

DIPLOMA IN DENTAL TECHNOLOGY

Dip (Dental Technology) - NQF Level 6 (360 credits)

Qualification code: DPDT20

SAQA ID: 100989, CHE NUMBER: H16/14275/HEQSF

Campus where offered:

Pretoria Campus

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 with a pass at Standard Grade in one of the following minimum combinations: Mathematics and Physical Science **or** Mathematics and Biology or Physiology, **or** Physical Science and Biology or Physiology.

• **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 4 for English (home language or first additional language) and 3 for Mathematics or Technical Mathematics or 4 for Mathematical Literacy and 3 for Life Sciences or 3 for Physical Sciences or Technical Sciences.

Selection criteria:

To be considered for this qualification, applicants must have an Admission Point Score (APS) of at least **19** (with Mathematics or Technical Mathematics) or **20** (with Mathematical Literacy). Life Orientation is excluded for APS calculation.

b. *Assessment procedure(s):*

For 2022:

Candidates will be selected based on their relevant APS scores.

As from 2023:

Selection is done in accordance with the South African Dental Technicians Council. Selection takes place in four steps. The weight of each step is given in brackets.

- Step 1: Academic performance (40%);
- Step 2: Potential assessment (20%);
- Step 3: Dexterity test (30%); and
- Step 4: Personal interview (10%).

Please take note that all completed applications received within the published due dates will be ranked. After consideration of the Departmental Student Enrolment Plan, only the top ranking applicants will be selected. Once a programme is full, a waiting list will be in place to provide an opportunity for applicants to fill places of those who did not register on time. Applicants will be informed of their status per official letter from the Office of the Registrar, alternatively, they can check their application status on the TUT website, www.tut.ac.za.

c. *Recognition of Prior Learning (RPL), equivalence and status:*

See Chapter 30 of Students' Rules and Regulations.

d. *Intake for the qualification:*

January only.



- e. *Presentation:*
Day classes.
- f. *Minimum duration:*
Three years.
- g. *Exclusion and readmission:*
See Chapter 2 of Students' Rules and Regulations.
- h. *Other requirements:*
- Immunisation against Hepatitis B is compulsory.
 - Students should have access to computers and the Internet.
 - Students should register with the South African Dental Technicians Council; this will be done by the Department.
 - Students must obtain approved first-aid certificates to be admitted to the third-year examinations of the National Diploma. First-aid programmes are usually arranged by the Department.
 - Faculty and statutory rules and regulations will apply to students who register for this qualification. It is the responsibility of the students to familiarise themselves with these rules and regulations.
 - In addition to tuition fees and textbooks, an amount of approximately R30 000 for personal instruments will be required. These will remain the property of the student. Students are responsible for purchasing these instruments themselves.
- i. *Special qualification rules:*
Special qualification rules apply, and students who register for this qualification will receive the rules with their letter of acceptance. It is the students' own responsibility to familiarise themselves with those rules.

CURRICULUM

FIRST YEAR

CODE	MODULE	NQF-L	CREDIT	PREREQUISITE MODULE(S)
11P105X	Communication for Academic Purposes	(5)	(10)	
ADH105D	Applied Dental Technology I	(5)	(30)	
CPL105X	Computer Literacy	(5)	(10)	
DLM105D	Dental Laboratory Management I	(5)	(18)	
DMS105D	Dental Materials Science I	(5)	(12)	
DTT105D	Dental Technology Theory I	(5)	(12)	
INL125D	Information Literacy (block module)	(5)	(2)	
LFS125X	Life Skills (block module)	(5)	(2)	
OAT105D	Oral Anatomy and Tooth Morphology	(5)	(24)	
TOTAL CREDITS FOR THE FIRST YEAR:			120	

SECOND YEAR

CODE	MODULE	NQF-L	CREDIT	PREREQUISITE MODULE(S)
ADH206D	Applied Dental Technology II	(6)	(33)	Applied Dental Technology I Dental Materials Science I Dental Technology Theory I
DLM206D	Dental Laboratory Management II	(6)	(18)	Dental Laboratory Management I
DMS206D	Dental Materials Science II	(6)	(15)	Applied Dental Technology I Dental Materials Science I Dental Technology Theory I



DTT206D	Dental Technology Theory II	(6)	(15)	Applied Dental Technology I Dental Materials Science I Dental Technology Theory I
JUR205D	Jurisprudence	(5)	(15)	
WDT226D	WIL in Dental Technology II (block module)	(6)	(24)	Applied Dental Technology I Dental Materials Science I Dental Technology Theory I
TOTAL CREDITS FOR THE SECOND YEAR:			120	

THIRD YEAR

CODE	MODULE	NQF-L	CREDIT	PREREQUISITE MODULE(S)
1SP305D	Business Practice I	(5)	(12)	
ADH306D	Applied Dental Technology III	(6)	(36)	Applied Dental Technology II Dental Materials Science II Dental Technology Theory II
DLM306D	Dental Laboratory Management III	(6)	(18)	Dental Laboratory Management II
DMS306D	Dental Materials Science III	(6)	(15)	Applied Dental Technology II Dental Materials Science II Dental Technology Theory II
DTT306D	Dental Technology Theory III	(6)	(15)	Applied Dental Technology II Dental Materials Science II Dental Technology Theory II
WDT326D	WIL in Dental Technology III (block module)	(6)	(24)	Applied Dental Technology II Dental Materials Science II Dental Technology Theory II WIL in Dental Technology II
TOTAL CREDITS FOR THE THIRD YEAR:			120	
TOTAL CREDITS FOR THE QUALIFICATION:			360	

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 module. At time of publication, the syllabus content was defined as follows:

A

APPLIED DENTAL TECHNOLOGY I (ADH105D)

PRACTICAL EVALUATION

(Module custodian: Department of Sport, Rehabilitation and Dental Sciences)

The manufacturing of all types of full dentures. The use and handling of materials and equipment that is important in prosthetic work. (Total notional time: 300 hours)

APPLIED DENTAL TECHNOLOGY II (ADH206D)

PRACTICAL EVALUATION

(Module custodian: Department of Sport, Rehabilitation and Dental Sciences)

The design and manufacture of all types of dentures, orthodontic appliances and mouth guards. These include clinical work received from the clinics. Full metal crowns, temporary crowns and posts are also constructed. (Total notional time: 330 hours)

APPLIED DENTAL TECHNOLOGY III (ADH306D)

PRACTICAL EVALUATION

(Module custodian: Department of Sport, Rehabilitation and Dental Sciences)

The construction of full metal crowns and bridges with acrylic veneers, as well as metal constructions for porcelain crowns, prosthetics, orthodontics and cobalt chrome. (Total notional time: 360 hours)



B**BUSINESS PRACTICE I (1SP305D)****1 X 3-HOUR PAPER***(Module custodian: Department of Sport, Rehabilitation and Dental Sciences)*

Basic accounting, as well as the layout of offices and the management and administration of a business. (Total notional time: 120 hours)

C**COMMUNICATION FOR ACADEMIC PURPOSES (11P105X)****1 X 3-HOUR PAPER***(Module custodian: Office of the Executive Dean)*

A workable knowledge of English is an essential skill for any graduate who is required to conduct themselves successfully in a professional working environment. This module will equip students with the competencies required to compose a selection of written texts related to communicating both internally and externally within a professional environment. In addition, the module includes strategies that are essential for the effective communication in various situations, including small groups to avoid unproductive conflict, a multicultural context, etc. (Total notional time: 100 hours)

COMPUTER LITERACY (CPL105X)**CONTINUOUS ASSESSMENT***(Module custodian: End User Computing Unit)*

This module provides students with foundational knowledge in computing fundamentals, essential digital skills in key applications based on MS Office Suite and network basics (i.e. MS Outlook and Internet). Online exams are mapped with End-User Computing: SAQA 49077 (61591) Core Element as well as Internet and Computing Core Certification (IC3). (Total notional time: 100 hours)

D**DENTAL LABORATORY MANAGEMENT I (DLM105D)****1 X 3-HOUR PAPER***(Module custodian: Department of Sport, Rehabilitation and Dental Sciences)*

Dental laboratory management - Work ethics and personal presentation; Health and safety in the workplace; basics of electricity, plumbing, gas and equipment; Optimal use of materials; Diversity in the workplace. Quality systems - Introduction to quality systems; Purpose/objectives of a QMS; Definitions; Total quality management of a six sigma; and Roles of employee and employer. (Total notional time: 180 hours)

DENTAL LABORATORY MANAGEMENT II (DLM206D)**1 X 3-HOUR PAPER***(Module custodian: Department of Sport, Rehabilitation and Dental Sciences)*

Dental laboratory management - Interpreting work slips; Professional communication; Principles of stock control; Coping with personal challenges; Career planning; Maintenance and use of equipment relative to year of study. Quality systems - Overview of ISO 9000 systems; Overview of medical devices QMS internationally; Medical devices QMS requirements – South Africa; ISO 9000 systems as basis of ISO 13485; and Overview of ISO 13485 with focus on custom-made devices. (Total notional time: 180 hours)

DENTAL LABORATORY MANAGEMENT III (DLM306D)**1 X 3-HOUR PAPER***(Module custodian: Department of Sport, Rehabilitation and Dental Sciences)*

Dental laboratory management - Record keeping; Invoicing; Informed consent for substitution; Council regulations regarding laboratories; Conflict resolution in the work-place; Applying for work; CV writing; Interviews; Continuous professional development; Rules and regulations; and Maintenance and use of equipment relative to year of study. Quality systems - Documents that regulators expect you to maintain. The medical device regulations that apply to dental laboratories; The roles that medical device regulators expect you to Perform; The documents that ISO 13485 expects you to maintain; The procedures that ISO 13485 expects you to document; The activities that ISO 13485 expects you to document; The arrangements that ISO 13485 expects you to document; The requirements that ISO 13485 expects you to document; and Introduction to risk management. (Total notional time: 180 hours)

DENTAL MATERIALS SCIENCE I (DMS105D)**1 X 3-HOUR PAPER***(Module custodian: Department of Sport, Rehabilitation and Dental Sciences)*

Dental materials such as gypsum, wax, impression material, acrylics and abrasive and polishing agents. Basic chemistry and physics applicable to dental materials. (Total notional time: 120 hours)



DENTAL MATERIALS SCIENCE II (DMS206D) 1 X 3-HOUR PAPER

(Module custodian: Department of Sport, Rehabilitation and Dental Sciences)

Dental materials such as inlay material. Dental alloys and physical properties of materials. Basic chemistry and physics that apply to dental materials. (Total notional time: 150 hours)

DENTAL MATERIALS SCIENCE III (DMS306D) 1 X 3-HOUR PAPER

(Module custodian: Department of Sport, Rehabilitation and Dental Sciences)

A continuation of the study of dental materials. Implants, cross-infection and safety in the laboratory. Basic chemistry and physics that apply to dental materials. (Total notional time: 150 hours)

DENTAL TECHNOLOGY THEORY I (DTT105D) 1 X 3-HOUR PAPER

(Module custodian: Department of Sport, Rehabilitation and Dental Sciences)

Theory of the construction of full dentures. (Total notional time: 120 hours)

DENTAL TECHNOLOGY THEORY II (DTT206D) 1 X 3-HOUR PAPER

(Module custodian: Department of Sport, Rehabilitation and Dental Sciences)

Theory of the construction of orthodontic appliances, as well as partial dentures and full metal crowns and bridges, temporary crowns and posts. (Total notional time: 150 hours)

DENTAL TECHNOLOGY THEORY III (DTT306D) 1 X 3-HOUR PAPER

(Module custodian: Department of Sport, Rehabilitation and Dental Sciences)

Theory of crown and bridge work, including full metal crowns with acrylic veneers and metal constructions for porcelain crowns and bridges. (Total notional time: 150 hours)

I

INFORMATION LITERACY (INL125D)

CONTINUOUS ASSESSMENT

(Module custodian: Directorate of Library and Information Services)

Introduction of information literacy. Development of a search strategy and application of a search string to search engines and academic databases. Evaluation of information sources. Ethical and legal use of information. (Total notional time: 20 hours)

J

JURISPRUDENCE (JUR205D)

1 X 3-HOUR PAPER

(Module custodian: Department of Sport, Rehabilitation and Dental Sciences)

Legal aspects of dental technology in South Africa. (Total notional time: 150 hours)

L

LIFE SKILLS (LFS125X)

CONTINUOUS ASSESSMENT

(Module custodian: Directorate of Student Development and Support)

Personal, socio-emotional and academic skills development for students in higher education. This module includes 1. Intra- and interpersonal skills (e.g. emotional intelligence, relationships, and conflict management); 2. General study skills (e.g. time management, goal setting, learning styles); 3. Health and wellness (e.g. HIV/AIDS, GBV issues, substance abuse); 4. Student life and adjustment (e.g. identity development, adjusting to a higher education environment); and 5. Financial management. (Total notional time: 20 hours)

O

ORAL ANATOMY AND TOOTH MORPHOLOGY (OAT105D)

1 X 3-HOUR PAPER

(Module custodian: Department of Sport, Rehabilitation and Dental Sciences)

Students are provided with the theoretical knowledge to understand the landmarks and anatomy during dental appliance manufacturing procedures and to prepare them to work as an employee in a dental laboratory. (Total notional time: 240 hours)



W**WIL IN DENTAL TECHNOLOGY II (WDT226D)****WORK-INTEGRATED LEARNING****WIL IN DENTAL TECHNOLOGY III (WDT326D)****WORK-INTEGRATED LEARNING*****(Module custodian: Department of Sport, Rehabilitation and Dental Sciences)***

A Cooperative Education programme that will enhance and enrich the student's knowledge and practice skills that were acquired in the simulated work environment in a real world setting. The student is also exposed to the tasks and practices found in such a place of work. (Total notional time: 240 hours)

