

2019 HANDBOOK ARCHITECTURE



HANDBOOK FOR 2019

FACULTY OF ENGINEERING AND THE BUILT ENVIRONMENT

DEPARTMENT of ARCHITECTURE



VISION

Developing Architectural Minds to respond to context and inspire society

MISSION

We shall adopt a learning paradigm focussing on finding and solving challenges in the build environment. We endeavour to achieve this through broad collaboration and the appropriate use of technology.

NATURE OF THE ARCHITECTURAL PROFESSION

The Architectural Technologist or Senior Architectural Technologist may be selfemployed upon registration with the South African Council for the Architectural Profession (SACAP) or may be employed by an architectural practice in which he /she would be involved in the technical aspects of architectural design and documentation. Responsibilities, however, are broader than drawing and technical documentation and include assistance in architectural design, materials, colours, layouts, site analysis, taking levels on site, measuring existing features and buildings, studies on historical buildings for further use, model making and contract administration. Routine office hours are usually maintained although extra effort will be expected if deadlines are to be met.

In order to make a success of the course and a career in this field, prospective candidates should possess an aptitude for innovative design, construction technology and the ability to grasp technical concepts related to construction methods.

Although the greatest numbers of Architectural Technologists are employed by private architectural firms, employment opportunities also exist with the Public Service, Local Authorities and other building drawing offices. Employment in the building industry is always closely related to the economic situation of the country, thus job opportunities vary accordingly.

What is a University of Technology?

A university of technology is characterized by being research - informed rather than research - driven, in which 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.



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IMPORTANT NOTICE

The departmental rules in this handbook must be read in conjunction with the Durban University of Technology's General Rules contained in the current General Handbook for Students. Except where otherwise laid down in the rules for the Department for specific instructional programmes, the General Rules for all courses shall apply to all instructional programmes in this department.

PLEASE NOTE THAT SMOKING IS BANNED IN THE BUILDING. IF YOU ARE CAUGHT SMOKING THE UNIVERSITY WILL INSTITUTE DISCIPLINARY PROCEEDINGS



I. CONTACT DETAILS

All **Departmental** queries to:

 Secretary:
 Ms Nomtha Sibisi

 Tel No:
 (031) 373 2857

 Fax No:
 (031) 373 2006

e-mail: nomthandazos@dut.ac.za

Location of Department: S5 Level 5 - Steve Biko Campus

All Faculty queries to: Faculty of Engineering & The Built Environment.

 Faculty officer:
 Mrs Neetha Singh

 Tel No:
 (031) 373 2548 / 2717

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 (031) 373 2719

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 singhn@dut.ac.za

Location of Faculty office: S4 Level 3 – Steve Biko Campus

Executive Dean: Professor Theo Andrew

Tel No: (031) 373 2762
Fax No: (031) 373 2724
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Location of Executive Dean's office: Steve Biko Campus Block S6 level 5

Departmental website:

http://www.dut.ac.za/faculty/engineering/architectural_technology/



2. STAFFING

HOD: Mr L. Du Plessis, B.A.S, M.Arch (UKZN), SAIA

Senior Lecturer: Mr P Da Costa, B.Bldg.A (UPE), B.Arch (UPE), Arch S.A.

Lecturers: Mr K. Orie, NHD. Arch (MLST)

Mr T Moahloli, B Arch, (UCT)

Mrs R J McCarthy, NHD. Arch (TN)

Ms. Kyria van Soelen, B Arch, M Arch (UKZN)

Mr. T Olaniran, BAS; MSC (Construction Management)

Mr. R Dwamena, PGDip: Architecture; MTRP

Junoir Lecturer: Ms. K. Matangana, ND: Architectural Technology (DUT),

B.Tech: Architectural Technology (DUT)

Secretary: Ms N M Sibisi, N.Dip Office Mngt & Tech,

B.Tech Business Admin (DUT)

Technician: Mr P Balkissoon, ND: Architectural Technology (DUT),

B.Tech: Architectural Technology (DUT)

3. PROGRAMMES OFFERED BY THE DEPARTMENT

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

Qualification	SAQA NLRD	Number
*National Diploma: Architectural Technology	(NDARC3)	72211
*Bachelor of Technology: Architectural Technology	(BTARCI)	72113
Bachelor of the Built Environment (Architecture)	(BBARCI)	101515

NOTE:

The National Diploma: Architectural Technology will not be offered for first time entrants from 2018 onwards and is currently in the process of being phased out The Bachelor of Technology: Architectural Technology will not be offered for first time entrants from January 2020 onwards and is subject to phase out from 2020 onwards

A. PURPOSE OF THE BACHELOR OF THE BUILT ENVIRONMENT (ARCHITECTURE)

The Bachelor of the Built Environment (Architecture) (BBE(Architecture) qualification is aimed primarily at professional registration, but is also intended to provide a means by which such basic professional registration can be the starting point for registration as a Professional Architect. The qualification provides students with a sound knowledge base in the discipline of architecture and the ability to apply their knowledge and skills to particular career or professional contexts, while equipping them to undertake more specialised and intensive learning. This learning programme has a strong professional and career focus and holders of this qualification are normally prepared to enter a specific niche in the architectural profession.

Specifically the purpose of the learning programme is to build the necessary knowledge, understanding, abilities and skills required for further learning towards becoming a competent practicing architectural technologist. This qualification provides:

- Preparation for careers in architecture itself and areas that potentially benefit from architectural skills, for achieving technological proficiency and to make a contribution to the economy and national development;
- The educational base required for registration as a Candidate Architectural Technologist with the South African Council for the Architectural Profession (SACAP).
- Entry to NQF level 8 programmes e.g. Honours and Masters programmes and subsequently Doctoral Programmes



B. DURATION OF THE BACHELOR OF THE BUILT ENVIRONMENT (ARCHITECTURE)

The duration of the programme is 3 years of full-time study. The course is based on semester modules that are assessed either through continuous evaluation or examination. The programme is based on core architecture and general education modules. Students are expected to complete a total of 30 modules for this programme.

4. PROGRAMME INFORMATION AND RULES

A. ENTRANCE REQUIREMENTS

In addition to the General Rules pertaining to Entrance Requirements, specific requirements apply to instructional programmes offered in this department and these are set out under *Entry requirements and Selection procedure*, below.

B. WORKING WHILE STUDYING

Work whilst studying is not supported by the Department for any full time student. The part-time Bachelor of Technology offering is the only offering that accommodates a reduced study load and may allow for working while studying.

C. ACADEMIC WORK DONE DURING THE SEMESTER/ YEAR

This section is to be read in conjunction with Section 7 – Assessment rules

- a) A year mark shall be determined according to the General Rules and/or as indicated in the syllabi and/or learner guide lines for the particular subject.
- b) Year marks shall be applicable to subjects assessed by examination.
- c) All deadlines for submission of projects shall be adhered to.
- d) Submissions handed in timeously will be eligible for upgrading once marks are issued for that project. This applies to continuous assessment subjects only. Refer to the individual subject / module study guide for further information.
- e) If a submission deadline is not adhered to, the work will not be assessed or be eligible for upgrade or inclusion in the year end portfolio. Refer to the section on penalties for late submissions.
- f) Under no circumstances will first time submissions of projects/academic work be evaluated at the portfolio examinations.
- g) Where circumstances prevail that have prevented timeous submission of work, the matter will be dealt with in terms of the conditions of the Department rule 10 (Section 7 Special Assessment).



D. CONDUCT OF STUDENTS

i.General

- a) It is the obligation of the studio user to know and understand these rules. A user is defined as a student, staff member or any other person making use of the Department's facilities.
- b) Department facilities and equipment, including printers, may only be used for official University purposes. Private or personal work may not be undertaken under any circumstance.
- c) Users may not create a disturbance or interfere with other students/users.
- d) No smoking, eating or drinking and unlawfully explicit and vulgar acts is permitted in department facilities. Smoking is also not permitted anywhere within the building.
- e) Students are to respect the equipment as well as the fittings and furniture damaging or modifying any piece of equipment or furniture not allowed. This particularly applies to the modification/damaging of chairs.
- f) Users shall not litter, cause any mess or leave the facilities in an untidy state.
- g) Users shall obey all reasonable instructions of Lab Consultants/Technician.
- h) Breaking/bypassing of these regulations, will result in such users potentially being barred from using the facilities/infrastructure, and potentially lead to disciplinary procedures. If any part of the regulations is not understood, please approach the Department Technician for clarification.
- All official correspondence is through student's official DUT e-mail address only. It is the student's responsibility to ensure they check their official e-mail regularly.

ii.Right of use

- a) Students/Users shall only gain access to the department facilities by producing a Durban University of technology currently valid student or staff card, or written authorisation to use the facilities from the Head of the Department of Architecture.
- b) Students/Users shall produce proof of identity at the request of the Lab Consultant/Technician or any other University official at all times.
- c) Students/Users shall not share, distribute or use access identifications or passwords other than those assigned to them.
- d) It is the responsibility of the student to logout after using the computer. Any students/users who either purposely or carelessly fails to logout will be held responsible for whatever purpose the computer is used for whilst being left active.



iii.Use of Hardware

- Students/Users must treat all computer laboratory and other equipment with due care, respect and consideration. Students must report any misuse of equipment to the Department Technician.
- b) No equipment/infrastructure may be removed from Department Facilities or be tampered with in any manner for any personal preference, choice or to give ownership to ones dedicated space in the department.

iv.Use of Software and Data

- a) Students/Users are not to use any software other than official/legal University software that is pre-loaded on the computers.
- b) Students/Users shall not make use of University computers or the University network (including Wi-Fi) to access or copy any computer games, pornography, viruses, movies and music for personal use and/or distribution.
- c) Students/Users are to use the university's resources responsibly this includes not playing computer games or downloading or streaming other entertainment related content on University computers.
- Students/Users shall not interfere or tamper with software configurations or any system data files.
- e) Students/Users shall respect all copyright and licensing requirements and intellectual property rights. Students/Users shall not copy software or other files from or to the University computer systems.
- f) Students/Users are responsible for resources under their control. Any file found on a disk or removable media, in a person's possession will be assumed to be owned by that person unless the contrary can be proven on a balance of probability and the student will be dealt with under University rules and South African law if the matter arises to be more of a serious case.
- g) Students/Users shall not access or in any way modify other user's files without permission/consent for the user/creator of these file/s.

v.Use of Facilities

- Students/Users may not attempt to bypass or undermine the computer network system security. The system security must be observed at all times.
- b) No software may be loaded, developed or executed on Department computers that attempt to alter the network file servers or other equipment.
- c) Students/Users may only access those facilities which they have been specifically authorised/assigned to use. Students/Users shall not access or attempt to access any other studio, laboratory, equipment, systems or data that they are not specifically authorised to.
- d) Only material relating to students/users courses and duties at the University may be downloaded from the Internet for educational and directly related further learning use.
- e) Students/Users shall not send messages using E-mail facilities/social media platforms to an individual or a large number of users that may be considered undesirable or harassment by some or all off the recipients.



E. WORK INTEGRATED LEARNING:

The National Diploma: Architectural Technology programme requires the student/candidate to undergo a period of a minimum of six months experiential learning as part of the course. All prescribed subjects (instructional offerings) and the prescribed experiential component must be passed in order to obtain sufficient credits to qualify for the qualification. The following applies:

- a) A student must register for experiential learning within two (2) weeks of starting a period of experiential learning.
- b) Unregistered periods of experiential learning will not be considered for credit purposes.
- c) If any of the registered details regarding experiential learning change, the student must advise the department in writing within two (2) working weeks of the new details (e.g. employer, supervisor, address, telephone number).
- d) It is the student's responsibility to obtain procedural steps from the departmental secretary, and to comply therewith, regarding such matters as the logbook, reporting progress and submitting of completed documentation. Logbooks are to be submitted for assessment before the student is allowed to register for his/ her third year.

F. IMPORTANT DATES

The university has a number of administrative deadlines that students need to be aware of. These are published in the year calendar contained in the general handbook. It is the student's responsibility to make themselves aware of these dates and comply with them. These apply to issues such as, but not limited to the following:

- a. Registration
- b. De-registration
- c. Application for re-marking of examination scripts
- d. Application for special examinations
- e. Graduation participation
- f. Handing in Senior Certificates

5. PROGRAMME STRUCTURE

A. NATIONAL DIPLOMA: ARCHITECTURAL TECHNOLOGY (NDARC3)

The National Diploma course is structured over three years, and is strictly full time study. The first and third years comprise full-time study at the Durban University of Technology, whilst second year entails working in the professional field for a period of 6 months and studying full time for 6 months. For the work integrated learning component, students should be employed by a professional architectural practice, whilst remaining registered at the Durban University of Technology. This work is assessed.

YEAR I

5.1.1 STUDIO WORK I: SWRK102

Assessment: Continuous Evaluation/Portfolio Hrs per week: 6
SYLLABUS

- 1. Drawing instruments and materials
- 2. Lettering, line drawing and geometrical exercises
- 3. Graphic projections
- 4. Working drawings of low-rise domestic buildings, including drainage schedules and municipal submission drawings
- 5. Application of the National Building Regulations
- 6. Construction detail design and drawing
- 7. Measurement of existing work
- 8. Drawing office equipment, filing, storage and library
- 9. Planning & design exercises in relation to low-rise domestic buildings
- 10. The role of the architect, architectural technologist, other building professionals, the contractor and the client

5.1.2 PRESENTATION I: PRSN 101

Assessment: Continuous Evaluation/Portfolio Hrs per week: 6 SYLLABUS

- I. The nature and application of presentation drawing and the differences between presentation drawing and technical drawing
- 2. Development of freehand sketching and drawing style
- 3. Design Theory: Form, space, proportions, rhythm, balance, scale, symmetry, texture, pattern, colour, light and shade.
- 4. Sustainable architectural design Social, Economic and Environmental
- 5. Design of Simple low scale architectural projects.
- 6. Compilation of sets of sketch plans

5.1.3 CONSTRUCTION & DETAILING I: CDET102

Assessment: Continuous Evaluation/Portfolio Hrs per week: 6
SYLLABUS

- 1. Construction methods and materials for low-rise simple buildings
- 2. Exercises to foster critical and analytical thinking in basic construction problems
- Introduction to framed structures
- Comprehensive Study of Building Materials and Technologies for low-rise simple buildings.
- 5. General introduction to building services and design and documentation of the following as applied to low-rise buildings:
- 6. Drainage systems and materials
- 7. Electrical distribution
- 8. Hot and cold water supply

5.1.4 COMMUNICATION I: CMMN101

Assessment: Continuous Evaluation Hrs per week: 2

SYLLABUS

- I Introduction to course methods and objectives
- 2. Communication theory
- 3. Oral presentation
- 4. Group communication skills and meeting procedure
- 5. Leadership skills
- 6. Technical writing and correspondence
- 7. Practical communication applications

5.1.5 HISTORY & APPRECIATION OF ARCHITECTURE I: HAAR101

Assessment: Continuous Evaluation/Portfolio Hrs per week: 2 SYLLABUS

- I. Introduction to influences on architectural form, its elements and principles; definitions of architecture
- 2. The evolution of architecture from earliest times to the present day
- 3. The development of structural devices, building methods & materials

5.1.6 APPLIED BUILDING SCIENCE I: ABSA101

Assessment: Examination 3 Hour Paper **Hrs per week**: 2

SYLLABUS

- I.Basic applied mechanics in terms of the concepts force, stress and deformation
- 2. The development of an appreciation of the influences of loads on structures
- 3. Expansion and contraction, convection, conduction and radiation of heat, orientation of buildings
- 4. Sound and Acoustics in built space
- 5. Distribution and use of electricity
- 6. Lighting of buildings
- 7. Environmental influences on Building Design



5.1.7 COMPUTER-AIDED DRAUGHTING III (PART A): CADG301

Assessment: Continuous Evaluation/Portfolio Hrs per week: 2

SYLLABUS

- I. Revision of work done in first year
- 2. Introduction to principles and range of computer drawing systems
- 3. Introduction to computer-aided draughting
- 4. Brief introduction to computer based graphics

5.1.8 COMPUTER APPLICATIONS I: CAPP102

Assessment: Continuous Evaluation/Portfolio Hrs per week: 2 SYLLABUS

- I. Introduction to computers
- 2. Operating systems basics
- 3. Application programs
- 4. Entrepreneurship and Office systems

YEAR II

5.1.9 STUDIO WORK II: SWRK 202

Assessment: Continuous Evaluation/Portfolio Hrs per week: 6
SYLLABUS

- Design of medium scale medium complexity buildings
- 2. Sketch Plans and models
- 3. Planning exercises

5.1.10 CONSTRUCTION AND DETAILING II: CDET202

Assessment: Continuous Evaluation/Portfolio Hrs per week: 6
SYLLABUS

- 1. Construction methods for low-rise medium- complexity buildings
- 2. Elementary steel, timber and reinforced concreted framed structures
- 3. Building services for low-rise domestic buildings
- 4. Construction Drawings and details

5.1.11 PRACTICAL BUILDING STUDIES II: PSTD201

Assessment: Continuous Evaluation/Portfolio Hrs per week: 2
SYLLABUS

- 1. Building materials for low-rise domestic buildings
- 2. National Building Regulations as they apply to building materials
- 3. The construction process; on-site practice
- 4. Schedules
- 5. Soil and Rock Types



5.1.12 THEORY OF DESIGN II: THDN201

Assessment: Examination: 3 Hour Paper Hrs per week: 2

SYLLABUS

- Theoretical discourse of Architectural Theory of the late 20th century namely Bauhaus, Expressionism, De Stijl and International Style/Early modernism and postmodernism
- 2. Critical analysis of theory towards architectural design

5.1.13 HISTORY & APPRECIATION OF ARCHITECTURE II: HAAR201

Assessment: Examination: 3 Hour Paper Hrs per week: 2
SYLLABUS

- I. Historical development of Architecture
- 2. Historical and environmental influences and issues which shaped the Architecture of Africa
- 3. Architectural models of other developing continents specifically relating to environmental issues, innovative use of material
- 6. Exploring planning issues relating to housing systems and patterns
- 7. The debate around sustainable development in the built environment an integral subject of delivery

5.1.14 ADVANCED COMPUTER AIDED DRAUGHTING III (PART B): CADG321

Assessment: Continuous Evaluation/Portfolio Hrs per week: 2 SYLLABUS

- I. Advanced CAD modeling
- 2. Renders and animation

YEAR III

5.1.15 STUDIO WORK III: SWRK302

Assessment: Continuous Evaluation/Portfolio Hrs per week: 6 SYLLABUS

- I. Working drawings to cover buildings types as dealt with in Applied Design III and Construction Detailing III including all services, schedules, foundation and roof plans, and construction detail
- 2. Application of National Building Regulations
- 3. Presentation techniques to expand on those dealt with in First Year, as well as model building
- 4. Introduction to specification writing a major project taken from initial concept design to final working drawings and specifications
- 5. Introduction to estimating building cost



5.1.17 CONSTRUCTION AND DETAILING III: CDET302

Assessment: Continuous Evaluation/Portfolio Hrs per week: 6
SYLLABUS

- I. Exercises to promote the application of critical and analytical thinking to construction problems
- Methods and materials for building types other than those dealt with in the First and Second Year, steel and reinforced concrete-framed buildings and multistorey buildings
- 3. Deep foundations
- 4. Basements and retaining walls
- 5. Co-ordination of services
- 6. Design and detailing of solutions to construction problems in architectural design.
- 7. Visits to sites of various types of building under construction

5.1.18 PRINCIPLES OF ARCHITECTURAL DESIGN III: PADE301

Assessment: Continuous Evaluation/Portfolio Hrs per week: 6
SYLLABUS

- I. Contextually responsive architectural design
- 2. Typical building types with reference to function, circulation, climate, topography and other factors
- 3. Planning and design exercises space requirements for human activities
- 4. Principles of mass housing
- 5. Studies of contemporary South African architectural & planning issues

5.1.19 SURVEY AND LANDSCAPING III: SVLD301

Assessment: Continuous Evaluation/Portfolio Hrs per week: 2 SYLLABUS

- 1. Elementary principles of surveying with optical instruments and preparation of contour drawings
- 2. Local soil, clay and rock types
- 3. Land form design and treatment of landscape surfaces
- 4. Principles and elements of landscape design and practical landscape design projects
- 5. Required dimensions for vehicle circulation and parking
- 6. Surface water drainage



5.1.20 OFFICE PRACTICE III: OPRA301

Assessment: Examination 3 Hour Paper Hrs per week: 2

SYLLABUS

I. Office management structures

- 2. The architect's duties and responsibilities and relationships with other building professionals, the contractor and the client
- 3. The building contract

5.1.21 BUILDING SERVICES III: BSER302

Assessment: Continuous Evaluation/Portfolio Hrs per week: 2 SYLLABUS

- I. Drainage and electrical distribution for high-rise buildings and low-rise buildings other than housing
- 2. Hot and cold water supply and distribution
- 3. Solar water heating
- 4. Fire-fighting systems and appliances
- 5. Surface water drainage
- 6. Space heating
- 7. Security systems
- 8. Introduction to air-conditioning
- 9. Dimensional requirements for air-conditioning systems, lifts, & escalators
- 10. The National Building Regulations as they apply to building services
- 11. Ventilation

5.1.22 THEORY OF DESIGN III:

Assessment: Examination 3 Hour Paper Hrs per week: 2 SYLLABUS

- I. Theoretical discourse of Architectural Theory and inter-connected philosophical paradigms of the late 20th century and the early 21st century.
- 2. Sustainability in architecture
- 3. Planning issues related to spatial and urban form will be an integral basis of this part of the syllabus.

5.1.23 HISTORY & APPRECIATION OF ARCHITECTURE III:

Assessment: Examination 3 Hour Paper **Hrs per week: 2 SYLLABUS**

- I. The historical evolution of architecture in the late 20^{th} century to early 21^{st} century
- 2. Historical evolution of architecture in developing countries
- 3. Relevance of history in architectural design.



5.2 B. TECH. ARCHITECTURAL TECHNOLOGY (BTARCI)

The Bachelor of Technology degree is a full-time one-year post-diploma course. The Department also offers a part-time, evening only, B Tech course. The content, exit level outcomes, assignments and structure of the part-time offering is identical to that of the full-time offering, the only tangible difference is that the course load for this part time offering is structured to be spread over two years only.

Please note that due to National legislation, signed into effect by the Minister of Higher Education in the Government Gazette no. 40123 of 6th July 2016, the last permitted enrolment for any non-HEQSF aligned programme will be the 31st December 2019. This means that you will not be able to enrol in a Bachelor of Technology (BTech) degree at DUT, or at any other institution in South Africa after this date.

5.2. I PRINCIPLES OF URBAN DESIGN IV PUDN401

Assessment: Examination 6 Hour Paper Hrs per week: 3

SYLLABUS

- I. Historical background
- 2. An introduction to urban character, elements and structures
- 3. A short overview of mass urbanization
- 4. The influence of authorities and development control measures
- 5. Techniques applied to surveys, analyses and documentation
- 6 Practical work

5.2.2. THEORY OF DESIGN IV THDN401

Assessment: Examination 3 Hour Paper Hrs per week: 2 SYLLABUS

- I. Urban Space, Form and Detail
- 2. Contextualism / Place Theory
- 3.. Sustainability in Architecture
- 4. Neo Organic Architecture
- 5. Design methodology
- 6. The influence of human requirements & behaviour on design & planning

5.2.3 APPLIED DESIGN IV ADES401

Assessment: Continuous Evaluation/Portfolio Hrs per week: 8 SYLLABUS

- Exercises to foster inventiveness
- 2. Integrated Design projects chosen to represent a diversity of building types (uses)
- 3. Practical application by means of design projects of principles and theory covered in other subjects
- 4. Design problems and solutions pertaining to aspects of construction technology

5.2.4 HOUSING IV HOUS402 Hrs per week: 2

Assessment: Examination 3 Hour Paper

SYLLABUS

- 1. Historical and present day local and international solutions
- 2. Legislation and political influences
- 3. Formative influences
- 4. Available resources
- 5. Infrastructure and services

5.2.5 STRUCTURES IV STRU401

Assessment: Examination 3 Hour Paper Hrs per week: 2

SYLLABUS

- Introduction to structures
- 2. Mechanical properties of building materials
- 3. Elementary design principles to the major structural components of buildings
- 4. Application of structural technology in design

5.2.6 OFFICE PRACTICE IV: OPRA401

Assessment: Examination 3 Hour Paper Hrs per week: 2 SYLLABUS

- 1. Management of Building Projects
- 2. Dispute resolution
- 3. The building contract
- 4. Principles of Contract Law and Case studies

5.3 BACHELOR OF THE BUILT ENVIRONMENT (ARCHITECTURE)

The BBE(Architecture) is a three year full-time programme. Its specific purpose is to build the necessary knowledge, understanding, abilities and skills required to register as a candidate architectural technologist with SACAP once graduated. To register with the professional council, an additional period of mentorship and professional practice examinations need to be completed. The modules in the course are outlined below

Module Title	HEQSF level	HEQSF Credit	Period of Study	Block Code	Offering type	Pre- requisite module/s
Architectural Design 1A	5	24	I	21	DI	-
Construction Technology IA	5	24	I	21	DI	-
Settlement History 101	5	12	I	21	DI	-
Academic Literacy IA	6	8	I	21	DI	-
Mathematics for the Built Environment 101	5	12	I	21	DI	-
Physics for the Built Environment IA	5	8	I	21	DI	-
Architectural Design 1B	5	24	2	22	DI	Architectural Design IA
Construction Technology IB	5	24	2	22	DI	Construction Technology IA
History & Theory of Design I	5	8	2	22	DI	-
Academic Literacy IB	5	8	2	22	DI	Academic Literacy IA
Physics for the Built Environment 1B	5	8	2	22	DI	-
Cornerstone 101	5	12	2	22	DI	-
Architectural Design 2	6	24	3	21	DI	Architectural Design IB Construction Technology IB History and Theory IB
Construction Technology 2	6	24	3	21	DI	Construction Technology IB
History &Theory of Design 2	6	8	3	21	DI	History & Theory of Design 1B
Landscaping & Site Survey 2	6	8	3	21	DI	-

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Urban Settlements 2	6	8	3	21	DI	-
Sociology and Society	5	8	4	21	DI	-
Work Based Project 2B	6	32	4	22	DI	Architectural Design 2A Construction Technology 2A
Project Management	6	8	4	22	DI	
Principles of Commercial Law 2	6	8	4	22	DI	
Research Methods	6	8	4	22	DI	
Architectural Design 3	7	24	5	21	DI	History and Theory 2A Work based Project 2B
Construction Technology 3	7	24	5	21	DI	Construction Technology 2A
History & Theory of Design 3A	7	8	5	21	DI	History & Theory of Design 2A
Law of Building Contracts 3	7	8	5	21	DI	Principles of Commercial law 2B
Property and Land Economics 3	7	8	5	21	DI	
Major Integrated Project	7	32	6	22	DI	Architectural Design 3A Construction Technology 3A History and Theory 3A
History & Theory of Design 3B	7	8	6	22	DI	History & Theory of Design 3A
Professional Practice 3	7	12	6	22	DI	-

Note the following:

- a) The Bachelor of the Built Environment (Architecture) is structured over three years and is strictly full time study. Work whilst studying is not supported by the Department. In order to graduate, all six semesters need to be successfully completed with all modules passed. All semesters are full time study.
- b) Though modules are semesterised, they are only offered once per annum. Failing a module will require students to repeat the module in the next academic year.

6. ADMISSION REQUIREMENTS AND SELECTION CRITERIA

A. NATIONAL DIPLOMA: ARCHITECTURE

The programme is no longer accepting new applicants.

B. BACHELOR OF TECHNOLOGY: ARCHITECTURE

For consideration for admission for entry to the B. Tech Architecture the following entry requirements will apply:

- N.Dip. Architectural (old course) at least three (3) years approved post diploma experience in a registered architect's office or bridging course as specified by the Department.
- N.H.Dip. Architectural (old course) at least three (3) years approved post experience in a registered Architect's office or bridging course as specified by the Department.
- N.Dip. Architecture (current) completion of the qualification.

C. BACHELOR OF THE BUILT ENVIRONMENT (ARCHITECTURE)

The minimum entry requirement is the National Senior Certificate; the Senior Certificate (offered prior to 2008); or the National Certificate (Vocational) with appropriate subject combinations and levels to achieve an exemption/endorsement for admittance to a Bachelor's degree programme. In addition the minimum admission requirements, rule G7, is stipulated in the General Rules Handbook.

Further to the above, the following are required for admission into BBE(Architecture):

(a) Entry Requirements

Compulsory Subjects	National Senior Certificate	National Certificate, (Vocational)	Senior Certificate		
	Rating	Mark	HG	SG	
Mathematics	4				
English (Home or First additional Language)	4				
English		80 %			
Mathematics		80 %			
English			D	С	
Mathematics			D	С	

Candidates with any alternative secondary school qualifications to the NSC will be dealt with according to Rule G7(2) as contained in the General Handbook for Students.

Other recommended subjects (not compulsory): Technology, History, Art, Technical Drawing, Geography, Physics.

(b) Ranking of Offers

In addition to the requirements above, the top 300 applicants will be required to undergo a test for selection purposes. The weighted results from this test, in addition to their Trials mathematics marks for those students yet to complete their senior certificate or the mathematics results achieved in their NSC if already awarded will be used to determine offers of places in the programme based on a ranking of these combined results.

Preference will be given to applicants placing Architecture at DUT as their 1st choice. This will also apply to the ranking of offers.

Should suitable numbers of candidates not register, the department reserves the right to conduct a second round of selection.

7. ASSESSMENT RULES

A. USE OF THE E-LEARNING PLATFORM

- a) The department makes use of an e-learning platform that makes use of online submissions, distribution of content, making of relevant announcements and the like. Students are required to familiarise themselves with the operation of the platform and regularly log on and check the e-classrooms.
- b) Assignments that are indicated as to be submitted via the e-learning platform may not be submitted in any other form. Students are to ensure that they allow for sufficient time for uploading and also to have sufficient access to the system to allow for upload prior to the deadline. The time captured by the system is when the file completes its upload, not when the upload starts.

B. UPLOADING OF STUDENT ASSIGNMENTS

- a) Students are required to ensure that correct files is uploaded to the e-learning platform before the deadline and that the file performs properly. Students will not be permitted to upload or submit an additional file after the close of submissions. Students are advised to check their file that was uploaded by downloading it from the e-learning platform after upload.
- b) The last uploaded file will be assessed unless specifically indicated as otherwise by the lecturer. Should multiple attempts be made that include before and after the deadline, the last attempt prior to the deadline will be assessed. Should the student elect to have the file assessed that was uploaded after the deadline, the penalties as per late submissions will apply.
- c) A maximum size of upload of assignment is 50MB per assignment (if multiple files are uploaded, the total size of all files is to total no more than 50MB). Should this be exceeded, the individual lecturer may deem the submission to be invalid and the student liable to receive a penalty, which may include a zero mark.

C. PENALTIES FOR LATE SUBMISSION

The Department is guided by DUT's General Rules for All Instructional Programmes. The rule G13(3) specifically refers. Practically, this is implemented in the following manner.

- a) It is the student's responsibility to ensure that all assignments/projects are submitted timeously and correctly and that they sit for all practicals, tests and exams.
- b) Should students miss the deadline for assignments/projects, the following penalties will apply.
 - a. Penalty of 10% of the grade for work that is submitted after the deadline but within the day of submission.

- Penalty of 20% of the grade for work that is submitted one day after the deadline.
- Penalty of 35% of the grade for work that is submitted two days after the deadline.
- d. Penalty of 50% of the grade for work that is submitted three days after the deadline.
- e. Penalty of 65% of the grade for work that is submitted four days after the deadline.
- Penalty of 80% of the grade for work that is submitted five days after the deadline.
- g. Work submitted six or more days after the deadline will not be assessed.
- c) For Continuous Assessment subjects only, if the original work was submitted late and should students elect to resubmit work that is eligible for upgrading, the penalty initially allocated to the original submission will still apply to the upgraded work.
- d) The penalties above do not apply to deadlines for resubmission / upgrading of work already assessed for consideration for final portfolio. No resubmitted / upgraded work will be considered or reassessed if the deadline is missed.
- No first time submissions of assignments/projects be evaluated at portfolio examinations.

D. LOSS OF DATA

- a) The computer systems are set up in a way that data saved onto the specific device will be wiped out should the user log out or the computer power off/restart. Loss of data due to this occurrence will be treated as per the below point.
- b) Loss of data / work on university or any other device for whatever reason (corruption of data, 'crashing' or theft of device, etc.) will not be considered as circumstances that allow for condoning of a late submission or for missing any assessment. Students are to ensure that regular back-ups of data occur, particularly in light of the numerous free online storage facilities available to them.

E. PUBLICATION OF MARKS

- a) All assessment results will be available via the DUT online mechanisms (Internet, result line, sms line) as soon as they become available. These constitute the officially published results. The onus therefore is on the student to obtain their results via any of these mechanisms. Non-receipt of results will not be accepted as a valid reason for missing deadlines for applications for remarks, scanning, reassessment, etc.
- b) Students are expected to check and confirm the accuracy of the marks reflected on the system within 5 days of the release thereof.

F. ENTRY INTO PORTFOLIO EXAMINATIONS

a) An average of 40% must be achieved across all assessment tasks that comprise the portfolio during the semester/year in order to gain access to the portfolio.

G. SPECIAL ASSESSMENTS

Referring to rule G13(3), application for a special assessment must be made within 5 days of the scheduled assessment being conducted. A special assessment may be granted by the Head of Department to a student who has been prevented from taking a test as a result of the following:

- a) Illness on the day of the scheduled assessment or immediately before it, provided that he/she submits a valid medical certificate, which has been signed by a registered and recognized health practitioner.
- b) By circumstances which, in the opinion of the Head of Department were beyond his/her control at the time of the test, provided satisfactory evidence is provided within 5 days of the scheduled assessment.
- Any documentation supplied in support of the application, such as doctors notes, have to be original. No scans or copies will be accepted.

Note: Applications for Special Exams are a separate matter and treated by the Faculty Office and not the Department, therefore application is through the Faculty Office. Rule G13(3) still applies.

H. SUPPLEMENTARY EXAMINATIONS & RE-WRITE EXAMINATIONS

Notwithstanding anything contrary to the General Rules, supplementary examinations will only be available in the following examinable (non-continuous assessment) subjects in this department to students that qualify for them:

i.National Diploma

First Year

Applied Building Science I

Second Year

- History & Appreciation of Architecture II
- Theory of Design II

Third Year

- Office Practice III
- Theory of Design III
- History & Appreciation of Architecture III

ii.Bachelor of Technology

- Theory of Design IV
- Housing IV
- Structures IV
- Principles of Urban Design IV
- Office Practice IV

iii.Bachelor of the Built Environment (Architecture)

- Academic Literacy IA
- Academic Literacy IB
- Law of Building Contracts 3
- Mathematics for the Built Environment 101
- Physics for the Built Environment IA
- Physics for the Built Environment IB
- Principles of Commercial Law 2
- Professional Practice 3
- Project Management
- Property and Land Economics 3
- Settlement History 101
- Sociology and Society
- Urban Settlements 2

I. CONTINUOUS EVALUATION / PORTFOLIO EVALUATION

- a) An average of 40% must be achieved across all assessment tasks that comprise the portfolio. A student may resubmit assignments prior to final portfolio evaluation date for summary reassessment. The lecturer for the subject will publish the deadline for resubmissions. This means that no new work will be assessed at final portfolio evaluation.
- b) For Continuous Assessment subjects only, there needs to be a clear, tangible, substantial and significant attempt at achieving all of the actual final assessment requirements for the work to be considered as submitted for purposes of determining if work qualifies for a resubmission. If in the opinion of the lecturer concerned the work does not demonstrate this, the work will not be eligible for resubmission.
- c) Resubmissions may be awarded a maximum mark of 50%.

J. ATTENDANCE FOR LECTURE / CRITIQUE / STUDIO SESSIONS

- a) Students are required to attend all formal critique sessions.
- Student are required to attend at least 75% of all lecture, tutorial and studio sessions.
- c) Students not achieving the required attendance for each subject individually may be subject to being excluded from attending the examinations / portfolio for that subject.
- d) Both submission of work and attendance at portfolio are compulsory, students not complying may be awarded a zero mark for the entire module.

8. EXPECTED GRADUATE OUTCOMES AND EXIT LEVEL OUTCOMES

The Graduate Outcomes of the BBE(Architecture) will be achieved by meeting the SACAP Exit Level Outcomes (ELO). Architecture students completing this qualification will need to demonstrate competence in all the following SACAP ELO indicated below.

- I: Architectural Design in which the graduate has to demonstrate
 - Knowledge of the principles and terminology applicable to architectural design
 - Understanding of the fundamentals of the design process
 - Ability to do thorough, appropriate planning
 - Understanding of problem analysis on a basic level
 - Knowledge of social and environmental issues
- 2. Environmental Relationships in which the graduate has to demonstrate
 - Awareness of the issues
- 3. Construction technology in which the graduate has to demonstrate
 - Knowledge of construction methods and uses for materials related to simple low rise building types
 - Ability to develop durable, cost effective climatic responsive construction details
 - Ability to conduct limited research into construction methods and materials and the appropriate applications
- 4. Building structures in which the graduate has to demonstrate
 - Knowledge of the basic structural concepts pertaining to buildings
- $5. \ \underline{Contextual} \ and \ \underline{urban} \ \underline{relationships} \ in \ which \ the \ \underline{graduate} \ has \ to \ demonstrate$
 - Awareness of the issues
- 6. <u>Architectural history, theory and precedent</u> in which the graduate has to demonstrate
 - Knowledge of the basic spatial and aesthetical aspects appropriate to architecture
 - Knowledge of architectural history in broad terms

- 7. Building services and related technologies in which the student has to demonstrate
 - Knowledge of the various technological aspects relating to services
 - Knowledge of the building regulations pertaining to all building services
 - Knowledge of the following technological aspects and building services.
 - Drainage and water reticulation
 - Electrical and electronic services and lighting
 - Communications
 - Air and gas supply
 - Heating and cooling
 - Elevators and escalators
 - Fire protection and control
 - Acoustics and sound systems
- 8. <u>Contract documentation and administration</u> in which the graduate has to demonstrate
 - Ability to produce a set of working drawings as part of a set of contract documents of a complex building to acceptable practice standards
 - Ability to develop durable, cost effective, climate responsive construction systems and details sensitive to the contextual language of the design concept
 - Understanding of component and material specification
 - Knowledge of the relevance of appropriate National Building Regulations (NBR) as well as the requirements of the NHBRC
 - Knowledge of local authority approval requirements and procedures
- 9. Computer applications in which the graduate has to demonstrate
 - Knowledge of computer technology presently in use in architectural practice and
 - Formal / Work Integrated learning with the ability to apply it in the execution of work. Computer software to include web browsers and communication programs, word processing, spreadsheets, architectural drawing, graphic and image editing
- 10. Office practice, legal aspects and ethics in which the graduate has to demonstrate
 - Knowledge of the terminology and basic concepts and principles of architectural practice
 - Knowledge of the contents of the various building contracts and the SAIA practice manual
 - Formal / Work integrated learning to demonstrate knowledge of the terminology and basic concepts and principles of business practice
 - Knowledge of the administrative and logistical support systems in a practice

9. PROGRESSION RULES

A. EXCLUSION RULES

See General Rule G17.

- a) Further to General Rule G17, a student is required:
 - To have passed all first year modules by the end of their second year of registration;
 - b. To have passed all second year modules by the end of their third year of registration;
 - To have passed at least half of the third year modules by the end of their fourth year of registration;
 - d. To complete the qualification by the end of five years of registration.
- b) Due to the integrated and scaffolded nature of the qualification and program delivery, students may be required to attend certain minor modules classes informally without working for credits (audit the class) that they may have already passed when completing major modules they have to re-register for. This is to be determined by the HoD at the time of re-registration of a major module.
- c) An average of 40% must be achieved across all assessment tasks / tests for an examination subject.
- d) Failure to achieve a 40% average in year mark will result in the student being excluded from the year end examination.

B. PROMOTION TO HIGHER LEVEL (NATIONAL DIPLOMA: ARCHITECTURAL TECHNOLOGY)

Students will only be allowed to register for the second year of study provided they have passed the

following subjects:

- Studio Work I
- Construction & Detailing I
- Presentation I
- History & Appreciation of Architecture I
- Computer Applications I
- Computer Aided Draughting III

Students will only be allowed to register for the third year of study provided they have passed the

following subjects:

- Studio Work II
- Construction & Detailing II
- Practical Studies II

Students that have passed the above subjects and have failed either or both of the subjects, History & Appreciation of Architecture II and/or Theory of Design II, may only register for their minor subjects in Third Year. Such students will however not be able to register for History & Appreciation of Architecture III and Theory of Design III until they have passed History & Appreciation of Architecture II and Theory of Design II.

C. CONFERMENT OF STATUS

See General Rule G10A. See General Rule G23.

D. EXEMPTIONS OF SUBJECTS

In accordance with the General Rule G9 candidates may apply for exemptions. Applications for exemptions must be submitted to the HOD: Architecture in writing on the prescribed credit exemption application form before the programme starts. Exemptions will be granted at the sole discretion of the Exemption Committee. Late applications will not be considered.

E. UNSATISFACTORY ACADEMIC PROGRESS

See General Rule G17.

F. WITHHOLDING OF ASSESSMENT RESULTS AND GRADUATION CERTIFICATES

Refer to General Rule G13 (1) (m).

G. SCANNING/RE-MARKING OF EXAMINATION SCRIPTS

Refer to General Rule G13 (1) (n).

H. SUPPLEMENTARY EXAMINATIONS

Refer to General Rule G13 (2).

I. SPECIAL EXAMINATIONS

Refer to General Rule G 13 (3).

J. ACADEMIC INTEGRITY

Refer to General Rule G 13 (1) (o).

10. FINANCIAL AID

Please consult directly with the DUT Financial Aid Office.

II. APPLICATION PROCEDURE

All first time entrants into the tertiary educational system MUST apply through the Central Applications Office (CAO), and preferably be done online.

Application forms are available from the Central Applications Office (CAO). These forms are also available at the Student Admissions office.

Address letters to: Central Applications Office, Private Bag X06, Dalbridge, 4014

Telephone: (031) 268 4444 Fax: (031) 2684422

Internet: http://www.cao.ac.za

Applications for Higher qualification (e.g. BTech: Architectural Technology; M.BE; PhD) need to be made through the Department Secretariat. For coursework qualifications (i.e. BTech: Architectural Technology), please ensure applications are in in September of the year prior to intended registration.

12. REGISTRATION PROCESS

Registration takes place in January each year. Application forms should be submitted in the year prior to the year the student intends to register. For further information, contact:

Department of Architecture, Durban University of Technology, Steve Biko Campus, P.O. Box 1334, Durban, 4000 - Telephone: (031) 373 2857

A. UNREGISTERED STUDENTS

Permission for *accepted* students to attend lectures pending finalization of registration is granted purely at the discretion of the Head of Department and is strictly not open ended. Students must register before the expiry date of the permission to attend form or the cut-off date set by the faculty for finalization of registration, whichever is the earlier date. The following is to be noted:

- This authorization is done in writing and must be applied for before lectures commence.
- b) This signed form must be presented at each lecture to the relevant lecturer to confirm the eligibility of students to attend and to record their attendance on the form. A record of suitable attendance on this form is vital to complete the late registration process.
- c) Being granted this permission to attend does not mean a student is registered, nor does it mean that a successful registration can be completed at a later date. Late registration is strictly in accordance with relevant university rules and procedures.
- d) Once the expiry date has been passed, students will no longer be permitted to attend lectures.
- e) Lecturers may retain hand-ins for students with permission to attend, but they may not assess any work of students until they are registered.

13. PLEASE NOTE THE FOLLOWING - Qualification Alignment Process

In order to align all existing qualifications to the requirements of the Higher Education Qualifications Sub Framework (HEQSF) please be advised that the existing NATED 151 National Diploma will be phased out as from 2018 and all Bachelor of Technology programmes as of 2020. The phase out process will be undertaken as follows: The final Ist time intake for the National Diploma: Architectural Technology will be in January 2017. The final Ist time intake for the Bachelor of Technology: Architectural Technology will be January 2019.

- From January 2016 all registered students must complete their annual subjects in a maximum of TWO registered consecutive years.
- 2) The subjects for the National Diploma: Architectural Technology and the Bachelor of Technology: Architectural Technology would be offered for the last time as indicated below. Thereafter only for those students who are repeating and dependant on available student numbers, would it be decided on whether to offer a subject or not.

Subjects offered for the last time January 2018:

Studiowork I, Construction and Detailing I, Presentation I, Applied Building Science I, Communication I, History and Appreciation of Architecture I, Computer Applications I and CAD III Part A.

Subjects offered for the last time January 2019:

Studiowork II, Construction and Detailing II, Practical Building Studies II, History and Appreciation of Architecture II, Theory of Design II, CAD III Part B.

Subjects offered for the last time January 2020:

Applied Design IV, Theory of Design IV, Structures IV No new registration for WIL from January 2020.

Subjects offered for the last time January 2021:

Studiowork III, Construction and Detailing III, Principles of Applied Design III, History and Appreciation of Architecture III, Theory of Design III, Services III, Survey and Landscaping III, Office Practice III.

Office Practice IV, Housing IV, Principles of Urban Design IV.

From January 2018, no student will be allowed to transfer to the phase out qualification from either within or external to the institution.

14. POST-GRADUTE STUDIES

The Department of Architecture is currently in a position to offer registration in a MASTERS DEGREE BY RESEARCH, the Master of the Built Environment and a Doctoral degree, the Doctor of Philosophy in Architecture

NEITHER degree counts towards professional registration, but as a Masters or Doctoral qualification, can articulate towards an academic career in the profession.

All enquiries must be directed to nomthandazos@dut.ac.za