**DIPLOMA IN BUILDING**
Qualification code: DBSC17 - NQF Level 6 (360 credits)
SAQA ID: 96922, CHE NUMBER: H16/10744/HEQSF

Campus where offered: Pretoria Campus

**REMARKS**

**a. Admission requirement(s) and selection criteria:**

- **FOR APPLICANTS WHO OBTAINED A SENIOR CERTIFICATE BEFORE 2008:**

  **Admission requirement(s):**
  A Senior Certificate or an equivalent qualification, with a D symbol (50 – 59%) at Higher Grade or a C symbol (60 – 69%) at Standard Grade for English and E symbols (40 – 49%) at Higher Grade or D symbols (50 – 59%) at Standard Grade for Mathematics and Physical Science.

  Applicants who do not meet the requirements for Mathematics and/or Physical Science may enrol for Mathematics N3 and/or Engineering Sciences N3 at any Technical and Vocational Education and Training (TVET) college, and if these are successfully passed at a performance level of at least 50%, they may re-apply for admission to the University.

  **Selection criteria:**
  To be considered for this qualification, applicants must have an Admission Point Score (APS) of at least 25 (excluding Life Orientation).

  **Assessment procedure:**
  All applications received by the published due dates will be ranked according to the APS achieved. After consideration of the Departmental Student Enrolment Plan (SEP), only the top performing applicants will be selected. A waiting list consisting of the remainder of the applicants will provide an opportunity for applicants to fill places created by accepted students failing to meet the enrolment dates.

- **FOR APPLICANTS WHO OBTAINED A NATIONAL SENIOR CERTIFICATE IN OR AFTER 2008:**

  **Admission requirement(s):**
  A National Senior Certificate, with a bachelor’s degree or a diploma endorsement, or an equivalent qualification, with an achievement level of at least 4 for English (home language or first additional language), 3 for Mathematics or Technical Mathematics and 3 for Physical Sciences or Technical Sciences.

  Applicants who do not meet the requirements for Mathematics or Technical Mathematics and/or Physical Sciences or Technical Physics, may enrol for Mathematics N3 and/or Engineering Sciences N3 at any Technical and Vocational Education and Training (TVET) college, and if these are successfully passed at a performance level of at least 50%, they may re-apply for admission to the University.

  **Selection criteria:**
  To be considered for this qualification, applicants must have an Admission Point Score (APS) of at least 25 (excluding Life Orientation).
Assessment procedure:
All applications received by the published due dates will be ranked according to the APS achieved. After consideration of the Departmental Student Enrolment Plan (SEP), only the top performing applicants will be selected. A waiting list consisting of the remainder of the applicants will provide an opportunity for applicants to fill places created by accepted students failing to meet the enrolment dates.

• FOR APPLICANTS WHO OBTAINED A QUALIFICATION FROM TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING (TVET) COLLEGES (PREVIOUSLY KNOWN AS FET COLLEGES):

Applicants with a National Certificate (Vocational) at NQF Level 4:

Admission requirement(s):
A National Certificate (Vocational) at NQF Level 4, with a bachelor’s degree or diploma endorsement, issued by the Council for Quality Assurance in General and Further Education and Training (Umalusi), with at least a 50% (APS of 4) for English and Mathematics, at least 60% (APS of 5) for Physical Sciences/Applied Engineering Technology/Materials and two other vocational subjects, and 50% for the fourth vocational subject.

Selection criteria:
To be considered for this qualification, applicants must have an Admission Point Score (APS) of at least 27 (excluding Life Orientation).

• APPLICANTS WITH A NATIONAL N CERTIFICATE/N DIPLOMA AS PUBLISHED IN NATED 191: N3 (NQF LEVEL 4) AND N4/N5/N6 (NQF LEVEL 5):

Admission requirement(s):
A National Senior Certificate (NSC) and a National N Certificate/N Diploma as published in Nated 191: N3 (NQF Level 4) and N4/N5/N6 (NQF Level 5), issued by the Council for Quality Assurance in General and Further Education and Training (Umalusi), with at least 50% (APS of 4) for English and for all subjects passed on a National N Certificate including Mathematics N3 and Engineering Sciences N3.

Applicants will be exempted from NQF Level 5 modules on the grounds of N4/N5/N6 subjects passed (a maximum of 50% of the qualification’s modules). Exemption will be granted for equivalent building sciences modules (including Mathematics and Engineering Sciences), successfully passed with at least 50% (APS of 4).

Selection criteria:
To be considered for this qualification, applicants must have an Admission Point Score (APS) of at least 24.

b. Minimum duration:
Three years.

c. Presentation:
Day classes.

d. Intake for this qualification:
January only.

e. Exclusion and readmission:
See Chapter 2 of Students’ Rules and Regulations.

f. Recognition of Prior Learning (RPL), equivalence and status:
See Chapter 30 of Students’ Rules and Regulations.
g. **Work-Integrated Learning I and II:**
Students are required to provide acceptable proof of employment before registration. See Chapter 5 of Students’ Rules and Regulations.

h. **Waiving of prerequisite modules:**
Prerequisites will only be waived in highly exceptional cases, based on a motivation by the Head of the Department and approved by the Executive Dean.

i. **Module credits:**
Module credits are shown in brackets after each module.

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### CURRICULUM

#### FIRST YEAR

<table>
<thead>
<tr>
<th>CODE</th>
<th>MODULE</th>
<th>NQF-L</th>
<th>CREDIT</th>
<th>PREREQUISITE MODULE(S)</th>
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<tbody>
<tr>
<td>ABC105D</td>
<td>Applied Building Science I</td>
<td>(5)</td>
<td>(20)</td>
<td></td>
</tr>
<tr>
<td>CMN105D</td>
<td>Construction Management I</td>
<td>(5)</td>
<td>(20)</td>
<td></td>
</tr>
<tr>
<td>COA105D</td>
<td>Computer Applications I</td>
<td>(5)</td>
<td>(10)</td>
<td></td>
</tr>
<tr>
<td>COM105D</td>
<td>Communication I</td>
<td>(5)</td>
<td>(10)</td>
<td></td>
</tr>
<tr>
<td>CTY105D</td>
<td>Construction Technology I</td>
<td>(5)</td>
<td>(20)</td>
<td></td>
</tr>
<tr>
<td>QSU105D</td>
<td>Quantity Surveying I</td>
<td>(5)</td>
<td>(20)</td>
<td></td>
</tr>
<tr>
<td>SSU105D</td>
<td>Site Surveying I</td>
<td>(5)</td>
<td>(20)</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>TOTAL CREDITS FOR THE FIRST YEAR:</strong></td>
<td></td>
<td><strong>120</strong></td>
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</table>

#### SECOND YEAR

Re-registration modules are offered in both semesters.

<table>
<thead>
<tr>
<th>CODE</th>
<th>MODULE</th>
<th>NQF-L</th>
<th>CREDIT</th>
<th>PREREQUISITE MODULE(S)</th>
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</thead>
<tbody>
<tr>
<td>CMN206D</td>
<td>Construction Management II</td>
<td>(6)</td>
<td>(20)</td>
<td>Construction Management I</td>
</tr>
<tr>
<td>CMN216R</td>
<td>Construction Management II (re-registration) (semester module)</td>
<td>(6)</td>
<td>(0)</td>
<td>Construction Management I</td>
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<tr>
<td>CTY205D</td>
<td>Construction Technology II</td>
<td>(5)</td>
<td>(20)</td>
<td>Construction Technology I</td>
</tr>
<tr>
<td>CTY215R</td>
<td>Construction Technology II (re-registration) (semester module)</td>
<td>(5)</td>
<td>(0)</td>
<td>Construction Technology I</td>
</tr>
<tr>
<td>QSU206D</td>
<td>Quantity Surveying II</td>
<td>(6)</td>
<td>(20)</td>
<td>Quantity Surveying I</td>
</tr>
<tr>
<td>QSU216R</td>
<td>Quantity Surveying II</td>
<td>(6)</td>
<td>(0)</td>
<td>Quantity Surveying I</td>
</tr>
<tr>
<td></td>
<td><strong>FIRST OR SECOND SEMESTER</strong></td>
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<tr>
<td></td>
<td>Students must compile and maintain a logbook of work completed, which must be certified by the supervisor at the place of employment.</td>
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<tr>
<td></td>
<td><strong>TOTAL CREDITS FOR THE SECOND YEAR:</strong></td>
<td></td>
<td><strong>120</strong></td>
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</table>

#### THIRD YEAR

<table>
<thead>
<tr>
<th>CODE</th>
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<th>NQF-L</th>
<th>CREDIT</th>
<th>PREREQUISITE MODULE(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMN306D</td>
<td>Construction Management III</td>
<td>(6)</td>
<td>(20)</td>
<td>Construction Management II</td>
</tr>
<tr>
<td>CSA306D</td>
<td>Construction Accounting III</td>
<td>(6)</td>
<td>(20)</td>
<td>Construction Management II</td>
</tr>
<tr>
<td>CTY306D</td>
<td>Construction Technology III</td>
<td>(6)</td>
<td>(20)</td>
<td>Construction Technology II</td>
</tr>
<tr>
<td>PAY306D</td>
<td>Price Analysis and Estimating III</td>
<td>(6)</td>
<td>(20)</td>
<td>Quantity Surveying II</td>
</tr>
<tr>
<td>QSU306D</td>
<td>Quantity Surveying III</td>
<td>(6)</td>
<td>(20)</td>
<td>Quantity Surveying II</td>
</tr>
</tbody>
</table>
SEK306D Structures and Concrete III (6) (20) Applied Building Science I

TOTAL CREDITS FOR THE THIRD YEAR: 120

TOTAL CREDITS FOR THE QUALIFICATION: 360

MODULE INFORMATION (OVERVIEW OF SYLLABUS)

The syllabus content is subject to change to accommodate industry changes. Please note that a more detailed syllabus is available at the Department or in the study guide that is applicable to a particular module. On 8 August 2018, the syllabus content was defined as follows:

A

APPLIED BUILDING SCIENCE I (ABC105D) 1 X 3-HOUR PAPER
(Module custodian: Department of Physics)

C

COMMUNICATION I (COM105D) CONTINUOUS ASSESSMENT
(Module custodian: Department of Applied Languages)
Communication theory, non-verbal communication (body language). Oral presentations, interviews, developing leadership and participation skills. Technical reports and correspondence. (Total tuition time: ± 180 hours)

COMPUTER APPLICATIONS I (COA105D) CONTINUOUS ASSESSMENT
(Subject/Module custodian: Department of End User Computing Unit)
Components of a microcomputer system, engineering applications of software. Managing personal computers. Introduction to computers. Basics of operating systems. Application programs, such as word-processing and spreadsheet programs. (Total tuition time: ± 180 hours)

CONSTRUCTION ACCOUNTING III (CSA306D) 1 X 3-HOUR PAPER
(Module custodian: Department of Accounting)

CONSTRUCTION MANAGEMENT I (CMN105D) 1 X 3-HOUR PAPER
(Module custodian: Department of Building Sciences)
Organisations involved in the building industry. Parties involved in the construction process. Construction undertakings and their organisational structures. Obtaining contracts. Introduction to site administration and cost control. Site meetings. Management functions and components: productivity and work study. Introduction to project planning. Introduction to personnel management. Subcontractors. Principles and applications of microeconomics. Scarcity, choice, elasticity utility and demand efficiency and equity, production and costs, price determination under different market structures: perfect competition, imperfect competition as well as monopoly. (Total tuition time: ± 180 hours)
CONSTRUCTION MANAGEMENT II (CMN206D, CMN216R)  
(Module custodian: Department of Building Sciences)
Introduction to Contract Law and the JBCC Minor Works contract. Projects based on relevant and appropriate site operations, which cover as many of the following topics as possible: legislation and company policy, communication in the micro-environment on the site, coordination of subcontractors, application of management functions and procedures, collection and application of information on plant, drawing up applications of bar charts, labour schedules, material schedules, plant-use schedules, plant maintenance schedules, networks, simple work study exercises. Application of the procurement and completion of materials for a building site. Application of the procurement and completion of materials for a building site. Principles and applications of macroeconomics. Measuring macroeconomic performance, simple Keynesian model, money and banking, fiscal and monetary policy, exchange rates and the balance of payments and introduction to international trade. Introduction to Building Information Modeling (BIM): BIM and the client. BIM in project management. Construction sequencing. Conflict, interference and collision detection. Facilities management. Faster and more effective processes. Controlled whole-life costs and environmental data. Lifecycle data. (Total tuition time: not available)

CONSTRUCTION MANAGEMENT III (CMN306D)  
(Subject custodian: Department of Building Sciences)

CONSTRUCTION TECHNOLOGY I (CTY105D)  
(Subject custodian: Department of Building Sciences)
Draughtsmanship and interpretation of drawings. Substructure and setting out of different types of foundations. Superstructure, i.e. walls, windows, doors. Concrete and timber suspension floors with stairs and railing. Roof construction and coverings. Electrical and plumbing services. Carpentry items, i.e. built-in cupboards, skirtings and ironmongery on fillings. Finishes on walls, floors and ceilings. Materials and properties in the building industry. (Total tuition time: ± 180 hours)

CONSTRUCTION TECHNOLOGY II (CTY205D, CTY215R)  
(Subject custodian: Department of Building Sciences)

CONSTRUCTION TECHNOLOGY III (CTY306D)  
(Subject custodian: Department of Building Sciences)

PRICE ANALYSIS AND ESTIMATING III (PAY306D)  
(Subject custodian: Department of Building Sciences)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
</table>
| QSU105D    | QUANTITY SURVEYING I (QSU105D)                   | 1 X 3-HOUR PAPER | **Subject custodian: Department of Building Sciences**
Introduction to the principles, processes and methods of measurement and documentation of builders' work. Drawing up of bills of quantities. Drawing up a list of dimensions. Calculation of quantities. Measurement and description of the following elements of a single-storey building: foundations, including site clearance and simple demolitions, superstructure brickwork, solid floor construction, roofs, finishes, comprising plaster, paint and tiling on walls, conventional floors and plastered and boarded ceilings on brandering. Stock steel, timber and aluminium windows. Stock flush and hard-wood doors, including timber and metal frames. Adjustments for windows, doors and plain openings. Working up by squaring, abstracting and billing. (Total tuition time: ± 180 hours) |
| QSU206D, QSU216R | QUANTITY SURVEYING II (QSU206D, QSU216R) PROJECT ASSESSMENT |          | **Subject custodian: Department of Building Sciences**
Projects based on load-bearing structures, including measuring, abstracting and billing with full descriptions and specifications. Reference to manufacturer catalogues and the ASAQS Model Preambles regarding the following: precast and pre-stressed concrete beams and floors, standard metal doors and windows, standard timber doors and windows, glass, prefabricated timber trusses, roof coverings, eaves, flashing and rainwater goods, floor, wall and ceiling finishes, drainage and plumbing detail, paint. The above projects should be augmented with the following systems when compiling a bill of quantities: traditional method x, computerised method, the use of the model preambles and x preliminaries. The appointment of the members of the professional team and their fee scales. The use of standard forms for certificates. BIM in quantity surveying. BIM and cost estimating. (Total tuition time: not available) |
| QSU306D    | QUANTITY SURVEYING III (QSU306D)                 | 1 X 3-HOUR PAPER | **Subject custodian: Department of Building Sciences**
Measurement and description of the following elements of multi-storey buildings: bulk earthworks and site clearance, load-bearing and framed concrete and brick structures, flat roofs, waterproofing to concrete roofs, sheet-metal covering and boarded roofs. Staircases, including balustrade walls, balustrading and finishes. Structural steelwork. Finishes, comprising facings, in-situ terrazzo, patent plaster finishes, more complex tiling, panelling, other non-standard finishes and suspended ceilings. Purpose-made timber and aluminium windows and doors, including sidelights, fanlights and adjustments. Joinery fittings. Plumbing and drainage complete. Prime cost and provisional sums, payment certificates, including final account adjustments and builders’ work regarding specialist installations. Practical working up and drawing up of bills of quantities, complete with trade preambles. (Total tuition time: ± 180 hours) |
| SSU105D    | SITE SURVEYING I (SSU105D)                       | 1 X 3-HOUR PAPER | **Module custodian: Department of Geomatics**
| SEK306D    | STRUCTURES AND CONCRETE III (SEK306D)            | 1 X 3-HOUR PAPER | **Module custodian: Department of Civil Engineering**
Elementary structural analysis, calculation of sectional properties, shear force and bending moment diagrams of simple supported beams with dead loads, as well as the design of beams in timber and steel. Reinforced concrete column design, steel columns. Earth pressures and foundations. Concrete: properties of concrete, mix design, batching, mixing, transporting, placing, compaction and curing of concrete, ready-mixed concrete, concrete pumping, quality control, special techniques, repair of concrete and cost analysis. (Total tuition time: not available) |
WORK-INTEGRATED LEARNING I (EXP115D)  WORK-INTEGRATED LEARNING I (EXP216D)

(*Subject custodian: Department of Building Sciences*)

Students are required to work for six months with approved employers who are –

- building contractors (preferably with MBA or BIA);
- registered quantity surveyors; or
- other employers approved by the Department of Building Sciences as being able to provide students with suitable Work-Integrated Learning.

Students should be given a broad introduction to the building industry and gain as much experience in the Build Industry as possible. (Total tuition time: six months)