

BACCALAUREUS TECHNOLOGIAE: INFORMATION TECHNOLOGY: BUSINESS APPLICATIONS

Qualification code: BTIB05 - NQF Level 7

Campus where offered: Soshanguve South Campus (day classes offered during the week and on Saturdays)

Last year of new intake: 2019

Teach-out (phase-out) date: 30 June 2022

Students registered for this qualification should complete their studies according to the teach-out date prescribed for the qualification, subject to the stipulations of Regulation 3.1.11 and 3.1.13 in the Students' Rules and Regulations.

Information on phased-out programmes can be obtained from the TUT website, www.tut.ac.za.

Key to asterisks:

* Information does not correspond to information in Report 151.

(Deviations approved by the Senate in November 2008, May 2011 and March 2013.)

CURRICULUM

Consult the 2019 Faculty Prospectus for the full contents of the qualification.

FIRST OR SECOND SEMESTER

CODE	SUBJECT	CREDIT	PREREQUISITE SUBJECT(S)
ABL401T	Advanced Business Analysis IV*	(0,100)	Business Analysis IV
ADQ401T	Advanced Knowledge Management IV	(0,100)	Knowledge Management IV
BUA401T	Business Analysis IV*	(0,100)	
ITA401T	Information and Technology Management IV	(0,100)	
KNM401T	Knowledge Management IV	(0,100)	
PAJ411C	Principles of Research IV*	(0,100)	
PJG401C	Project Management IV	(0,100)	
PJT411C	Project IV	(0,200)	Principles of Research IV
PJT412R	Project IV (re-registration)	(0,000)	

plus one of the following subjects:

DBS401T	Database Systems IV (first-semester subject)	(0,100)	
DEG401T	Data Engineering IV* (first-semester subject)	(0,100)	
DPY401T	Decision Support Systems IV* (second-semester subject)	(0,100)	

TOTAL CREDITS FOR THE QUALIFICATION: **1,000**



SUBJECT INFORMATION (OVERVIEW OF SYLLABUS)

The syllabus content is subject to change to accommodate industry changes. Please note that a more detailed syllabus is available at the Department or in the study guide that is applicable to a particular subject. At time of publication, the syllabus content was defined as follows:

A

ADVANCED BUSINESS ANALYSIS IV (ABL401T) 1 X 3-HOUR PAPER *(Subject custodian: Department of Informatics)*

Students have to demonstrate their advanced knowledge and understanding of the ISD and business processes development methods using the BABOK by: Identifying business opportunities according to problem specifications; analysing business requirements to solve the problem; developing system analysis and design solutions using appropriate methods, techniques and tools sets; and defending the skills needed to plan, control, and manage the project. (Total Tuition time: ± 54 hours)

ADVANCED KNOWLEDGE MANAGEMENT IV (ADQ401T) 1 X 3-HOUR PAPER *(Subject custodian: Department of Informatics)*

Students have to be able to construct the relevant documents, reports and other sources and to search that content for meaningful relationships synthesise the concepts and techniques such as data mining, information management, groupware and BI software. The content entails: Knowledge Management Life Cycle and Models, Competitive Intelligence and Business Intelligence. (Total Tuition time: ± 54 hours)

B

BUSINESS ANALYSIS IV (BUA401T) 1 X 3-HOUR PAPER *(Subject custodian: Department of Informatics)*

Business analysis is critical in identifying the business needs of end users and other stakeholders to determine the appropriate solution to a business problem. Focus is primarily on business analysis, and discusses how to obtain success in business analysis. Six business analysis knowledge areas are discussed in detail. On successful completion of this subject, the student will be able to: specify and model requirements for an IT business solution, investigate business problem or opportunity within an organisation, analyse and document solution requirements for an IT organisation and support project manager throughout solution development, implementation and testing to ensure that requirements are met. (Total Tuition time: ± 54 hours)

D

DATA ENGINEERING IV (DEG401T) 1 X 3-HOUR PAPER *(Subject custodian: Department of Computer Science)*

The aim of this subject is to address the issues of data representation for data mining. Objectives: On completion of this subject, students should be able to prepare and process data for meaningful interpretations. Key topics: data engineering models, data mining tool, normalisations and redistributing variables, introduction to Neural network. (Total tuition time: ± 40 hours)

DATABASE SYSTEMS IV (DBS401T) 1 X 3-HOUR PAPER *(Subject custodian: Department of Computer Science)*

This subject assumes knowledge of databases and builds on this existing database knowledge by presenting database design and technology concepts. Fundamental database concepts are covered as well as relational database models and normalisation; entity-relationship modelling; transaction management and concurrency control; distributed database management systems; object-orientated databases; client/server systems; data warehousing, data mining and also databases in electronic commerce. (Total tuition time: ± 40 hours)

DECISION SUPPORT SYSTEMS IV (DPY401T) 1 X 3-HOUR PAPER *(Subject custodian: Department of Computer Science)*

The subject focuses on decision support systems and business intelligence, human decision making processes, decision making, systems, modeling and support, decision support systems concepts, methodologies and technologies, modeling and analysis, data mining for business intelligence, artificial neural networks for data mining, text and web mining, data warehousing and the CART algorithm. (Total tuition time: ± 40 hours)



I**INFORMATION AND TECHNOLOGY MANAGEMENT IV (ITA401T)****1 X 3-HOUR PAPER****(Subject custodian: Department of Informatics)**

This subject provides concepts and frameworks for understanding the potential impact of Information Technology (IT) on business strategy and performance. The subject focuses on the implications of increased digitisation for defining business strategies and operating models, and explores the roles of both general managers and IT executives in using IT to achieve operational excellence and business agility. On successful completion of this subject, the student will be able to develop an IT Strategy for a digital enterprise; evaluate how IT will shape future businesses and the contribution of enterprise architecture; evaluate the risk and benefits of digitised processes and compare strategically whether to perform those processes internally or externally; assess the impact of globalisation; motivate why some firms are better able to convert their IT investments into business value; and implement steps to ensure effective IT decision making. (Total tuition time: ± 54 hours)

K**KNOWLEDGE MANAGEMENT IV (KNM401T)****1 X 3-HOUR PAPER****(Subject custodian: Department of Informatics)**

This subject is aimed at extending the skills of the students by introducing students to the various Knowledge Management concepts, design, implementation and management of KNM systems, as well as an overview of challenges that organisations face during the implementation of KNM initiatives. As the economy increasingly moves towards a knowledge-based economy, the ability to manage knowledge becomes a matter of competitive survival for organisations. Principles and practice of knowledge management in organisations, therefore, become the focal point of this subject. On completion of the subject, students will be able to identify and apply the theoretical and practical knowledge management principles to address management pitfalls, manage these knowledge management challenges; and implement the relevant knowledge management steps to ensure success within the context of the organisation. (Total tuition time: ± 54 hours)

P**PRINCIPLES OF RESEARCH IV (PAJ411C)****CONTINUOUS ASSESSMENT****(Subject custodian: Department of Informatics)**

This subject prepares students to obtain the necessary skills in doing proper research to deliver a proper researched report. The subject also looks at the basics of paradigms, methodologies, and techniques of research in the behavioural sciences, and their application in information technology. On completion of the subject, students will be able to apply the basic paradigms, methodologies and techniques; apply different methodologies in different scenarios; recommend which data collection technique is necessary; apply correct research methods in the ICT environment, and apply the appropriate tools for collecting data in the ICT environment. Project topics and research questions in line with the Department niche area. (Total tuition time: ± 54 hours)

PROJECT IV (PJT411C/PJT412R)**CONTINUOUS ASSESSMENT****(Subject custodian: Department of Informatics)**

This subject is an IT project that includes IT research and writing a research report. On completion of the subject, students will be able to apply the research and presentation skills obtained in Principles of Research, apply the correct Harvard reference method, demonstrate writing skills, and demonstrate research skills according to the project topics and research questions in line with the Department niche area. (Total tuition time: ± 26 hours)

PROJECT MANAGEMENT IV (PJG401C)**1 X 3-HOUR PAPER****(Subject custodian: Department of Informatics)**

This subject aims to enhance students' knowledge of Project Management. The student who successfully completes this subject must be able to apply project management skills to any IT related project. On completion of the subject, students will be able to define, facilitate, document, and manage the project requirements for information technology project, construct the relevant template based on industry-accepted standards, apply the appropriate techniques that are geared to significantly improve requirements, collection and documentation; and explore the roles of various players (project leaders, business analysts, client advocates, and customers) in determining the success of the requirements definition for IT projects. (Total tuition time: ± 54 hours)

