

---

## CONSTRUCTION ECONOMICS AND MANAGEMENT

The Department offers the following postgraduate degree programmes:

Construction Management  
Quantity Surveying  
Property Studies  
Project Management

### Research Entity:

Urban Real Estate Research Unit

The Department is housed on Level 5 of the Snape Building, opposite Engineering Mall, off Madiba Circle, Upper Campus.

## Staff

### Associate Professor and Head of Department

KA Michell, BSc(QS) MPhil *Cape Town* PhD *Salford* PrQS PMAQS MRICS MSAFMA

### Professors

KS Cattell, BSc(QS) *UPE* MPhil *Cape Town* PrQS PMAQS MRICS MSAPCI MSAFMA

### Associate Professors

MM Mooya, BSc(Land Economy) *Copperbelt* MPhil(Land Economy) *Cantab* PhD(Real Estate) *Pret*

F Viruly, BA(Hons) *Witwatersrand* MA(Dev Econ) *Kent* FRICS

A Windapo, BSc(Building) *IfE* MSc(Construction Management) PhD *Lagos* FNIOB PrCPM

### Emeritus Professors

BG Boaden, BSc(QS) *Witwatersrand* MBA *British Columbia* PhD *Witwatersrand*

PA Bowen, BSc(QS) BCom *Natal* MSc(Construction Management) *Heriot-Watt* PhD *UPE* PrQS  
PMAQS FRICS FCIQB PrCM PrCPM PrValuer

AJ Stevens, MSc(Building) *Cape Town* PhD *UPE*

### Senior Lecturers

E Edwardes, BSc BSc(QS) MSc(Project Management) *Pret* PrQS PMAQS

CI Jay, BSc(Hons)(Geology) *Cardiff* MBL *UNISA* PMP(PMI)

K Le Jeune, BSc(QS) MSc(Property Studies) *Cape Town* PrQS PMAQS MRICS

MW Massyn, BSc(Building) *UPE* FCIQB

RPT McGaffin, BSocSc *Cape Town* MCRP *Cape Town* MPhil *Cantab*

SD Nurick, BCom BSc(Hons)(Property Studies), MPhil *Cape Town* MRICS

N-T Tuan, BSc(Eng) *Chung Cheng Institute of Technology* MEng *Pret* PhD *Cape Town* INFORMS  
*Taiwan Chapter*

### Lecturers

A Mtya, BSc Hons (CM) *Cape Town* Candidate CPM SACPCMP

U Ordor BSc(Architecture) *Jos* MSc (Architecture) *Jos* MNIA MSc (Property Studies) *Cape Town*

### Academic Development Lecturer

A Street BSc (QS)(Hons) *Cape Town* PrQS PMAQS

**Contract Lecturer**

Mochelo Lefoka, BSc (CS), *Cape Town*, BSc (Hons) (CM) *Cape Town*

**Honorary Research Associate**

C Kariuki, BA (Land Economics) MA (Housing Administration) *Nairobi*

**Junior Research Fellow**

L Boyle, BSc (Construction Studies) BScHons (Quantity Surveying) M Phil (Urban Sustainability) *Cape Town*

**Departmental Manager**

JM Thompsett

**Administrative Officers**

M Fagodien (Postgraduate)

W Samaai BA *Cape Town* (Undergraduate and Honours)

**Administrative Assistants**

J Breda (Finance)

**Reception and General Administration**

V Daries

**Departmental Assistant**

M Neutt

## Postgraduate Programmes

Please note that the offering of all postgraduate programmes is subject to a minimum student enrolment.

A subminimum of 40% applies to the examination and coursework components of all Honours level courses with a CON course code.

A subminimum of 50% applies to the examination and coursework components of all Postgraduate Diploma and Master's level courses with a CON course code.

## Honours Programmes

### Bachelor of Science Honours in Construction Management [EH002CON02]

**Programme Convener::**

Ms K Le Jeune, BSc(QS) MSc(Property Studies) Cape Town PrQS PMAQS MRICS

The curriculum of the BSc(Hons) in Construction Management programme equips graduates to: identify, analyse and solve problems in the field of construction assembly and management of the process; perform a number of managerial roles within a constructor organisation, after an appropriate period of practical experience; work effectively in teams; and undertake research and produce reports. The aims of the degree are to provide employable management graduates to the construction industry; to fully satisfy the criteria for accreditation in terms of the requirements of the Chartered Institute of Building (CIOB), the South African Council for the Project and Construction Management Professions (SACPCMP), the Royal Institution of Chartered Surveyors (RICS), and the South African Council for the Quantity Surveying Profession (SACQSP).

## 156 DEPARTMENTS IN THE FACULTY AND COURSES OFFERED

A candidate shall complete approved courses to a total of at least 160 credits and shall comply with all the prescribed curriculum requirements.

### Core Courses

Code	Course	NQF Credits	HEQSF Level
ACC2022F/S	Management Accounting I.....	18	6
CON4030F	Property Studies II .....	16	8
CON4033W	Applied Contract Law II .....	16	8
CON4038F	Advanced Construction Management .....	16	8
CON4039S	Integrated Management Project .....	16	8
CON4047W	Research Project.....	32	8
CON4049S	Construction Innovation.....	16	8
STA1000F	Statistics 1000 .....	18	5
CON4035X	Practical training .....	0	8
	Approved elective .....	12	8
	Total credits .....	<b>160</b>	

### Elective Courses

Courses totalling a minimum of 12 credits must be taken, of which at least 8 credits should be at HEQSF level 8.

Code	Course	NQF Credits	HEQSF Level
CON4042H	Advanced Property Studies B.....	16	8
CON4045S	Housing Development & Management I T.....	16	8

Or any 12 credit course presented at Honours level which has been approved by the Programme Convener.

## **Bachelor of Science Honours in Quantity Surveying** **[EH004CON05]**

### Programme Convener::

Ms K Le Jeune, BSc(QS) MSc(Property Studies) Cape Town PrQS PMAQS MRICS

The curriculum of the BSc(Hons) in Quantity Surveying programme equips graduates to: undertake financial planning and control of new and existing facilities; undertake property development and property portfolio management; value property; apply appropriate quantity surveying techniques to building and civil engineering projects; perform appropriate professional quantity surveying management functions; work effectively in teams; and undertake research and produce reports. The aims of the degree are to provide employable professional graduates to the Quantity Surveying Profession; to fully satisfy the criteria for accreditation in terms of the requirements of the Chartered Institute of Building (CIOB), the South African Council for the Quantity Surveying Profession (SACQSP); and the Royal Institution of Chartered Surveyors (RICS).

A candidate shall complete approved courses to a total of at least 164 credits and shall comply with all the prescribed curriculum requirements..

### Core Courses

Code	Course	NQF Credits	HEQSF Level
ACC2022F/S	Management Accounting I.....	18	6
CON4030F	Property Studies II .....	16	8
CON4032F	Measurement & Design Appraisal III .....	12	8
CON4033W	Applied Contract Law II .....	16	8
CON4034W	Professional Practice.....	20	8
CON4047W	Research Project.....	32	8

Code	Course	NQF Credits	HEQSF Level
CON4037S	Civil Engineering Measurement .....	16	8
STA1000F	Statistics 1000 .....	18	5
CON4035X	Practical Training .....	0	8
	Approved elective .....	16	
	Total credits .....	164	

### Elective Courses

Courses totalling a minimum of 16 credits must be taken, of which at least 8 credits should be at HEQSF level 8.

Code	Course	NQF Credits	HEQSF Level
CON4038F	Advanced Construction Management .....	16	8
CON4042H	Advanced Property Studies B .....	16	8
CON4045S	Housing Development & Management I T .....	16	8
CON4049S	Construction Innovation .....	16	8

Or any 12 credit course presented at Honours level which has been approved by the Programme Convenor.

## Bachelor of Science Honours in Property Studies [EH003CON03]

### Associate Professor and Programme Convenor:

MM Mooya, BSc(Land Economy) Copperbelt MPhil(Land Economy) Cantab PhD(Real Estate) Pret

The curriculum of the BSc(Hons) in Property Studies programme equips graduates to: apply advanced methods of valuation and value special properties; manage property and buildings; plan, control and report costs associated with property management; know and apply legislation and case law relevant to the valuation of fixed property; define a research problem, undertake empirical research, analyse data and report research findings; and apply skills in an elective area of speciality in statistics, management, economics or law.

The aim of the degree is to fully satisfy the criteria for accreditation in terms of the requirements of the South African Council for the Property Valuers' Profession (SACPVP). A candidate shall complete approved courses to a total of at least 144 credits and shall comply with all the prescribed curriculum requirements.

### Core Courses

Code	Course	NQF Credits	HEQSF Level
CON4041S	Advanced Property Studies A .....	16	8
CON4042H	Advanced Property Studies B .....	16	8
CON4043S	Applied Property Law .....	16	8
CON4045S	Housing Development & Management IT .....	16	8
CON4047W	Research Project .....	32	8
CON4048F	Advanced Property Studies C .....	16	8
	Approved electives .....	32	8
	Total credits .....	144	

### Elective Courses

Courses totalling a minimum of 32 credits must be taken, of which at least 8 credits should be at HESQF level 8.

Code	Course	NQF Credits	HEQSF Level
ACC1012S	Business Accounting .....	18	5
ACC2022F/S	Management Accounting I .....	18	6

## 158 DEPARTMENTS IN THE FACULTY AND COURSES OFFERED

Code	Course	NQF Credits	HEQSF Level
BUS2010F	Marketing I.....	18	6
CML2005F	Labour Law .....	18	6
CML2001F	Company Law .....	18	6
BUS4103F	Effective People Practices.....	18	8
CON3039S	Construction Management IT .....	16	7
ECO2003F	Microeconomics II.....	18	6
ECO2004S	Macroeconomics II .....	18	6
STA2020F/S	Applied Statistics .....	24	6
STA3022F	Research and Survey Statistics.....	36	7

Or any 12 credit course presented at Honours level which has been approved by the Programme Convener.

## Master's Programmes

### Master of Science in Property Studies

[EM013CON03]

#### Associate Professor and Programme Convener:

F Viruly, BA(Hons) *Witwatersrand* MA(Dev Econ) *Kent* FRICS

The primary aim of the MSc in Property Studies programme is to produce graduates with the necessary skills to enter the field of property at a professional managerial level. Students are exposed to the full spectrum of property related disciplines and issues, including: urban land economics; property law; property finance; property development; property valuation; property portfolio management; and facilities management. In addressing each of these areas, a strong emphasis is placed on the development of decision-making skills. The purpose of the research report, only undertaken by candidates for the MSc in Property Studies programme, is to develop advanced research skills.

A candidate for the MSc in Property Studies shall complete approved courses to a total of at least 200 credits and shall comply with all the prescribed curriculum requirements.

#### Core Courses

Code	Course	NQF Credits	HEQSF Level
CON5010Z	Minor Dissertation Property Studies.....	60	9
CON5006Z	Property Development .....	20	9
CON5007Z	Property Law.....	20	9
CON5008Z	Urban Land Economics.....	20	9
CON5009Z	Property Finance .....	20	9
CON5021Z	Property Portfolio Management.....	20	9
CON5036Z*	Introduction to Research .....	4	9
CON5037Z*	Research Methodology .....	6	9
CON5041Z*	Principles of Applied Statistics .....	4	9
CON5042Z*	Advanced Principles of Applied Statistics.....	6	9
CON5043Z	Property Valuation Theory & Practice.....	20	9
CON5046Z**	Research Methodology .....	20	9
	Total credits .....	200	

Note: From 2019 intake these courses \* will be replaced by CON5046Z\*\*

**Elective Courses**

To achieve registration with SACPVP (South African Council for Property Valuers' Profession) a student, in addition to the core courses, will have to complete the following core elective:

Code	Course	NQF Credits	HEQSF Level
CON5044Z	Advanced Property Valuation .....	20	9

## **Master of Science in Project Management** **[EM014CON06]**

**Senior Lecturer and Programme Convenor :**

N-T Tuan, BSc(Eng) *Chung Cheng Institute of Technology* MEng *Pret* PhD *Cape Town* INFORMS *Taiwan Chapter*

A candidate for the MSc in Project Management programme shall complete approved courses to a total of at least 200 credits and shall comply with all the prescribed curriculum requirements.

**Core Courses**

Code	Course	NQF Credits	HEQSF Level
CON5023Z	Minor Dissertation Project Management .....	60	9
CON5014Z	Project Management & Systems Theory .....	20	9
CON5016Z	Project Planning & Implementation .....	20	9
CON5018Z	Human Resource Management and Interpersonal Communication	20	9
CON5022Z	Total Quality Management in a Project Environment .....	20	9
CON5029Z	Project Risk Management.....	20	9
CON5036Z*	Introduction to Research.....	4	9
CON5037Z*	Research Methodology .....	6	9
CON5041Z*	Principles of Applied Statistics.....	4	9
CON5042Z*	Advanced Principles of Applied Statistics.....	6	9
CON5046Z**	Research Methodology .....	20	9
	Approved elective.....	20	9
	Total credits .....	<b>200</b>	

Note: From 2019 intake these courses \* will be replaced by CON5046Z\*\*

**Elective Courses**

One approved 20-credit course at HESQF level 9 must be taken, or a combination of courses totalling 20 credits, offered by the University.

**Elective Course (select 20 credits)**

Code	Course	NQF Credits	HEQSF Level
CON5030Z	Project Finance & Procurement.....	20	9
	Other approved elective.....	20	9

## **Doctoral Programmes**

**Doctor of Philosophy****[ED001CON01]**

**ED001 Doctor of Philosophy is a Research Degree**

**Core Course**

Code	Course	NQF Credits	HEQSF Level
CON6009W	Thesis .....	360	10

## 160 DEPARTMENTS IN THE FACULTY AND COURSES OFFERED

Course descriptions are set out in the section Courses Offered. The course code abbreviation for Construction Economics and Management is CON.

### Course Outlines

---

#### CON4030F PROPERTY STUDIES II

16 NQF credits at HEQSF level 8; 4 lectures per week, project(s), seminars, tutorials.

**Convener:** Mr R McGaffin

**Course entry requirements:** CON3033F

**Course outline:**

This course in property studies aims to develop an understanding of feasibility studies; risk assessment techniques; capital budgeting and sources of finance; the property development process; whole life appraisal; maintenance management; and property valuation methods.

**DP requirements:** 40% subminimum in both course work and examination

**Assessment:** Year mark 50%; June examination 2 hours 50%.

---

#### CON4032F MEASUREMENT & DESIGN APPRAISAL III

*No additional assessment.*

12 NQF credits at HEQSF level 8; 4 lectures per week, project(s), seminars, tutorials.

**Convener:** Ms K Le Jeune

**Course entry requirements:** CON3012W, CON3031W

**Course outline:**

This course in measurement and design appraisal covers: Design appraisal, measurement and preparation of tender documentation for complex buildings and specialist installations (electrical and mechanical). The theoretical component involves a study of: (i) critical design appraisal and the improvement of constructability and cost-efficiency; (ii) compiling the Preliminaries Bill; and (iii) descriptive clauses in the Standard System of Measuring of Building Work. The practical component involves the application of the principles of measurement to advanced/unconventional forms of building construction and specialist installations by means of elemental quantification, covering: Bulk Earthworks; Planking, Strutting and Shoring; Piling; Underpinning; Basements; Electrical Installations; and Mechanical Installations. The practicals require computerised documentation using measurement software.

**DP requirements:** 40% subminimum in both course work and examination

**Assessment:** Year mark 80% ; June oral examination (20%) 30 minutes.

---

#### CON4033W APPLIED CONTRACT LAW II

16 NQF credits at HEQSF level 8; 2 lectures per week, seminar(s).

**Convener:** Mr T Boxall

**Course entry requirements:** CML1002F or CML1001F or CML1006S, CON3032W

**Course outline:**

This course aims to develop an understanding of applied contract law. Topics include: the Insolvency Act; case studies of construction and building disputes; alternative dispute resolution; government and new engineering forms of contract; and common international contracts.

**DP requirements:** 40% subminimum in both course work and examination.

**Assessment:** Year mark 50% ; November examination 2 hours 50%.

---

#### CON4034W PROFESSIONAL PRACTICE

*No additional assessment.*

20 NQF credits at HEQSF level 8; First Semester: 4 lectures per week, seminars, tutorials, studio sessions. Second Semester: Simulated Office Project, studio sessions as required..

**Convener:** Ms K Le Jeune

**Course entry requirements:** CON3031W

**Co-requisites:** CON4032F

**Course outline:**

This course in professional practice covers: The Quantity Surveying Profession Act (No. 49 of 2000), Rules promulgated under the Act, and the implications of the Code of Conduct for registered practitioners; the commission; the Quantity Surveyor-Client Agreement; professional liability and professional indemnity insurance; fee scales; PROCAP; the Quantity Surveying function during the pre-contract, tender, post-contract, and final account stages; preparation and presentation of cost plans and Bills of Quantities, administration and adjudication of competitive bids, valuation for interim payment certificates, recovery statements, valuation of and payment for materials on and off-site; escalation; preparation and presentation of Final Accounts. Simulated Office project.

**DP requirements:** 40% subminimum in both course work and examination. Submit Simulated Office Project Report.

**Assessment:** Year mark 54.4 % ; June oral examination (45.6%) minimum 30 minutes,

### CON4035X PRACTICAL TRAINING

0 NQF credits at HEQSF level 8

**Convener:** Ms K Le Jeune

**Course outline:**

This opportunity to gain practical experience includes 160 hours (4 weeks) of approved experience employed in any of the built environment disciplines: construction; engineering; housing; property development and management; quantity surveying; relevant local authority, provincial and national government departments.

**DP requirements:** None

**Assessment:** Complete practical training and complete report.

### CON4037S CIVIL ENGINEERING MEASUREMENT

16 NQF credits at HEQSF level 8; 2 lectures per week, 1 studio session as required.

**Convener:** Ms K Le Jeune

**Course entry requirements:** CON3012W, CON4032F

**Course outline:**

This course aims to develop an understanding of measurement and scheduling of civil engineering construction. The theoretical aspects of the course cover the SANS 1200 specifications and the SANS 10120: Part 4 Typical Schedules of Quantities for: Site Clearance; Earthworks; and Concrete (Structural). The practical component involves the application of the principles of measurement to the elements: Site Clearance; Earthworks; and Concrete (Structural).

**DP requirements:** 40% subminimum in both course work and examination

**Assessment:** Year mark 50% ; November examination 3 hours 50%.

### CON4038F ADVANCED CONSTRUCTION MANAGEMENT

16 NQF credits at HEQSF level 8; 4 lectures per week, seminars, tutorials, field trip(s)..

**Convener:** Mr M Massyn

**Course entry requirements:** CON3012W, CON3038W

**Course outline:**

This advanced course in construction management covers: The concept of project management compared with the management of construction enterprises. Organisational theory and management, organisation structures for enterprises and a major projects. Leadership and motivation on projects. Precontract planning. Production and logistics management. Contractual risk management and contracting strategies. Human relations management including: industrial relations practice; and health and safety requirements.

**DP requirements:** 40% subminimum in both course work and examination

**Assessment:** Year mark 50% ; June examination 2 hours 50%.



**CON4039S INTEGRATED MANAGEMENT PROJECT**

*This course is not eligible for additional assessment.*

16 NQF credits at HEQSF level 8; 2 lectures per week, field trips, tutorials, seminars.

**Convener:** Mr M Massyn/Ms A Mtya

**Course entry requirements:** CON4038F, CON3031W

**Course outline:**

This integrated management project uses the documents for an actual construction project to, simulate all activities performed during the pre-tender and construction phases of a project such as obtaining bids from suppliers and subcontractors, preparing the estimate, preparing the site layout, preparing all planning activities required; analysing production requirements such as concrete cycles and formwork selection, plant and material management; health and safety risk assessment; financial management such as interim certificate and final account preparation and reconciliation.

**DP requirements:** None

**Assessment:** Portfolio (70%), oral examination (November) 30% (1 hour).

---

**CON4041S ADVANCED PROPERTY STUDIES A**

16 NQF credits at HEQSF level 8; 4 lectures per week, tutorials.

**Convener:** Associate Professor M Mooya

**Course entry requirements:** CON3034F, CON3035S, CON3041F

**Course outline:**

This advanced course in property studies covers: Expropriation: the legislation; the process; compensation; methods of valuation. Property Valuation: influence of re-zoning on value; valuation of farmland; usually non-negotiable properties; large shopping centres; air space; interest in time-share; leasehold interests; retirement villages; mining rights. Valuation of properties classified as "special" in terms of function, design, construction, or location; market/non-market properties; and properties subject to particular legislation.

**DP requirements:** 40% subminimum in both course work and examination

**Assessment:** Year mark 50% ; November examination 2 hours 50%.

---

**CON4042H ADVANCED PROPERTY STUDIES B**

16 NQF credits at HEQSF level 8; 4 lectures per week, seminars, field trips.

**Convener:** Associate Professor K Michell/Mr D Owen

**Course entry requirements:** CON3034F or CON3033F, CON3035S or CON3038W, CON3032W or CON3036W

**Course outline:**

This course provides an introduction to facilities management. Topics include:

Management of building operations: Operation of building operating systems; building maintenance and repairs; cleaning services; security services; cost control and financial reporting. Real property management: Introduction to property management; role of property management; maintenance of the long-term property acquisition/lease programme; purchase of land and buildings; principles of property maintenance; leasing and insurance; leasing non-owned premises; marketing and leasing of owned premises; lease management; service and management of tenants; management of residential, group housing, sectional title, office, shopping centre and industrial developments; cost control and reporting. Office Facility Planning: Determining workplace area standards; specifying common facilities; programming short- and long-term office space needs; maintaining the office space inventory; and space allocation to individuals and user-groups.

**DP requirements:** 40% subminimum in both course work and examination

**Assessment:** Assignment 65% November examination 2 hours 35%.

---

**CON4043S APPLIED PROPERTY LAW**

16 NQF credits at HEQSF level 8; 4 lectures per week, tutorials.

**Convener:** Mr T Boxall

**Course entry requirements:** CML2011S (or equivalent).

**Course outline:**

This course in applied contract law covers: A detailed study of the statutes and ordinances affecting property development and valuation. A detailed study of case law relating to: malafides of valuation court; what constitutes immovable property; method of valuation; separate valuations of land and buildings; valuation of an interest in land; restrictive conditions effect on value; Expropriation Act; expropriation in terms of provincial ordinances; valuation of subdivided property; and method of valuation.

**DP requirements:** 40% subminimum in both course work and examination.

**Assessment:** Year mark 50%; November examination 2 hours 50%.

---

**CON4045S HOUSING DEVELOPMENT & MANAGEMENT I T**

16 NQF credits at HEQSF level 8; 4 lectures per week, seminars, tutorials.

**Convener:** Mr R McGaffin

**Course outline:**

This course aims to conceptualise housing as a multi-dimensional asset. Students will be guided to: define the housing problem and assess various policy intervention undertaken internationally and locally to date; based on the problem statement propose sound interventions drawing on theory and evidence, and undertake a financial viability study of a housing project.

**DP requirements:** 40% subminimum in both course work and examination; Attendance and satisfactory participation in all contact sessions; Satisfactory participation in all group work; Submission of all assignments as per due dates.

**Assessment:** Year mark 50% ; June examination 2 hours 50%.

---

**CON4047W RESEARCH REPORT**

*This course is not eligible for additional assessment.*

32 NQF credits at HEQSF level 8; Seminar(s).

**Convener:** Associate Professor A Windapo/Dr N Tuan

**Course entry requirements:** CON1019F/S, STA1000F/S

**Course outline:**

This course aims to provide an understanding of the research process. Topics include: selection of research problem; preparation of the research proposal; conducting empirical research; analysis of findings; drawing conclusions; making recommendations; and presentation of a research report.

**DP requirements:** Submission of a satisfactory research proposal

**Assessment:** November examination - Research report 100%.

---

**CON4048F ADVANCED PROPERTY STUDIES C**

16 NQF credits at HEQSF level 8; 4 lectures or tutorials per week.

**Convener:** Associate Professor F Viruly

**Course entry requirements:** CON3034F/S, CON3035S, CON3041S

**Course outline:**

This advanced course in property studies covers: Modern portfolio theory: portfolio risk and return; applied portfolio theory; index models; portfolio construction (structure, selection and management). Property Portfolio: compiling an efficient property portfolio; IPD and property data sources; trading properties; diversification strategies. The property component of institutional investor portfolios; the property listed sector including property unit trusts and property loan stocks; property market research and analysis; and quantitative techniques for analysis of market data.

**DP requirements:** 40% subminimum in both course work and examination

**Assessment:** Year mark 50%; June examination 2 hours 50%.

**CON4049S CONSTRUCTION INNOVATION**

16 NQF credits at HEQSF level 8; 2 lectures per week, field trip(s), tutorials, seminars.

**Convener:** Associate Professor A Windapo

**Course entry requirements:** CON3038W, CON3012W

**Course outline:**

This course aims to develop an understanding of innovation in construction. Topics include: cycles of innovation; dissemination of technology; relationship between technology, economic practice and structures of the industry using examples such as lean production, intelligent buildings, standardisation and pre-assembly, design management and sustainable construction, and entrepreneurship.

**DP requirements:** 40% subminimum in both course work and examination.

**Assessment:** Year mark 50% ; November examination 2 hours 50%.

---

**CON5006Z PROPERTY DEVELOPMENT**

20 NQF credits at HEQSF level 9; one week block lectures.

**Convener:** Associate Professor F Viruly

**Course outline:**

This course in property development covers: investment evaluations; property development evaluation, incorporating: environmental impact assessments; land assembly and servicing; economic viability analysis; management and marketing of property developments; risk assessment; and whole life appraisal.

**DP requirements:** 50% subminimum in both course work and examination.

**Assessment:** Three hour examination 50%, assignments 50%.

---

**CON5007Z PROPERTY LAW**

20 NQF credits at HEQSF level 9; one week block lectures..

**Convener:** Ms L van Schalkwyk

**Course outline:**

This course aims to develop an understanding of property law. Topics include: the meaning and function of law and legal rules; the main divisions of the law; the structure of the courts, officers of the courts and different court procedures; sources of South African law; basic concepts of Private Law; an outline of South Africa's Constitution; the Bill of Rights and Land Use; the Expropriation Act; the impact of the environmental clause and environmental legislation on land use; sectional title and share block schemes; general principles of the law of contract; specific or applied contracts: sale and lease; forms of security: contractual and property rights; Insolvency law: the effect of insolvency on property and uncompleted contracts; commercial agency: estate agents; alternative dispute resolution; and case studies.

**DP requirements:** 50% subminimum in both course work and examination.

**Assessment:** Three hour examination 50%, assignments 50%.

---

**CON5008Z URBAN LAND ECONOMICS**

20 NQF credits at HEQSF level 9; one week block lectures..

**Convener:** Associate Professor F Viruly

**Course outline:**

This course in urban land economics covers: urban economics and urban problems; the urbanization process; the urban hierarchy; urban rent; theories of urban spatial structure; location theory; and problems in developing countries.

**DP requirements:** 50% subminimum in both course work and examination.

**Assessment:** Three hour examination 50%, assignments 50%.

---

**CON509Z** PROPERTY FINANCE

20 NQF credits at HEQSF level 9; one week block lectures.

**Convener:** TBC

**Course outline:**

This course in property finance is an application of business finance theory to property. Topics include: mathematics of finance; property investment decision-making; capital budgeting; financing decision and capital structure; capital markets; sources and flows of capital for property investments; and types of financial instruments.

**DP requirements:** 50% subminimum in both course work and examination

**Assessment:** Three hour examination 50%, assignments 50%.

---

**CON5010Z** MINOR DISSERTATION PROPERTY STUDIES

60 NQF credits at HEQSF level 9

**Convener:** Associate Professor F Viruly

**Course entry requirements:** CON5037Z and CON5042Z

**Course outline:**

Students select a research topic, prepare a proposal, undertake empirical research, analyse the findings, draw conclusions and present a minor dissertation.

**DP requirements:** None

**Assessment:** Research Report

---

**CON5014Z** PROJECT MANAGEMENT & SYSTEMS THEORY

20 NQF credits at HEQSF level 9; one week block lectures..

**Convener:** Mr M Massyn

**Course outline:**

This course is an overview of the project management knowledge areas, project management processes, and the relationship of project management to other management disciplines. The project management body of knowledge and its place in the trans-disciplinary study of the abstract organisation of projects, investigation of both the principles common to all complex projects; and the models which can be used to describe them are investigated. Emphasis is placed on real systems that are open to, and interact with, their environment. The relationship between the business environment and the project environment is also covered.

**DP requirements:** 50% subminimum in both course work and examination.

**Assessment:** Three hour examination 50%, assignments 50%.

---

**CON5016Z** PROJECT PLANNING & IMPLEMENTATION

20 NQF credits at HEQSF level 9; one week block lectures.

**Convener:** Mr M Massyn

**Course outline:**

This course in project planning and implementation covers: the need for planning which includes the rules for planning and control; scope management, project strategy, project methodology; project scheduling techniques; and change management and project integration.

**DP requirements:** 50% subminimum in both course work and examination.

**Assessment:** Three hour examination 50%, assignments 50%.

---

**CON5018Z** HUMAN RESOURCE MANAGEMENT & INTERPERSONAL COMMUNICATION

20 NQF credits at HEQSF level 9; one week block lectures.

**Convener:** Mr I Jay

**Course outline:**

This course aims to develop an understanding of the human resource management needs of project management, changes in employment practice, interfacing with stakeholders, group dynamics, leadership, motivation methods of achieving objectives through others in a people intensive

## 166 DEPARTMENTS IN THE FACULTY AND COURSES OFFERED

environment, communication, conflict resolution, negotiation, ethics and culture and the management organisation structures used in project teams.

**DP requirements:** 50% subminimum in both course work and examination.

**Assessment:** Three hour examination 50%, assignments 50%.

---

### **CON5021Z** PROPERTY PORTFOLIO MANAGEMENT

20 NQF credits at HEQSF level 9; one week block lectures.

**Convener:** Associate Professor F Viruly

**Course outline:**

This course in property portfolio management covers: Portfolio Management: the property cycle; the economic cycle; modern portfolio theory; the property portfolio. Operational Property/Asset Management: introduction to property management; legal aspects/tenant issues; maintenance/services; investment strategy and value; current trends; case studies. Strategic property/asset management; shopping centre management: management; leasing; financial control. Facilities Management: space planning and management; relocation; maintenance management and life cycle costing; energy management; environmental issues; and outsourcing.

**DP requirements:** 50% subminimum in both course work and examination.

**Assessment:** Three hour examination 50%, assignments 50%.

---

### **CON5022Z** TOTAL QUALITY MANAGEMENT IN A PROJECT ENVIRONMENT

20 NQF credits at HEQSF level 9; one week block lectures.

**Convener:** Dr N Tuan

**Course outline:**

This course aims to develop an understanding of total quality management in a project environment and includes: Total Quality Management as a set of management processes and systems and the application of TQM in project environments; new product development, value engineering, safety, and health and welfare.

**DP requirements:** 50% subminimum in both course work and examination.

**Assessment:** Three hour examination at end of module 50%, assignments 50%.

---

### **CON5023Z** MINOR DISSERTATION PROJECT MANAGEMENT

60 NQF credits at HEQSF level 9

**Convener:** Dr N Tuan

**Course entry requirements:** CON5037Z and CON5042Z

**Course outline:**

Students select a research topic, prepare a proposal, undertake empirical research, analyse the findings, draw conclusions and present a minor dissertation.

**DP requirements:** None

**Assessment:** Written work counts 100%.

---

### **CON5024W** DISSERTATION CONSTRUCTION ECONOMICS & MANAGEMENT

180 NQF credits at HEQSF level 9

**Convener:** TBA

**Course outline:**

Students select a research topic, prepare a proposal, undertake empirical research, analyse the findings, draw conclusions and present a dissertation.

**DP requirements:** None

**Assessment:** Written work counts 100%.

---

**CON5025W** DISSERTATION CONSTRUCTION ECONOMICS & MANAGEMENT

120 NQF credits at HEQSF level 9

**Convener:** TBA

**Course entry requirements:** CON5040Z DP

**Course outline:**

Students select a research topic, prepare a proposal, undertake empirical research, analyse the findings, draw conclusions and present a dissertation.

**DP requirements:** None

**Assessment:** Research Report.

---

**CON5025Z** MASTERS DISSERTATION CONSTRUCTION ECONOMICS & MANAGEMENT

120 NQF credits at HEQSF level 9

---

**CON5029Z** PROJECT RISK MANAGEMENT

20 NQF credits at HEQSF level 9; one week block release lectures.

**Convener:** Dr N Tuan

**Course outline:**

This course in project risk management covers: the nature of risks and the nature of projects; risk perceptions and the communication of risk; systematic risk management; creating a project risk management framework; establishing risk registers and reviewing risk management performance.

**DP requirements:** 50% subminimum in both course work and examination

**Assessment:** Three hour examination at end of module 50%, assignments 50%.

---

**CON5030Z** PROJECT FINANCE & PROCUREMENT

20 NQF credits at HEQSF level 9; one week block release lectures..

**Convener:** TBC

**Course outline:**

This course in project finance and procurement covers: Principles of cost, and financial models, including the use of net present value, the capital asset pricing model, and real options. The development of a cost benefit analysis, and business case. Procurement, tendering, cost control, project contracts and project marketing are also included.

**DP requirements:** 50% subminimum in both course work and examination.

**Assessment:** Three hour examination 50%, assignments 50%.

---

**CON5033Z** DISSERTATION PROJECT MANAGEMENT

120 NQF credits at HEQSF level 9

**Convener:** Dr N Tuan

**Course entry requirements:** CON5040Z

**Course outline:**

Students select a research topic, prepare a proposal, undertake empirical research, analyse the findings, draw conclusions and present a dissertation.

**DP requirements:** None

**Assessment:** Written work counts 100%.

---

**CON5034Z** DISSERTATION PROPERTY STUDIES

120 NQF credits at HEQSF level 9

**Convener:** Associate Professor F Viruly

**Course entry requirements:** CON5040Z

## 168 DEPARTMENTS IN THE FACULTY AND COURSES OFFERED

### **Course outline:**

Students select a research topic, prepare a proposal, undertake empirical research, analyse the findings, draw conclusions and present a dissertation.

**DP requirements:** None.

**Assessment:** Research Report.

---

### **CON5036Z INTRODUCTION TO RESEARCH**

4 NQF credits at HEQSF level 9

**Convener:** Professor K Cattell

#### **Course outline:**

This course provides guidance in: research and writing skills; plagiarism; research ethics; critical analysis of literature; creating an argument; writing in an academic style; and referencing conventions.

**DP requirements:** None

**Assessment:** One-and-a-half-hour examination 100%.

---

### **CON5037Z RESEARCH METHODOLOGY**

6 NQF credits at HEQSF level 9; half week block lectures.

**Convener:** Dr N Tuan

**Course entry requirements:** CON5036Z

#### **Course outline:**

This course aims to develop an understanding of research methodology, the research experience; knowledge and problems; the proposal chapter; designing the research; theoretical frameworks; overview of research methods - from quantitative to qualitative; case studies; writing the literature review, data presentation and analysis; and concluding the research.

**DP requirements:** 100% attendance at lectures in block week.

**Assessment:** Evaluation of Research Proposal 100%.

---

### **CON5040Z DISSERTATION PREPARATION**

0 NQF credits at HEQSF level 9

**Convener:** TBA

#### **Course outline:**

The aim of this course is to allow a student to undertake preparatory work for the master's dissertation. Work required includes literature searches and reviews; identification of the research problem, objectives and hypothesis; consideration of research methodology; planning for the active research phase; and ensuring that research infrastructure (e.g. apparatus etc.) is or will be in place. The student should maintain regular contact with his/her supervisor in order to show evidence of suitable progress towards these aims. The supervisor must indicate satisfactory fulfilment of the course aims prior to the student proceeding to the dissertation.

**DP requirements:** None

---

### **CON5041Z PRINCIPLES OF APPLIED STATISTICS**

4 NQF credits at HEQSF level 9

**Convener:** Professor K Cattell

**Course entry requirements:** Knowledge of Excel.

#### **Course outline:**

This course in applied statistics covers: Data presentation: Identifying an appropriate population; drawing a sample from the population; organising data; discrete and continuous data types; graphical presentation of data. Descriptive statistics: Exploratory data analysis and summary statistics. Applied mathematics: Simple interest; equivalence; compound interest; present value; annuities; general annuities; sinking funds; and amortization.

**DP requirements:** None

**Assessment:** One-and-a-half-hour examination 100%.

---

**CON5042Z FURTHER APPLIED STATISTICS (ADVANCED PRINCIPLES)**

6 NQF credits at HEQSF level 9

**Convener:** Professor K Cattell**Course entry requirements:** CON5041Z**Course outline:**

This course in advanced principles of applied statistics covers: Design of a questionnaire: Defining the "target" population, drawing a sample from the population, organising the data into an appropriate format for further analysis. Presenting the results: Summarizing the data, and interpreting the results. Statistical methods: Contingency tables; (Chi Square tests); multiple regression; t-test and Anova; and confidence interval equivalence.

**DP requirements:** Class attendance and submission of all worksheets, projects and assignments.**Assessment:** Continuous assessment

---

**CON5043Z PROPERTY VALUATION THEORY & PRACTICE**

20 NQF credits at HEQSF level 9

**Convener:** Associate Professor M Mooya**Course outline:**

This course in property valuation theory and practice covers: The Valuer; Valuation Theory - concepts and historical development; Accuracy of Valuations; The Surveyor General; Register of Deeds; Local Authorities; Town Planning Schemes; the Valuer's Records; Factors Affecting Supply and Demand in the Property Market; Different Types of Fixed Property; Factors Influencing the Value of Property; Approaches to the Valuation of Property; the Valuation Report.

Potential and its Influence on Value: Legal Concept of Potential; Economic Concept of Potential; Potential for an Alternative Use; Redevelopment Potential; Quantifying the Influence of Potential on Value; Highest and Best Use of a Property; Under-improved Property; Over-improved Property; "Wrong" or Inappropriate Development; Influence of Re-zoning on Value. Methods of Valuation I: Sales, Cost and Income Methods of Valuation. Valuation of Residential Properties: Definition of a Residential Property; Valuation Approach; Sources of Information; the Valuation Process; Limitations on Use and Development; Unimproved Properties; Improved Properties; Valuation of Township Developments including Developers' Interests. Valuation of Income Producing Properties I: Influence of Leases on Value; Valuation of Leasehold Interests; Valuation of Income Producing Properties; Overview of Capitalisation Rates and their Use in the Valuation of Income Producing Properties. South African Legislative Environment: Relevant legislation and its application to the Valuation Process. Case Law: Relevant Case Law as it pertains to the Valuation of Property. Expropriation: Legislation; Valuation for Expropriation; Valuation of Servitudes. ARGUS - Valuation DCF Software: Use of the ARGUS software for the valuation of property.

**DP requirements:** 50% subminimum in both course work and examination.**Assessment:** Three hour examination 50%, assignments 50%.

---

**CON5044Z ADVANCED PROPERTY VALUATION**

20 NQF credits at HEQSF level 9

**Convener:** Ms K. Evans**Course entry requirements:** CON5043Z**Course outline:**

This advanced course in property evaluation covers: Valuation of Income Producing Properties II: Valuation of Residential, Commercial and Industrial Properties; Capitalisation Rates - Detailed Discussion of Capitalisation Rates; Usage and Derivation from Market; Pitfalls.

Methods of Valuation II: Residual and Accounts Methods of Valuation. Valuation of Special Properties: Valuation of Sectional Titles; Valuation for Fractional Ownership; Valuation of Farms and Agricultural Land; Valuation of Shopping Centres; Valuation of Special Properties, including Petrol Stations, Air Space, Mining Rights and Minerals, Industrial Plant and Machinery; Non-Negotiable Properties, and Properties Subject to Particular Legislation. Introduction to Non-Market Valuation Methods: Travel Cost Method; Contingent Valuation Method; and Hedonic Pricing



## 170 DEPARTMENTS IN THE FACULTY AND COURSES OFFERED

Method. Valuations for Rating Purposes (Municipal / Mass Valuations): Fiscal Requirements; Legislative Framework; Valuation Process; Appeals Process. South African Legislative Environment: Relevant Legislation and its application to the Valuation Process. Case Law: Relevant Case Law as it pertains to the Valuation of Property. Issues in Valuation Theory and Practice: Contemporary and Emerging Issues in Valuation Theory and Practice; Developing World Issues. Valuation for Insurance Purposes: Types of Property Insurance; Purpose of Insurance; Insurance Cover; Methods of Estimating and Sources of Cost Data; Inclusions in a Cost Estimate; Location; Professional Fees; Demolition Costs and Site Clearance. *GIS*: Type of GIS systems; Application of GIS systems to property. Valuation and Listed Property: Understand the relationship between property valuation and listed property.

**DP requirements:** 50% subminimum in both course work and examination.

**Assessment:** Three hour examination 50%; assignments 50%.

---

### **CON5046Z RESEARCH METHODOLOGY**

20 NQF credits at HEQSF level 9

**Convener:** Mr I Jay

**Course outline:**

This course aims to develop an understanding of academic research design. This includes: research methodology, the research experience; knowledge and problems; the proposal chapter; designing the research; theoretical frameworks; overview of research methods - from qualitative to quantitative; case studies; writing the literature review; data presentation and analysis; and concluding the research.

---

### **CON6009W THESIS**

360 NQF credits at HEQSF level 10

**Convener:** TBA

**Course outline:**

A PhD thesis is required to be an original, coherent and consistent body of work which reflects the candidate's own efforts. The thesis may not be more than 80 000 words. A candidate will undertake research, and such advanced coursework as may be required, under the guidance of a supervisor or supervisors appointed by Senate.

**DP requirements:** None

**Assessment:** Written work counts 100%.