BSc Quantity Surveying (12132023)

<table>
<thead>
<tr>
<th>Duration of study</th>
<th>3 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total credits</td>
<td>414</td>
</tr>
<tr>
<td>Contact</td>
<td>Mr DJ Hoffman  <a href="mailto:danie.hoffman@up.ac.za">danie.hoffman@up.ac.za</a>  +27 (0)124202551</td>
</tr>
</tbody>
</table>

Programme information

Quantity surveying is the science that delivers specialised financial and contractual services and advice to clients in the building and construction industry, as well as in related industries. The quantity surveyor is an independent and professional consultant who works with architects, consulting engineers, and the building contractor, in order to protect the interests of the client, while at the same time also looking after the interests of the contractor and subcontractors.

The student could enter the building or construction industry as a candidate quantity surveyor after he/she has completed the three-year degree. Such qualification, however, would not allow the person to register as a professional quantity surveyor without acquiring additional qualifications. After completing the honours programme the opportunities become far wider, and application can be made for registration as a professional quantity surveyor with the South African Council for the Quantity Surveying Profession, after further assessment and furnishing of evidence, in compliance with the prescribed competencies. Employment opportunities in the building and construction sector, government departments, in the property sector, banks and manufacturing industry exist for such registered quantity surveyors. Most, however, work in the private sector where they become employees/ partners/ directors of quantity surveying practices, or open their own practices.

The examinations for the BScHons degree in Quantity Surveying are approved by the Minister as prescribed examinations in terms of the stipulations of the Quantity Surveying Profession Act (Act No. 49/2000), as well as by the Royal Institution of Chartered Surveyors.

Admission requirements

- The following persons will be considered for admission: a candidate who is in possession of a certificate that is deemed by the University to be equivalent to the required Grade 12 certificate with university endorsement; a candidate who is a graduate from another tertiary institution or has been granted the status of a graduate of such an institution; and a candidate who is a graduate of another faculty at the University of Pretoria.
- Life Orientation is excluded when calculating the APS.
- Grade 11 results are used in the provisional admission of prospective students.
- A valid qualification with admission to degree studies is required.
- Minimum subject and achievement requirements, as set out below, are required. On first-year level a student has a choice between Afrikaans and English as language medium. In certain cases, tuition may be presented in English only, for example in electives, where the lecturer may not speak Afrikaans or in cases where it is not economically or practically viable.
- BSc (Quantity Surveying) is a selection programme.

<table>
<thead>
<tr>
<th>Minimum requirements</th>
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</table>
### Achievement level

<table>
<thead>
<tr>
<th>Afrikaans or English</th>
<th>Mathematics</th>
<th>Physical Science</th>
<th>APS</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSC/IEB HIGCSE AS-Level A-Level</td>
<td>NSC/IEB HIGCSE AS-Level A-Level</td>
<td>NSC/IEB HIGCSE AS-Level A-Level</td>
<td>or Accounting 4 or Accounting 3 or Accounting ?D or Accounting ?D</td>
</tr>
<tr>
<td>5 3 C C</td>
<td>5 3 C C</td>
<td>or Accounting 4 or Accounting 3 or Accounting ?D or Accounting ?D</td>
<td>30</td>
</tr>
</tbody>
</table>

### Other programme-specific information

**Please Note:** Students with Maths 4, should take STK 113 and STK 123 (instead of STK 110) during their first year of study and STK 120 during their second year of study.

The degree is awarded if all the prescribed modules have been passed.

### Promotion to next study year

**i. Promotion to the second semester of the first year and to the second year of study**

a. A newly registered first-year student who failed all the prescribed modules for the programme at the end of the first semester shall not be readmitted to the School for the Built Environment in the second semester.

b. A student who complies with all the requirements of the first year of study, or has at least obtained 110 credits, is promoted to the second year of study.

c. A student who has not obtained at least 70% of the credits of the first year of study after the November examinations must reapply for admission should he/she intend to continue with his/her studies. Written application must be submitted to the student administration of the School for the Built Environment no later than 12 January. Late applications will be accepted only in exceptional circumstances after approval by the Dean and conditions of readmission as determined by the admissions committee shall apply should first-year students be readmitted.

d. Students who have not passed all the prescribed modules of the first year of study, as well as students who are readmitted in terms of (c) must register for the outstanding modules of the first year.

e. A student who is repeating his/her first year, may, on recommendation of the relevant head of department and with the approval of the Dean, be permitted to enrol for modules of the second year of study in addition to the first-year modules which he or she failed, providing that he or she complies with the prerequisites for the second-year modules and that no timetable clashes occur. The number of credits per semester for which a student registers may not exceed the prescribed number of credits per semester by more than 16 credits.

**ii. Promotion to the third year of study**

a. A student who complies with all the requirements of the second year of study, or has at least obtained 230 credits, is promoted to the third year of study.

b. The Dean may, on the recommendation of the Head of Department, allow a student, who qualifies for promotion to a subsequent year of study, but who has not passed all the modules of that year, to carry over those modules to the next or a later year.

c. The number of credits per semester for which a student registers may not exceed the prescribed number of credits per semester by more than 16 credits.

d. A student who complies with all the requirements for the degree with the exception of one year module or two semester modules, in which a final mark of at least 40% has been obtained, may be admitted to a special
examination in the module(s) concerned, at the start of the ensuing semester.

e. (e) On the recommendation of the Head of Department, the Dean may in exceptional circumstances deviate from the abovementioned stipulations, provided that no timetable clashes occur.

Pass with distinction

The degree is conferred with distinction on a student:

i. if no module of the second and third study year was repeated and a weighted average of at least 75% was obtained in one year in all the modules (excluding JCP 201), of the final study year;

ii. the degree programme was completed within the prescribed three study years, and the final study year modules were passed on first registration without any supplementary or special examinations.
Curriculum: Year 1

Minimum credits: 141

Fundamental modules

Academic information management 101 (AIM 101)

Module content:
Find, evaluate, process, manage and present information resources for academic purposes using appropriate technology. Apply effective search strategies in different technological environments. Demonstrate the ethical and fair use of information resources. Integrate 21st-century communications into the management of academic information.

Module credits: 6.00

Service modules
- Faculty of Engineering, Built Environment and Information Technology
- Faculty of Education
- Faculty of Economic and Management Sciences
- Faculty of Humanities
- Faculty of Law
- Faculty of Health Sciences
- Faculty of Natural and Agricultural Sciences
- Faculty of Theology
- Faculty of Veterinary Science

Prerequisites: No prerequisites.

Contact time: 2 lectures per week

Language of tuition: Separate classes for Afrikaans and English

Academic organisation: Information Science

Period of presentation: Semester 1

Academic literacy for Construction Economics 122 (ALL 122)

Module content:
By the end of this module students should be able to cope more confidently and competently with the reading, writing and critical thinking demands that are characteristic of the field of Construction Economics.

Module credits: 6.00

Service modules: Faculty of Engineering, Built Environment and Information Technology

Prerequisites: No prerequisites.

Contact time: 2 lectures per week, 1 web-based period per week

Language of tuition: Module is presented in English

Academic organisation: Unit for Academic Literacy

Period of presentation: Semester 1
### Academic orientation 112 (UPO 112)

**Module credits**: 0.00  
**Language of tuition**: Afrikaans and English is used in one class  
**Academic organisation**: EBIT Dean's Office  
**Period of presentation**: Year

### Core modules

#### Building organisation 121 (BGG 121)

**Module content:**
The structure of the building industry and the role of building disciplines and related parties.

**Module credits**: 3.00  
**Prerequisites**: No prerequisites.  
**Contact time**: 1 lecture per week  
**Language of tuition**: Separate classes for Afrikaans and English  
**Academic organisation**: Construction Economics  
**Period of presentation**: Semester 1

#### Building drawings 111 (BOU 111)

**Module content:**
Students are introduced to design aspects in the built environment by doing basic technical drawings of simple building structures with appropriate detail sketches. Assignments during the semester expose the students to building plan interpretation through the following topics: foundations; super-structure; roof structure; window and door types; plan and sectional drawings and local authority submission criteria.

**Module credits**: 6.00  
**Prerequisites**: No prerequisites.  
**Contact time**: 1 practical per week, 1 lecture per week  
**Language of tuition**: Separate classes for Afrikaans and English  
**Academic organisation**: Construction Economics  
**Period of presentation**: Semester 1

#### Building drawings 121 (BOU 121)

**Module content:**
Broadens the vocabulary of the technical language from BOU 111. Students are introduced to other aspects of the building industry that include the following topics: topography; symbols; ergonomic design principles;
orientation of buildings; perspective drawings; waterproofing and dampcourse applications.

<table>
<thead>
<tr>
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<th>6.00</th>
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<td>Prerequisites</td>
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<tr>
<td>Contact time</td>
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<tr>
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<tr>
<td>Academic organisation</td>
<td>Construction Economics</td>
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<tr>
<td>Period of presentation</td>
<td>Semester 2</td>
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</table>

**Building science 110 (BWT 110)**

**Module content:**
Principles, methods and materials used in best practice in the construction of simple single-storey buildings up to wall plate height.

<table>
<thead>
<tr>
<th>Module credits</th>
<th>9.00</th>
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</thead>
<tbody>
<tr>
<td>Prerequisites</td>
<td>No prerequisites.</td>
</tr>
<tr>
<td>Contact time</td>
<td>3 lectures per week</td>
</tr>
<tr>
<td>Language of tuition</td>
<td>Separate classes for Afrikaans and English</td>
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<td>Semester 1</td>
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</table>

**Building science 120 (BWT 120)**

**Module content:**
Principles, methods and materials used in best practice in the construction of simple single-storey buildings from wall plate height to completion including finishes and external work. Introduction to alternative practices and materials for sustainability.

<table>
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<tr>
<td>Prerequisites</td>
<td>BWT 110 GS</td>
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<tr>
<td>Contact time</td>
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<td>Language of tuition</td>
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<td>Construction Economics</td>
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<td>Semester 2</td>
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</table>

**Economics 110 (EKN 110)**

**Module content:**
This module deals with the core principles of economics. A distinction between macroeconomics and
Microeconomics is made. A discussion of the market system and circular flow of goods, services, and money is followed by a section dealing with microeconomic principles, including demand and supply analysis, consumer behaviour and utility maximisation, production and the costs thereof, and the different market models and firm behaviour. Labour market institutions and issues, wage determination, as well as income inequality and poverty are also addressed. A section of money, banking, interest rates and monetary policy concludes the course.

**Module credits**
10.00

**Service modules**
- Faculty of Engineering, Built Environment and Information Technology
- Faculty of Education
- Faculty of Humanities
- Faculty of Natural and Agricultural Sciences

**Prerequisites**
No prerequisites.

**Contact time**
1 discussion class per week, 2 lectures per week

**Language of tuition**
Separate classes for Afrikaans and English

**Academic organisation**
Economics

**Period of presentation**
Semester 1

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**Economics 120 (EKN 120)**

**Module content:**
This module deals with the core principles of economics, especially macroeconomic measurement the private and public sectors of the South African economy receive attention, while basic macroeconomic relationships and the measurement of domestic output and national income are discussed. Aggregate demand and supply analysis stands core to this course which is also used to introduce students to the analysis of economic growth, unemployment and inflation. The microeconomics of government is addressed in a separate section, followed by a section on international economics, focusing on international trade, exchange rates and the balance of payments. The economics of developing countries and South Africa in the global economy conclude the course.

**Module credits**
10.00

**Service modules**
- Faculty of Engineering, Built Environment and Information Technology
- Faculty of Education
- Faculty of Humanities
- Faculty of Natural and Agricultural Sciences

**Prerequisites**
EKN 110 GS or EKN 113 GS and at least 4 (50-59%) in Mathematics in the Grade 12 examination or 60% in STK 113 and concurrently registered for STK 123

**Contact time**
2 lectures per week, 1 discussion class per week

**Language of tuition**
Separate classes for Afrikaans and English

**Academic organisation**
Economics

**Period of presentation**
Semester 2

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**Building services 112 (GBD 112)**
**Module content:**
Sanitary services; soil and waste drainage for simple, multi-storey and multi-purpose buildings; local sewage by-laws; construction of all types of sewage and sanitary fittings.

<table>
<thead>
<tr>
<th><strong>Module credits</strong></th>
<th>6.00</th>
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<tbody>
<tr>
<td><strong>Prerequisites</strong></td>
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<tr>
<td><strong>Contact time</strong></td>
<td>2 lectures per week</td>
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<tr>
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<td>Separate classes for Afrikaans and English</td>
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<tr>
<td><strong>Academic organisation</strong></td>
<td>Construction Economics</td>
</tr>
<tr>
<td><strong>Period of presentation</strong></td>
<td>Semester 1</td>
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</tbody>
</table>

**Building services 122 (GBD 122)**

**Module content:**
Sanitary services; hot and cold-water supply to simple and multi-storey buildings; local by-laws; water reticulation to town development; different hot-water systems; water purification systems; water and energy saving.

<table>
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<td><strong>Contact time</strong></td>
<td>2 lectures per week</td>
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<td><strong>Academic organisation</strong></td>
<td>Construction Economics</td>
</tr>
<tr>
<td><strong>Period of presentation</strong></td>
<td>Semester 2</td>
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</table>

**Quantities 101 (HVH 101)**

**Module content:**
Introduction to quantity surveying, mensuration; interpretation of drawings, methodology of measuring, working up processes, general instructions, measuring of simple building elements.

<table>
<thead>
<tr>
<th><strong>Module credits</strong></th>
<th>24.00</th>
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</thead>
<tbody>
<tr>
<td><strong>Prerequisites</strong></td>
<td>No prerequisites.</td>
</tr>
<tr>
<td><strong>Contact time</strong></td>
<td>3 lectures per week, 1 practical per week</td>
</tr>
<tr>
<td><strong>Language of tuition</strong></td>
<td>Separate classes for Afrikaans and English</td>
</tr>
<tr>
<td><strong>Academic organisation</strong></td>
<td>Construction Economics</td>
</tr>
<tr>
<td><strong>Period of presentation</strong></td>
<td>Year</td>
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</table>

**History of the environment 122 (OMG 122)**

**Module content:**
Introduction to the vocabulary of the built environment as developed over the history of human settlement. Concise history of the development of the built environment from early settlement to modern cities. The role and responsibilities of the built environment professional in engaging with built environment heritage in the form of cultural and natural landscapes.

**Module credits** 6.00  
**Prerequisites** No prerequisites.  
**Contact time** 2 lectures per week  
**Language of tuition** Separate classes for Afrikaans and English  
**Academic organisation** Architecture  
**Period of presentation** Semester 2  

**Introduction to structures 110 (SKE 110)**

**Module content:**
Design; basics (forces, moments, equilibrium, reactions, stress, strain); materials; loads; pin-jointed trusses; tension members.

**Module credits** 9.00  
**Service modules** Faculty of Engineering, Built Environment and Information Technology  
**Prerequisites** No prerequisites.  
**Contact time** 2 lectures per week, 1 discussion class per week  
**Language of tuition** Separate classes for Afrikaans and English  
**Academic organisation** Civil Eng  
**Period of presentation** Semester 1  

**Structures 120 (SKE 120)**

**Module content:**
Beams (shear force and bending moment, bending and shear stresses, design of standard beams in steel, concrete and timber, section properties, lateral restraint); compression members; combined axial and bending; deflection.

**Module credits** 9.00  
**Service modules** Faculty of Engineering, Built Environment and Information Technology  
**Prerequisites** SKE 110 GS  
**Contact time** 1 tutorial per week, 2 lectures per week  
**Language of tuition** Separate classes for Afrikaans and English  
**Academic organisation** Civil Eng  
**Period of presentation** Semester 2
Mathematics 134 (WTW 134)

Module content:
*Students will not be credited for more than one of the following modules for their degree: WTW 134, WTW 165, WTW 114, WTW 158. WTW 134 does not lead to admission to Mathematics at 200 level and is intended for students who require Mathematics at 100 level only. WTW 134 is offered as WTW 165 in the second semester only to students who have applied in the first semester of the current year for the approximately 65 MBChB, or the 5-6 BChD places becoming available in the second semester and who were therefore enrolled for MGW 112 in the first semester of the current year.

Functions, derivatives, interpretation of the derivative, rules of differentiation, applications of differentiation, integration, interpretation of the definite integral, applications of integration. Matrices, solutions of systems of equations. All topics are studied in the context of applications.

Module credits
16.00

Service modules
Faculty of Engineering, Built Environment and Information Technology
Faculty of Education
Faculty of Veterinary Science

Prerequisites
Refer to Regulation 1.2: At least 50% for Mathematics in the Grade 12 examination.

Contact time
4 lectures per week, 1 tutorial per week

Language of tuition
Separate classes for Afrikaans and English

Academic organisation
Mathematics and Applied Maths

Period of presentation
Semester 1
Curriculum: Year 2
Minimum credits: 123

Core modules

Building science 210 (BWT 210)
Module content:
Erection and construction of multi-storey buildings, including site management and temporary site work, building equipment and earthwork machinery, specialised foundations, bulk excavations and advanced concrete construction, including retaining walls. Timber and steel structures as construction methods.

<table>
<thead>
<tr>
<th>Module credits</th>
<th>9.00</th>
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</thead>
<tbody>
<tr>
<td>Prerequisites</td>
<td>BWT 110 GS and BWT 120 GS</td>
</tr>
<tr>
<td>Contact time</td>
<td>3 lectures per week</td>
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<tr>
<td>Language of tuition</td>
<td>Afrikaans and English is used in one class</td>
</tr>
<tr>
<td>Academic organisation</td>
<td>Construction Economics</td>
</tr>
<tr>
<td>Period of presentation</td>
<td>Semester 1</td>
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</table>

Building science 220 (BWT 220)
Module content:
Material study of metals and advanced materials. Study and development of sensitivity for and the philosophy of industrial safety, accident prevention and total loss control safety risk management in the construction industry.

<table>
<thead>
<tr>
<th>Module credits</th>
<th>9.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prerequisites</td>
<td>No prerequisites.</td>
</tr>
<tr>
<td>Contact time</td>
<td>3 lectures per week</td>
</tr>
<tr>
<td>Language of tuition</td>
<td>Afrikaans and English is used in one class</td>
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<tr>
<td>Academic organisation</td>
<td>Construction Economics</td>
</tr>
<tr>
<td>Period of presentation</td>
<td>Semester 2</td>
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</table>

Financial management 110 (FBS 110)
Module content:
*Only for BSc (Mathematical Statistics, Construction Management, Real Estate and Quantity Surveying) and BEng (Industrial Engineering) students.
the role of financial institutions. Risk and return characteristics of various financial instruments. Issuing ordinary shares and debt instruments.

**Module credits**
10.00

**Service modules**
Faculty of Engineering, Built Environment and Information Technology
Faculty of Natural and Agricultural Sciences

**Prerequisites**
No prerequisites.

**Contact time**
3 lectures per week

**Language of tuition**
Module is presented in English

**Academic organisation**
Financial Management

**Period of presentation**
Semester 1

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**Financial management 120 (FBS 120)**

**Module content:**
*Only for BSc (Mathematical Statistics, Construction Management, Real Estate and Quantity Surveying) students.* Analysis of financial statements. Budgeting and budgetary control. Tax principles and normal income tax for individuals. Time value of money and its use for financial and investment decisions. Calculating the cost of capital and the financing of a business to maintain the optimal capital structure. Capital investment decisions and a study of the financial selection criteria in the evaluation of capital investment projects. The dividend decision and an overview of financial risk management.

**Module credits**
10.00

**Service modules**
Faculty of Engineering, Built Environment and Information Technology
Faculty of Natural and Agricultural Sciences

**Prerequisites**
No prerequisites.

**Contact time**
3 lectures per week

**Language of tuition**
Module is presented in English

**Academic organisation**
Financial Management

**Period of presentation**
Semester 2

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**Building services 211 (GBD 211)**

**Module content:**
Introduction to the principles of indoor comfort. Heating, ventilation and air-conditioning systems. Installation and operation of lifts and other mechanical services. Fire detection and protection.

**Module credits**
6.00

**Prerequisites**
No prerequisites.

**Contact time**
2 lectures per week

**Language of tuition**
Afrikaans and English is used in one class
### Quantities 200 (HVH 200)

**Module content:**
Measuring of simple buildings and simple building elements, and external works. Abstracting and billing.

<table>
<thead>
<tr>
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<tbody>
<tr>
<td><strong>Prerequisites</strong></td>
<td>BWT 110 GS, BWT 120 GS and HVH 101</td>
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<tr>
<td><strong>Contact time</strong></td>
<td>3 lectures per week, 1 practical per week</td>
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<td><strong>Language of tuition</strong></td>
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<td>Year</td>
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### Reinforced concrete structures 210 (SKE 210)

**Module content:**
Properties of reinforced concrete; construction methods; slabs; beams; columns; foundations; retaining walls; placement of reinforcement in the various structural members; basic concepts of prestressed concrete.

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<thead>
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<td><strong>Service modules</strong></td>
<td>Faculty of Engineering, Built Environment and Information Technology</td>
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<tr>
<td><strong>Prerequisites</strong></td>
<td>SKE 120 GS</td>
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<td><strong>Contact time</strong></td>
<td>2 lectures per week</td>
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<td><strong>Language of tuition</strong></td>
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<tr>
<td><strong>Academic organisation</strong></td>
<td>Civil Eng</td>
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<tr>
<td><strong>Period of presentation</strong></td>
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### Civil engineering services 220 (SKE 220)

**Module content:**
Water reticulation; sewerage reticulation; stormwater reticulation; roads.

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<thead>
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</table>
### Statistics 110 (STK 110)

**Module content:**

Descriptive statistics:
- Sampling and the collection of data; frequency distributions and graphical representations. Descriptive measures of location and dispersion.

Probability and inference:
- Introductory probability theory and theoretical distributions. Sampling distributions. Estimation theory and hypothesis testing of sampling averages and proportions (one and two-sample cases). Identification, use, evaluation and interpretation of statistical computer packages and statistical techniques.

**Module credits**

13.00

**Service modules**

- Faculty of Engineering, Built Environment and Information Technology
- Faculty of Education
- Faculty of Humanities
- Faculty of Natural and Agricultural Sciences

**Prerequisites**

At least 5 (60-69%) in Mathematics in the Grade 12 examination. Candidates who do not qualify for STK 110 must register for STK 113 and STK 123

**Contact time**

1 tutorial per week, 1 practical per week, 3 lectures per week

**Language of tuition**

Separate classes for Afrikaans and English

**Academic organisation**

Statistics

**Period of presentation**

Semester 2

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### Statistics 161 (STK 161)

**Module content:**

- Multivariate statistics analysis of variance; categorical data analysis; distribution-free methods; curve fitting, regression and correlation; the analysis of time series and indices. Identification, use, evaluation and interpretation of statistical computer packages and statistical techniques. This module is also presented as an anti-semester bilingual module.

**Module credits**

6.00

**Service modules**

- Faculty of Engineering, Built Environment and Information Technology
- Faculty of Natural and Agricultural Sciences

**Prerequisites**

- STK 110 GS or both STK 113 GS and STK 123 GS

**Contact time**

1 practical per week, 3 lectures per week

**Language of tuition**

Separate classes for Afrikaans and English

**Academic organisation**

Statistics

**Period of presentation**

Semester 1
Period of presentation  Quarter 3

Site surveying 213 (TRN 213)

Module content:
General surveying; instruments, their handling and adjusting; surveying systems and simple calculations; determining of levels; setting out of the works; tacheometry and plotting; scales, planimetry; areas and volumes; construction surveying; aerial photography.

Module credits  12.00

Prerequisites  No prerequisites.

Contact time  1 practical per week, 2 lectures per week

Language of tuition  Module is presented in English

Academic organisation  Geography, Geoinf + Meteor

Period of presentation  Semester 1

Building services 221 (GBD 221)

Module content:
Theory of electricity; regulations of electricity-supply authorities; electrical installations; distribution of electricity.

Module credits  6.00

Prerequisites  No prerequisites.

Contact time  2 lectures per week

Language of tuition  Afrikaans and English is used in one class

Academic organisation  Construction Economics

Period of presentation  Semester 2
Curriculum: Final year

Minimum credits: 150

Core modules

Business law 310 (BER 310)
Module content:
Introduction to law. General principles of the law of contract. Specific contracts: purchase contracts; letting and
hiring of work; employment contracts. Agency. General aspects of entrepreneurial law. Dispute resolution –
mediation and arbitration.

<table>
<thead>
<tr>
<th>Module credits</th>
<th>16.00</th>
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<tbody>
<tr>
<td>Service modules</td>
<td>Faculty of Engineering, Built Environment and Information Technology</td>
</tr>
<tr>
<td>Prerequisites</td>
<td>No prerequisites.</td>
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<tr>
<td>Contact time</td>
<td>4 lectures per week</td>
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<tr>
<td>Language of tuition</td>
<td>Separate classes for Afrikaans and English</td>
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<tr>
<td>Academic organisation</td>
<td>Mercantile Law</td>
</tr>
<tr>
<td>Period of presentation</td>
<td>Semester 1</td>
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</tbody>
</table>

Housing 320 (BHU 320)
Module content:
Concepts, principles, history, current trends in settlement, shelter and integrated living environments; role of
housing in society; statutory policy and planning frameworks and paradigms; housing delivery options; housing
development management; financing and property rights options; housing types and densities; housing product,
norms and standards; management and maintenance of social housing stock; housing needs assessment and
post-occupancy evaluation; consumer education and protection.

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<tr>
<th>Module credits</th>
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<tbody>
<tr>
<td>Prerequisites</td>
<td>No prerequisites.</td>
</tr>
<tr>
<td>Contact time</td>
<td>2 lectures per week</td>
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<tr>
<td>Language of tuition</td>
<td>Afrikaans and English is used in one class</td>
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<tr>
<td>Academic organisation</td>
<td>Construction Economics</td>
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<tr>
<td>Period of presentation</td>
<td>Semester 2</td>
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</tbody>
</table>

Quantity surveying practice 300 (BRK 300)
Module content:
Management theory; basic principles of production management, lists of materials; pricing; payment certificates;
final accounts; contract price adjustments; application of computer-based measuring programmes.
Module credits | 18.00
---|---
Prerequisites | HVH 200 GS
Contact time | 3 lectures per week
Language of tuition | Afrikaans and English is used in one class
Academic organisation | Construction Economics
Period of presentation | Year

**Building science 310 (BWT 310)**

**Module content:**

Module credits | 9.00
---|---
Prerequisites | No prerequisites.
Contact time | 3 lectures per week
Language of tuition | Afrikaans and English is used in one class
Academic organisation | Construction Economics
Period of presentation | Semester 1

**Building science 320 (BWT 320)**

**Module content:**
Thermal properties of insulation systems and construction materials. Critical review of current development and construction practice; alternative construction technologies; innovation in construction; technical evaluation of innovative construction materials and methods; life cycle costing and life cycle analysis; the National Building Regulations.

Module credits | 9.00
---|---
Prerequisites | No prerequisites.
Contact time | 3 lectures per week
Language of tuition | Afrikaans and English is used in one class
Academic organisation | Construction Economics
Period of presentation | Semester 2

**Introduction to property law 320 (EOW 320)**

**Module content:**
Moveable and immovable property. Rights over immovable property; private legal circumscription of ownership;
relevant legislation pertaining to property; real securities; the registration of rights; zoning regulations.

**Module credits**  6.00

**Prerequisites**  No prerequisites.

**Contact time**  2 lectures per week

**Language of tuition**  Separate classes for Afrikaans and English

**Academic organisation**  Construction Economics

**Period of presentation**  Semester 2

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**Financial management 210 (FBS 210)**

**Module content:**

*Only for BCom (Financial Sciences, Investment Management and Law) and BSc (Construction Management, Quantity Surveying and Real Estate) students.

Framework and purpose of financial management; understanding financial statements; analysis of financial statements for decision making; time value of money; risk and return relationships; business valuation; short-term planning; current asset management.

**Module credits**  16.00

**Service modules**  Faculty of Engineering, Built Environment and Information Technology

**Prerequisites**  BCom Financial Sciences, Investment Management and Law: FRK111 and FRK121 (or FRK100 or 101), STK110, 120 or FBS121, and simultaneously registered for FRK211; BSc Construction Management, Quantity Surveying and Real Estate: FBS110, 120, STK110 and STK120

**Contact time**  3 lectures per week

**Language of tuition**  Module is presented in English

**Academic organisation**  Financial Management

**Period of presentation**  Semester 1

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**Financial management 320 (FBS 320)**

**Module content:**

*Only for BCom (Financial Sciences, Investment Management, and Law) and BScs (Construction Management, Quantity Surveying and Real Estate) students.

Cost of capital; determination of capital requirements and the financing of a business to maintain the optimal capital structure; the investment decision and the study of financial selection criteria in the evaluation of capital investment projects; impact of inflation and risk on capital investment decisions; evaluation of leasing decisions; dividend decisions; international financial management. Valuation principles and practices: an introduction to security analysis; hybrids and derivative instruments, mergers and acquisitions.

**Module credits**  20.00

**Service modules**  Faculty of Engineering, Built Environment and Information Technology
Prerequisites
FBS 210. Only available to 07130202, 07130203, 07130204, 07130071 and 07130151

Contact time
3 lectures per week

Language of tuition
Module is presented in English

Academic organisation
Financial Management

Period of presentation
Semester 2

Quantities 300 (HVH 300)

Module content:

Module credits
24.00

Prerequisites
BWT 210 GS, BWT 220 GS, GBD 112 GS, GBD 122 GS and HVH 200

Contact time
3 lectures per week, 1 practical per week

Language of tuition
Afrikaans and English is used in one class

Academic organisation
Construction Economics

Period of presentation
Year

Community-based project 201 (JCP 201)

Module content:
This project-orientated module is a form of applied learning which is directed at specific community needs and is integrated into all undergraduate academic programmes offered by the Faculty of Engineering, Built Environment and Information Technology. The main objectives with the module are as follows:
(1) The execution of a community related project aimed at achieving a beneficial impact on a chosen section of society, preferably but not exclusively, by engagement with a section of society which is different from the student's own social background.
(2) The development of an awareness of personal, social and cultural values, an attitude to be of service, and an understanding of social issues, for the purpose of being a responsible professional.
(3) The development of important multidisciplinary and life skills, such as communication, interpersonal and leadership skills.

Assessment in the module will include all or most of the following components: evaluation and approval of project proposal, assessment of oral and/or written progress reports, peer assessment in the event of team projects, written reportback by those at which the project was aimed at, and final assessment on grounds of the submission of a portfolio and a written report.

Module credits
8.00

Prerequisites
No prerequisites.

Contact time
1 other contact session per week
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<td><strong>Academic organisation</strong></td>
<td>Informatics</td>
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<td>Year</td>
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**Building services 311 (GBD 311)**

**Module content:**
Principles of illumination; illumination installations; lightning security; security systems; communication systems. Multimedia installations.

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<tr>
<td><strong>Prerequisites</strong></td>
<td>GBD 221 GS</td>
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<tr>
<td><strong>Contact time</strong></td>
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**Sustainable construction 320 (VKN 320)**

**Module content:**
Introduction to sustainable development and general sustainable construction principles, processes and technology. Sustainable practices on the construction site. Relevant regulations and voluntary programmes, including an introduction to ‘Green Star’ rating.

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<td><strong>Contact time</strong></td>
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**Research methodology 320 (NNM 320)**

**Module content:**
Introduction to scientific research. Planning and preparation of a research project. Different research methods.

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The information published here is subject to change and may be amended after the publication of this information. The General Regulations (G Regulations) apply to all faculties of the University of Pretoria. It is expected of each student to familiarise himself or herself well with these regulations as well as with the information contained in the General Rules section. Ignorance concerning these regulations and rules will not be accepted as an excuse for any transgression.