

# BACCALAUREUS TECHNOLOGIAE: ENGINEERING: CIVIL: TRANSPORTATION ENGINEERING

Qualification code: BT002 - NQF Level 7

Campus where offered: Pretoria Campus (block-mode classes)  
Last year of new intake: July 2019  
Teach-out (phase-out) date: 30 June 2023

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](http://www.tut.ac.za).

## CURRICULUM

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

### 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
<b>FIRST SEMESTER (2021)</b>		
TSP401T	Transportation Planning IV	(0,125)
TTN401T	Transportation Technology IV	(0,125)
<b>SECOND SEMESTER (2021)</b>		
AHT401T	Asphalt Technology IV	(0,125)
PTY401T	Pavement Technology IV	(0,125)
<b>FIRST SEMESTER (2022)</b>		
ENN401T	Environmental Management for Engineers: Civil IV	(0,125)
GDE401T	Geometric Design IV	(0,125)
<b>SECOND SEMESTER (2022)</b>		
CCN401T	Concrete Technology IV	(0,125)
TFE401T	Traffic Engineering IV	(0,125)
TOTAL CREDITS FOR THE QUALIFICATION:		<b>1,000</b>



## 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

**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)

