

NATIONAL DIPLOMA: OPERATIONS MANAGEMENT

Qualification code: NDOS04 - NQF Level 6

Campus where offered: Pretoria Campus

Important notification to new applicants:

Students who intend to enrol for this qualification for the first time in 2017 or thereafter, should note that it will not be possible to continue with any Baccalaureus Technologiae as from 2020, since it is being replaced by qualifications aligned with the newly-implemented Higher Education Qualification Sub-Framework. Potential students are advised to consult the University's website for any new qualifications which might not be published in this Prospectus.

REMARKS

a. *Admission requirement(s) and selection criteria:*

• **FOR APPLICANTS WHO OBTAINED A SENIOR CERTIFICATE BEFORE 2008:**

Admission requirement(s):

A Senior Certificate or an equivalent qualification.

Recommended subject(s):

Mathematics.

Selection criteria:

Applicants must undergo a TUT potential assessment.

• **FOR APPLICANTS WHO OBTAINED A NATIONAL SENIOR CERTIFICATE IN OR AFTER 2008:**

Admission requirement(s):

A National Senior Certificate with a bachelor's degree or a diploma endorsement, or an equivalent qualification with an achievement level of at least 3 for English (home language or first additional language) and 3 for Mathematics or 5 for Mathematical Literacy.

Recommended subject(s):

None.

Selection criteria:

To be considered for this qualification, applicants must have an Admission Point Score (APS) of at least 20.

Assessment procedures:

Applicants with a final APS of 24 and more will be admitted to the programme. Applicants with a score of 20 to 23 will be required to do the TUT potential assessment.

• **FOR APPLICANTS WITH A NATIONAL CERTIFICATE (VOCATIONAL):**

Admission requirement(s):

A National Certificate (Vocational) with at least 50% for English (home language or first additional language) and 50% for Mathematics or Mathematical Literacy, 50% for Life Orientation (excluded for APS calculation), 60% for any other three compulsory vocational subjects and 50% for the fourth subject.

The certificate must be in any of the following fields: management, marketing, hospitality, tourism, office administration, information technology, computer science, finance, economics or accounting.



Selection criteria:

To be considered for this qualification, applicants must have an Admission Point Score (APS) of at least **27**.

- b. *Minimum duration:*
Three years.
- c. *Presentation:*
Day classes (first two years) and evening classes (third year). The subjects Operations Management Practice IA and IB are offered in the form of day classes.
- d. *Intake for the qualification:*
January only.
- e. *Operations Management Practice IA and IB (work-integrated learning):*
See Chapter 5 of Students' Rules and Regulations.
- f. *Exclusion and readmission:*
See Chapter 2 of Students' Rules and Regulations.
- g. *Recognition of Prior Learning (RPL), equivalence and status:*
See Chapter 30 of Students' Rules and Regulations.
- h. *Subject credits:*
Subject credits are shown in brackets after each subject.

Key to asterisks:

- * Information does not correspond to information in Report 151.
(Deviations approved by the Senate in August 2005.)

CURRICULUM

FIRST YEAR

CODE	SUBJECT	CREDIT	PREREQUISITE SUBJECT(S)
FPO100T	Financial Principles in Operations Management I	(0,186)*	
OEF150T	Organisational Effectiveness I	(0,250)	
ORM100T	Operations Management I	(0,250)	
OTE100T	Operations Management Techniques I	(0,250)	
TOTAL CREDITS FOR THE FIRST YEAR:		0,936	

SECOND YEAR

CODE	SUBJECT	CREDIT	PREREQUISITE SUBJECT(S)
MPP100T	Management Principles and Practice I	(0,188)	
OEF240T	Organisational Effectiveness II	(0,250)	Organisational Effectiveness I
ORM200T	Operations Management II	(0,250)	Operations Management I
OTE200T	Operations Management Techniques II	(0,250)	Operations Management Techniques I
WPD100T	Workplace Dynamics I	(0,188)	
TOTAL CREDITS FOR THE SECOND YEAR:		1,126	



THIRD YEAR

CODE	SUBJECT	CREDIT	PREREQUISITE SUBJECT(S)
OEF320T	Organisational Effectiveness III	(0,188)	Organisational Effectiveness II
ORM300T	Operations Management III	(0,250)	Operations Management II
OTE300T	Operations Management Techniques III	(0,250)	Operations Management Techniques II

FIRST AND SECOND SEMESTER

OMA10AT	Operations Management Practice IA	(0,125)
OMA10BT	Operations Management Practice IB	(0,125)

TOTAL CREDITS FOR THE THIRD YEAR: **0,938**

TOTAL CREDITS FOR THE QUALIFICATION: **3,000**

SUBJECT/MODULE 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/module. On 13 September 2017, the syllabus content was defined as follows:

F

FINANCIAL PRINCIPLES IN OPERATIONS MANAGEMENT I (FPO100T) 1 X 3-HOUR PAPER *(Subject custodian: Department of Managerial Accounting and Finance)*

Elements of cost, methods of costing and costing systems, financial aspects of a purchase procedure and stores procedure, basic concepts of cash flow, elements of overhead costs, financial aspects of budgeting, budgetary control, basic concepts of financing projects. Elements of cost, methods of costing and costing systems, financial aspects of a purchase procedure and stores procedure, basic concepts of cash flow, elements of overhead costs, financial aspects of budgeting, budgetary control, basic concepts of financing projects. (Total tuition time: not available)

M

MANAGEMENT PRINCIPLES AND PRACTICE I (MPP100T) 1 X 3-HOUR PAPER *(Subject custodian: Department of Management and Entrepreneurship)*

Dynamics of the organisation, motivation, management and leadership styles, management by objectives and communication. Decision making and problem solving, creativity, operational research, industrial relations, and the systems approach to organisations. (Total tuition time: not available)

O

OPERATIONS MANAGEMENT I (ORM100T) 1 X 3-HOUR PAPER *(Subject custodian: Department of Operations Management)*

Introduction to production management. Production management in perspective. The nature of operating systems and operations management. Product and service design. Facility planning and layout. Capacity management. Introduction to quality. (Total tuition time: ± 96 hours)

OPERATIONS MANAGEMENT II (ORM200T) 1 X 3-HOUR PAPER *(Subject custodian: Department of Operations Management)*

Introduction to production management, task and strategic importance of operational management, operational management systems, application of operational management to services, work study and quality, distribution and maintenance. Material requirements planning. Operations scheduling. Quality techniques. Just-in-time production. (Total tuition time: ± 96 hours)



OPERATIONS MANAGEMENT III (ORM300T)**1 X 3-HOUR PAPER****(Subject custodian: Department of Operations Management)**

Project management. Total quality management. Maintenance management. Theory of constraints. (Total tuition time: ± 96 hours)

OPERATIONS MANAGEMENT PRACTICE IA (OMA10AT)**WORK-INTEGRATED LEARNING****OPERATIONS MANAGEMENT PRACTICE IB (OMA10BT)****WORK-INTEGRATED LEARNING****(Subject custodian: Department of Operations Management)**

Industry-related training as determined by the industry and the University. (No formal tuition)

OPERATIONS MANAGEMENT TECHNIQUES I (OTE100T)**1 X 3-HOUR PAPER****(Subject custodian: Department of Mathematics and Statistics)**

Introduction to statistics and sampling methods, organisation and description of data using tables and graphs, measures of location and dispersion, basic probability, probability distributions (binomial, poisson, normal), introduction to sampling distributions (means and proportions), confidence intervals, hypothesis testing, Chi-squared tests, regression and correlation analysis, time series analysis, index numbers, elementary interest calculations. (Total tuition time: ± 100 hours)

OPERATIONS MANAGEMENT TECHNIQUES II (OTE200T)**1 X 3-HOUR PAPER****(Subject custodian: Department of Operations Management)**

Fundamentals of decision theory. Decision trees and utility theory. Marginal analysis and the normal distribution. Game theory. Introduction to linear programming (LP) problems. Formulation of LP problems. Graphic solution of LP problems. Simplex method. Transportation and assignment. Network analysis. Queuing theory. (Total tuition time: ± 96 hours)

OPERATIONS MANAGEMENT TECHNIQUES III (OTE300T)**1 X 3-HOUR PAPER****(Subject custodian: Department of Operations Management)**

Linear programming: advanced applications and sensitivity analysis. Duality and integer programming. Goal programming and dynamic programming. Simulation. Markov analysis, matrix algebra, linear algebra, advanced game theory and advanced queuing theory. (Total tuition time: ± 96 hours)

ORGANISATIONAL EFFECTIVENESS I (OEF150T)**1 X 3-HOUR PAPER****(Subject custodian: Department of Operations Management)**

An introduction to the concepts of productivity and work study is given as well as why work study is a valuable tool to management. Method study is presented in detail according to the SREDEDIM steps. Various methods of recording information are discussed and practiced via case studies. The questioning technique is used to design the proposed procedure and workplace layout. After the proposed procedure and workplace layout is designed, time studies, as one of the work quantification techniques, are taught to enable the student to measure the time for the proposed procedure. The student is taught to determine a standard time for procedures and processes. This enables the student to determine savings in terms of time and cost. (Total tuition time: ± 96 hours)

ORGANISATIONAL EFFECTIVENESS II (OEF240T)**1 X 3-HOUR PAPER****(Subject custodian: Department of Operations Management)**

Work quantification techniques such as activity sampling, predetermined motion time systems, standard data, and self-recording techniques form part of this subject. Productivity improvement, the implementation of incentive schemes and planning and control is discussed. The student will be able to calculate different performance ratios and the Objective Matrix as a tool to improve performance is highlighted (Total tuition time: ± 96 hours)

ORGANISATIONAL EFFECTIVENESS III (OEF320T)**1 X 3-HOUR PAPER****(Subject custodian: Department of Operations Management)**

The role and place of management services, management services as a consultancy service, the use of computers in management services, ergonomics, related techniques to management services. Organisation goals and objectives, organisation structure and systems, approach to an organisation's functional analysis, new forms of work organisation and job design, remuneration. (Total tuition time: ± 96 hours)

W**WORKPLACE DYNAMICS I (WPD100T)****1 X 3-HOUR PAPER****(Subject custodian: Department of People Management and Development)**

Human and group behaviour, negotiating skills, legal aspects, performance expectations and reward systems in the production environment. (Total tuition time: ± 96 hours)

