Software 1 (Visual C#) (60702312) Module 2 (DSFW122)
The "visual aspects" of Visual C# Web Application
Methods
Debugging
String Manipulation
XML
Multiple web pages, Hyperlinks Classes and Objects
Practical:
Extensive use of problem solving & OOP by solving problems using Visual C#.
Method of Evaluation:
Course mark 40% and Exam 60 %(One two hour paper).

Business Analysis 3 [Mod 1 and 2]
Educate Learners on manufacturing terminology, concepts, and strategies related to demand management, procurement and supplier planning, material requirements planning, capacity requirements planning, sales and operations planning, master scheduling, performance measurements, supplier relationships, quality control, and continuous improvement.
Increase functional knowledge of production and inventory management.
Improve efficiency across the processes of an organization's supply chain.
Streamline operations through accurate forecasting.
Predict outcomes more accurately.
Maximize customer satisfaction by delivering products and services Just-in-Time.
Increase profitability by optimizing an organization's inventory investment.
Method of Evaluation:
Course mark 40% and Exam mark 60% (One two hour paper).

Development Software 1 (Visual C#) (60702312) Module 1 (DSFW112)
Introduction: Computers
Computers: Components, Types, Uses, etc.
Discuss Software: OS (or SS) and Application S/W
Introduction: Programming
Overview of the .Net Platform
Procedural programming vs OOP
Program Development Cycle (Analyze, Design, Code, Test, Document, Maintain)
Structured Programming Techniques
I.P.O, Flow Charts, Trace Table
Overview of the .Net Platform
Variables: Naming, Declaration, Initialization, Scope Data Types: Integral, Floating, Bool, Char, String, Constants, etc.
Operators: Assignment, Relational, Logic, and Arithmetic
Introduction to C# (Web Application)
Decision/Selection Structures Looping/iteration/repetition
Practical:
Extensive use of problem solving using algorithms and Visual C#.
Method of Evaluation:
Course mark 40% and Exam 60% (One two hour paper).

Development Software 2 (60702722)

The Development Software II course aims to integrate theory and practical components of Web based database systems using an object oriented approach to development. Learners are exposed to advanced development concepts and given simulated problems allowing them to use their programming skills to solve these problems.

Module 1

To become familiar with Web based programming using the Visual Studio .NET Framework components and the C# language. Use ASP.NET web controls to design information systems with a user-friendly Graphical User Interface (GUI).
Design information systems that adhere to the object oriented programming paradigm.
To develop knowledge of SQL Server.
Design and develop information systems that facilitate the management of data stored in a SQL Server database.
Enforces the features and benefits of the ADO.NET data access model and its' components.

Practical:

Practical work shall consist of tutorials, assignments and a group project.

Method of Evaluation:

Course mark 40% and Exam 60% (One two hour paper).

Module 2

Design and develop applications built around a 3-tier application paradigm.
Use advanced ASP.NET web controls, web forms and ASP.NET data controls.
Creating ASP.NET custom controls and using those controls in an ASP.NET application.
Setting up ASP.NET Membership Provider for an application.
Creating an ASP.NET application to send email.
Create and consume Web Services.
Caching objects to improve performance in ASP.NET.
Deploying web applications using Visual Studio and Internet Information Server.

Practical:

Practical work shall consist of tutorials, assignments and a group project.

Method of Evaluation:

Course mark 40% and Exam 60% (One two hour paper).

Information Systems 1 (60503612) – Phased Out- Final offering 2016

Module 1

Introduction to Computers, the internet & WWW
Application Software
Components of the system unit
Input and Output, Storage
Operating systems and utility programs

Practical:

Practical work shall consist of an in-depth study, and hands-on training on the use of Presentation, Word Processing and Spreadsheet software packages, (Assignments are given to cover all aspects of these packages).

Development Software 3 (60702803) (Annual)

The Development Software 3 course integrates various theory and practical components that a learner would have been exposed to during the course of the diploma. The course achieves this through the use of a work integrated learning project. Students are required to obtain non-trivial exposure to the real working world by attempting to solve software problems in the retail, services, manufacturing, government and small business sectors.
The ultimate objective is for each student to experience the complete design and development of a real-life information system. The course includes an agile project management component that provides the foundation for students to administer and manage their projects successfully.

Method of Evaluation:

NO EXAM
100% Course Mark

Financial Accounting I (0401092120) Mod 1

Financial Reporting as specified in AC000
Identify overall objectives of Financial Reporting
Define elements of financial statements related to measurement
Define and advise the qualitative characteristics of financial information
Identify and apply recognition and measurement Explain the need for a conceptual framework
Explain the meaning of GAAP Prepare basic financial reports

Practical:

Practical work shall consist of tutorial and self-study assignments on all sections of the syllabus.

Method of evaluation:

Year Mark 40% and one examination of 3 hours 60% = 100%

Financial Accounting I (0401092120) Mod 2

Statement of Changes in equity:
Sole Trader - changes in capital
Partnership
Close Corporations
Company
Change in ownership:
Sole trader - dissolution of entity Partnership - entry and retirement
Close Corporations - entry of new member
AC Statements
AC101 / AC108 / AC123 /AC128

Practical:

Practical work shall consist of tutorial and self-study assignments on all sections of the syllabus.

Method of evaluation:

Year Mark 40% and one examination of 3 hours 60% = 100%

Module 2
The World of the Systems Analyst
Approaches to System Development
Structured Systems Analysis Structured Systems Design
Practical:
Practical work shall consist of an in-depth study, and hands-on training on the use of Databases software packages and CASE tool software packages (Assignments are given to cover all aspects of these packages).
Method of Evaluation:
Course mark 40% and Exam mark 60% (One two hour paper).

Information Systems 3 (60502203) Mod 1

Introduction to software engineering Software engineering concepts
The software process
Classic process models
Agile process models
Software teams
Requirements engineering concepts
Software design concepts Web application design
Method of Evaluation:
Course mark 40% and Exam 60%
Module 2
Object-oriented databases
Database administration
Data Warehouses and Data Mining Knowledge based expert systems **Practical:**
This will consist of hands on work on Oracle MS SQL database system.
Method of Evaluation:
Course mark 40% and Exam 60% (One two hour paper).

Internet Programming 2 (60704122)

Web development, including:
HTML 4 leading onto XHTML
Cascading Style Sheets
Server side scripting language / MySQL
Practical:
Exercises are given to the student for all topics within the syllabus. These exercises are expected to be programmed on the computer.
Method of Evaluation: Course mark 40% and Exam mark 60% (One three hour paper).

IT Logic and Technology 1

Introduction to Computers
ICDL
Problem-solving using pseudo code
Introduction to Programming
Logic skills
Mark-up Languages
Method of Evaluation:
NO EXAM, 100% Course Mark

Information Systems 2 (60502122)

Module 1
Introductory concepts: information and the organization
Methodologies for developing Information Systems in an object oriented approach
Tools and Techniques available for Systems Analysis
Practical:
Microsoft Projects (or a project management tool) and Microsoft Visio
Method of Evaluation:
Course mark 40% and Exam 60% (One two hour paper- Semester 1)
Module 2
Identification of alternatives Systems Design Database concepts and structures.
Practical:
Microsoft Visio
Method of Evaluation:
Course mark 40% and Exam 60% (One two hour paper).

Information-Technology Skills (60502012)

Module 1
Communication Theory:
Interpersonal Communication
Meeting Procedure
Small Group Communication
Organisational Communication
Electronic Communication
Presentations Accounting:
The Business entity
Starting a business
The ledger - first glance
The accounting equation
Final accounts and balance sheet
Year-end financial statements **Method of Evaluation:**
NO EXAM - 100% Course Mark
Module 2 Management:
The role of management
The role of IT management
Business processes in Finance, Marketing, Production, Personnel
The impact of IT on Business and Society
Starting your own business Developing a Business Plan
Legal Aspects:
Labour Legislation in S.A
Legislation regarding Information and technology
Method of Evaluation:
NO EXAM - 100% Course Mark

IT Logic and Technology 2

Software Packages
Web 2 standards
HTML
Method of Evaluation:
NO EXAM, 100% Course Mark

Skills Development 1
Academic Literacy
Information Literacy
Numeracy
Language skills
Life skills
Method of Evaluation:
NO EXAM, 100% Course Mark

Systems Software 1 (60801212)
Module 1/ Module 2
On completion of module 2 the learner will be able to:
Distinguish between the different types of networks
Demonstrate an understanding of the importance of network standards
Design a small network using their knowledge of network technologies
Practical:
Designing a LAN
Method of Evaluation:
Course mark 40% (Three tests) and Exam 60% (One two hour paper)

Technical Programming 1 (60702412)
Module 1
Object Oriented programming techniques
Java Selection structures
Java Control Structures
Java methods
Practical:
Programming tasks to cover all topics in the syllabus. These must be planned, designed and tested on a computer
Method of Evaluation:
Course mark 40% and Exam 60% (One two and a half hour paper)
NB: Technical Programming Module 1 is a pre-requisite for Module 2.

Module 2
One Dimensional Arrays
String Methods and Manipulation
Object Oriented programming techniques Text Files

Practical:
Programming tasks to cover all topics in the syllabus. These must be planned, designed and tested on a computer
Method of Evaluation:
Course mark 40% and Exam 60% (One two and a half hour paper)

Skills Development 2
Accounting skills
Business Skills
Language Skills
Method of Evaluation:
NO EXAM, 100% Course Mark

Systems Software 2 (60801322)
Module 1
Operating systems (advanced) Method of Evaluation:
Course mark 40% and Exam 60% (One two hour paper)
Module 2
Network Fundamentals **Practical:**
Tutorial and self-study group assignments with individual assessment
Method of Evaluation:
Course mark 40% and Exam 60% (One two hour paper)

Technical Programming 2 (60704022)
Module 1
Object oriented programming **Practical:**
Practical Programming to cover all topics in the syllabus. These must
be planned, designed and tested on a computer Method of Evaluation:
Course mark 40% and Exam 60% (One practical examination with a minimum duration of two hours)
Module 2
Advanced GUI Programming **Practical:**
Practical Programming to cover all topics in the syllabus. These must be well planned, designed and tested on a computer
Method of Evaluation:
Course mark 40% and Exam 60% (One practical examination with a minimum duration of two hours)

ABRIDGED SYLLABUS for ND: FIS

Business Calculations (150805212)
Basic mathematics
Summarising and analysing data
Index numbers

Commercial Law for Accountants I (130309912) Module 1
Understand the SA legal framework
Understand the rules relating to the Interpretation of Statutes
Understand and apply knowledge of principles relating to the Law of Contract
Understand the legal principles relating to Contract of Sale
Understand and apply knowledge of principles relating to the Law of Agency

Cost Accounting I (040140412)
Understand the basic principles of cost classification and terminology
Define and understand the different terms and concepts in respect of stock holding and administer different stock systems.
Administer remuneration systems.
Classification and analysis of overheads and allocation of overheads by means of predetermined rates.
Understand the cost flow in a manufacturing concern determine cost of manufactured products and services.
Use the Cost-volume-profit analysis as a management tool
Practical
Practical work shall consist of tutorials and self-study assignments on all sections of the syllabus.
Method of Evaluation
Year Mark 40% and one examination of three hours 60% = 100%

Entrepreneurial Skills (40510912)
Develop an understanding of the basic business and economic principles by identifying and justifying the relationship between business and economic principles.
The basic functions of the enterprise and how they relate.
Create, maintain and enhance a culture of entrepreneurship

Financial Accounting Module 2
SAPSE Code 040137406
Subject Code FACC422
Theory
Interim Reporting
Operating Segments
Employee Benefits
Financial Instruments Borrowing Costs **Practical:**
None
Method of Evaluation:
Course mark - 40%; Exam mark - 60% (one three hour exam)

Communication (059900512)
Effectively apply communication principles to a variety of communication activities, contexts and resolving problems.
Demonstrate verbal and written communication skills

Cost Accounting II (040140522)
Module 1
Administer an Integrated Accounting system and a Cost Ledger Accounting system.
Operate a basic job-costing system.
Administer contract accounts.
Draw up fixed, flexible and cash budgets.
Practical:
Practical work shall consist of tutorials and self-study assignments on all sections of the syllabus.
Method of Evaluation:
Year Mark 40% and one examination of three hours 60% = 100%

Cost Accounting II (040140522) Module 2
Demonstrate competency in the operation of process costing systems with equivalent units and normal and abnormal losses.
Demonstrate competency in the operation of process costing systems with joint and by products. Demonstrate competency in preparing income statements according to the direct and absorption costing methods.
Demonstrate the ability to use pricing decisions.
Demonstrate the ability to implement a Standard Costing, system.
Practical:
Practical work consists of tutorials and self-study assignments
Method of Evaluation:
Year Mark 40% and one examination of three hours 60%

Financial Accounting I (0401092120)

Module 1

Financial Reporting as specified in AC000
Identify overall objectives of Financial Reporting
Define elements of financial statements related to measurement
Define and advise the qualitative characteristics of financial information
Identify and apply recognition and measurement
Explain the need for a conceptual framework
Explain the meaning of GAAP Prepare basic financial reports

Practical:

Practical work shall consist of tutorial and self-study assignments on all sections of the syllabus.

Module 2

Statement of Changes in equity:
Sole Trader - changes in capital
Partnership, Close Corporations, Company
Change in ownership
Sole trader - dissolution of entity Partnership - entry and retirement
Close Corporations - entry of new member AC Statements, AC101, AC108, AC123, AC128

Practical:

Practical work shall consist of tutorial and self-study assignments on all sections of the syllabus.

Method of Evaluation:

Year Mark 40% and one examination of 3 hours 60% = 100%

Financial Information Systems I (FISY101) Information Systems I (ISYS103)

Theory

Overview of the computer and communication revolution
Information processing cycle
Computer software concepts
Information systems concepts Impact of computers on society **Practical:**
Practical work shall consist of an in-depth study and hands-on training on the use of Word Processing, Spreadsheets, Databases and
Presentation software packages (tutorials and assignments are given to cover all aspects of these packages), as well as a written report on a site visit done in conjunction with Systems Software 1.

Method of Evaluation:

One 3-hour examination 50% and Year Mark 50% = 100%

Financial Accounting II (0401093220)

(Module 1)

IAS 01 - Presentation of Financial Statements
IAS 01 - Inventories
IAS 18 - Revenue
IAS 10 - Events after the balance sheet
IAS 38 - Intangibles
IAS 37 - Provisions and contingencies **Practical:**
Practical work shall consist of tutorial and self-study assignments
Computer applications

Method of Evaluation Year Mark 40% and two 3-hour examinations 60%

(Module 2)

IAS 01 - Presentation of Financial Statements
IAS 16 - Property, Plant & Equipment
IAS 36 - Impairments of Assets IAS 21 - Foreign exchange
IAS 07 - Cash Flow Statements

Practical:

Practical work shall consist of tutorial and self-study assignments
Computer applications

Method of Evaluation:

Year Mark 40% and two 3-hour examinations 60% =100%

Financial Accounting III

Module 1

Identify overall objectives of financial reporting, the specific information needs of equity investors, and the general information needs of other users.
Define the elements of financial statements related to the measurement of financial position and performance and apply to the presentation of financial reports. Define and advise the qualitative characteristics financial information
Identify and apply recognition and measurement criteria to financial statements.
Explain the need for a conceptual framework and for standards of financial reporting.
Identify the statutory disclosure requirements, and explain the meaning of fair presentation
Earnings per share, leases and statements of cash flow

Method of Evaluation:

Year Mark 40% and two 3-hour examinations 60% = 100%

Module 2

Apply techniques to account for group financial statements and valuations
Incorporate changes in the form or capital structure (Liquidations and reorganization, mergers and acquisitions) of an Entity in the financial statements in accordance with the objectives to be achieved and the legal constraints. Demonstrate the purpose of financial reporting by applying analysis and interpretation techniques to financial statements

Method of Evaluation:

Year Mark 40% and two 3-hour examinations 60% =100%

Financial Information Systems 2 (FISY201) Information Systems 2 (ISYS203)

Theory

Introductory concepts: Information and the organisation
Methodologies for developing Information Systems
Tools and Techniques available for Systems Analysis
Database concepts and structures, especially the Relational Database Practical:
ORACLE Case and Microsoft Access

Method of Evaluation:

One 3-hour examination 50% and Year Mark 50% = 100%
(Amended w.e.f. 2001/01)

Financial Information Systems 3 (FISY321) Module 2

Theory

Overview of analysis and design Object-orientated analysis
Object-orientated design
File systems and databases
Transaction management and currency control Object-orientated databases
Database administration
Knowledge based expert systems

Practical:

This will consist of hands-on work on the Oracle database and the XI-PLUS expert system.

Method of Evaluation:

One 3-hour examination 50% and Year Mark 50% = 100%

Internal Auditing 2 (040111022) Module 1

Evaluation of internal control system cycles
Internal audit reports
Internal auditor's relationship with other parties

Internal Auditing 2 (040111022) Module 2

Statistical sampling
Operational auditing Computer auditing

Financial Information Systems 3 (FISY311)

Module 1

(Offered in Semester 2) Subject Code FISY311
Financial information system 3 is a project management course which equips learners with the tools and techniques used in running a project from the initial stage to the closing stage.
Introduction to Project management
Project, Program, and Portfolio selection Project management knowledge areas
Tools and techniques used in each knowledge area
Project management process group
Mapping the process group to the knowledge areas
Project management best practices Project management profession

Practical:

Practical work involves the application of all the tools and technique to manage a project from the initiation to closure

Method of Evaluation:

Course mark - 40% and exam mark - 60% (one two hour exam)

Internal Auditing 1(040137312) Module 1

Basic introduction to Internal Auditing
The internal auditor
Control of the profession
Basic introduction to auditing

Internal Auditing 1(040137312) Module 2

Planning the audit
Audit working papers
Basic audit concepts internal control
Elementary systems of internal control

Internal Auditing 3 (040111103) Module 1

Professional matters pertaining to internal auditing
Audit working papers
The internal audit process

Internal Auditing 3 (040111103) Module 2

The audit approach of the cycles
Computer auditing
Fraud identification

Management Accounting 3 (40140603)

Module 1

Explain, calculate, prepare and evaluate fixed and flexible operational and cash budgets
Prepare budget reports reflecting actual against budget
Discuss the use of budget reports to evaluate performance
Explain the behavioural implications of planning and budgeting
Explain the use of IT in the budget process
Analyse, calculate and interpret operational variances
Prepare reports using a range of benchmarks and evaluate the results
Explain the behavioural implications of standard costing
Explain, calculate, apply and compare different group incentive schemes
Discuss and apply the use of advanced stock control methods Use activity based costing in cost determination

Software Skills 1

Module 1 (SWSK111)

Problem Solving & Structured Programming Techniques
Programming Logic
Control Structures (Sequence, Selection & Repetition)
Introduction to VB .NET Console based

Practical:

Extensive use of problem solving VB .NET console applications.

Examination:

No exam —% course mark

Module 2 (SWSK121)

The "visual aspects" of Visual Basic .NET Windows Application
Sub-procedures & Function procedures
Arrays
String Manipulation
Sequential Files (if time allows)

Practical:

Extensive use of problem solving & structured programming by solving problems using VB.NET

Method of Evaluation:

No exam —% course mark

Management Accounting 3 (40140603)

Module 2

Measuring relevant costs for decision-making
Apply and evaluate short-term decision-making techniques
Apply and discuss the experience and learning curve
Apply and discuss the linear programming model
Explain and apply the use of decision trees
Explain and apply the use of network analysis and PERT analysis
Explain the capital budgeting process
Evaluate projects using investment appraisal techniques, including, under conditions of capital rationing
Evaluate alternative investment appraisal techniques
Explain the relevance of qualitative factors
Prepare project cash flows that take account of taxations and inflation Evaluate mutually exclusive projects with unequal lives

Method of Evaluation:

Year Mark 40% and one 3-hour examination 60% = 100%

Programming 1 (PROG101)

Theory

Problem-solving and structured programming techniques
The visual aspects of VISUAL BASIC
Control Structures (Sequence, Selection and Repetition)
Sub-procedures and Function procedures
Arrays
Strings
Graphics
De-bugging
Sequential File Processing **Practical:**
Extensive use of problem solving and structured programming by solving problems using Visual Basic

Method of Evaluation:

One 3-hour examination 50% and Year Mark 50% = 100%

Taxation 1 (040100512)

Establish what taxable income is
Determine and calculate the taxation of persons other than companies
Apply the provisions relating to non-resident taxpayers
Determine and calculate employees' tax and provisional tax
Identify and value fringe benefits and allowances

Method of Evaluation:

Course mark - 40% and exam mark - 60% (one three hour exam)

E & OE