

BACCALAUREUS TECHNOLOGIAE: ENGINEERING: CIVIL: TRANSPORTATION ENGINEERING

Qualification code: BTTO02 - NQF Level 7

Campus where offered: Pretoria Campus

Important notification to new applicants:

Students who intend to enrol for this qualification should take note that no new applications will be accepted as from 2020. Potential students are advised to consult the University's website for possible new qualifications which are aligned with the newly-implemented Higher Education Qualification Sub-Framework.

REMARKS

a. *Admission requirement(s):*

- A National Diploma: Engineering: Civil or a NQF Level 6 (old NQF and the new HEQSF) qualification in Civil Engineering (or a closely related field), obtained from an accredited South African university. Preference will be given to candidates with an average of 60% or more.
- Candidates who do not meet the 60% requirement will be evaluated by the Department and may be requested to provide a portfolio of relevant work experience (excluding P1 and P2) in order to be considered for selection.
- Apart from meeting the above requirements, a candidate must have obtained a minimum of 60% in Documentation III and Transportation Engineering II and III.

National Diploma students at TUT who are busy with their final semester (P2) and do not have more than one theoretical subject outstanding may also apply for admission and may be considered, based on the average of their completed theoretical subjects, but admission will be subject to the successful completion of the National Diploma and the Faculty's Student Enrolment Plan (SEP).

Holders of any other equivalent South African or international qualification may also be considered, see Chapter 1 of Students' Rules and Regulations.

b. *Selection criteria:*

Due to capacity constraints, candidates will be selected based on academic performance and/or work experience. Selection will be done after the closing date for applications. Please note that meeting the minimum requirements does not guarantee admission.

c. *Minimum duration:*

One year.

d. *Presentation:*

Block-mode classes. Subjects are offered over a period of two years. Classes and assessments may take place on Friday afternoons and/or Saturdays.

e. *Intake for the qualification:*

January and July.

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. *Accreditation by professional body:*

This qualification has been accredited by the Engineering Council of South Africa (ECSA).



- i. *Subject credits:*
Subject credits are shown in brackets after each subject.

CURRICULUM

Please note:

Students must pass eight subjects. A minimum of five compulsory subjects in their particular field of specialisation should be taken, with the balance made up of subjects offered in the other fields of specialisation. Optional/elective subjects taken from the other fields must be closely related/relevant to the qualification. Subjects are offered as determined by the Head of the Department. The total credits of the Level IV subjects may not be less than 0,500.

Students who register for the subject: Construction Materials Technology IV are not permitted to register for Asphalt Technology IV or Concrete Technology IV.

ATTENDANCE

CODE	SUBJECT	CREDIT
FIRST SEMESTER (2019)		
TSP401T	Transportation Planning IV	(0,125)
TTN401T	Transportation Technology IV	(0,125)
SECOND SEMESTER (2019)		
AHT401T	Asphalt Technology IV	(0,125)
PTY401T	Pavement Technology IV	(0,125)
FIRST SEMESTER (2020)		
ENN401T	Environmental Management for Engineers: Civil IV	(0,125)
GDE401T	Geometric Design IV	(0,125)
SECOND SEMESTER (2020)		
CCN401T	Concrete Technology IV	(0,125)
TFE401T	Traffic Engineering IV	(0,125)
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. On 8 August 2018, the syllabus content was defined as follows:

A

ASPHALT TECHNOLOGY IV (AHT401T) **1 X 4-HOUR PAPER**
(Subject custodian: Department of Civil Engineering)
 Rehabilitation. Applications and design. Influence of the traffic and the environment. Project. (Total tuition time: ± 32 hours)

C

CONCRETE TECHNOLOGY IV (CCN401T) **1 X 3-HOUR PAPER**
(Subject custodian: Department of Civil Engineering)
 Properties and materials. Production and supply. Special applications. Testing. (Total tuition time: ± 32 hours)



E

ENVIRONMENTAL MANAGEMENT FOR ENGINEERS: CIVIL IV (ENN401T) 1 X 3-HOUR PAPER
(Subject custodian: Department of Civil Engineering)
ISO 14000, environmental impact assessment, integrated environmental management, environmental audits, case studies and project. (Total tuition time: ± 32 hours)

G

GEOMETRIC DESIGN IV (GDE401T) 1 X 4-HOUR PAPER (OPEN BOOK)
(Subject custodian: Department of Civil Engineering)
Principles and practice of road alignment, environmental impact control, design control and criteria, elements of design (geometric, safety), intersection and interchange design, drainage design, earthworks design, design project. (Total tuition time: ± 32 hours)

P

PAVEMENT TECHNOLOGY IV (PTY401T) 1 X 4-HOUR PAPER (OPEN BOOK)
(Subject custodian: Department of Civil Engineering)
Pavement design factors (gravel, flexible, rigid), pavement construction (gravel, flexible, rigid), pavement assessment and rehabilitation, pavement management and project. (Total tuition time: ± 32 hours)

T

TRAFFIC ENGINEERING IV (TFE401T) 1 X 3-HOUR PAPER
(Subject custodian: Department of Civil Engineering)
Traffic surveys. Traffic characteristics and flow theory. Traffic design, traffic management and urban works, traffic safety, statistical methods, parking studies, systems and structures. Traffic systems management, traffic impact studies, traffic control and forms of signing, signals and automated traffic control systems, interchange and intersection capacities. Project. (Total tuition time: ± 32 hours)

TRANSPORTATION PLANNING IV (TSP401T) 1 X 3-HOUR PAPER
(Subject custodian: Department of Civil Engineering)
Planning theory and technique, transport models, data retrieval, assessment, environmental planning and characterisation, development control, route planning, transport impact studies. Project. (Total tuition time: ± 32 hours)

TRANSPORTATION TECHNOLOGY IV (TTN401T) 1 X 3-HOUR PAPER
(Subject custodian: Department of Civil Engineering)
Transport policies, transportation systems, terminals, public transport, private transport, freight transport, vehicle and driver characteristics. Project. (Total tuition time: ± 32 hours)

