DUT
DURBAN UNIVERSITY OF TECHNOLOGY

FACULTY OF HEALTH SCIENCES

2019 HANDBOOK
DENTAL SCIENCES

HANDBOOK FOR 2019

FACULTY OF HEALTH SCIENCES

DEPARTMENT of DENTAL SCIENCES

The above department offers two programmes:

DENTAL TECHNOLOGY
DENTAL ASSISTING

This handbook offers information on both programmes

WHAT IS A UNIVERSITY OF TECHNOLOGY?

A university of technology is characterized by being research informed rather than research driven where the focus is on strategic and applied research that can be translated into professional practice. Furthermore, research output is commercialized thus providing a source of income for the institution. Learning programmes, in which the emphasis on technological capability is as important as cognitive skills, are developed around graduate profiles as defined by industry and the professions.

IMPORTANT NOTICES

The rules in this departmental handbook must be read in conjunction with the General Rules (G Rules) contained in the DUT General Handbook for Students as well as the relevant subject Study Guides.

Your attention is specifically drawn to Rule G1 (8), and to the process of dealing with students' issues.

NOTE TO ALL REGISTERED STUDENTS

Your registration is in accordance with all current rules of the Institution. If, for whatever reason, you do not register consecutively for every year/semester of your programme, your existing registration contract with the Institution will cease. Your re-registration anytime thereafter will be at the discretion of the institution and, if permitted, will be in accordance with the rules applicable at that time.

FACULTY of HEALTH SCIENCES
FACULTY VISION, MISSION & VALUES (2017-2019)

Vision: "Leading Transformative and Innovative Health Sciences Education"

Mission Statement: "Developing Holistic Professionals responsive to Healthcare needs" through *Excellence* in:

- Teaching and Learning
- Research, Innovation and Engagement
- Fostering Entrepreneurship

Values

Professionalism
To work within regulatory frameworks of professional conduct. To maintain and develop professional expertise and good work ethic.

Integrity
To conduct ourselves with strong moral principles. To be honest and authentic. To do what is ethical and just.

Ubuntu
To treat people with respect, fairness, courtesy, politeness and kindness.

Transparency
To conduct ourselves with openness and honesty through shared governance.

Accountability
To accept responsibility for one's actions.

DEPARTMENTAL VISION, MISSION & VALUES

Department of Dental Sciences Vision:

Department Vision: "Advancing Excellence in Dental Science Education"

Mission Statement: "Developing Holistic Dental Professionals Responsive To Oral Healthcare Needs" through *excellence* in:

- Teaching, Learning and Assessment
- Research, Innovation, Engagement and
- Entrepreneurship

Values

Professionalism
To sustain professional expertise and engender ethical behavior

Integrity
To practice and uphold moral principles, truthfulness and honesty

Accountability
To be liable for one's decisions, commitments and actions

uBuntu
To embody mutual respect, dignity, empathy and altruism

Teamwork
To effectively work together towards common goals

CONTENTS

1. DEPARTMENTAL & FACULTY CONTACT DETAILS

All departmental queries to:

Secretary:	Mrs Rani Sukhu
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Fax No:	(031)-3732047
Email:	sukhui@dut.ac.za
Location of Department	Gate 8, Steve Biko Rd, Ritson Campus, Mansfield School

Admin Assistant:	
(Dental Assisting)	Ms Kerusha Pillay
Tel No:	(031)-3735356
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Location of Department	Main Gate, ML Sultan Rd, ML Sultan Campus, AH0005C

Clinic Receptionist/	
Dental Assistant:	Mrs B Majola
Tel No:	(031)-3732439
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All Faculty queries to:

Faculty Officer:	Ms Fortunate Thembelihle Mayisela
Tel No:	(031)-3732701
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Location:	Health Sciences Faculty Office, Gate 8, Steve Biko Road, Mansfield Site Area, Ritson Campus

Executive Dean:	Professor N Sibiya
Executive Dean's Secretary:	Mrs Bilkish Khan
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Location:	Executive Dean's Office, 8, Steve Biko Road, Mansfield Site Area, Ritson Campus

2. STAFFING

Head of Programmes	Mrs S Naidoo, Master of Applied Sciences (MRT)(Uni-Syd), BTech: Rad: Nuclear Medicine, NDip: Rad: Diagnostic, HDip: Ed. Technical (Rad)
Senior Lecturer:	Dr A Vahed, DTech: Quality (DUT), Reg Dental Tech
Lecturers	Ms M M P Zondi, MTech: Dent Tech (DUT), Reg Dental Tech Mr MJ Radebe, MBA (MANCOSA) Dr V Gareeb, BDS (MEDUNSA) Mr T Gumbi, MHSc: Dental Tech (DUT), Reg Dental Tech Ms N Dladla, BTech: Dental Tech (DUT), Reg Dental Tech
Technician	Mr K Padayachee, BTech: Dental Tech
Secretary Dental Sciences	Mrs R Sukhu, B Tech: Commercial Administration (ML)
Admin Assistant Dental Assisting	Ms K Pillay
Clinic Receptionist/ Dental Assistant	Mrs B Majola
Senior Technical Assistant	Ms W Allison B Tech: Cost Management and Accounting
Technical Assistant	Mr M P Phewa
Admin Assistant	Mr M Ndebele

3. DEPARTMENTAL INFORMATION & RULES

3.1. Programmes offered by the department

This department offers two programmes, namely

- Dental Technology
- Dental Assisting

3.2. Qualifications offered by the department

Learning programmes are offered in this Department which will, upon successful completion, lead to the award of the following qualifications:

Qualification	Qual Code	SAQA NLRD Number	Important Dates
ND: Dental Technology	NDDNT1	72222	Teach Out 2019
ND: ECP: Dental Technology	NDDTF1	72222	Teach Out 2019
BTech: Dental Technology	BTDNT1	72124	Teach Out 2019
BHSc:Dental Technology			
MHSc: Dental Technology	MHDNT1	72095	
DDentalTech: Dental Technology	DTDNT1		
Qualification	**Qual Code**	**SAQA NLRD Number**	
HC: Dental Assisting	HCDNA	73492	

3.3. Departmental information

3.3.1. Academic Integrity

Please refer to the General Rules pertaining to academic integrity G13 (1)(o). These will be enforced wherever necessary to safeguard the worthiness of our qualifications, and the integrity of the Faculty of Health Sciences at the DUT.

3.3.2. Code of Conduct for students

In addition to the General Rules pertaining to Conduct SR3 (3), a professional code of conduct pertaining to behavior, appearance, personal hygiene and dress shall apply to all students registered in a Dental Technology programme. Students are not allowed to perform private work for patients or dentists, or any other dental professional. This aligns with No. 17 of Section 1.16 of SADTC ACT.

Laboratory Conduct

Only Dental Technology students are allowed in the Dental laboratories.

- Noise levels should be kept low at all times.
- Hand bags/Backpacks should be stored in the designated bag areas.
- No student may bring food into the dental laboratory. There is strictly no eating in the dental laboratory.
- No laptops are allowed in the dental laboratories, unless prior arrangements have been made with the lecturer.

- No earphones may be used, unless permitted by the lecturer.
- Students may not work at another student's work station.
- Students cannot enter, or sit, in another dental laboratory without the lecturer's permission.
- Students are to avoid material wastage.
- Students are to ensure that machinery and Bunsen burners are switched off when not in use. Remember that Bunsen burners utilise "priceless" oxygen thereby increasing the carbon dioxide levels in the labs.
- Students arriving late for practical sessions will need to provide reasons for their lateness in a letter addressed to the lecturer. Lateness means that you will be missing part of the practical, as well as creating a disturbance for the other students.
- Students need to obtain their lecturer's permission to leave the lab.
- At the end of each day students will be dismissed by the lecturer.
- Attendance registers will be signed at the beginning and at the end of the practical sessions.
- Students must adhere to all Health and Safety regulations whilst working in the laboratories.
- Students arriving late for a test will be allowed entry up to one hour after the commencement of the test. Such student will not be allowed extra time.
- No student may leave a test room within the first hour of a test or thereafter without the permission of the invigilator.

Cleaning of Laboratories

- Students must try and work meticulously at all times.
- Student "mess/mishaps" must be cleaned immediately by the student concerned.
- All students will clean the laboratory and plaster rooms daily prior to the end of the practical.
- Student work benches and surroundings areas *(including laboratory floors)* to be kept clean and tidy at all times.
- Students who abscond and/or do not clean will need to appear before a departmental student tribunal.

Dress Code:

- Laboratory coats and other protective clothing must be worn at all times when in the dental laboratory.
- Closed shoes must be worn at all times when in the dental laboratory.
- Appropriate attire is to be worn at all times. Inappropriate dressing will not be tolerated and any student in contravention of this will not be allowed in the dental laboratory.
- Hats, beanies and caps are not to be worn in the dental laboratory.
- Long hair, including a hair piece, must be tied up at all times.
- Face masks and protective goggles must be worn when appropriate (when working off or grinding/ working in the casting room).

Discipline

- Students found to contravene the code of conduct will appear before the departmental student tribunal for appropriate disciplinary action. Note that disciplinary action is required to correct the student's misdemeanour.
- Students who continually transgress these rules will then be referred to the institutional disciplinary tribunal.

3.3.3. Uniforms

Students must adhere to instructions regarding specific uniforms required during practical's and clinic sessions.

3.3.4. Attendance

Students are encouraged to achieve hundred percent (100%) attendance for all planned academic activities as these are designed to provide optimal support for the required competency. Where absence is unavoidable, the student must timeously advise the department of the reason. Only exceptional reasons will be accepted for absence from guest lectures, industry or field trips. Poor attendance records may lead to penalties.

3.3.5. Health and Safety

Students must adhere to all Health and Safety regulations both at DUT and during Workplace Based Learning (WPBL) placements. Failure to do so will be treated as a breach of discipline.

3.4. Departmental Rules

3.4.1. Registration

The final date for late registration for the Dental Technology and Dental Assisting Programme will be fifteen (15) working days after the official commencement of lectures.

3.4.2. Discipline

Rules of conduct pertaining to a specific laboratory as instituted by the Head of this Department shall apply to all students registered for the particular subject.

- **Material Wastage**

Students found to be wasting materials will be disciplined in terms of completing several hours of community service.

- **General Disciplinary Issues**

The Head of Department shall have the right to constitute an internal disciplinary tribunal should he/she deem this necessary. The authority of the internal disciplinary tribunal shall be limited to cleaning duties or community work.

- **Equipment**

Equipment Damage: students found to have willfully damaged any equipment will be charged the full amount of the repair / replacement. The Department is **NOT** responsible for any damage to personal equipment caused by **"POWER SURGES."**

Issued Equipment: students will be allocated departmental equipment for the duration of the year. It is the student's responsibility to take care of the said equipment. Any equipment, lost, stolen or damaged will be to the account of the student to whom the equipment was issued.

Please note: the department supplies lockers for the safe-guarding of equipment. The student is required to pay R200.00 holding fee. Each student is to ensure that they have their own equipment and instruments to complete the practical tasks. There will be consequences to those students who are NOT compliant.

- **Laboratory and/or Clinic Cleaning**

Students are required to clean laboratories and/or clinics at the end of the teaching day as well as to be present at general cleaning every Wednesday Afternoon (Dental Assisting) and every Thursday afternoon (Dental Technology). Failure to be present will result in the student cleaning his/her laboratory or all the laboratories/clinic (up to one week) of the department of Dental Sciences or community work. Students transgressing this rule for a third, or more, time will be referred to the Registrar Academic for institutional disciplinary action. In those instances where discipline is of a serious nature or that the student concerned has been found guilty of a similar offence, the matter will be referred to the DUT's disciplinary tribunal.

- **ABSENTEEISM**

Lecturers appreciate 100% attendance. Non-attendance will negatively impact on student performances in subjects.

3.4.3. Workplace Based Learning (WPBL)

The Department of Dental Sciences requires the student to undergo a period of experiential learning as part of the programme (Dental Technology and Dental Assisting). All prescribed subjects and the prescribed experiential component must be passed in order to obtain sufficient credits to qualify for the qualification. Although the Institution undertakes to assist the student in obtaining suitable experiential learning placement, the onus is on the student to attempt to find an "employer". The employer must be accredited by the Institution for the purposes of experiential learning.

An experiential learning agreement creates a separate contract between the "employer" and the student.

Students registered for **Applied Dental Technology II** are required to provide the department with proof of having completed 10 days of Workplace Based Learning at a commercial dental laboratory.

Students registered for **Applied Dental Technology III** are required to provide the department with proof of having 20 days of Workplace Based Learning at a commercial laboratory.

The necessary forms, to be completed by the student and the laboratory owner, are obtainable from the Secretary and must be returned no later than the first day of the fourth term. The department may, at its discretion, allocate teaching time for this exercise, but this will not exceed 10 teaching days for 3rd year students and 5 teaching days for 2nd year students.

NOTE: Third year students are required to pay an additional fee to the Institution for WPBL registration.

3.4.4. Late submissions of practical tasks and assignments

Practical tasks and assignments that are not handed in on due date and time will be penalized. Students are reminded that assignments are given well in advance and that last minute problems can be avoided by completing assignments before the due date. **See discipline-specific study guides for further details.**

3.4.5. Dental Clinic

The Department of Dental Sciences operates a Dental Clinic for the training of Dental Technology and Dental Assisting students.

Dental Technology - Work generated by this clinic is handed to students to complete. Please note that the completion of this work is compulsory. The work completed by students for the clinic may be evaluated and the marks obtained by the student may be used in the determination of a student's year mark.

Dental Assisting - Students are expected to assist the clinician with all procedures.

3.4.6. Special Tests and Condonement

Summative means all assessment marks that contribute to the final mark of a subject, but not including examinations for the purpose of this rule.

If a student misses a summative written, oral or practical test, **for reasons of illness**, a special test may be granted if the student provides a valid medical certificate specifying the nature and duration of the illness, and a declaration that for health reasons it was impossible for the student to sit for the test. This certificate must be submitted to the subject lecturer, no later than one week after the date of the missed test.

Any student who misses an assessment test, and any student who qualifies for a rewrite but fails to write it, will be scored a zero mark for the missed assessment.

3.4.7. Registration with the Professional Board: Dental Technology Students

In addition to the requirements of the General Rules (see Rule G3) a student who registers for the National Diploma in Dental Technology or Bachelor of Health Sciences in Dental Sciences or Postgraduate qualification in Dental Technology (practicing as a Dental Technician or Dental Technologist) shall be registered as a Student Dental Technician and must conform to the requirements as laid down by the South African Dental Technicians Council in the Dental Technicians Act, 1979.

A graduate, on successful completion of the National Diploma in Dental Technology, and who has satisfied the requirements of the South African Dental Technicians Council shall be recognized by the South African Dental Technicians Council as qualified for registration as a dental technician. The said qualification shall entitle the holder thereof to practice a profession as a Dental

Technician, however only in the capacity of employee.

A graduate, on successful completion of the BTech Degree in Dental Technology, and who has satisfied the requirements of the South African Dental Technicians Council shall be recognized by the South African Dental Technicians Council as qualified for registration as a Dental Technologist. The said qualification shall entitle the holder thereof to practice a profession as a Dental Technologist, in the capacity of employer.

A graduate on successful completion of the Bachelor of Health Sciences in Dental Sciences, and who has satisfied the requirements of the South African Dental Technicians Council shall be recognized by the South African Dental Technicians Council as qualified for registration as a Dental Technologist.

No student who is in fee default with the Institution will be registered with the South African Dental Technicians Council until such time as his/her fees are paid up in full. This must be completed within five years of obtaining your qualification.

3.4.8. Registration with the Professional Board: Dental Assisting Students

In addition to the requirements of the General Rules (see Rule G3) a student who registers for the National Certificate in Dental Assisting shall be registered as a Student Dental Assistant and must conform to the requirements as laid down by the Health Professionals Council of South Africa.

A graduate, on successful completion of the National Certificate in Dental Assisting, and who has satisfied the requirements of the Health Professionals Council of South Africa shall be recognized by the Health Professionals Council of South Africa as qualified for registration as a Dental Assistant.

No student who is in fee default with the Institution will be registered with the Health Professionals Council of South Africa until such time as his/her fees are paid up in full.

3.4.9 Appeals

Rule G1 (8) refers:

Any student wishing to appeal against:

(a) The implementation of an Institutional Rule must do so in the first instance to the relevant Head of Department;

(b) The decision of a Head of Department must do so via the relevant Executive Dean to the Faculty Board or a delegated Committee of the Faculty Board. The decision of the Faculty Board or a delegated Committee of the Faculty Board is final and no further appeals will be considered thereafter.

(Amended w.e.f. 2009/01)

4. NATIONAL DIPLOMA: DENTAL TECHNOLOGY

4.1 Programme information

A diploma in Dental Technology enables a qualified dental technician to work as a dental laboratory employee upon registration with the South African Dental Technicians Council (SADTC). A final practical assessment is conducted, in the concluding year of the programme, which, if completed successfully, enables the qualified student to register with the SADTC. Certain subjects in this programme do not have a final examination. The results for these subjects are determined through a weighted combination of assessments. As such, there are no supplementary examinations. Students are encouraged to work steadily through the period of registration in order to achieve the highest results possible. Assessment details are listed under each subject at the back of this handbook. Moderation follows the DUT requirements.

4.2 Learning Programme Structure

National Diploma: Dental Technology

Code	Subjects	Year of Study	CA/E *	Credits	Pre-requisite	Co-req
OANA101	Oral Anatomy I	1	CA	0.080	Admission requirements	
TMOR101	Tooth Morphology I	1	CA	0.080		
DMSC102	Dental Materials Science I	1	CA	0.350		
DTTH101	Dental Technology Theory I	1	CA	0.240		
APDT101	Applied Dental Technology I	1	CA	0.170		
PHCD111	Physics & Chemistry I (Mod 1) (Physics)	1	E	0.100		
PHCD121	Physics & Chemistry I (Mod 2) (Chemistry)	1	E	0.100		
DMSC211	Dental Materials Science II (Module 1)	2	E	0.200	Dental Materials Science I, Dental Technology I	
DMSC221	Dental Materials Science II (Module 2)	2	E	0.200	Dental Materials Science II (Mod 1)	
DTTH211	Dental Technology Theory II (Mod 1) (Crown/Bridge & Orthodontics)	2	CA	0.125	Dental Technology Theory I	
DTTH221	Dental Technology Theory II (Mod 2) (Chrome & Prosthetics)	2	CA	0.125	Dental Technology Theory I	
APDT201	Applied Dental Technology II	2	CA	0.250	Tooth Morphology I, Applied Dental Technology I, Dental Materials Science II	
JURI111	Jurisprudence I (Module 1)	2	E	0.085		
JURI121	Jurisprudence I (Module 2)	2	E	0.085	Jurisprudence I (Mod 1)	
BPRD101	Business Practice I	3	CA	0.170		

DMSC301	Dental Materials Science III	3	CA	0.350	Dental Materials Science II, Oral Anatomy, Dental Technology Theory II	
DTTH311	Dental Technology Theory III (Mod 1) (Crown/Bridge & Orthodontics)	3	CA	0.140	Dental Technology Theory II (Mod 1) (Crown/Bridge & Orthodontics), Oral Anatomy	
DTTH321	Dental Technology Theory III (Mod 2) (Chrome & Prosthetics)	3	CA	0.140	Dental Technology Theory II (Mod 2) (Chrome & Prosthetics), Oral Anatomy	
APDT301	Applied Dental Technology III	3	CA	0.200	Oral Anatomy, Applied Dental Technology II, Dental Materials Science III	
ETDN301	Experiential Learning	3	CA	0.000	Oral Anatomy 1	
CMCA102	Communication I	3	CA	0.080		

*CA = Continuous Assessment; E = Examination at end of Subject / Module

4.3 Programme Rules

4.3.1. Minimum Admission Requirements

In addition to Rule G7 the minimum entrance requirement for entry into the programme of study is a National Senior Certificate (NSC) with endorsement for degree entry with the following subjects:

Subject	**NSC Rating**
English (home) **OR** English (1st additional)	3
Physical Sciences **OR** Mathematics **OR** Mathematics Literacy	3 3 6
And two 20 credit subjects (not more than one language)	3

The minimum requirement for holders of the Senior Certificate is matriculation exemption with the following subjects at the stated ratings:

Compulsory Subjects	**HG**	**SG**
Mathematics **OR** Physical Science	E	C

The latter also applies to National Certificate (Vocational) level 4 candidates.

The DUT General Rules G7 (3) will apply for admission requirements based upon Work Experience, Age and Maturity and Recognition of Prior Learning.

The DUT's Admissions Policy for International Students and General Rules G4 and G7 (5) will apply for admission of International students.

4.3.2. Selection Processes

In accordance with Rule G5, acceptance into the programme is limited to 28 places. As more qualifying applications are received than can be accommodated, the following selection process will determine placement in the programme:

All applicants must apply through the Central Applications Office (CAO). Initial shortlisting for selection is based on the applicant's academic performance in Grade 12 (Grade 12 June / trial marks will be used for current matriculants) together with a submission of a portfolio. Shortlisted students will then be invited to undergo placement testing. Applicants who pass the placement tests are invited for an interview. Provisional acceptance is given to selected applicants awaiting National Senior Certificate (NSC) results. If the final Grade 12 NSC results do not meet the minimum entrance requirements, this provisional acceptance will be withdrawn. Final selection for placement will be based on results in the SC / NSC and DUT placement tests.

4.3.3. Pass Requirements

Notwithstanding the DUT pass requirements (G14 and G15), and those detailed as follows, students are encouraged to apply themselves to their learning, and strive for the best academic results possible in order to adequately prepare themselves for their future careers, and to maximize possible employment opportunities. In line with SADTC requirements, students must complete their National Diploma qualification within five years.

4.3.3.1. A student Dental Technician shall not be permitted to continue with Dental Technology Theory II and III; Dental Material Science II and III; and Applied Dental Technology II and III unless the student has passed the preceding level. (Consistent with Dental Technicians Act, 1979. Reg 21(2))

4.3.3.2. Tooth Morphology is a prerequisite for Applied Dental Technology II.

4.3.3.3. Oral Anatomy is a prerequisite for Applied Dental Technology III.

4.3.3.4. Continuous Evaluation Subject Rules

Please refer to 4.1 Learning Programme Structure to identify the subjects/ modules, which are evaluated by Continuous Assessment. Examinations will not be written in these subjects / modules. All modules will need to be passed in the same academic year. See "Subject Content" for further information as well as specific Study Guides, which contain specific rules for each subject. Any numbers of tasks may form the class work marks. This is solely dependent on the discipline-specific lecturer in charge of the different sections. Formal tests will be held during the year. These will be held as and when necessary.

Students failing formative class work and assessments are encouraged to repeat exercises to improve their performance. Summative classwork and assessments are exempt from a re-submission.

4.3.3.5. Examination Subject Rules

Please refer to 4.1 Learning Programme Structure to identify the subjects / modules, which are evaluated by Examination.

A 40% year mark is required to enter the examination for each module for the above subjects.

A final pass mark of 50% is required for each module for the above subjects.

The examination for Module 1 is written during the mid-year examination period and for Module 2, during the year-end examination period.

A student failing Module 1 and Module 2 will be permitted supplementary examinations provided that the results obtained comply with the supplementary examination rules as contained in rule G13 (3).

A student must pass both modules in one academic year failing which the student will be required to re-register for both modules.

4.3.3.6 Rules for Dental Technology Theory II and Dental Technology Theory III

Both subjects run for the entire year (annual)

Both subjects consist of 2 modules each containing 2 study units:

- Module 1: Study Unit 1 —Crown and Bridge and Study Unit 2: Orthodontics;
- Module 2: Study Unit 1 —Chrome and Study Unit 2: Prosthetics

Final marks for each study unit will be determined as follows:

Assessment	**Weighting**	**Sub minimum**
Assessment 1	30%	
Assessment 2	40%	40% required
Assessment 3 (Assignment/presentation)	30%	40% required

Note for each Study Unit:

- In respect to Test 1, a subminimum mark is not applicable.
- A subminimum pass mark of 40% is required for Assessment 1 and Assessment 2.
- A subminimum of 50% will apply to final assignments / presentations submissions. Students may be afforded formative assessment opportunities prior to the final submission.
- The final mark for each Study Unit comprises the marks scored for Test 1, 2, 3 & assignment/presentation with the appropriate weightings. The final pass mark for each unit per Module is 50%.
- Credit for Dental Technology Theory II and Dental Technology Theory III subjects will only be granted if the student passes both study units for Module 1 and Module 2 in the same academic year for each theory subject. Therefore, failure in any study unit will necessitate re-registration for all study units per module.

Applied Dental Technology II and Applied Dental Technology III
Both subjects consist of 4 study units.
Final marks for each study unit will be determined as follows:

Assessment	**Weighting**	**Sub minimum**
Assessment 1	30%	-
Assessment 2	30%	50%
Class work	40%	40% required

Note: A 50% subminimum is required for Applied Dental Technology III (Assessment 2)

4.3.3.7. Rules for Practical Tests and Examinations

A. Preparation procedures prior to the commencement of the test and/or examination.

A.1. All models, examples, teaching aids, previous work done by the students must be cleared out of the laboratory at least one day prior to the commencement of the test/examination. This is to ensure that no outside help or unfair advantage can be gained by the students. Students are to make their own arrangements as to what they should do with these articles cleared from the laboratory.

A.2. All materials, personal tools and equipment required for the practical must be on hand and in working order.

A.3. The invigilator must ensure that all models must be laid out or on-hand and clearly marked for the test / examination.

B. Test and/or examination day.

B.1. No student is allowed to communicate to another student, except when it is relevant to the practical test.

1.1 **You are not allowed to discuss your practical cases during the practical test.**

B.2. You are NOT allowed to have old models and practical work in your possession.

B.3. Cell phones are to be switched off and placed in your bags.

3.1 You are not allowed to have a cell phone in your possession, if found, it will be confiscated for the duration of the test.

B.4. All materials obtained prior and during this test are to be obtained from the Departmental Store only.

4.1 All communal materials must be obtained and returned to the invigilator.

B.5 A replacement model, if required, must be obtained from the designated invigilator on duty.

B.6 No student may bring any handbags or lunch boxes into a test or an examination. Students are to make their own arrangements as to what they should do with these articles.

B.7. Students enter, go to their workstations, and lay out and prepare their tools and instruments.

B.8. The following will be read out prior to the text/examination papers being handed out: "This is an official test/examination of the Department of Dental Sciences as constituted by the Durban University of Technology. All rules of the Institution pertaining to tests and examination apply. These rules are to be found in the Rule Book for students of the Institution and are available to students on request. Those students contravening these rules will be prosecuted in terms of the rules of the Durban University of Technology by the Institution's disciplinary tribunal." (Note to invigilator: In the case of an examination a list of instructions to be read to students will be supplied by Examinations Office and must be read out as well as B.3)

B.9. Time of arrival to major practical tests, any student arriving late will be allowed into the laboratory only up to one hour after the commencement of the test. Such a student will not be allowed extra time. This is aligned with DUT test and examination rules.

C. The following laboratory rules & procedures will apply:

C.1. No additional tools, instruments, models or equipment may be brought into the laboratory during the duration of the test/examination. Any additional materials required by the student to complete the test/examination may only be brought into the venue under the supervision of the invigilator. No tools, instruments, materials, models or equipment may be taken out of the laboratory until the end of the test/examination and after all work has been taken in for marking.

C.2. At lunchtime, the invigilator will inform the students to stop working. All gas taps are to be turned off and the students are to stand by their workstations and await the invigilator's instructions. Upon checking each individual student's work the invigilator will give the student permission to leave the laboratory. At the end of the lunch break, the invigilator will allow the students to re-enter and carry on from where they left off.

D. At the end of the day:

D.1. The invigilator will inform the students to stop working.

D.2. All students will tidy their workstations and lay out their work-in-progress on their workbenches.

D.3. All students will then clean the laboratory to the satisfaction of the invigilator.

D.4. After the laboratory has been cleaned, the student will stand by their workstations and the invigilator will check all work to ensure that everything is present. The onus is on the student to ensure that all his/her work is

present on the bench for inspection. The student will then be told that he/she can go and must leave the laboratory immediately. The student's work is to be left on the top of his/her workbench. If the student has a muffle to go into the overnight furnace, the student must go to the casting room with the muffle and wait there for the invigilator.

D.5. After all the students have left, the invigilator will secure and lock the laboratory.

E. A student may not:

E.1. Touch or handle another student's work;

E.2. Discuss his/her work or another student's work with another student;

E.3. Leave the test/examination room FOR WHATEVER REASON without the permission of the designated invigilator;

E.4. Work at another student's workstation;

E.5. Invest or cast another student's work, either together or separately with their own work.

F. Student completing the work prior to the end of the test or examination may inform the invigilator that he/she is finished. He/she must then tidy his/her workstation and hand in his/her completed work. The student must then leave the laboratory immediately. At the end of the test or examination, the student must return and help to clean the laboratory.

G. At the end of the test/examination the invigilator will stop the students from working. Students are then required to clean the laboratory. When the laboratory is clean, the invigilator will take in the student's work. It is the student's responsibility to see that all his/her work is clearly marked with his/her name or number.

H. Students are to hand in their own work. Test/examination work MAY NOT be handed in by another student.

I. Casting procedure

I.1 A student may only cast his/her own work.

I.2 The student will ensure that his/her muffle and casting ring is clearly marked with his/her name or number.

I.3 In the event that a student casts another student's muffle and casting ring his/her own muffle and casting ring will be withdrawn and he/she will have to start that section of work again. If the other student's muffle is a miscast, he/she will be allocated extra time only at the discretion of the Head of Department.

1.4 All castings need to be performed in the presence of the invigilator. When ready to cast please inform the invigilator. Failure to do so will result in your casting being withdrawn.

1.5 All work must be submitted on an appropriate articulator.

Note:

Any contravention of the above mentioned instructions/requirements will lead to disciplinary action.

A 40% sub-minimum is applicable to each discipline-specific section, and the overall pass mark for this test is 50%, and above.

J. Flasking and Packing of Dentures

The student will ensure that his/her flasks and clamps are clearly marked or labeled with his/her name or number. In the event that a student packs or flasks another student's work, his/her own work will be withdrawn and he/she will have to start that section of the work again. If the other student's work has been damaged, he/she will be allocated extra time at the discretion of the Head of Department.

K Procedure for packing overnight furnace

When a student wants a muffle or casting ring to go into the overnight furnace he/she will take the muffle or cast ring to the casting room after his/her work station has been checked at the end of the day. The invigilator will then pack the furnace and set the times and temperature. Each student will note the position of his/her muffle or casting ring in the furnace and the casting in the morning will be in the reverse sequence to the placing of the muffles or casting rings the night before.

L After the invigilator has confirmed that students acknowledge the rules as displayed on the class notice board and those additional rules and/or instructions (where necessary) have been verbally explained, the paper is issued and the test/examination will start.

4.3.4. First Aid Certificate

Students shall not be permitted to sit for the examinations at the end of the third year of study unless they are in possession of a Certificate in General First-Aid issued by a first-aid organization recognized by the Institution

4.3.5. Re- Registration Rules

Rule G16 of the General Handbook for Students applies.

4.3.6. Exclusion Rules

In addition to Rule G17, the following rule applies: A first year student who fails 3 or more subjects with a final mark of less than 40% in these subjects will not be permitted to re-register in the Dental Technology programme. De-registration from any subject is subject to the provisions of Rule G6 (2). Students wishing to re-apply must do so in writing to the department and may be required to undergo further placement testing.

4.3.7. Interruption of Studies

In accordance with Rule G21A (b), the minimum duration for this will be three (3) years of registered study and the maximum duration will be five (5) years of registered study, including any periods of WPBL. Should a student interrupt their studies by more than three (3) years, the student will need to apply to the department for permission to reregister and will need to prove currency of appropriate knowledge prior to being given permission to continue with registration. (Please note that this rule is necessary to comply with the South African Dental Technicians Council Rules as per the Dental Technicians Act, 1979 (Regulations regarding the training of student Dental Technicians, No. 21 (4) w.e.f 23 February 2001.)

4.3.8. Materials Purchases

Money for materials purchases are to be deposited into the official Durban University of Technology bank account, account number FDTS 301374. A duplicate receipt is to be requested from the cashier, which then needs to be presented to the Senior Technical Assistant who will process the payment on the internal departmental system. Students are responsible for the purchase and cost of dental materials.

Note: Students are also responsible for the purchase of personal equipment and instruments, which are needed to complete practical tasks. The table below reflects the estimated cost of equipment and instruments for personal use.

DENTAL TECHNOLOGY : STUDENT EQUIPMENT			
ECP	**1st YEAR**	**2nd YEAR**	**3rd & 4th YEARS**
HAND TOOLS	**HAND TOOLS**	**HAND TOOLS**	**HAND TOOLS**
Micro Motor	Micro Motor	Micro Motor	Micro Motor
Micro Torch	Micro Torch	Micro Torch	Micro Torch
Ash Carver No. 5	Ash Carver No. 5	Ash Carver No. 5	Ash Carver No. 5
Apex Carver Lecron Round	Apex Carver Lecron Round	Apex Carver Lecron Round	Apex Carver Lecron Round
Scalpel Handle	Scalpel Handle	Scalpel Handle	Scalpel Handle
Scalpel Blade	Scalpel Blades (5 per student)	Scalpel Blades (5 per Student)	Scalpel Blades (5 per Student)
Wax Knife Large	Wax Knife Large	Wax Knife Large	Wax Knife Large

Plaster Knife	Plaster Knife	Plaster Knife	Plaster Knife
Plaster Spatula	Plaster Spatula	Plaster Spatula	Plaster Spatula
Pk Thomas Carver	Pk Thomas Carver	Pk Thomas Carver	Pk Thomas Carver
		Wax Dropper	Wax Dropper
		Porcelain Separator	Porcelain Separator
		Artery Forceps	Artery Forceps
		Measuring Gauge	Measuring Gauge
		Glass Slab	Glass Slab
		Porcelain Brush	Porcelain Brush
		Porcelain Firing Trays	Porcelain Firing Trays
BURS	**BURS**	**BURS**	**BURS**
Cross Cut Bur - Dentures	Cross Cut Bur - Dentures	Cross Cut Bur - Dentures	Cross Cut Bur - Dentures
S/Steel Rosehead Bur	S/Steel Rosehead Bur	S/Steel Rosehead Bur	S/Steel Rosehead Bur
Sandpaper Mandrel	Sandpaper Mandrel	Sandpaper Mandrel	Sandpaper Mandrel
Mandrel Screw Type	Mandrel Screw Type	Mandrel Screw Type	Mandrel Screw Type
Plaster Bur	Plaster Bur	Plaster Bur	Plaster Bur
Pear Shape Carbide Bur	Pear Shape Carbide Bur	**Pear Shape Carbide Bur (2 per Student)**	Pear Shape Carbide Bur (2 per Student)
Tungsten Fissure Bur	Tungsten Fissure Bur	**Tungsten Fissure Bur (2 per Student)**	Tungsten Fissure Bur (2 per Student)
	Mandrel Screw Type Heavy Duty	**Mandrel Screw Type Heavy Duty (2 per Student)**	Mandrel Screw Type Heavy Duty (2 per Student)
		Cutting Disc	Cutting Disc
		Tungsten Carbide Cross Cut Parallel	Tungsten Carbide Cross Cut Parallel
		Stone Grinder (Parallel)	Stone Grinder (Parallel)
		Diamond Burs (Parallel, Pointed & Tapered)	Diamond Burs (Parallel, Pointed & Tapered)
POLISHING EQUIPMENT	**POLISHING EQUIPMENT**	**POLISHING EQUIPMENT**	**POLISHING EQUIPMENT**
linen pumice wheel (4 x 42)	linen pumice wheel (4 x 42) (2 per student)	linen pumice wheel (4 x 42) (2 per student)	linen pumice wheel (4 x 42) (2 per student)
Calico Lathe Wheel	Calico Lathe Wheel	Calico Lathe Wheel	Calico Lathe Wheel
	Rubber Cones For Denture Work (Pack of 6)	Rubber Cones For Denture Work (Pack of 6)	Rubber Cones For Denture Work (Pack of 6)
Rubber Cone (Lollipop)	Rubber Cone (Lollipop) (pack of 6)	Rubber Cone (Lollipop) (Pack of 6)	Rubber Cone (Lollipop) (Pack of 6)
Muslin Buff	**Muslin Buff (2 per student)**	Muslin Buff (2 per Student)	Muslin Buff (2 per Student)
	Felt Polishing Cone	Felt Polishing Cone	Felt Polishing Cone
		Metal Centred Pumice Brush	Metal Centred Pumice Brush
GENERAL	**GENERAL**	**GENERAL**	**GENERAL**
Rubber Mixing Bowl (Acrylic Resimix Large)	Rubber Mixing Bowl (Acrylic Resimix Large)	Rubber Mixing Bowl (Acrylic Resimix Large)	Rubber Mixing Bowl (Acrylic Resimix Large)
Rubber Mixing Bowl (Plaster Large Green)	Rubber Mixing Bowl (Plaster Large Green)	Rubber Mixing Bowl (Plaster Large Green)	Rubber Mixing Bowl (Plaster Large Green)
Robinson Soft Brush	Robinson Soft Brush	Robinson Soft Brush (pack of	Robinson Soft Brush (pack of 12)

(pack of 12)	(pack of 12)	12)	
150mm Ruler Stainless Steel	150mm Ruler Stainless Steel	150mm Ruler Stainless Steel	150mm Ruler Stainless Steel
Spring Dividers 100mm	Spring Dividers 100mm	Spring Dividers 100mm	Spring Dividers 100mm
Paint Scrapers 100mm	Paint Scrapers 100mm	Paint Scrapers 100mm	Paint Scrapers 100mm
Goggles Safety	Goggles Safety	Goggles Safety	Goggles Safety
Diagonal Cutters (Side Cutters)	Diagonal Cutters (Side Cutters)	Diagonal Cutters (Side Cutters)	Diagonal Cutters (Side Cutters)
Paint Brush 8mm	Paint Brush 8mm	Paint Brush 8mm	Paint Brush 8mm
Water Paper	Water Paper	Water Paper	Water Paper
Protractor	Protractor	Protractor	Protractor
	hand/medium size towel	hand/medium size towel	hand/medium size towel
	mechanical pencil (coloured lead)	mechanical pencil (coloured lead)	mechanical pencil (coloured lead)
	Tippex	Tippex	Tippex
		Tweezers	Tweezers
		Ortho Pliers (Round Nose)	Ortho Pliers (Round Nose)
		Ortho Pliers (Long Nose)	Ortho Pliers (Long Nose)
		Wire Cutters	Wire Cutters
		Snapper	Snapper
			Porcelain Kit
			Flasks

4.3.9 Vaccinations

The Department will facilitate a mandatory Hepatitis B vaccination for first time entering students.

5. NATIONAL DIPLOMA: DENTAL TECHNOLOGY: EXTENDED CURRICULUM PROGRAMME (ECP) (NDDTF1)

5.1 Programme Information

This department offers an Extended Curriculum learning programme for the ND: Dental Technology. On the basis of the placement assessments, successful applicants for study towards the National Diploma will be accepted into either the three-year minimum; or an augmented, four-year minimum, of study. An augmented, Extended Curriculum has been devised in order to enhance student development and to improve the student's chances of successful completion.

5.2 Learning Programme Structure

Code	Subjects	Year of Study	CA/E*	Credits	Pre-requisite	Co-Requisite
CMCA102	Communication I	1	CA	0.020	Admission requirements	
OANA101	Oral Anatomy I	1	CA	0.040		
TMOR101	Tooth Morphology I	1	CA	0.040		
IADT112	Introduction to Applied Dental Technology (Year 1)	1	CA	0.300		
IADT122	Introduction to Applied Dental Technology I (Year 2)	2	CA	0.100	Introduction to Applied Dental Technology (Year 1)	
DDRC101	Dental Drawings and Carvings	1	CA	0.280	Admission Requirements	
DCLT101	Dental Computer Literacy	1	CA	0.220		
DMSC102	Dental Materials Science I	2	CA	0.250	Introduction to Applied Dental Technology (Year 1), Dental Drawings and Carvings Dental Computer Literacy	
DTTH101	Dental Technology Theory I	2	CA	0.150		
APDT101	Applied Dental Technology I	2	CA	0.100		
PHCD111	Physics & Chemistry I (Mod 1) (Physics)	2	E	0.050		
PHCD121	Physics & Chemistry I (Mod 2) (Chemistry)	2	E	0.050		
DMSC211	Dental Materials Science II (Module 1)	3	E	0.145	Dental Materials Science I, Dental Technology I	
DMSC221	Dental Materials Science II (Module 2)	3	E	0.145	Dental Materials Science II (Mod I)	
DTTH211	Dental Technology Theory II (Mod 1) (Crown/Bridge & Orthodontics)	3	CA	0.080	Dental Technology Theory I	
DTTH221	Dental Technology Theory II (Mod 2) (Chrome & Prosthetics)	3	CA	0.080	Dental Technology Theory I	
APDT201	Applied Dental Technology II	3	CA	0.180	Tooth Morphology I Applied Dental Technology I	
JURI111	Jurisprudence I (Module 1)	3	E	0.050		
JURI121	Jurisprudence I (Module 2)	3	E	0.050	Jurisprudence I (mod 1)	
BPRD101	Business Practice I	4	CA	0.100		
DMSC301	Dental Materials Science III	4	CA	0.250	Dental Materials Science II Oral Anatomy	

DTTH311	Dental Technology Theory III (Mod 1) (Crown/Bridge & Orthodontics)	4	CA	0.095	Dental Technology Theory II (Mod 1) (Crown/Bridge & Orthodontics) Oral Anatomy	
DTTH321	Dental Technology Theory III (Mod 2) (Chrome & Prosthetics)	4	CA	0.095	Dental Technology Theory II (Mod 2) (Chrome & Prosthetics), Oral Anatomy	
APDT301	Applied Dental Technology III	4	CA	0.130	Oral Anatomy I Applied Dental Technology II	
ETDN301	Experiential Learning	4	CA	0.000	Oral Anatomy I	

* CA= Continuous Assessment; E = Examination at end of Subject / Module.

5.3 Programme Rules

5.3.1 Minimum Admission Requirements

In addition to Rule G7 the minimum entrance requirement for entry into the programme of study is a National Senior Certificate (NSC) with endorsement for degree entry with the following subjects:

Subject	**NSC Rating**
English (home) **OR** English (1st additional)	3
Physical Sciences **OR** Mathematics **OR** Mathematics Literacy	3 3 6
And two 20 credit subjects (not more than one language)	3

The minimum requirement for holders of the Senior Certificate is matriculation exemption with the following subjects at the stated ratings:

Compulsory Subjects	**HG**	**SG**
Mathematics **OR** Physical Science	E	C

The latter also applies to NC (V) level four (4) candidates.
The DUT General Rules G7 (3) will apply for admission requirements based upon Work Experience, Age and Maturity and Recognition of Prior Learning. The DUT's Admissions Policy for International Students and General Rules G4 and G7 (5) will apply for admission of International students.

5.3.2 Selection Criteria

In accordance with Rule G5, acceptance into the programme is limited to 28 places. As more qualifying applications are received than can be accommodated, the following selection process will determine placement in the programme:

All applicants must apply through the Central Applications Office (CAO). Initial shortlisting for selection is based on the applicant's academic performance in Grade 12 (Grade 12 June / trial marks will be used for current matriculants) together with a submission of a portfolio. Shortlisted students will then be invited to undergo placement testing. Applicants who pass the placement tests are invited for an interview. Provisional acceptance is given to selected applicants awaiting National Senior Certificate (NSC) results. If the final Grade 12 NSC results do not meet the minimum entrance requirements, this provisional acceptance will be withdrawn. Final selection for placement will be based on results in the SC / NSC and DUT placement tests.

5.3.3 Pass Requirements

Students registered in the extended curriculum programme, will only be eligible for subsequent registration provided that:

5.3.3.1 A student passes 5 out of the 6 registered subjects.

5.3.3.2 A student passes the following 3 of the 6 subjects:

- Introduction to Applied Dental Technology (IADT101),
- Dental Computer Literacy (DCLT101),
- Dental Drawings and Carvings (DDRC101)

NOTE: **The specific rules for ND: Dental Technology (ECP) are stipulated above. In addition, the rules pertaining to the ND: Dental Technology under section 4.3.3 to 4.3.9 apply.**

6. Subject Content

SUBJECT CONTENT: ND: DENTAL TECHNOLOGY & ND: DENTAL TECHNOLOGY EXTENDED PROGRAMME (ECP)

NB: Students are to read this section in conjunction with the relevant study guide.

ORAL ANATOMY (OANA101)

Assessment Plan

Assessments - 80%
Assignments - 20%

Topics Covered

Introduction to oral anatomy. Surface anatomy. The mucous membrane.
The human skull, including the Maxillae, Mandible and their relationship to the teeth.
The Temporomandibular joint.
Muscles. Border movements of the mandible. The salivary glands. Diseases of the oral cavity. Nerves.
Blood supply to the oral cavity. Lymphatic drainage of the Head and Neck. Dental histology.

TOOTH MORPHOLOGY (TMOR101)

Assessment Plan

Assessments - 70%
Assignments - 30%

Topics Covered

Dental Morphological Terminology. Permanent maxillary incisors. Permanent mandibular incisors. Permanent canines.
Permanent maxillary premolars. Permanent mandibular premolars, Permanent maxillary molars.
Permanent mandibular molars. Tissues of the teeth and pulp cavities of permanent teeth.
Oral anatomy related to oral function. Chewing. Occlusion and malocclusion. The primary dentition.
Dental anomalies. Forensic Dentistry.

APPLIED DENTAL TECHNOLOGY I (APDT101)

Assessment Plan

Class work - 40%
Assessments - 60%

Topics Covered

The handling of gypsum products and wax products, Pouring, trimming and finishing of models, Special (custom) trays. Occlusal rims. Articulation. The setting up of artificial teeth and festooning, Post-Dams. Flasking, packing and polishing, Selective grinding. Acrylic denture repairs,

APPLIED DENTAL TECHNOLOGY II (APDT201)

This subject consists of four discipline-specific areas of equal weighting namely: Crown & Bridge, Orthodontics, Cobalt Chrome & Prosthetics.

Assessment Plan

This subject is run as a continuous assessment and therefore:-
The pass mark for this subject is 50%.
There will be no formal examination at year-end.

There is no supplementary examination/test. Your final mark will be made up of class work (40%) and formal moderated tests (60%).
A 40% subminimum mark per discipline ***(Crown & Bridge, Orthodontics, Prosthetics and Chrome)*** is required and a final pass mark of 50%, and above, is needed to pass this subject overall.

Laboratory based Content Covered:

Prosthetics
Aesthetically functional denture set-ups. Complete upper or lower denture against opposing natural teeth.
Insertion of palatal and other strengtheners. Technique for Clear palate dentures. Resilient denture bases.
Denture Inlays.. Basic acrylic partial denture cases. Clinical cases.

Cobalt Chrome
Removable partial dentures, Construction of chrome cobalt partial dentures with the emphasis on survey and block out.

Orthodontics
Diagnostic models, Springs for mesiodistal movement, Springs for buccal movement, Springs for labs lingual movement
Springs for reduction of overjet & alignment of incisors, Base plate and bite planes, Screw type appliances, Clasps

Crown and Bridge
Pin, Base & ditching of models, Working casts and dies, Wax Patterns, Spring, investing, casting and finishing, Posts, Soldering and constructing a three-unit full metal bridge, Metal Inlays/Onlays Temporary Crowns

APPLIED DENTAL TECHNOLOGY III (APDT301)
Assessment Plan
Class work - 40%
Assessment - 60%

Laboratory based Content Covered:

Prosthetics
Semi-adjustable articulator. Fully balanced occlusion. Denture characterisation. Immediate dentures. Denture duplication. Partial dentures. Class II and Class III malocclusion.
Overdentures tooth and implant supported. Splints, stents and surgical templates. Clinical cases, Maxillofacial: Obturators and variations.

Cobalt Chrome
Removable partial dentures, Construction of chrome cobalt partial dentures with the emphasis on casting, working off, and fitting cobalt chrome dentures. A brief overview of acrylic work on cobalt chrome dentures

Orthodontics
Spring and screw expansion appliances, Habit preventers, Advanced orthodontic springs Intermaxillary and extra oral traction, Fixed orthodontic appliances, Mouth guards

Crown and Bridge
Fixed bridges in porcelain. Bridge design. Pontics and connectors. Spruing, investing, casting and finishing. Posts Retained bridges. The cast metal ceramic crown and bridge design. Cast metal ceramic crown and bridge construction. Porcelain application and repair techniques. Porcelain application to single units. Porcelain margin application.

DENTAL MATERIALS SCIENCE I (DMSC102)

Assessment Plan
Assessment - 65%
Assignments - 35%

Topics Covered
History of Dental Technology. Introduction to dental materials and their properties, Gypsum products, Impression materials, Denture base resins, Waxes, Separating media. Denture cleaners, Dental Instruments, Abrasion and polishing.

DENTAL TECHNOLOGY THEORY I (DTTH 101)

Assessment Plan
Assessment - 70%
Assignments - 30%

Theory Content Covered
Introduction to false teeth. Introduction to removable prosthodontic techniques. Landmarks of the edentulous mouth. Preliminary impressions and casts. Anatomical changes associated with the loss of teeth. Special/custom trays. Master/final/secondary casts/models. Occlusal rims. Articulators, Artificial tooth arrangement. Festooning (waxing up). Post-Dams, Retention, stability and support of complete dentures. Flasking & packing complete dentures. Selective grinding. Pumicing and polishing of dentures. Acrylic repairs. Speech

DENTAL TECHNOLOGY THEORY II (DTTH 211/221)

Assessment Plan
Assessment - 70%
Presentation & Assignments - 30%

Topics Covered
Crown and Bridge
Introduction to fixed restorations, Crown & Bridge Systems, Crown & Bridge wax-up, Sprue, Invest & Casting metal crowns, Different types of margin preparations, Occlusal arrangement/Pathological Occlusion, Occlusal interferences
Porosity, Bridges, Design principles of posts, Temporary crowns & Metal inlays, Technological advancements in Crown & Bridge

Orthodontics
Introduction, Definition of orthodontics, Orthodontic stainless steel and stainless steel wire Orthodontic appliance and removable appliances, Normal occlusion and morphology of normal occlusion

Occlusal and orthodontic forces, Development of primary and permanent dentition, Tissue changes
Malocclusion of teeth, Classification of malocclusion, Anchorage force and retention
Principles of orthodontic treatment, Case discussions

Cobalt Chrome
Removable partial dentures, Advantages of a metal partial denture. Brief overview of the components of a RPD.
Classification of RPD. Introduction to design of RPD. An in-depth study of major connectors.
An in-depth study of rests. An in-depth study on retainers. Guide plates and acrylic retentions.

Prosthetics
Terminology related to Complete Denture Prosthetics. Model analyses. Complete Denture Occlusion. Aesthetics in dentures.
Palatal and other strengtheners. Clear palates. Resilient denture bases.
Inlays for artificial teeth. Saving materials in the dental laboratory.

DENTAL TECHNOLOGY THEORYIII (DTTH 311/321)

Assessment Plan
Assessment - 70%
Presentation & Assignments - 30%

Theory Content Covered
Crown and Bridge
Introduction to fixed bridges. Biomechanics of fixed bridge. Bridge design and abutment selection. Cantilever Bridges, Tilted molar abutment. Pontics and connectors. Margin design. Spruing, investing, casting and finishing. Soldering and brazing metal ceramic bridges. Bridges. Temporary restorations.
Introduction to metal ceramics. Cast metal ceramic crown and bridge design (Optimizing aesthetics).
Cast metal ceramic crown and bridge construction. Porcelain application. Reducing stress in porcelain. Diagnostic set-ups. Color in Ceramics

Orthodontics
Neuromuscular development of normal occlusion, Preventive orthodontics, Interceptive orthodontics, Habit breakers. Fixed appliances, Soldering and welding of stainless steel, Case discussions

Cobalt Chrome
Removable partial dentures, Duplicating. Spruing. Investing. Heating the muffle (Burn-Out).
Casting: Induction and flame. Constituents of a chrome cobalt alloy. Working off.
Electro polishing. Finishing the RPD. Fitting the RPD. Miscasts. Casting defects. Indirect Retention. Preparation of the remaining dentition.
The RPI Bar concept. R.P.A. clasp systems.

Prosthetics
Semi-adjustable articulator. Fully balanced occlusion. Denture characterization, Immediate dentures. Denture duplication. Partial dentures. Class II and Class III malocclusion.
Clinical cases. Overdentures tooth & implant supported. Splints, stents and surgical templates. Clinical cases.
Maxillofacial, Obturators and variations. Fractures of the facial bones.

INTRODUCTION TO APPLIED DENTAL TECHNOLOGY (IADT 112)

Assessment Plan

Theory	50%
Practical	50%

Topics Covered

Intro to Dental Theory, Gypsum products, Impressions, Models, Wax products, Special trays

DENTAL COMPUTER LITERACY (DCLT101)

Assessment Plan

Theory	80%
Library Literacy	20%

Topics Covered

Hardware, Software, Word Processing, Electronic Information Systems, Spreadsheets, World Wide Web

DENTAL DRAWINGS AND CARVINGS (DDRC101)

Assessment Plan

Tests	50%
Projects	50%

Topics Covered

Form, Drawing basic forms, Perspective drawing, Object drawing, (manmade and mechanical objects) Drawing of animal bones, drawing teeth, carving teeth in clay, carving teeth in wax.

COMMUNICATION (CMCA102)

The Assessment Plan

Test 1	25%
Test 2	25%
Assignment 3	25%
Test 4	25%
Examinations	25%

Topics Covered

Communication skills and professionalism. Assertive behaviour. Confidence in speaking.
Appropriate and effective body language. Active listening. Writing skills. Reading skills. Effective communication.
Self-image and interpersonal relations. Conflict resolution skills. Negotiations. Inter-cultural communication.

BUSINESS PRACTICE I (BPRD101)

Assessment Plan

Theory Tests	40%
Examinations	60%

Topics Covered

Human Resources Management, Effective time utilization. Set up and maintain administrative systems.
Application of an applicable software programmes. Develop and use interactive skills. Industrial relations.
Establish goals (Self and organization). Problem solving and decision making. Conflict management.
Negotiation skills. Crisis management. Assertive behaviour. Performance Management, Labour Relations Act.

Health and Safety Act. Basic Conditions of Employment
Accounting, Basic accounting, Transactions and the accounting equation, Accounting definitions Income statement and balance sheet, Analysis and interpretations, Bank reconciliation, Cash flows.

DENTAL MATERIALS SCIENCE II (DMSC211/221)

Assessment Plan

Theory Tests & Assignment 40%
Examinations 60%

Topics Covered

Elastic impression materials. Die materials. Casting Waxes. Casting Investments,
Metal solidification & microstructure. Constitution of alloys. Casting procedures for dental alloys. Dental Casting alloys.
Electro polishing, Tarnish and corrosion, wrought metal alloys, Soldering and Welding, Rebase materials.

DENTAL MATERIALS SCIENCE III (DMSC301)

Assessment Plan

Assessment 70%
Presentation & Assignments 30%

Topics Covered

All ceramics. Platinum foil & refractory die materials for ceramic restorations. Heat Treatment, Thermoplastic materials.
Evaluation of articles and assignments, Osseointegration dental implant materials, Health factors in a dental laboratory
Porcelain, Noble metal - ceramic alloys, Base metal - ceramic alloys, Biological response to dental materials. Bonding of ceramics
Selection and evaluation of metal ceramic casting alloys, Application of dental materials, Trouble-shooting

JURISPRUDENCE I (JURI 111/121)

Assessment Plan

Theory Tests and assignment 40%
Examinations 60%

Topics Covered

Objectives, functions and powers of the SADTC, Education, training and registration of Dental Technicians and laboratory.
Offences and the control over artificial teeth, Disciplinary powers of the Council
General and supplemental provisions, Regulations of the Council, Adherence to moral standards Professional ethics code, Professional Image. Other legislative Laws and Acts that pertain to employed Dental Technicians, continuous professional development forms of ownership.

PHYSICS AND CHEMISTRY I (PHCD 111/121)

Assessment Plan (Physics)

Theory Tests 40%
Examinations 60%

Topics Covered

Introduction to Mechanics, Units, standards and measurements, Vectors, Motion, Introductory Kinematics
Equations of motion, Forces, Newton's Laws of Motion, Statics, Torque, Levers in the body: Dental Applications

Equilibrium, Elastic Properties of Matter, Stress and Strain, Hooke's Law, Young's Modulus, Ultimate Strength
Shearing, Basic Fluid Mechanics, Density, Pressure, Viscosity, Equation of Continuity, Archimedes' Principle
Thermal Properties of Matter, Heat and Temperature, Temperature scales, Heat Transfer, Thermal Expansion
Specific Heat Capacity, Latent Heat, Light, Nature of Light, Reflection and Refraction, Dispersion, Colour

Assessment Plan (Chemistry)

Theory Tests	40%
Examinations	60%

Topics Covered

Matter. Chemical Equations and Stoichiometry. Solutions. Chemical Reactions. Reaction Rates

6. B TECH: DENTAL TECHNOLOGY (BTDNT1)

6.1 Programme Information

The B Tech programme is a single year qualification, which enables successful students to become registered (SADTC) laboratory owners. A final practical assessment is conducted which, if completed successfully, enables the qualified student to register with the SADTC. All subjects in this programme do not have a final examination. The results for these subjects are determined through a weighted combination of assessments. As such, there are no supplementary examinations. Students are encouraged to work steadily through the period of registration in order to achieve the highest results possible. Assessment details are listed under each subject at the back of this handbook. Moderation follows the DUT requirements.

6.2 Learning Programme Structure

Code	Subjects	Year of Study	CA/E*	Credits
RMDT101	Research Methods & Techniques I	4	CA	0.200
BPRD201	Business Practice II	4	CA	0.200
DMSC411	Dental Materials Science IV (Module 1) (Theory)	4	CA	0.125
DMSC421	Dental Materials Science IV (Module 2) (Research Report)	4	CA	0.125
DTTH411	Dental Technology IV (Module 1) (Crown & Bridge and Orthodontics)	4	CA	0.088
DTTH421	Dental Technology IV (Module 2) (Chrome and Prosthetics)	4	CA	0.088
DTTH431	Dental Technology IV (Module 3) (Practical)	4	CA	0.175

* CA= Continuous Assessment; E = Examination at end of Subject / Module.

6.3 Programme Rules

6.3.1 Entrance Requirements:

National Diploma: Dental Technology or an equivalent qualification

6.3.2 Selection Criteria

Entry into the B Tech is not automatic. A total of 15 places are available to students and selection will be on the basis of academic performance as

determined by a ranking system. Working experience will be an added advantage for those students not applying directly from the National Diploma. Students are required to formally apply in the third term of their third year of study should they wish to be considered for the B Tech. Applicants from industry must apply by the 20 September 2019.

Application forms are available from the Faculty Office: Health Sciences. Completed application forms must be submitted to the Departmental secretary of Dental Sciences.

1. Ranking Criteria:

	Criterion	points
1	A ***minimum*** final mark of 55% in Applied Dental Technology III	55
2	A ***minimum*** final mark of 55% in Dental Materials Science III	55
3	A ***minimum*** final mark of 55% in Dental Technology Theory III	55
4	Any higher mark in points 1, 2, and 3 above will be awarded the equivalent number of points; e.g 65% = 65 points	
5	Completion of the ND: Dental Technology (Mainstream) in minimum time (3 years) without repeating any subjects	10
6	Completion of the ND: Dental Technology (ECP) in minimum time (4 years) without repeating any subjects	10
7	Students completing both 5, and 6 above in more than the minimum time.	5
8	1 point will be awarded for each year of industry work experience (evidence must be provided); e.g. 2 years of work experience = 2 points	

Applicants are required to formally apply should they wish to be considered for the B. Tech programme. Application forms are available from the Faculty Office of Health Sciences. Completed forms must be submitted to the Secretary of the Dental Sciences and/or department before the due date.

Selection will be based on merit as determined by the criteria and points allocation in the table below. Note that preference will be given to those individuals who have industry experience in all four disciplines of Dental Technology. Interviews may be conducted to assess the suitability of the applicant for the programme.

Written evidence of industry experience in a registered Dental Technology Laboratory must be provided with the application or an accumulation of work experience collated as a portfolio.

6.3.3 Pass Requirements

6.3.3.1 A student Dental Technologist must complete the BTech: Dental Technology within two (2) years. This is a South African Dental Technicians Council rule, as well as that of the Durban University of Technology.

6.3.3.2 Subject Rules

Dental Materials Science IV

The subject consists of two modules:

- Module 1: Theory

Assessment	Weighting	Sub minimum
Assessment 1	35%	
Assessment 2	40%	40%
Assignment	25%	40%

- Module 2: Research Project

Assessment	Weighting	Sub minimum
Research Abstract	10%	40%
Research Poster	20%	45%
Jounal paper	70%	50%

Each module will contribute fifty percent (50%) towards the final mark.

Both modules must be passed in the same academic year.

With reference to Module 2, a student not obtaining the required standard at submission date will be allowed to re-submit before January of the following year, but will fail the current year.

Dental Technology Theory IV

The subject consists of two modules each containing two study units:

- Module 1: Study Unit 1 - Crown & Bridge and Study Unit 2: Orthodontics;
- Module 2: Study Unit 1 - Chrome and Study Unit 2: Prosthetics

Both modules run for the entire year (annual)

Both modules must be passed in the same academic year.

Final marks for each study unit will be determined as follows:

Assessment	Weighting	Sub minimum
Assessment 1	30%	
Assessment 2	40%	40% required
Assignment/Presentation	30%	40% required

Note for each Study Unit:

- A subminimum pass mark of forty percent (40%) is required for Assessment 1 and Assessment 2.
- A subminimum of fifty percent (50%) will apply to assignments / presentations.

NOTE: In addition to the above, the rule pertaining to the ND: Dental Technology - 4.3.3.7 applies.

Dental Technology IV (Module 3) (Practical) is divided into four (4) study units, namely: Crown & Bridge; Orthodontics; Cobalt Chrome; and Prosthetics
Dental Technology IV (Practical)
Subjects consist of 4 study units.

Final marks for each study unit will be determined as follows:

Assessment	Weighting	Sub minimum
Assessment 1	30%	
Assessment 2	30%	50%
Class work	40%	40% required

Business Practice II

The course will be evaluated by continuous evaluation. No formal examinations will be written. Students will be evaluated by submitting a formal business plan as well as a group assignment and an accounting equation written test.

Assessment	Weighting	Sub minimum
Mall exhibition	20%	40%
Business Report	80%	40%

Research Methods & Techniques I (RMDT101)

This continuous assessment subject has no formal examinations.

Assessment	Weighting	Sub minimum
Concept paper	30%	40%
Research proposal	70%	50%

NOTE: Research Methods & Techniques I is a co-requisite for Dental Materials IV (Module II) (Research Project).

In addition to the above, the rule pertaining to the ND: Dental Technology - 4.3.3.7 applies.

6.4 Subject Content: B Tech: Dental Technology

NB: Students are to read this section in conjunction with the relevant study guide

BUSINESS PRACTICE II (BPRD201)

Assessment Plan

Mall Exhibition	20%
Business Report	80%

Topics Covered

Strategic planning. Financial systems, Operating systems. Human resources. Marketing systems. Procurement systems. Quality control systems. Loss control systems. Effective time management.

Applicable software packages. Design a dental laboratory. Develop and use interactive skills.

Employer/employee relationship. Establish goals (Self and organization). Problem solving and decision making.

Conflict handling. Motivation. Crisis management. Client relations. Market research.

Assess economic viability. Creative and innovative thinking. Develop markets. Present business plan.

Develop organizational network. Effective advertising, Laboratory prescription card. Financing a business. Opening a small business. Computer lectures. Promoting your business. VAT and the Dental Laboratory. Partnerships, and Accounting equation.

DENTAL MATERIALS SCIENCE IV THEORY (DMSC411)

This subject is run as a continuous assessment and therefore:-

The pass mark for this subject is 50%.

There will be no formal examination at year-end.

Please refer to your discipline specific student guide for further details.

Assessment Plan

Assessments	75%
Assignment	25%

Content Covered

Biological response to dental materials; Occupational Health and Safety of Dental Materials; Dental Implant Materials; and Maxillofacial Dental Materials.

DENTAL MATERIALS SCIENCE IV (DMSC421- Module II) RESEARCH REPORT (See subject guide for specific details)

Assessment Plan

Research abstract	10%
Poster	20%
Research Report/Journal/Case Study	70%

Content Covered:

Writing of a Research Report/ Journal Article/Case Study by providing the: Background/Rationale/ Introduction; Literature Review; Research Design and Methodology; Results/Findings and Discussions; Conclusions and Recommendations; Referencing through EndNote and using Turnitin; Writing a research abstract for a research poster; and presenting research results to peers and to the wider DUT community.

DENTAL TECHNOLOGY IV (DTTH 411) Crown & Bridge & Orthodontics

Assessment Plan

Assessments	70%
Assignments	30%

Topics Covered

Crown and Bridge

All-ceramic systems; Metal-ceramic systems; Planning and design factors for large cases. Occlusion factors in ceramic restorations; The use of precision attachments and broken stress connectors in large cases; Combination cases with removable partial dentures and fixed restorations with milling and attachments; Implant borne metal-ceramic restorations; Design factors for practical cases.

Orthodontics

Principles of angle Class I treatment; Principles of angle Class II treatment; Principles of angle Class III treatment; Functional jaw orthopedics; Case discussions; Practical cases.

DENTAL TECHNOLOGY IV (DTTH421) Chrome & Prosthetics

Assessment Plan

Assessments	70%
Assignments	30%

Chrome

Removable partial dentures (Cobalt Chrome); Design principles of chrome cobalt partial dentures; Practical cases; Combination work/precision attachments, backings and onlays.

Prosthetics

Introduction to implantology; Implant terminology; Types of implants; Prosthetic procedures; Occlusal considerations; Biomechanical considerations; Practical cases; Combination work and attachments.

DENTAL TECHNOLOGY IV (DTTH431) (Practical)

Assessment Plan

Class work	40%
Assessment	60%

Topics Covered

Prosthetics

Overdentures with attachments, Implant terminology, Types of implants, Prosthetic procedures, Occlusal considerations.
Biomechanical considerations, Practical cases, Combination work.

Cobalt Chrome

Removable partial dentures, Design of chrome cobalt partial dentures, Practical cases, Combination work, backings, onlays, laser welding.

Orthodontics

Principles of angle Class I treatment, Principles of angle Class II treatment, Principles of angle Class III treatment.
Functional jaw orthopaedics, Case discussions, Practical cases.

Crown and Bridge;

Metal-ceramic systems; Planning and design factors for large cases, Occlusion factors in ceramic restorations; The use of precision attachments and broken stress connectors in large cases; Combination cases with removable partial dentures and fixed restorations, including milling and precision attachments; CAD-CAM. Practical cases.

RESEARCH METHODS AND TECHNIQUES (RMTQ101)

Assessment Plan (See subject guide for specific details)

Concept paper	30%
Research Proposal	70%

Note that the final pass mark for this module is 50%.

Content Covered

Overview of Quantitative Research and Qualitative Research, design and methodology.

Research Proposal Process: Aim and Objectives/Research Questions; Context of the study; Problem Statement; Delimitations, Limitations, Assumptions and Hypothesis; Overview on Literature Review; Research Design and Methodology (What stimulated the study, Sampling, Data collection and Data Analysis); References and Plagiarism; Ethical Considerations; and Endnote; Academic Development/Writing: Research Proposal.

7. BACHELOR OF HEALTH SCIENCES: DENTAL TECHNOLOGY (BHDNT1)

7.1 Programme Information

A Bachelor of Health Sciences Degree in Dental Technology which enables successful students to become registered (SADTC) laboratory owners with the South African Dental Technicians Council (SADTC). A final practical assessment is conducted, in the concluding year of the programme, which, if completed successfully, enables the qualified student to register with the SADTC. All subjects do not have a final examination. Students are encouraged to work steadily through the period of registration in order to achieve the highest results possible. Assessment details are listed under each subject at the back of this handbook. Moderation follows the DUT requirements.

7.2 Programme Rules

7.2.1. *Minimum Admission Requirements*

In addition to Rule G7 the minimum entrance requirement is a National Senior Certificate (NSC) or a Senior Certificate (SC) or a National Certificate (Vocational) NC (V) that is valid for entry into a Bachelor's Degree and must include the following subjects at the stated minimum weightings below.

Subject	**NSC Rating**	**Senior Certificate**		**NC(V)**
		HG	SG	
English (home) **OR** English (1st additional)	4	D	B	70%
Physical Sciences **AND**	4	D	B	70%
Mathematics	4	D	B	70%
And two 20 credit subjects (not more than one language)	4			70%

Minimum Admission Requirements in respect of Work Experience, Age, Maturity, RPL and International Students.

The DUT general rule G7 (3) and G7(8) respectively will apply.

The DUT's Admissions Policy for International Students and General Rules G4 and G7 (5) will apply for admission of International students.

7.2.2. *Selection Criteria*

All applicants must apply through the Central Applications Office (CAO). In accordance with Rule G5, acceptance into the programme is limited. Since more qualifying applications are received than can be accommodated, the following selection process will apply:

- All applicants must apply through the Central Applications Office (CAO).
- Initial shortlisting for selection is based on the applicant's academic performance in Grade 12 (Grade 12 June / trial marks will be used for current matriculants) together with a submission of a portfolio.
- Applicants who meet the minimum departmental requirements will be ranked and may be invited to a placement tests.
- Initial shortlisting for selection is based on the applicant's academic performance in Grade 12 and or Grade 11 results.
  Note: Applicants whose application has been declined due to poor academic achievement in grade 11 may reapply to the programme should they be able to show improved academic performance in the final grade 12 examinations. Those applicants who wish to reapply should immediately notify the programme of the intention to reapply. In order for the application to be reconsidered, the applicant must submit the final grade 12 results to the Department as soon as these results are available.
- Applicants who pass the placement tests are invited for an interview.

  Note: Applicants scoring more than 23 points in their matriculation examination stand a better chance of being selected.
  The point scores for each **National Senior Certificate (NSC)** subject or the **Senior Certificate (SC)** results is obtained by using the table below:

POINT SCORES

	NSC	**Senior Certificate**		**NC(V)**
Results		**HG**	**SG**	
90 – 99%	8	8	6	4
80 – 89%	7	7	5	4
70 – 79%	6	6	4	4
60 – 69%	5	5	3	3
50 – 59%	4	4	2	
40 – 49%	3	3	1	
30 – 39%	2			
0 – 29%	1			

Note: no points are allocated for ten (10) credit subjects.
Final selection is based on criteria and weightings in the table below.

WEIGHTINGS OF ASSESSMENTS

Assessment	Weighting
Matriculation Score	50%
Placement Test	40%
Interview	10%

- Finally, selected applicants are required to visit a dental laboratory. Failure to provide proof of dental laboratory visitation by the due date as determined by the Department will render the application unsuccessful.
- Selected applicants will be placed into either the four-year Degree or the five-year Extended Curriculum Programme.
- Provisional acceptance is given to selected applicants awaiting National Senior Certificate (NSC) results. If the final Grade 12 NSC results do not meet the minimum entrance requirements, this provisional acceptance will be automatically withdrawn.

7.2.3. Progression rules

In addition to Rules G14 and G16 the following is applicable:

1. As per table 3, students must pass all prerequisite modules before registration for the higher-level modules.
   Rules for practical Tests and/or Examinations

All students must comply with the departmental rules and procedures for practical tests and/or examinations as stated in the relevant departmental manual/study guide. Breach of these procedures may result in disciplinary action being taken.

Prior to the commencement of practical test and examinations, students will be made aware of the detailed rules and all students will be required to sign acknowledgement thereof.

7.2.4. First Aid Certificate

Students shall not be permitted to graduate unless they are in possession of a certificate in General First-Aid issued by a first-aid organization recognized by the S.A. Dental Technicians Council.

7.2.5. Re- Registration Rules

Rule G14 and G16 of the General Handbook for Students applies.

7.2.6. Exclusion Rules

Please refer to DUT Rule G17, a student who fails three or more modules with less than 40% in each of the failed modules is not permitted to reregister for the programme. De-registration from any module is subject to the provisions of rule G6(2).

7.2.7 Duration of Study

In accordance with the DUT Rule G23B (2) and Rule G23B (3), the minimum duration is four years, including any periods of dental laboratory practice and the maximum duration will be six years of registered study, including any periods of dental laboratory practice.

7.2.8. Interruption of Studies

Should a student interrupt their studies for a period of more than three consecutive years, the student will need to apply to the department for permission to reregister and will need to prove relevance of appropriate knowledge prior to being given permission to continue with registration.

7.2.9 SADTC Registration

Students are required to register with the SADTC by the 31st March in the first year of study

Dental Laboratory Practice

Students are referred to Rule G28.

1. **Dental Laboratory Practice** learning is a compulsory component of this qualification and the student is required to attend 24 weeks in an accredited laboratory as well as meeting certain outcomes as specified in the Study guide for this module.
2. A completed record book must be completed by the 31st March in the fourth year of study and must detail and provide proof of all completed **Dental Laboratory Practice** learning activities.
3. Students are required to comply with the rules and regulations of the laboratory in which they are placed.
4. Disciplinary matters occurring in the laboratory will in the first instance be subject to the Laboratory's Disciplinary Code of Conduct and then be referred to DUT for student disciplinary action.

7.2.10. Materials Purchases

Certain students are supplied materials for practical training.

Students are required to purchase additional materials for repeat practical exercises.

Money for materials purchases are to be deposited with the official Durban University of Technology cashiers into account number FDTS 301374. A duplicate receipt is to be requested from the cashier which then needs to be presented to the departmental secretary who will process the payment on the internal departmental system.

7.2.11. Rules for Practical Tests and Examinations

A. Preparation procedures prior to the commencement of the test and/or examination.

A.1. All models, examples, teaching aids, previous work done by the students must be cleared out of the laboratory at least one day prior to the commencement of the test/examination. This is to ensure that no outside help or unfair advantage can be gained by the students. Students are to make their own arrangements as to what they should do with these articles cleared from the laboratory.

A.2. All materials, personal tools and equipment required for the practical must be on hand and in working order.

A.3. The invigilator must ensure that all models must be laid out or on-hand and clearly marked for the test / examination.

B. Test and/or examination day.

B.1. No students may bring any hand-bags or lunch boxes into a test or an examination. Students are to make their own arrangements as to what they should do with these articles.

B.2. Students enter, go to their work stations, and lay out and prepare their tools and instruments.

B.3. The following will be read out prior to the text/examination papers being handed out: "This is an official test/examination of the Department of Dental Sciences as constituted by the Durban University of Technology. All rules of the Institution pertaining to tests and examination apply. These rules are to be found in the Rule Book for students of the Institution and are available to students on request. Those students contravening these rules will be prosecuted in terms of the rules of the Durban University of Technology by the Institution's disciplinary tribunal." (Note to invigilator: In the case of an examination a list of instructions to be read to students will be supplied by Examinations Office and must be read out as well as B.3).

B.4. Time of arrival to major practical tests, any student arriving late will be allowed into the laboratory only up to one hour after the commencement of the test. Such a student will not be allowed extra time.

C. The following laboratory rules & procedures will apply:

C.1. No additional tools, instruments, models or equipment may be brought into the laboratory during the duration of the test/examination. Any additional materials required by the student to complete the test/examination may only be brought into the venue under the supervision of the invigilator. No tools, instruments, materials, models or equipment may be taken out of the laboratory until the end of the test/examination and after all work has been taken in for marking.

C.2. At lunch time the invigilator will inform the students to stop working. All gas taps are to be turned off and the students are to stand by their workstations and await the invigilator's instructions. Upon checking each individual student's work the invigilator will give the student permission to leave the laboratory.

At the end of the lunch break, the invigilator will allow the students to re-enter and carry on from where they left off.

D. At the end of the day:

D.1. The invigilator will inform the students to stop working.

D.2. All students will tidy their work stations and lay out their work-in-progress on their work benches.

D.3. All students will then clean the laboratory to the satisfaction of the invigilator.

D.4. After the laboratory has been cleaned, the student will stand by their work stations and the invigilator will check all work to ensure that everything is present. The onus is on the student to ensure that all his/her work is present on the bench for inspection. The student will then be told that he/she can go and must leave the laboratory immediately. The student's work is to be left on the top of his/her workbench. If the student has a muffle to go into the overnight furnace, the student must go to the casting room with the muffle and wait there for the invigilator.

D.5. After all the students have left, the invigilator will secure and lock the laboratory.

E. A student may not:

E.1. Touch or handle another student's work;

E.2. Discuss his/her work or another student's work with another student;

E.3. Leave the test/examination room FOR WHATEVER REASON without the permission of the designated invigilator;

E.4. Work at another student's work station;

E.5. Invest or cast another student's work, either together or separately with their own work.

F. Student completing the work prior to the end of the test or examination may inform the invigilator that he/she is finished. He/she must then tidy his/her workstation and hand in his/her completed work. The student must then leave the laboratory immediately. At the end of the test or examination, the student must return and help to clean the laboratory.

G. At the end of the test/examination the invigilator will stop the students from working. Students are then required to clean the laboratory. When the laboratory is clean, the invigilator will take in the student's work. It is the student's responsibility to see that all his/her work is clearly marked with his/her name or number.

H. Students are to hand in their own work. Test/examination work MAY NOT be handed in by another student.

I. Casting procedure

I.1 A student may only cast his/her own work.

I.2 The student will ensure that his/her muffle and casting ring is clearly marked with his/her name or number.

I.3 In the event that a student casts another student's muffle and casting ring his/her own muffle and casting ring will be withdrawn and he/she will have to start that section of work again. If the other student's muffle is a miscast, he/she will be allocated extra time only at the discretion of the Head of Department.

I.4 All castings need to be performed in the presence of the invigilator. When ready to cast please inform the invigilator. Failure to do so will result in your casting being withdrawn.

J. Flasking and Packing of Dentures

The student will ensure that his/her flasks and clamps are clearly marked or labeled with his/her name or number. In the event that a student packs or flasks another student's work, his/her own work will be withdrawn and he/she will have to start that section of the work again. If the other student's work has been damaged, he/she will be allocated extra time at the discretion of the Head of Department.

K Procedure for packing overnight furnace

When a student wants a muffle or casting ring to go into the overnight furnace he/she will take the muffle or cast ring to the casting room after his/her work station has been checked at the end of the day. The invigilator will then pack the furnace and set the times and temperature. Each student will note the position of his/her muffle or casting ring in the furnace and the casting in the morning will be in the reverse sequence to the placing of the muffles or casting rings the night before.

L After the invigilator has confirmed that students acknowledge the rules as displayed on the class notice board and those additional rules and/or instructions (where necessary) have been verbally explained, the paper is issued and the test/examination will start.

7.3 Learning Programme Structure

Bachelor of Health Sciences:

FIRST YEAR: FIRST SEMESTER						
STUDY PERIOD	**MODULE TITLE**	**MODULE CODE**	**HEQSF LEVEL**	**SAQA CREDITS**	**C/E**	**PREREQUISITES**
SP1	PRINCIPLES AND PRACTICES OF DENTAL TECHNOLOGY I (MOD I)	PPDT111	5	12	C	
SP1	DENTAL MATERIALS SCIENCE I (MODI)	DMTS111	5	12	C	
SP1	INTRODUCTION TO ORAL ANATOMY (MOD I)	INOA111	6	8	C	
SP1	INTRODUCTION TO TOOTH MORPHOLOGY (MOD I)	ITOM111	6	8	C	
SP1	CHEMISTRY	CHMS101	5	12	C	

SP1	COMMUNITY HEALTH CARE AND RESEARCH I PERSONAL AND PROFESIONAL DEVELOPMENT I	CHCR101 PFDV101	5 5	12	C	
FIRST YEAR: SECOND SEMESTER						
SP2	PRINCIPLES AND PRACTICES OF DENTAL TECHNOLOGY I (MOD II)	PPDT121	5	12	C	PPDT111
SP2	INTRODUCTION TO TOOTH MORPHOLOGY(MOD II)	ITOM121	6	8	C	ITOM111
SP2	INTRODUCTION TO ORAL ANATOMY (MOD II)	INOA121	6	8	C	INOA111
SP2	DENTAL MATERIALS SCIENCE I (MOD II)	DMTS121	5	8	C	DMTS111
SP2	CORNERSTONE 101	CSTN101	5	12	C	
SP2	PHYSICS	PSCS101	5	12	C	
SECOND YEAR: FIRST SEMESTER						
SP3	PRINCIPLES AND PRACTICES OF ORTHODONTICS II (MOD I)	PPOR211	6	12	C	PPDT121
SP3	PRINCIPLES AND PRACTICES OF CROWN & BRIDGE II (MOD I)	PPCB211	6	8	C	
SP3	PRINCIPLES AND PRACTICES OF PROSTHETICS II (MOD I)	PPRO211	6	8	C	
SP3	DENTAL MATERIALS SCIENCE II (MOD I)	DMTS211	6	8	C	DMTS121
SP3	ADVANCE KNOWLEDGE OF DENTAL ANATOMY AND MORPHOLOGY	AKDM101	6	8	C	INOA111 ITOM111
SP3	DENTAL LAW & ETHICS (MOD I)	DLET111	6	8	C	
SP3	WORLD OF WORK VALUES IN THE WORK PLACE LAW OF LIFE INTRODUCTION TO TECHNOPRENEURSHIP COMMUNITY ENGAGEMENT EQUALITY AND DIVERSITY	WWRK101 VWKP101 LWLF101 ITCH101 CMEP101 EQDV101	6	8	E	
SECOND YEAR: SECOND SEMESTER						
SP4	PRINCIPLES AND PRACTICES OF ORTHODONTICS II (MOD II)	PPOR221	6	12	C	PPOR211
SP4	PRINCIPLES AND PRACTICES OF CROWN & BRIDGE II (MOD II)	PPCB221	6	8	C	PPCB211

SP4	PRINCIPLES AND PRACTICES OF PROSTHETICS II (MOD II)	PPRO221	6	12	C	PPRO211
SP4	DENTAL MATERIALS SCIENCE II (MOD II)	DMTS221	6	8	C	DMTS211
SP4	DENTAL LAW & ETHICS (MOD II)	DLET121	6	8	C	DLET111
SP4	COMMUNITY HEALTH CARE AND RESEARCH II PERSONAL AND PROFESSIONAL	CHCR201 PFDV201	6 6	12	E	CHCR101 PFDV101
	THIRD YEAR: FIRST SEMESTER					
SP5	PRINCIPLES AND PRACTICES OF ADVANCED REMOVABLE PROSTHODONTICS I (MOD I)	PARP111	7	16	C	PPOR221 PPCB221 PPRO221
SP5	PRINCIPLES AND PRACTICES OF CROWN & BRIDGE III (MOD I)	PPCB311	7	8	C	
SP5	PRINCIPLES AND PRACTICES OF ORTHODONTICS III	PPOR301	7	12	C	
SP5	PRINCIPLES AND PRACTICES OF PROSTHETICS III	PPRO301	7	12	C	
SP5	DENTAL MATERIALS SCIENCE III (MOD I)	DMTS311	7	8	C	DMTS221
SP5	HEALTH BUSINESS STUDIES I	HBST101	6	12	C	
SP5	AN INTRODUCTION TO THE PRINCIPLES AND PRACTICES OF RESEARCH (MOD I)	IPPR111	7	8	C	
	THIRD YEAR: SECOND SEMESTER					
SP6	PRINCIPLES AND PRACTICES OF ADVANCED REMOVABLE PROSTHODONTICS I (MOD II)	PARP121	7	8	C	PARP111
SP6	PRINCIPLES AND PRACTICES OF CROWN & BRIDGE III (MOD II)	PPCB321	7	8	C	PPCB311
SP6	DENTAL MATERIALS SCIENCE III (MOD II)	DMTS321	7	8	C	DMTS311
SP6	AN INTRODUCTION TO THE PRINCIPLES AND PRACTICES OF RESEARCH (MOD II)	IPPR121	7	8	C	IPPR111
SP6	COMMUNITY HEALTH CARE AND RESEARCH III	CHCR301 PFDV301	6 7	12	E	CHCR201 PFDV201
	FOURTH YEAR: FIRST SEMESTER					
SP7	PRINCIPLES AND PRACTICES OF ADVANCED REMOVABLE PROSTHODONTICS II (MOD I)	PARP211	8	8	C	PARP111 PPCB311
SP7	PRINCIPLES AND PRACTICES OF PROSTHETICS IV (MOD I)	PPRO411	8	8	C	PPOR301

SP7	PRINCIPLES AND PRACTICES OF CROWN AND BRIDGE IV (MOD I)	PPCB411	8	8	C	PPRO301
SP7	DENTAL LABORATORY PRACTICE	DLPR101	8	16	C	
SP7	FUNDAMENTAL PRINCIPLES AND PRACTICES TO RESEARCH DESIGN AND METHODOLOGY (MOD I)	FRDM111	8	8	C	IPPR121
FOURTH YEAR: SECOND SEMESTER						
SP8	PRINCIPLES AND PRACTICES OF ADVANCED REMOVABLE PROSTHODONTICS II (MOD II)	PARP221	8	12	C	PARP211
SP8	PRINCIPLES AND PRACTICES OF PROSTHETICS IV (MOD II)	PPRO421	8	8	C	PPRO411
SP8	PRINCIPLES AND PRACTICES OF CROWN AND BRIDGE IV (MOD II)	PPCB421	8	16	C	PPCB411 DLPR101
SP8	FUNDAMENTAL PRINCIPLES AND PRACTICES TO RESEARCH DESIGN AND METHODOLOGY (MOD II)	FRDM121	8	8	C	FRDM111
SP8	DENTAL MATERIALS SCIENCE IV	DMTS401	8	12	C	DMTS321
SP8	HEALTH BUSINESS STUDIES II	HBST201	8	12	C	HBST101
SP8	COMMMUNITY HEALTH CARE AND RESEARCH IV PERSONAL & PROFESSIONAL DEVELOPMENT IV	CHCR401 PFDV401	8 8	12	E	CHCR301 PFDV301

7.4 Subject Content

SUBJECT CONTENT: BHSc: DENTAL TECHNOLOGY (BHDNT1)

NB: Students are to read this section in conjunction with the relevant study guide.

INTRODUCTION TO ORAL ANATOMY: MODULES I & II (INOA111 & INOA121)

This subject is run as a continuous assessment and therefore:-
The pass mark for this subject is 50%.
There will be no formal examination at year end

Assessment Plan per Module:

Theory Tests - 60%
Theory Assignment - 40%

Note for Each Module:

1. **Module I** is a prerequisite to **Module 2.**
2. Both modules need to be passed in one year as they are pre-requisite modules to the subject ***'Advance Knowledge of Dental Anatomy and Morphology'***.
3. Please refer to your discipline specific student guide for further details.

Subject Content Covered
Module I: Surface Anatomy of the skull and associated anatomical structures; The Oral Mucous Membrane; The human skull, including the Maxillae, Mandible and their relationship to the teeth; and The Temporomandibular joint.

Module 2: Salivary glands; Infection control procedure and diseases of the Oral Cavity; Trigeminal Nerve; Blood supply to the oral cavity; and lymphatic drainage of the head and neck.

INTRODUCTION TO TOOTH MORPHOLOGY: MODULES I & II (ITMO111 & ITMO121)

This subject is run as a continuous assessment and therefore:-
The pass mark for this subject is 50%.
There will be no formal examination at year-end.

Assessment Plan per Module

Tests	- 60%
Assignments	- 40%

Note for Each Module:

1. **Module I** is a prerequisite to **Module 2.**
2. Both modules need to be passed in one year as they are pre-requisite modules to the subject ***'Advance Knowledge of Dental Anatomy and Morphology'.***
3. Please refer to your discipline specific student guide for further details.

Subject Content Covered
Module 1: Overview of dental terminologies, concepts and tooth identification systems; Permanent maxillary incisors. Permanent mandibular incisors. Permanent canines. Permanent maxillary premolars. Permanent mandibular premolars.
Module 2: Permanent maxillary molars; Permanent mandibular molars; Principles of Mastication; Occlusion and malocclusion; The primary dentition; and dental anomalies.

ADVANCED KNOWLEDGE OF DENTAL ANATOMY AND MORPHOLOGY (AKDM101)

This subject is run as a continuous assessment and therefore:-
The pass mark for this subject is 50%.
There will be no formal examination at year-end.
Please refer to your discipline specific student guide for further details.

Assessment Plan

Tests	=	60%
Theory Assignments	=	40%

Subject Content Covered
Border Movements; Structural and functional features of the muscles of mastication and facial expression; Dental Histology; Tissues of the teeth and pulp cavities of the permanent dentition; Oral Anatomy related to oral function; Forensic Dentistry.

PRINCIPLES AND PRACTICES OF DENTAL TECHNOLOGY I MODULES I & II (PPDT111 & PPDT121)

This subject consists of a theory and practical component. Please note that there are two modules in this subject. Module 1 is a prerequisite to Module 2.

Both modules need to be passed in one year as they are pre-requisite modules to the subject 'Principle and practices of Dental Technology II'.

This subject is run as a continuous assessment and therefore:-
The pass mark for this subject is 50%.
There will be no formal examination at year-end.

Assessment Plan per module

Assessment Section	% Weight Contribution to the Final Mark
Theory Component: ▪ Assessment = 60% ▪ Assignment = 40%	**50%**
Practical Component: ▪ Assessment = 40%. ▪ Classwork = 60%	**50%**

Topics Covered

Theory

The Dental Team, Dental Caries. Anatomical changes and aesthetics associated with the loss of teeth. Definitions used in prosthodontics. Objectives of prosthodontic treatment. Diagnosis and treatment planning. Landmarks of the edentulous Maxillae and Mandible. Objectives of the primary impression. Infection control. Procedure for pouring alginate irreversible hydrocolloid impressions. Care of the impression. Requisites for casts. Casting of alginate impressions. Trimming of primary impressions. Objectives of the final impression. Methods of pouring master casts. Trimming of the final model. Types of special trays. Outline of special trays. Criteria for recording bases and occlusal rims. Materials for recording bases. Fabrication technique for bite blocks. Classification of articulators. Jaw and articulator movements. Guides for the arrangement of artificial teeth, Posterior palatal seal. The technique of gingival reconstruction on complete dentures. Retention, stability and support in complete dentures. Flasking and packing. Selective grinding. Speech problems associated with denture treatment. Orthodontic baseplates.

Practical

Mixing of dental model plaster and dental stone. Pouring of primary impressions. Trimming of primary and final models. Self-cured acrylic and light Cured impression trays. Recording bases and occlusal rims. Articulation. Set- up of try-in denture in a Class I relationship. Set-up of teeth in centric occlusion. Festooning. Trouble shooting at the try-in stage. Flasking and packing of complete dentures. Pumicing and polishing of dentures. Denture midline fracture repair. Replacement of an individual tooth or teeth.
Fabrication of orthodontic baseplates.

PRINCIPLES AND PRACTICES OF PROSTHETICS II MODULES I & II (PPRO211 & PPRO221)

ASSESSMENT PLAN

This subject is run as a continuous assessment and therefore:-
The pass mark for this subject is 50%.
There will be no formal examination at year-end.
There are two assessment sections, namely a theoretical component and a practical component. Each assessment component has a specific and equal weighting towards the final mark, namely:

1. **Theory Component:**
   Tests = 60%
   Theory Assignment = 40%

2. **Practical Component:**
   Tests = 40%
   Class Practical's = 60%

Note:

1. The sub-minimum mark for each component is 50%.
2. This subject is a pre-requisite to 'Principles and Practices of Prosthetics III.
3. Please refer to your discipline specific student guide for further details.

Subject Content Covered

Theoretical Principles of Removable Acrylic Dental Prosthetics: Prosthodontic Terminologies; Artificial Tooth Selection; Aesthetic Denture Set-ups; General Principles of Balance; Lingualised & Monoplane Occlusion; Clear Palates; Palatal Strengtheners; Gold Denture Inlays; and Hard and Soft Denture Relines.

Removable Acrylic Dental Prosthetics laboratory practice: Techniques used in the fabrication of "aesthetically" functional wax "try-in" and "finish" dentures; Clear palate dentures; Design and construction of gold inlays in dentures; Denture relines; and Introduction to acrylic partial dentures.

PRINCIPLES AND PRACTICES OF CROWN AND BRIDGE II MODULES I & II (PPCB211 & PPCB221)

Subject Content

Introduction to fixed restorations, Crown & Bridge Systems, Crown & Bridge wax-up, Sprue, Invest & Casting metal crowns, Different types of margin preparations, Occlusal arrangement/Pathological Occlusion, Occlusal interferences. Porosity, Bridges, Design principles of posts, Temporary crowns & Metal inlays, Technological advancements in Crown & Bridge

PRINCIPLES AND PRACTICES OF ORTHODONTICS II MODULES I & II (PPOR211 & PPOR221)

ASSESSMENT PLAN

This module will employ continuous assessment through tests, assignments or presentations and formative assessment activities of which theory will constitute 40% of the final mark and practical work will constitute 60%.

Moderation: 60% of theory and practical formal assessments will be moderated internally. Each student must obtain an overall final mark of 50% in order to pass this module.

Topics Covered
Theory
History and development of orthodontics; what is Orthodontics; Indications of orthodontic treatment; Terminology relating to the structures in the oral and the relationships of the jaws; Timing of orthodontic treatment; Tooth movements by orthodontic appliances; Biomechanics of tooth movements; removable appliances

Practical
Adams clasps; ball clasps; C Clasps; Finger spring; Z spring; T spring; Lapp Spring; Roberts retractor; canine retractor.

PRINCIPLES AND PRACTICES OF PROSTHETICS III (PPRO301)
ASSESSMENT PLAN

Assessment Section	% Weight Contribution to the Final Mark
Theory Component: ▪ Assessment = 60% ▪ Assignment = 40%	50%
Practical Component: ▪ Assessment = 40%. ▪ Classwork = 60%	50%

Topics Covered
Partial Dentures, Immediate Dentures, Class II & Class III, Articulators, Duplicate Dentures, Splints, Stents and Surgical Templates, Aesthetic Dentures, Over-dentures

DENTAL MATERIALS SCIENCE I MODULES I & II (DMTS111 & DMTS121)
Please note that there are two modules in this subject. Module 1 is a prerequisite to Module 2. Both modules need to be passed in one year, as they are pre-requisite modules to the subject 'Dental Materials Science II'.

This subject is run as a continuous assessment and therefore:-
The pass mark for this subject is 50%.
There will be no formal examination at year-end.

Assessment Plan per module
Assessment = 60%
Assignments = 40%

Topics Covered
History of Dental Technology. Selection of dental materials. Evaluation of dental materials. Properties used to characterise materials. Chemical properties of materials. Mechanical properties of materials. Thermal properties. Miscellaneous physical properties. Biological

properties. The application of the properties to Dental Technology. Requirements of Dental Cast Materials. Introduction to dental gypsum. Setting of Gypsum Products. Introduction to dental impression materials. Dental resin. Requirements of polymeric denture base materials. Polymerisation. Heat-cured acrylic materials. Introduction to waxes. Basic constituents of wax. Physical properties of waxes. Dental applications of waxes. Separating media. Denture cleaners. Dental instruments. Abrasion and polishing.

PRINCIPLE AND PRACTICES OF CROWN AND BRIDGE III MODULES I & II (PPCB311 & PPCB321)

Subject Content

Introduction to fixed bridges. Bridge design and abutment selection. Pontics and connectors. Spruing, investing, casting and finishing. Soldering and brazing metal ceramic bridges. Bridges. Temporary restorations. Introduction to metal ceramics. Cast metal ceramic crown and bridge design. Cast metal ceramic crown and bridge construction. Porcelain application. Diagnostic set-ups.

PRINCIPLES AND PRACTICES OF ORTHODONTICS III (PPOR301)

ASSESSMENT PLAN

This module will employ continuous assessment through tests, presentations and formative assessment activities of which theory will constitute 40% of the final mark and practical work will constitute 60%.

Assessment tasks will follow examination rules as stipulated in the Institution's general rule book, departmental handbook and module study guide for students.

Students' performance will be tracked and monitored through submission of draft work and consultations with the academic development practitioners.

Moderation: 60% of theory and practical formal assessments will be moderated externally. The final practical assessment will be externally examined by an examiner appointed by the South African Dental Technicians Council

TOPICS COVERED

Skeletal and dentoalveolar malocclusions; Temporomandibular joint disorders; Inclined planes; Diagnostic setups; Removable dentofacial orthopaedic appliances; Head gear; Twin block; Herbst appliance; coffin spring; Piston screw; Hyrax; Lip bumper; Quad Helix; Anterior & Posterior bite planes; Midline, sectional and saggital expansion screws; Buccal Bow; J hooks; tubing; laser welding; space maintainers; gum guards; habit breakers; Night guards; clenching inhibitors; snoring devices; fixed retainers; clear retainers.

PRINCIPLES AND PRACTICES OF ADVANCED REMOVABLE PROSTHODONTICS I MODULES I & II (PARP111 & PARP121)
ASSESSMENT PLAN

Assessment Section	% Weight Contribution to the Final Mark
Theory Component: ▪ Assessment = 60% ▪ Assignment = 40%	50%
Practical Component: ▪ Assessment = 40%. ▪ Classwork = 60%	50%

Topics Covered

Removable partial dentures, Advantages of a metal partial denture. An in-depth study of the Components of a RPD. Classification of RPD. Introduction to design of RPD.
Duplicating. Spruing. Investing. Heating the muffle (Burn Out). Casting. Induction and flame. Constituents of a chrome cobalt alloy. Working off. Electro polishing Finishing and Fitting the RPD.

DENTAL LABORATORY PRACTICE (DLPR101)

HEALTH BUSINESS STUDIES I (HBST101)
Assessment Plan
Theory Tests 40%
Examinations 60%
Topics Covered
Human Resources Management, Effective time utilization. Set up and maintain administrative systems. Application of an applicable software programmes. Develop and use interactive skills. Industrial relations. Establish goals (Self and organization). Problem solving and decision making. Conflict management. Negotiation skills. Crisis management. Assertive behaviour. Performance Management, Labour Relations Act. Health and Safety Act. Basic Conditions of Employment
Accounting, Basic accounting, Transactions and the accounting equation, accounting definitions
Income statement and balance sheet, Analysis and interpretations, Bank reconciliation, Cash flows

HEALTH BUSINESS STUDIES II (HBST201)

DENTAL MATERIALS SCIENCE II MODULES I & II (DMTS211 & DMTS221)
ASSESSMENT PLAN

Assessment	% Weight
Tests	75
Assignment	25
Total	100

A pass mark of 50% is required on all written assessments.

Objectives of assessments include testing:

- Ability to transfer knowledge learnt in dental materials class to correctly select optimum dental materials.
- Ability to critically analyse dental materials according to their properties and behaviours.
- Ability to independently apply knowledge.
- Confidence in correctly evaluating certain dental materials.

Moderation will take place according to the University's assessment policy.

Topics Covered

Stress/strain, Elastomeric impression materials, Die materials, Inlay waxes, Investments, Metals and alloys, Soldering, Reline materials, Wrought base metal alloys

DENTAL MATERIALS SCIENCE III MODULES I & II (DMTS311 & DMTS321)

Assessment Plan

Theory Tests	75%
Presentation & Assignments	25%

Topics Covered

Maxillo facial materials, Platinum foil & refractory die materials for ceramic restorations Evaluation of articles and assignments, Osseointegration dental implant materials, Health factors in a dental laboratory. Porcelain, Noble metal - ceramic alloys, Base metal - ceramic alloys, Biological response to dental materials. Selection and evaluation of mental ceramic casting alloys, Application of dental materials, Trouble-shooting

DENTAL LAW AND ETHICS MODULES I & II (DLET111 & DLET121)

Assessment Plan

Theory Tests	60%
Assignments	40%

Topics Covered

Objectives, functions and powers of the SADTC, Education, training and registration of Dental Technicians, Offences and the control over artificial teeth, Disciplinary powers of the Council General and supplemental provisions, Regulations of the Council, Adherence to moral standards Professional ethics code, Loyalty to the organization and profession, Professional Image. Other Laws and Acts pertaining to employed Dental Technicians

PHYSICS (PSCS101)

Assessment Plan (Physics)

Theory Tests	40%
Examinations	60%

Topics Covered

Introduction to Mechanics, Units, standards and measurements, Vectors, Motion, Introductory Kinematics, Equations of motion, Forces, Newton's Laws of Motion, Statics, Torque, Levers in the body: Dental Applications, Equilibrium, Elastic Properties of Matter, Stress and Strain, Hooke's Law, Young's Modulus, Ultimate Strength, Shearing, Basic Fluid Mechanics, Density, Pressure, Viscosity, Equation of Continuity, Archimedes' Principle, Thermal Properties of Matter, Heat and Temperature, Temperature scales, Heat Transfer, Thermal Expansion, Specific Heat Capacity, Latent Heat, Light, Nature of Light, Reflection and Refraction, Dispersion, Color.

CHEMISTRY (CHMS101)

Assessment Plan

Theory Tests	40%
Examinations	60%

Topics Covered

Matter. Chemical Equations and Stoichiometry. Solutions. Chemical Reactions. Reaction Rates and Equilibrium. Acids, Bases and Salts. Electrochemistry and Redox Theory. Applied Chemistry of Selected Topics. Organic Chemistry.

AN INTRODUCTION TO THE PRINCIPLES AND PRACTICES OF RESEARCH MODULES I & II (IPPR111 & IPPR121)

Note that:
This is a prerequisite subject to Fundamental Principles and Practices of Research Design and Methodology.
The final pass mark for this module is 50%.

Assessment Plan (See subject guide for specific details)

Research Phase I	30%
Research Proposal	70%

Topics Covered Overview of Quantitative Research and Qualitative Research, design and methodology.
Research Proposal Process: Aim and Objectives/Research Questions; Context of the study; Problem Statement; Delimitations, Limitations, Assumptions and Hypothesis; Overview on Literature Review; Research Design and Methodology (What stimulated the study, Sampling, Data collection and Data Analysis); References and Plagiarism; Ethical Considerations; and Endnote.

FUNDAMENTAL PRINCIPLES AND PRACTICES OF RESEARCH DESIGN AND METHODOLOGY MODULES I & II (FRDM111 & FRDM121)

Assessment Plan (See subject guide for specific details)

Research abstract	-	10%
Research Poster	-	20%
Research Report/Case Study/Journal Article	-	70%

Note that the final pass mark for this module is 50%.

Topics Covered:

Writing of a Research Report/ Journal Article/Case Study by providing the: Background/Rationale/ Introduction; Literature Review; Research Design and Methodology; Results/Findings and Discussions; Conclusions and Recommendations; Referencing through EndNote and using Turnitin; Writing a research abstract for a research poster; and presenting research results to peers and to the wider DUT community.

DENTAL MATERIALS SCIENCE IV (DMTS401)

This subject is run as a continuous assessment and therefore:-
The pass mark for this subject is 50%.

There will be no formal examination at year-end.
Please refer to your discipline specific student guide for further details.

Assessment Plan

Theory Tests	60%
Assignments	40%

Topics Covered

Biological response to dental materials; Occupational Health and Safety of Dental Materials; Dental Implant Materials; and Maxillofacial Dental Materials.

PRINCIPLES AND PRACTICES OF CROWN AND BRIDGE IV MODULES I & II (PPCB411 & PPCB 421)

ASSESSMENT PLAN

Assessment Section	% Weight Contribution to the Final Mark
Theory Component: ▪ Assessment = 60% ▪ Assignment = 40%	50%
Practical Component: ▪ Assessment = 40%. ▪ Classwork = 60%	50%

TOPICS COVERED

All-ceramic systems; Metal-ceramic systems; Planning and design factors for large cases. Occlusion factors in ceramic restorations; The use of precision attachments and broken stress connectors in large cases; Combination cases with removable partial dentures and fixed restorations with milling and attachments; Implant borne metal-ceramic restorations; Design factors for practical cases. CAD-CAM including milling and precision attachment.

PRINCIPLES AND PRACTICES OF ADVANCED REMOVABLE PROSTHODONTICS II MODULES I & II (PARP211 & PARP221)

ASSESSMENT PLAN

Assessment Section	% Weight Contribution to the Final Mark
Theory Component: ▪ Assessment = 60% ▪ Assignment = 40%	50%
Practical Component: ▪ Assessment = 40%. ▪ Classwork = 60%	50%

TOPICS COVERED

Removable partial dentures (Cobalt Chrome); Miscasts. Casting defects. Indirect Retention. The RPI Bar concept. Design of chrome cobalt partial dentures; Practical cases; Combination work/precision attachments.

PRINCIPLES AND PRACTICES OF PROSTHETICS IV

Assessment	Weighting	Sub minimum
Test 1	15%	N/A
Test 2	30%	40% required
Test 3	30%	40% required
Assignment/Presentation	25%	50% required

Assessment Section	% Weight Contribution to the Final Mark
Theory Component: ▪ Assessment = 60% ▪ Assignment = 40%	**50%**
Practical Component: ▪ Assessment = 40%. ▪ Classwork = 60%	**50%**

Content

1. Precision Attachments and Combination work, Constructing Prosthesis on Implants, Obturators and Maxillofacial Prosthesis.

8. MASTER'S OF HEALTH SCIENCES TECHNOLOGY: DENTAL TECHNOLOGY (MHDNT1)

8.1 Programme Information

This full research qualification is aligned to Rule G24 in the General Student Handbook. This 180 credits qualification is offered at SAQA Level NQF level 9. The student will conduct independent research under guidance in Dental Technology, and contribute to knowledge production in that field. The research problem, its justification, process and outcome is reported in a dissertation, which complies with the generally accepted norms for the research at that level. Ultimately, the graduate will make a valuable contribution to the existing body of knowledge and initiate change that will help to develop and advance the profession of Dental Technology. *The minimum duration of the programme is one (1) of study and the maximum duration is three (3) years of study.*

8.2 Programme Rules

8.2.1 Admission Requirements

In accordance with Rule G5 in the General Student Handbook, acceptance into the programme is limited, and entry into the Master of Health programme is not automatic. In addition to Rule G24 (1), candidates must be in possession of a Bachelor's Degree in Dental Technology or an equivalent qualification, or have been granted status or advanced standing according to Rule G10. All international applicants need to have their qualifications evaluated by the South African Qualification Authority **(SAQA)**.

Furthermore, the applicant needs to complete all internal application and selection processes as required by the Department's Research Committee.

8.2.2 Pass Requirements

Please refer to Rule G24.

8.2.3 Re-registration Rules

Rule G24 (2), Rule G26 (5) and the General Student Handbook.

8.2.4 Exclusion Rules

Rule G24 (1)(d); Rule G24 (2), and the General Student Handbook.

8.2.5 Interruption of Studies

In accordance with Rule G24, the minimum duration for this programme will be one (1) year of registered study and the maximum duration will be three (3) years of registered study. Should a student interrupt their studies by more than three (3) years, the student will need to apply to the department for permission to reregister and will need to prove currency of appropriate knowledge prior to being given permission to continue with registration.

The applicant also needs to complete all internal application processes as required by the department's research committee.

9 DOCTOR OF DENTAL TECHNOLOGY (DDentalTech)

9.1. Programme Information

This research intensive qualification is aligned to Rule G25 in the General Student Handbook. This 360 credits qualification is offered as SAQA Level NQF level 10. The degree of Doctor of Science is awarded on the basis of the submission of a thesis. The thesis should provide evidence of the student: Being able to make an original and substantial contribution to the body of knowledge through the use of appropriate research principles and methods; Gaining knowledge and skills needed to apply scientific research methods independently and critically; Demonstrating competence in technical skills relevant to Dental Technology, and high level or personal autonomy, commitment and accountability in the design and execution of research; Think globally and consider issues from a variety of perspectives and apply international standards and practices within Dental Technology; and Demonstrating principles of ethical reasoning and professional responsibility. The thesis must comply with the normal technical requirements and rules with regard to scope, quality and layout.

9.2 Programme Rules

9.2.1 Minimum Admission Requirements

In addition to Rule G25 (1) in the General Student Handbook, persons must be in possession of a Master of Health Sciences in Dental Technology or equivalent, or have been granted status or advanced standing according to Rule G10. Please also refer to the Postgraduate Student Handbook.

Furthermore, the applicant needs to complete all internal application and selection processes as required by the Department's Research Committee.

9.2.2 Pass Requirements

Refer to Rule G25 (4) in the General Handbook for Students

9.2.3 Re-registration Rules

Please refer to Rule G26 (5) and the Postgraduate Student Handbook.

9.2.4 Exclusion Rules

Please refer to Rules G25 (2) (B; C (ii)) in the General Student Handbook.

9.2.5 Interruption of Studies

In accordance with Rule G25 (2), the minimum duration for this programme will be two (2) years of registered study and the maximum duration will be four (4) years of registered study. Should a student interrupt their studies by more than three (3) years, the student will need to apply to the department for permission to reregister and will need to prove currency of appropriate knowledge prior to being given permission to continue with registration. Please refer to the Postgraduate Student Handbook.

SECTION B: DENTAL ASSISTING

10. HIGHER CERTIFICATE: DENTAL ASSISTING (HCDNA1) [Full Time: One Year Qualification]

10.1. Programme Information

Certain subjects in this qualification do not have a final examination. The results for these subjects are determined through a weighted combination of assessments. As such, there are no supplementary examinations. Students are encouraged to work steadily through the period of registration in order to achieve the highest results possible. Assessment details are listed under each subject at the back of this handbook. Moderation follows the DUT requirements.

10.2. Learning Programme Structure

Code	Subjects	Year of Study	Credits Nated	CA/E*
CSTN101	Cornerstone	1	.094	E
DAPA101	Dental Assisting Practical 1A	1	.093	CA
DATA101	Dental Assisting Theory 1A	1	.126	CA/ E
DNPM101	Dental Practice Management	1	.094	E
OAPA101	Oral Anatomy and Pathology 1A	1	.093	CA/ E
DACP101	Dental Assisting Clinical Practice	1	0125	CA
DAPB101	Dental Assisting Practical 1B	1	.093	CA
DATB101	Dental Assisting Theory 1B	1	.126	CA/ E
OAPB101	Oral Anatomy and Pathology 1B	1	.093	CA/ E
PHDA101	Pharmacology for Dental Assisting	1	.063	CA/ E

* CA —Continuous assessment / E —Examination

10.3. Programme Rules

10.3.1. Minimum Admission Requirements

In addition to Rule G7 the following apply:
The minimum entrance requirement for entry into programme: Higher Certificate in Dental Assisting is a National Senior Certificate (NSC), a Senior Certificate or a National Certificate (Vocational) (NC(V)), and must include the following subjects at the stated minimum ratings below:

Subject	NSC Rating
English (home) **OR** English (1st additional)	3
Life Sciences **OR** Physical Sciences	3
Mathematics **OR** Mathematics Literacy	3 5
and two 20 credit subjects, of which not more than one may be a language	3

The minimum requirement for holders of the Senior Certificate into the programme: Higher Certificate in Dental Assisting is matriculation exemption with the following subjects at the stated ratings:

Compulsory Subjects	**HG**	**SG**
English	E	C
Mathematics	E	C
Biology **OR** Physical Science	E	C
and two 20 credit subjects, of which not more than one may be a language	E	C

10.3.2. Selection Procedures

In accordance with Rule G5, acceptance into the programme is limited to seventy five (75) places. As more qualifying applications are received than can be accommodated, the following selection process will determine placement in the programme:

All applicants must apply through the Central Applications Office (CAO).
Preference is given to those who have Dental Assisting as their first choice.
Initial shortlisting for selection is based on the applicant's academic performance in Grade 12 (Grade 11 or Grade 12 Trial marks, will be used for current matriculants).
All applicants that meet the above requirement will be notified and will be required to complete and submit documentation to the Dental Assisting Programme.
Applicants who are successful following the interview will then be ranked according to the table below:

Assessment	Weighting
Results of the NSC, SC or NC(V) certificate	50%
Certificate of attendance from a dental surgery	10%
Submitted documentation	10%
Interview	30%

Shortlisted students will be invited to undergo placement testing. Applicants who pass the placement tests are invited for an interview.
Provisional acceptance is given to selected applicants awaiting National Senior Certificate (NSC) results. If the final Grade 12 NSC results do not meet the minimum entrance requirements, this provisional acceptance will be withdrawn.
Final selection for placement will be based on results in the SC / NSC and DUT placement tests.

10.3.3. Pass Requirements

Notwithstanding the DUT pass requirements (G14 and G15), students are encouraged to apply themselves to their learning, and strive for the best academic results possible in order to adequately prepare themselves for their future careers, and to maximize possible employment opportunities.

10.3.4. Uniform

It is compulsory for all students to wear the prescribed uniform. Failure to do so will result in disciplinary action. Dental Assisting students are expected to be appropriately attired when attending clinical sessions. This includes the use of gloves, masks, eyewear, gowns, etc.

10.3.5. First Aid Certificate

Students shall not be permitted to graduate unless they are in possession of a current Level 2 First Aid Certificate at the time of completing the Dental Assisting programme. The first aid certificate will be arranged and paid for by the programme. Students missing the course for any reason will be expected to obtain the required certificate at their own cost and in their own time.

10.3.6 Hepatitus B

All students registered for the programme are required to complete a course of Hepatitus B inoculations arranged and paid for by the department.

10.3.7 Duration of Programme

In accordance with the DUT Rule G20B*, minimum duration is one year of registered study, including any periods of clinical practice and maximum duration will be two years including any periods of clinical practice.

10.3.8 Exclusion Rules

In addition to the DUT General Rule G17*, a student who fails 50% or more of the subjects registered in the initial year of study with a final mark of less than 40% in the failed subjects will not be permitted to re-register in Dental Assisting programme. De-registration from any subject is subject to the provisions of Rule G6 (2)*.

10.3.9 Interruption of Studies

Should a student interrupt their studies for a period of more than two (2) consecutive years, the student will need to apply to the department for permission to re-register and will need to prove currency of appropriate knowledge and skills prior to being granted permission to continue with registration.

10.4 SUBJECT CONTENT FOR:

Higher Certificate in Dental Assisting

NB: Students are to read this section in conjunction with the relevant study guide

SEMESTER 1

DENTAL ASSISTING THEORY 1A (DATA101)

Assessment Plan

Theory Tests	40%
Examination	60%

Topics Covered

Infection Control; Pain Control, Dental Materials, Radiography

DENTAL PRACTICE MANAGEMENT (DNPM101)

Assessment Plan

Theory Tests	40%
Examination	60%

Topics Covered

Patient Management, Practice Management, Ethics and Jurisprudence Office Technology and Management - (Theory and Practical)

ORAL ANATOMY AND PATHOLOGY 1A (OAPA101)

Assessment Plan

Theory Tests	40%
Examination	60%
Topics Covered	
Microbiology, Oral Anatomy and Physiology	

DENTAL ASSISTING PRACTICAL IA (DAPA101)

Assessment Plan

Clinical Exams	50%
Practical Tests	50%

Topics Covered

Surgery Orientation; Dental Equipment and Dental Instruments; Four Handed Dentistry; Clinical Procedures (including specialties); Clinical Asepsis; Radiographic Procedures

CORNERSTONE 101 (CSTN101)

The Cornerstone module is compulsory for all undergraduate students. The purpose of this module is to induct students into the community of higher education, with values and practices that promote self-awareness, social justice and environmental sustainability

Assessment Plan

TBC

SEMESTER 2

DENTAL ASSISTING THEORY 1B (DATB101)
Assessment Plan
Theory Tests 40%
Examination 60%
Topics Covered
Nutrition, Oral Hygiene, Conservative Dentistry, Dental Specialities

ORAL ANATOMY AND PATHOLOGY 1B (OAPB101)
Assessment Plan

Theory Tests	40%
Examination	60%
Topics Covered	
Oral Pathology	%
Medical Emergencies	%
Cariology	%

DENTAL ASSISTING PRACTICAL IB (DAPB101)
Assessment Plan
Clinical Exams 50%
Practical Tests 50%
Topics Covered
Surgery Orientation; Dental Equipment and Dental Instruments; Four Handed Dentistry; Clin- ical Procedures (including specialties); Clinical Asepsis; Radiographic Procedures

DENTAL ASSISTING CLINICAL PRACTICE (DACP101)
Assessment Plan

Work Integrated Learning hours	30%
Clinical Feedback	20%
Practical Tests	50%

Topics Covered
Surgery Orientation; Dental Equipment and Dental Instruments; Infection Control Practice; Ra- diographic Practice.

Work Integrated Learning is a compulsory component of this module and the student is required to attend an accredited dental practice to obtain (200) as well as meeting certain outcomes as specified in the Study guide for this module.

PHARMACOLOGY FOR DENTAL ASSISTING (PHDA101)

Theory Tests	40%
Examination	60%

E & OE