University of Pretoria Yearbook 2019

BSc Construction Management (12132025)

Minimum duration of study	3 years
Total credits	424
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Programme information

Construction management is the field of study meant for the person who wishes to become part of the process of infrastructure development, especially the construction of buildings. The construction manager is a professional business person who acts as manager for undertakings in the building, construction and property industry as well as related support services.

Career opportunities cover a wide spectrum and construction managers find employment as main and subcontractors in the building and construction industry, as project managers or investment experts with financial institutions and property developers, as property experts who offer broker services and compile packages, as managers of building and property portfolios for investors, as suppliers of material and equipment to the building and construction industry, as consultants for financial services in the construction and related sectors, or as private entrepreneurs working in these fields.

The examinations of the BScHons degree in Construction Management are recognised by the minister as prescribed examinations in terms of the stipulations as described in the Project and Construction Management Professions Act (Act No 48/2000), as well as by the Chartered Institute of Building.

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

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 conditional 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.
- BSc (Construction Management) is a selection programme.
- Tuition will be presented in English only.

Minimum requirements
Achievement level

English Home Language or English First Additional Language		Mathematics		Physical Science or Accounting		APS
NSC/IEB	AS Level	NSC/IEB	AS Level	NSC/IEB	AS Level	
5	C	5	C	4	D	**30**

* Cambridge A level candidates who obtained at least a D in the required subjects, will be considered for admission. International Baccalaureate (IB) HL candidates who obtained at least a 4 in the required subjects, will be considered for admission.

Promotion to next study year

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.

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 relevant 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. On the recommendation of the relevant 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 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 and Religion Faculty of Veterinary Science
Prerequisites	No prerequisites.
Contact time	2 lectures per week
Language of tuition	Module is presented in English
Department	Information Science
Period of presentation	Semester 1

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.

Academic information management 111 (AIM 111)

Module credits	4.00
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 and Religion
Prerequisites	No prerequisites.
Contact time	2 lectures per week
Language of tuition	Module is presented in English
Department	Information Science

Period of presentation	Semester 1

Module content

Find, evaluate, process, manage and present information resources for academic purposes using appropriate technology.

Academic information management 121 (AIM 121)

Module credits	4.00
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 and Religion Faculty of Veterinary Science
Prerequisites	No prerequisites.
Contact time	2 lectures per week
Language of tuition	Module is presented in English
Department	Informatics
Period of presentation	Semester 2

Module content

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.

Academic literacy for Construction Economics 122 (ALL 122)

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
Department	Unit for Academic Literacy
Period of presentation	Semester 1

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.

Academic orientation 112 (UPO 112)

Module credits	0.00

Language of tuition	Module is presented in English
Department	EBIT Deans Office
Period of presentation	Year

Core modules

Building organisation 121 (BGG 121)

Module credits	3.00
Prerequisites	No prerequisites.
Contact time	1 lecture per week
Language of tuition	Module is presented in English
Department	Construction Economics
Period of presentation	Semester 1

Module content

The structure of the building industry and the role of building disciplines and related parties.

Building drawings 111 (BOU 111)

Module credits	6.00
Prerequisites	No prerequisites.
Contact time	1 lecture per week, 1 practical per week
Language of tuition	Module is presented in English
Department	Construction Economics
Period of presentation	Semester 1

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.

Building drawings 121 (BOU 121)

Module credits	6.00
Prerequisites	No prerequisites.
Contact time	1 practical per week, 1 lecture per week
Language of tuition	Module is presented in English
Department	Construction Economics
Period of presentation	Semester 2

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.

Building science 110 (BWT 110)

Module credits	9.00
Prerequisites	No prerequisites.
Contact time	3 lectures per week
Language of tuition	Module is presented in English
Department	Construction Economics
Period of presentation	Semester 1

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

Building science 120 (BWT 120)

Module credits	9.00
Prerequisites	BWT 110 GS
Contact time	3 lectures per week
Language of tuition	Module is presented in English
Department	Construction Economics
Period of presentation	Semester 2

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.

Economics 110 (EKN 110)

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	Module is presented in English
Department	Economics

Period of presentation	Semester 1

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.

Economics 120 (EKN 120)

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	1 discussion class per week, 2 lectures per week
Language of tuition	Module is presented in English
Department	Economics
Period of presentation	Semester 2

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.

Building services 112 (GBD 112)

Module credits	6.00
Prerequisites	No prerequisites.
Contact time	2 lectures per week
Language of tuition	Module is presented in English
Department	Construction Economics
Period of presentation	Semester 1

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.

Building services 122 (GBD 122)

Module credits	6.00
Prerequisites	No prerequisites.
Contact time	2 lectures per week
Language of tuition	Module is presented in English
Department	Construction Economics
Period of presentation	Semester 2

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.

Quantities 101 (HVH 101)

Module credits	24.00
Prerequisites	No prerequisites.
Contact time	3 lectures per week, 1 practical per week
Language of tuition	Module is presented in English
Department	Construction Economics
Period of presentation	Year

Module content

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

History of the environment 122 (OMG 122)

Module credits	6.00
Prerequisites	No prerequisites.
Contact time	2 lectures per week
Language of tuition	Module is presented in English
Department	Architecture
Period of presentation	Semester 2

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.

Introduction to structures 110 (SKE 110)

Module credits	9.00
Prerequisites	No prerequisites.
Contact time	1 discussion class per week, 2 lectures per week
Language of tuition	Module is presented in English
Department	Civil Engineering
Period of presentation	Semester 1

Module content

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

Structures 120 (SKE 120)

Module credits	9.00
Prerequisites	SKE 110 GS
Contact time	1 tutorial per week, 2 lectures per week
Language of tuition	Module is presented in English
Department	Civil Engineering
Period of presentation	Semester 2

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.

Mathematics 134 (WTW 134)

Module credits	16.00
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Education Faculty of Veterinary Science
Prerequisites	50% for Mathematics in Grade 12
Contact time	4 lectures per week, 1 tutorial per week
Language of tuition	Module is presented in English
Department	Mathematics and Applied Mathematics
Period of presentation	Semester 1

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.

Curriculum: Year 2

Minimum credits: 133

Core modules

Labour law 311 (ABR 311)

Module credits	20.00
Service modules	Faculty of Engineering, Built Environment and Information Technology Faculty of Economic and Management Sciences Faculty of Humanities
Prerequisites	No prerequisites.
Contact time	2 lectures per week, 1 tutorial every 2nd week
Language of tuition	Separate classes for Afrikaans and English
Department	Mercantile Law
Period of presentation	Semester 1

Module content

Basic principles of the employment contract. Collective labour law. Statutory conditions of employment. Individual labour disputes. Collective labour disputes. Settlement procedures.

Building science 210 (BWT 210)

Module credits	9.00
Prerequisites	BWT 110 GS and BWT 120 GS
Contact time	3 lectures per week
Language of tuition	Afrikaans and English are used in one class
Department	Construction Economics
Period of presentation	Semester 1

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.

Building science 220 (BWT 220)

Module credits	9.00
Prerequisites	No prerequisites.
Contact time	3 lectures per week
Language of tuition	Afrikaans and English are used in one class
Department	Construction Economics

Period of presentation	Semester 2

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.

Financial management 110 (FBS 110)

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
Department	Financial Management
Period of presentation	Semester 1

Module content

*Only for BSc (Mathematical Statistics. Construction Management, Real Estate and Quantity Surveying) and BEng (Industrial Engineering) students.
Purpose and functioning of financial management. Basic financial management concepts. Accounting concepts and the use of the basic accounting equation to describe the financial position of a business. Recording of financial transactions. Relationship between cash and accounting profit. Internal control and the management of cash. Debtors and short-term investments. Stock valuation models. Depreciation. Financial statements of a business. Distinguishing characteristics of the different forms of businesses. Overview of financial markets and the role of financial institutions. Risk and return characteristics of various financial instruments. Issuing ordinary shares and debt instruments.

Building services 211 (GBD 211)

Module credits	6.00
Prerequisites	No prerequisites.
Contact time	2 lectures per week
Language of tuition	Afrikaans and English are used in one class
Department	Construction Economics
Period of presentation	Semester 1

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.

Building services 221 (GBD 221)

Module credits	6.00

Prerequisites	No prerequisites.
Contact time	2 lectures per week
Language of tuition	Afrikaans and English are used in one class
Department	Construction Economics
Period of presentation	Semester 2

Module content

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

Construction quantities 201 (KSH 201)

Module credits	24.00
Prerequisites	BWT 110 GS, BWT 120 GS and HVH 101
Contact time	1 practical per week, 3 lectures per week
Language of tuition	Afrikaans and English are used in one class
Department	Construction Economics
Period of presentation	Year

Module content

Measuring of simple buildings and simple building elements and external works. Abstracting and billing.

Reinforced concrete structures 210 (SKE 210)

Module credits	9.00
Prerequisites	SKE 120 GS
Contact time	2 lectures per week
Language of tuition	Separate classes for Afrikaans and English
Department	Civil Engineering
Period of presentation	Semester 1

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.

Civil engineering services 220 (SKE 220)

Module credits	9.00
Prerequisites	No prerequisites.
Contact time	3 lectures per week
Language of tuition	Separate classes for Afrikaans and English
Department	Civil Engineering

Period of presentation	Semester 2

Module content

Water reticulation; sewerage reticulation; stormwater reticulation; roads.

Statistics 110 (STK 110)

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 practical per week, 1 tutorial per week, 3 lectures per week
Language of tuition	Module is presented in English
Department	Statistics
Period of presentation	Semester 1

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.

Statistics 161 (STK 161)

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	Module is presented in English
Department	Statistics
Period of presentation	Quarter 3

Module content

*Offered by the Department of Statistics
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.

Site surveying 213 (TRN 213)

Module credits	12.00
Prerequisites	No prerequisites.
Contact time	2 lectures per week, 1 practical per week
Language of tuition	Module is presented in English
Department	Geography Geoinformatics and Meteorology
Period of presentation	Semester 1

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.

Curriculum: Final year

Minimum credits: 150

Core modules

Business law 310 (BER 310)

Module credits	16.00
Service modules	Faculty of Engineering, Built Environment and Information Technology
Prerequisites	No prerequisites.
Contact time	4 lectures per week
Language of tuition	Separate classes for Afrikaans and English
Department	Mercantile Law
Period of presentation	Semester 1

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.

Housing 320 (BHU 320)

Module credits	6.00
Prerequisites	No prerequisites.
Contact time	2 lectures per week
Language of tuition	Afrikaans and English are used in one class
Department	Construction Economics
Period of presentation	Semester 2

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.

Building science 310 (BWT 310)

Module credits	9.00
Prerequisites	No prerequisites.
Contact time	3 lectures per week
Language of tuition	Afrikaans and English are used in one class

Department	Construction Economics
Period of presentation	Semester 1

Module content

Erection and construction of specialised building components and finishes. Acoustics. Material study of plastics, glues, rubber, mastics, bonding agents, fibre cement, bituminous products, sealers, epoxies and waterproofing.

Building science 320 (BWT 320)

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

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.

Introduction to property law 320 (EOW 320)

Module credits	6.00
Prerequisites	No prerequisites.
Contact time	2 lectures per week
Language of tuition	Separate classes for Afrikaans and English
Department	Construction Economics
Period of presentation	Semester 2

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.

Financial management 210 (FBS 210)

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
Department	Financial Management
Period of presentation	Semester 1

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.

Financial management 320 (FBS 320)

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
Department	Financial Management
Period of presentation	Semester 2

Module content

*Only for BCom (Financial Sciences, Investment Management, and Law) and BSs (Construction Management, Quantity Surveying and Reak 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.

Building services 311 (GBD 311)

Module credits	6.00
Prerequisites	GBD 221 GS
Contact time	2 lectures per week
Language of tuition	Afrikaans and English are used in one class
Department	Construction Economics
Period of presentation	Semester 1

Module content

Principles of illumination; illumination installations; lightning security; security systems; communication systems. Multimedia installations.

Community-based project 201 (JCP 201)

Module credits	8.00
Prerequisites	No prerequisites.
Contact time	1 other contact session per week
Language of tuition	Separate classes for Afrikaans and English
Department	Informatics
Period of presentation	Year

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.

Construction management 310 (KBS 310)

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

Module content

General functions and techniques of management.

Construction management 320 (KBS 320)

Module credits	9.00
Prerequisites	No prerequisites.
Contact time	3 lectures per week
Language of tuition	Afrikaans and English are used in one class

Department	Construction Economics
Period of presentation	Semester 2

Module content

The fundamentals and basic applications of project management.

Construction quantities 300 (KSH 300)

Module credits	24.00
Prerequisites	BWT 210 GS, BWT 220 GS, GBD 112 GS, GBD 122 GS and KSH 201
Contact time	3 lectures per week, 1 practical per week
Language of tuition	Afrikaans and English are used in one class
Department	Construction Economics
Period of presentation	Year

Module content

Measuring of simple concrete structures, structural steelwork, plumbing and drainage, and alterations. Material lists, analysis of building costs, certificates, contract price adjustment provisions (CPAP) and final accounts.

Research methodology 320 (NNM 320)

Module credits	6.00
Prerequisites	No prerequisites.
Contact time	2 lectures per week
Language of tuition	Separate classes for Afrikaans and English
Department	Construction Economics
Period of presentation	Semester 2

Module content

Introduction to scientific research. Planning and preparation of a research project. Different research methods.

Sustainable construction 320 (VKN 320)

Module credits	6.00
Prerequisites	No prerequisites.
Contact time	2 lectures per week
Language of tuition	Afrikaans and English are used in one class
Department	Construction Economics
Period of presentation	Semester 2

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.

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 students to familiarise themselves 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.