

BACHELOR OF ARCHITECTURE

(Extended curriculum programme with foundation provision)

(Qualification type: Professional Bachelor's Degree)

Qualification code: BPARF1 - NQF Level 8 (480 credits)

CHE NUMBER: H16/10740/HEQSF

Campus where offered: Pretoria Campus (day classes)

Last year of new intake: 2019

Teach-out (phase-out) date: 31 December 2021

Students registered for this qualification should complete their studies according to the teach-out date prescribed for the qualification, subject to the stipulations of Regulation 3.1.11 and 3.1.13 in the Students' Rules and Regulations.

Information on phased-out programmes can be obtained from the TUT website, www.tut.ac.za.

CURRICULUM

Consult the 2019 Faculty Prospectus for the full contents of the qualification.

FIRST YEAR

CODE	MODULE	NQF-L	CREDIT	PREREQUISITE MODULE(S)
FAL105P	Foundation Architectural Language and Communication	(5)	(12,0)	
FBL105P	Foundation Building Business Law and Practice	(5)	(12,0)	
FBS105P	Foundation Building Science	(5)	(12,0)	
FPD105P	Foundation Principles of Architectural Design	(5)	(12,0)	
FTD105P	Foundation Technical Architectural Drawing	(5)	(12,0)	

TOTAL CREDITS FOR THE FIRST YEAR: **60**

SECOND YEAR

Upon first registration for this academic year, the following module and its combinations must be taken concurrently:

- ACH105P and CDO105P.
- ACH105P and THD105P.
- CDO105P, CSM105P and KME105P.

In the event of failing, non-completion and/or de-registering any of the above modules, the following rule(s) will apply:

- CDO105P may not precede ACH105P, because CDO105P is based on ACH105P.
- If THD105P has been passed previously, a student may continue with ACH105P.
- CSM105P and KME105P may not precede CDO105P, because CSM105P and KME105P are based on CDO105P.

CODE	MODULE	NQF-L	CREDIT	PREREQUISITE MODULE(S)
ABC105P	Applied Building Science I	(5)	(3,0)	
ACH105P	Architectural Design I	(5)	(24,0)	
CAI105P	Computer-Aided Draughting I	(5)	(2,4)	
CDO105P	Contract Documentation I	(5)	(7,2)	
COA105P	Computer Applications I	(5)	(2,4)	
COM105P	Communication I	(5)	(2,4)	
CSM105P	Construction Materials I	(5)	(3,0)	
HAC105P	History of Architecture I	(5)	(3,0)	



KME105P	Construction Methods I	(5)	(3,0)
PTT105P	Presentation Techniques I	(5)	(7,2)
THD105P	Theory of Design I	(5)	(2,4)

TOTAL CREDITS FOR THE SECOND YEAR: **60**

THIRD YEAR

Upon first registration for this academic year, the following module and its combinations must be taken concurrently:

- ACH206P and CDO206P.
- ACH206P and THD206P.
- CDO206P, CSM206P and KME206P.

In the event of failing, non-completion and/or de-registering any of the above modules, the following rule(s) will apply:

- CDO206P may not precede ACH206P, because CDO206P is based on ACH206P.
- If THD206P has been passed previously, a student may continue with ACH206P.
- CSM206P and KME206P may not precede CDO206P, because CSM206P and KME206P are based on CDO206P.

CODE	MODULE	NQF-L	CREDIT	PREREQUISITE MODULE(S)
ACH206P	Architectural Design II**	(6)	(48,0)	Architectural Design I
ARC206P	Architectural Technology Practice II	(6)	(30,0)	Architectural Design I Computer-Aided Draughting I Construction Materials I Construction Methods I Contract Documentation I
CDO206P	Contract Documentation II	(6)	(18,0)	Contract Documentation I
CM1206P	Computer-Aided Design II	(6)	(6,0)	Computer-Aided Draughting I Computer Applications I
CSM206P	Construction Materials II*	(6)	(6,0)	Construction Materials I
KME206P	Construction Methods II*	(6)	(6,0)	Construction Methods I
THD206P	Theory of Design II**	(6)	(6,0)	History of Architecture I Theory of Design I

TOTAL CREDITS FOR THE THIRD YEAR: **120**

FOURTH YEAR

Upon first registration for this academic year, the following module and its combinations must be taken concurrently:

- ACH307P and CDO307P.
- ACH307P and LDE307P.
- ACH307P and THD307P.
- BSV307P, CDO307P, CSM307P, KME307P and SPQ307P.

In the event of failing, non-completion and/or de-registering any of the above modules, the following rule(s) will apply:

- CDO307P may not precede ACH307P, because CDO307P is based on ACH307P.
- LDE307P may not precede ACH307P, because LDE307P is based on ACH307P.
- If THD307P has been passed previously, a student may continue with ACH307P.
- BSV307P, CSM307P, KME307P and SPQ307P may not precede CDO307P, because these modules are based on CDO307P.

CODE	MODULE	NQF-L	CREDIT	PREREQUISITE MODULE(S)
ACH307P	Architectural Design III	(7)	(48,0)	Architectural Design II
AHC307P	Architectural Practice III	(7)	(6,0)	Architectural Technology Practice II



BSV307P	Building Services III	(7)	(6,0)	
CAI307P	Computer-Aided Draughting III	(7)	(6,0)	Computer-Aided Design II
CDO307P	Contract Documentation III	(7)	(15,6)	Contract Documentation II
CSM307P	Construction Materials III	(7)	(6,0)	Construction Materials II
KME307P	Construction Methods III	(7)	(6,0)	Construction Methods II
LDE307P	Landscape Design III	(7)	(12,0)	Architectural Design II
SFA307P	Surveying for Architecture III	(7)	(4,8)	
SPQ307P	Specification and Quantities III	(7)	(3,6)	
THD307P	Theory of Design III	(7)	(6,0)	Theory of Design II

TOTAL CREDITS FOR THE FOURTH YEAR: **120**

FIFTH YEAR

Option 1: Architectural Design

This option is accredited by the South African Council for the Architectural Profession (SACAP) for registration in the SACAP category of Candidate Senior Technologist. The degree is internationally validated through the Canberra Accord (CA). The CA facilitates the portability of educational credentials amongst participating member countries by recognising the similarity of professional architecture degrees. CA signatories include Canada, China, Korea, Mexico, South Africa, the USA and a further 35 countries represented by the Commonwealth Association of Architects (CAA).

In order to continue with this option, students will be required to obtain a minimum mark of 70% in the final examination for Architectural Design III. Should they not meet this requirement, they will only be allowed to continue if recommended by the examination panel for Architectural Design III and Theory of Design III and the subsequent endorsement by the Head of the Department.

Upon first registration for this academic year, the following module and its combinations must be taken concurrently:

- ACH408P and PUD408P.
- ACH408P and THD408P.
- CSM408P and KME408P.

In the event of failing, non-completion and/or de-registering any of the above modules, the following rule(s) will apply:

- If THD408P has been passed previously, a student may continue with ACH408P.
- PUD408P may not precede ACH408P, because PUD408P is based on ACH408P.

CODE	MODULE	NQF-L	CREDIT	PREREQUISITE MODULE(S)
ACH408P	Architectural Design IV**	(8)	(48,0)	Architectural Design III
CSM408P	Construction Materials IV*	(8)	(12,0)	Construction Materials III
KME408P	Construction Methods IV*	(8)	(12,0)	Construction Methods III
LWC408P	Law and Contract Management IV	(8)	(12,0)	Architectural Practice III
PJG408P	Project Management IV	(8)	(9,6)	Architectural Practice III
PUD408P	Principles of Urban Design IV**	(8)	(12,0)	Landscape Design III
STR408P	Structures IV**	(8)	(9,6)	Applied Building Science I
THD408P	Theory of Design IV**	(8)	(4,8)	Theory of Design III

TOTAL CREDITS FOR THE FIFTH YEAR: **120**

Option 2: Architectural Technology

Information for this option will be made available as soon as it is approved by the various approval bodies.

TOTAL CREDITS FOR THE QUALIFICATION: **480**



MODULE INFORMATION (OVERVIEW OF SYLLABUS)

The syllabus content is subject to change to accommodate industry changes. Please note that a more detailed syllabus is available at the Department or in the study guide that is applicable to a particular module. On 01 October 2019, the syllabus content was defined as follows:

A

APPLIED BUILDING SCIENCE I (ABC105P)

CONTINUOUS ASSESSMENT

(Module custodian: Department of Architecture and Industrial Design)

Basic units: units used in the building industry, SI units, basic mathematics, statistics, basic mechanics and structures. Principles of heat: thermal insulation, humidity and condensation, ventilation, macro- and microclimate. Principles of sound: acoustics. Electricity. Lighting: artificial light, natural light. Hydraulics. Corrosion. (Total tuition time: ± 21 hours)

ARCHITECTURAL DESIGN I (ACH105P)

CONTINUOUS ASSESSMENT

(Module custodian: Department of Architecture and Industrial Design)

Design projects at a single-storey residential scale with simple circulation and zoning. Spaces around elements and elements in space. Ergonomics: design around human spatial requirements. Structure and material as generators. Introduction to environmental effects on design. The role of context in determining aesthetics. (Total tuition time: ± 252 hours)

ARCHITECTURAL DESIGN II (ACH206P)

CONTINUOUS ASSESSMENT

(Module custodian: Department of Architecture and Industrial Design)

Design projects consisting of predominantly low-rise buildings with more complex circulation requirements with an emphasis on the following aspects: 1. Design process: determining design generators, concept, context and concept development. 2. Structure and material as design generators. 3. Environment and climate as design generators. 4. Introduction to problem analysis. (Total tuition time: ± 126 hours)

ARCHITECTURAL DESIGN III (ACH307P)

CONTINUOUS ASSESSMENT

(Module custodian: Department of Architecture and Industrial Design)

Design projects of simple multi-storey buildings (i.e. offices with a basement), as well as long-span structures (i.e. factories), emphasising issues such as: 1. Problem analysis as first step to synthesis; 2. Interpretation of the brief; 3. The effects of and solutions to environmental and climatic influences on design; 4. The principles of sustainability, as applied to buildings; 5. The fabric of the city: how a design solution acts as building block within the structure and fabric of the city. (Total tuition time: ± 252 hours)

ARCHITECTURAL DESIGN IV (ACH408P)

CONTINUOUS ASSESSMENT

(Module custodian: Department of Architecture and Industrial Design)

Design projects and exercises to promote creativeness and lateral thinking. Analysis of local heritage, town structure, climate and social structure. This will culminate in appropriate design proposals, with consideration to principles of sustainable development/green building where applicable, structure and material as major generators of design, structures with complex circulation and specialised design and/or construction and services (small auditorium, museum, etc.), as well as a mixed-use building, emphasising the following issues: problem analysis, interpretation and development of the brief. Environmental and climatic issues and their influence on design. Sustainability. Urban issues. (Total tuition time: ± 252 hours)

ARCHITECTURAL PRACTICE III (AHC307P)

CONTINUOUS ASSESSMENT

(Module custodian: Department of Architecture and Industrial Design)

Office management (drawing-office practice, forms of collaboration and doing business, strengths and weaknesses, space and equipment requirements and layout). The SAIA Practice Manual (client/architect agreement, accepting work at risk, remuneration for work at risk, styles of practice, multidisciplinary firms, agreement checklist, employment conditions, architect/consultant relationship, project managers, clerk of works, issuing drawings and documentation, the concept of principal agent). The building contract (tender procedures, types of building contracts, forms of subcontractors, dispute resolution and the role of consultants). (Total tuition time: ± 14 hours)



ARCHITECTURAL TECHNOLOGY PRACTICE II (ARC206P)**CONTINUOUS ASSESSMENT****(Module custodian: Department of Architecture and Industrial Design)**

This module/subject consists of work-integrated learning in an architectural practice, where the following aspects should be encountered: Presentation drawings. Working drawings and specifications. Building and site surveying. Office procedures (electronic data-management procedures, printing and plotting, issuing drawings, library, filing, staff meetings, general office duties). Local authority procedures and approval of documents. Exposure to site inspections and meetings. Liaison with consultants and representatives. (No formal tuition hours)

B**BUILDING SERVICES III (BSV307P)****CONTINUOUS ASSESSMENT****(Module custodian: Department of Architecture and Industrial Design)**

Drainage. Water reticulation. Electrical and electronic services. Lighting. Communication. Air and gas supply. Heating and cooling. Elevators and escalators. Natural heating and ventilation. Fire protection and control. Building regulations. Employing alternative and green technology. Acoustics. Sound systems. (Total tuition time: ± 14 hours)

C**COMMUNICATION I (COM105P)****CONTINUOUS ASSESSMENT****(Module custodian: Department of Architecture and Industrial Design)**

Communication within the architectural profession. Relevant terminology and professional vocabulary. Summarising techniques. Comprehension. Report writing. Academic writing and referencing using ENDNOTE (or other approved referencing software). (Total tuition time: ± 30 hours)

COMPUTER-AIDED DESIGN II (CMI206P)**CONTINUOUS ASSESSMENT****(Module custodian: Department of Architecture and Industrial Design)**

Building Information Modelling (BIM) software. Using ArchiCAD (or other approved CAD software) to produce working drawings from design models. Intermediate skills level of ArchiCAD (or other approved CAD software). (Total tuition time: ± 24 hours)

COMPUTER-AIDED DRAUGHTING I (CAI105P)**CONTINUOUS ASSESSMENT****(Module custodian: Department of Architecture and Industrial Design)**

ArchiCAD (or other approved CAD software): An introduction with emphasis on using 2D in the production of technical drawings. (Total tuition time: ± 30 hours)

COMPUTER-AIDED DRAUGHTING III (CAI307P)**CONTINUOUS ASSESSMENT****(Module custodian: Department of Architecture and Industrial Design)**

Photoshop (or other approved rendering software), 3-D modelling and rendering, REVIT for Architecture (or other approved CAD software). (Total tuition time: ± 30 hours)

COMPUTER APPLICATIONS I (COA105P)**CONTINUOUS ASSESSMENT****(Module custodian: Department of Architecture and Industrial Design)**

MS Windows, MS Word, MS Excel, Photoshop. Basic hardware terminology. Introduction to the Internet and e-mail. SketchUp. (Total tuition time: ± 42 hours)

CONSTRUCTION MATERIALS I (CSM105P)**CONTINUOUS ASSESSMENT****(Module custodian: Department of Architecture and Industrial Design)**

Timber: SA Pine, common hardwoods. Metals: steel, galvanising and aluminium. Concrete: cement types, aggregates, how to make good concrete. Masonry: bricks and blocks. Mortars: classes and types. Plasters: cement, lime and earth. Roof coverings: concrete tiles and sheet metal (profiles and laying practice). Paint: basic systems (primers, undercoats and topcoats). Floor finishes: ceramic tiles (glazed and quarry), carpets, timber and their skirtings. Fixing systems: nails, screws and bolts. (Total tuition time: ± 28 hours)



CONSTRUCTION MATERIALS II (CSM206P)**CONTINUOUS ASSESSMENT****(Module custodian: Department of Architecture and Industrial Design)**

Waterproofing materials for pitched and flat concrete roofs. Timber: joints commonly used in fittings, doors and windows. Manufactured timber boards. Concrete: cement types, aggregates, integral finishes on concrete, reinforcement, concrete floor finishes. Masonry: concrete bricks and blocks. Mortars: classes and types. Glass: types and applications. Fibre cement sheeting and tiles. Insulation materials for roofs. (Total tuition time: ± 14 hours)

CONSTRUCTION MATERIALS III (CSM307P)**CONTINUOUS ASSESSMENT****(Module custodian: Department of Architecture and Industrial Design)**

Timber: softwoods and common hardwoods, jointing (particularly poles) and protection. Metals: steel, stainless steel, brass, copper and aluminium. Plastics: fibre-glass, ABS, PMMA. Stone types. Concrete. Load-bearing masonry. Tiles. Thatch. (Total tuition time: ± 28 hours)

CONSTRUCTION MATERIALS IV (CSM408P)**CONTINUOUS ASSESSMENT****(Module custodian: Department of Architecture and Industrial Design)**

Cement, concrete and cementitious products. Metals: corrosion, joining, ferrous and non-ferrous metals. Bricks and blocks: clay, concrete and earth. Timber: defects and protection, products. Polymers, plastics and rubbers. Mastics. Composite materials: external cladding, wood products. Paint systems. Adhesives. (Total tuition time: ± 21 hours)

CONTRACT DOCUMENTATION I (CDO105P)**CONTINUOUS ASSESSMENT****(Module custodian: Department of Architecture and Industrial Design)**

Drawing equipment and materials, lettering, line work and geometric exercises, graphic projections, scale, dimensioning and annotation. Working drawings: ground-floor plan, sections, elevations and site plan, application of the National Building Regulations, services layouts. Construction detailing, measuring existing work, drawing office equipment, storage of information, the role of the architect, technologist and other professional consultants, the building contractor and the client. (Total tuition time: ± 168 hours)

CONTRACT DOCUMENTATION II (CDO206P)**CONTINUOUS ASSESSMENT****(Module custodian: Department of Architecture and Industrial Design)**

Working drawings of own design, which could be used for measuring by a quantity surveyor and as contract documents with a bill of quantities. Detail drawings for discussion with consultants. Construction detail design drawings. Schedules: finishing, doors, windows, cupboards, etc. Details of components and fixtures. (Total tuition time: ± 63 hours)

CONTRACT DOCUMENTATION III (CDO307P)**CONTINUOUS ASSESSMENT****(Module custodian: Department of Architecture and Industrial Design)**

SANS 10400: safety, access for the disabled, dimensioning and modular coordination. Substructure: bearing piles, basement construction and retaining walls. Structural systems: concrete, steel, timber and load-bearing masonry. Roofs: long-spanning sheet metal, tiles, thatch and flat concrete roofs. External construction: cladding types, industrial cladding, prefabricated cladding and curtain walling. Internal construction: partitioning, staircases and glazing. Thermal performance: responsive configurations, sun control, insulation and materials. Structures: trusses, portal frames, complex foundations and pre-stressing (both pre-and post-tensioning). Construction detail: design drawings. Schedules: finishing schedules, door schedules, window schedules, joinery and details of components and fixtures. Working drawings: used as contract documents with a bill of quantities, for measuring by a quantity surveyor. (Total tuition time: ± 126 hours)

CONSTRUCTION METHODS I (KME105P)**CONTINUOUS ASSESSMENT****(Module custodian: Department of Architecture and Industrial Design)**

Regulations: SANS 10400 and the National Home Builders Registration Council (NHBC). Site investigation, site visits. Substructure: excavations, strip foundations (other foundation types in concept only). Superstructure: load-bearing walls, cavity walls and elementary masonry detailing. Retaining walls: garden, brick and stone. Roofs: design and selection, trusses, beams, rafters and elementary ceilings. Services: sanitary fittings, design of drainage and water supply systems, electrical systems. Fittings: residential door types and their construction. Stairs: interior stairs for applicable building types. (Total tuition time: ± 28 hours)



CONSTRUCTION METHODS II (KME206P)**CONTINUOUS ASSESSMENT****(Module custodian: Department of Architecture and Industrial Design)**

Regulations: National Building Regulations (SANS 10400) and NHBRC Regulations, where applicable. Sub-structure: semi-basement and simple retaining walls, drainage behind walls, complex strip foundations, cut and fill. Damp-and waterproofing: semi-basements. Superstructure: load-bearing walls, cavity walls, masonry detailing, expansion joints. Roofs: flat concrete roofs, trusses, beams, rafters, suspended ceiling systems and bulkheads, plastered metal lathes. Structures: pad footings, reinforced strip footings, columns and slabs. Services: design of drainage and water supply systems, stormwater catch pits, electrical layout. Fittings: commercial door and window types and their construction, master keying. Stairs and ramps: interior stairs and ramps, elementary prefabricated stairs. (Total tuition time: ± 28 hours)

CONSTRUCTION METHODS III (KME307P)**CONTINUOUS ASSESSMENT****(Module custodian: Department of Architecture and Industrial Design)**

Regulations: SANS 10400 and NHBRC. Bricks and blocks: durability and exposure zones, bonding, joints, pointing and stability, design of multi-storey structures, tall walls, lintels and beams. Timber structures: joint design and fasteners, products and uses, floors and flooring, long-span roofs for commercial and shopping centres. Detailing: performance criteria, evaluation of existing details and generating model details. Site and geotechnical investigations: failure of foundations, warning signs, bearing capacities, consolidation, stabilisation, groundwater, moisture content and types of soil tests. Roofs: evaluation and problem-solving, gutter and down-pipe design, expansion joint design, packing decks, roof lights and ventilators. Sustainable buildings: recyclability, resource-saving manufacture, initial and life-cycle cost-efficiency, initial and life-cycle energy efficiency, ease of use and maintenance. Thermal behaviour of buildings: revision of basic principles, microclimate. Low-cost solutions. Thermal performance: responsive configurations, sun control, insulation and materials. Structures: trusses, portal frames, complex foundations, pre-stressing (both pre- and post-tensioning). Deterioration of buildings: performance criteria, planned maintenance, weathering, corrosion and case studies. Site and surface-water drainage: hydrological factors, site drainage, risks and risk assessment, factors affecting run-off and economic considerations. Solar energy: passive systems, active systems, trombe walls and rock beds. Building systems: Agrément certification, etc. Services: waste disposal, gas, data and communication systems, security systems and incinerators. (Total tuition time: ± 28 hours)

CONSTRUCTION METHODS IV (KME408P)**CONTINUOUS ASSESSMENT****(Module custodian: Department of Architecture and Industrial Design)**

Bricks and blocks. Timber structures. Detailing. Geotechnical investigations. Roofs. Sustainable buildings. Thermal behaviour of buildings. Surface water drainage. Solar energy. Building systems (Agrément certificate). Building services. Regulations (SANS 10400, NHBRC). (Total tuition time: ± 21 hours)

F**FOUNDATION ARCHITECTURAL LANGUAGE AND COMMUNICATION (FAL105P)****CONTINUOUS ASSESSMENT****(Module custodian: Department of Architecture and Industrial Design)**

Module 1: architectural presentation techniques: introduction to the various methods of communicating design ideas and concepts to clients and peers (oratorical and linguistic tutoring). An introduction to the use of artistic media to present design ideas (pencil, markers, watercolour and 3D CAD programs). Building basic models for design development and presentation purposes (cutting boards, glue, skills in constructing models). Module 2: language cultural studies: Language course on writing, oral skills development and public speaking. Writing essays related to the architectural field. Prescribed reading: architecture- and language-related (building architectural vocabulary, background and world view). (Total tuition time: ± 42 hours)

FOUNDATION BUILDING BUSINESS LAW AND PRACTICE (FBL105P)**CONTINUOUS ASSESSMENT****(Module custodian: Department of Architecture and Industrial Design)**

Module 1: Understanding of legalities concerning the structure known as the SACAP. This includes researching the structure and workings of the SACAP. Module 2: Understanding legalities regarding the agreement between the architect and the client. This module investigates the client architect agreement and the legal onus on each party. Module 3: Legalities for plan submission at local authorities. Student will visit local authorities and acquire the necessary documentation needed to submit plans. These documents will be completed as for a real set of plans for submission. Module 4: Legalities placed upon the architect from the SACAP. This includes the reservation of work, the architectural stages of work as per the SACAP guidelines, architect's fees structures and calculations thereof, as well as the yearly published notices in the Government Gazette. (Total tuition time: ± 42 hours)



FOUNDATION BUILDING SCIENCE (FBS105P)**CONTINUOUS ASSESSMENT***(Module custodian: Department of Architecture and Industrial Design)*

Module 1: Theory of commonly used building construction methods and materials. Module 2: Elementary principles of building science related to architectural design. Module 3: Practical making modelling and making, students design and construct their own toolbox. (Total tuition time: ± 42 hours)

FOUNDATION PRINCIPLES OF ARCHITECTURAL DESIGN (FPD105P)**CONTINUOUS ASSESSMENT***(Module custodian: Department of Architecture and Industrial Design)*

Module 1: Principles of architectural design: introduction to the process of design. Focus on pragmatic planning principles, relationship of spaces, ergonomic principles and application of structure and construction as part of design decision-making. Module 2: Architectural terminology and theory: introduction to the language used in architectural theory. The focus will be on the correct use of terminology through examples and an explanation of their meaning. Module 3: Practical approach to the theorem design to develop model make. This theorem is explored as a whole throughout the year. (Total tuition time: ± 252 hours)

FOUNDATION TECHNICAL ARCHITECTURAL DRAWING (FTD105P)**CONTINUOUS ASSESSMENT***(Module custodian: Department of Architecture and Industrial Design)*

Module 1: Build skill and understanding of the methods and materials needed to construct a basic building in South Africa. Module 2: Master the basic sketching techniques needed to sketch and draw these methods and materials as related to the module. Module 3: Understand the basic types of construction relevant to the assignments in the module. (Total tuition time: ± 48 hours)

H**HISTORY OF ARCHITECTURE I (HAC105P)****CONTINUOUS ASSESSMENT***(Module custodian: Department of Architecture and Industrial Design)*

Introduction and an overview of Western architecture, from the origins to the present day, and Southern African architecture, from the origins to the present day. Principal examples, as well as technological and cultural aspects, are highlighted and put in social context. Visits to local historical examples. (Total tuition time: ± 28 hours)

L**LANDSCAPE DESIGN III (LDE307P)****CONTINUOUS ASSESSMENT***(Module/Subject custodian: Department of Architecture)*

A brief historical overview. Terminology, perceptions and basic design principles. Landscape design and the design process. Spatial development. Land form. Circulation and paving. Site structures. Plant material. Water. Basic urban design principles. Urban ecology. (Total tuition time: ± 42 hours)

LAW AND CONTRACT MANAGEMENT IV (LWC408P)**CONTINUOUS ASSESSMENT***(Subject/Module custodian: Department of Architecture)*

Contract law – basic concepts, such as contract documentation. Basic principles of South African common law. Arbitration. Construction law. Building contract. Principles of property law – forms of ownership. Tender procedures – forms of tender. Certificates. Sectional titles. Land Tenure Act. Principles of bankruptcy and liquidations. Nominated subcontractors. Laws governing the built environment. Case studies. (Total tuition time: ± 21 hours)

P**PRESENTATION TECHNIQUES I (PTT105P)****CONTINUOUS ASSESSMENT***(Module custodian: Department of Architecture and Industrial Design)*

The application of drawing and sketching principles relevant to architectural presentation. The syllabus covers ten basic skills. Line work different types of lines and uses. Construction lines as a drawing element. General sheet and drawing layout. Tracing techniques relevant to architectural presentation. Architectural contextual elements-trees. Architectural contextual elements-people. Typography, spelling and vocabulary. Architectural model building. Three dimensional sketching, perspectives and isometric projections. General layout composition and ordering principles for architectural presentation. (Total tuition time: ± 56 hours)



PRINCIPLES OF URBAN DESIGN IV (PUD408P)**CONTINUOUS ASSESSMENT***(Module custodian: Department of Architecture and Industrial Design)*

Structural configurations: structural systems, structural planning, stabilising elements, structural patterns, structural loads. Basic mechanics: forces, moments, stresses. Sectional properties: centroids, moment of inertia. Material properties: general stress and strain, Young's Modulus. Other stresses: stresses due to internal forces, combined stresses. Deflections: elastic beam deflections. Approximate sizing of structural components: beams, trusses, columns, retaining walls. (Total tuition time: ± 21 hours)

PROJECT MANAGEMENT IV (PJG408P)**CONTINUOUS ASSESSMENT***(Module custodian: Department of Architecture and Industrial Design)*

Management approaches. The business environment. Personnel management. Financial management. Risk analysis. Financial viability studies. IT integration. Decision-making and problem solving. Corporative communication. Small business management. Politics, ethics and social responsibility. Case studies. (Total tuition time: ± 14 hours)

S**SPECIFICATION AND QUANTITIES III (SPQ307P)****CONTINUOUS ASSESSMENT***(Module custodian: Department of Architecture and Industrial Design)*

The following aspects of specification and quantities are covered: introduction to bills, specifications for bills of quantities, interaction between drawings and other contract documentation, as well as estimates, feasibility, measuring units, costing and influencing factors. (Total tuition time: ± nine hours)

STRUCTURES IV (STR408P)**CONTINUOUS ASSESSMENT***(Subject/Module custodians: Departments of Civil Engineering and Architecture)*

Visits to buildings. Relevant topics relating to design projects. Green architecture. Pro-bono architecture and architecture for the poor. Selected topic from the social and behavioural sciences. Speculative architecture. Selected period from the fine arts, including painting and sculpture. Theory: the work of international and local architects and architectural firms. (Total tuition time: ± 21 hours)

SURVEYING FOR ARCHITECTURE III (SFA307P)**CONTINUOUS ASSESSMENT***(Module custodian: Department of Architecture and Industrial Design)*

Principles of surveying. Basic surveying methods. Practical levelling and contouring. Setting out of buildings. Introduction to geographic information systems (GIS). Basic use and application of the Global Positioning System (GPS). Cadastral, referencing and photogrammetric software (CAD). Fieldwork practice. (Total tuition time: ± 24 hours)

T**THEORY OF DESIGN I (THD105P)****CONTINUOUS ASSESSMENT***(Module custodian: Department of Architecture and Industrial Design)*

Visits to buildings. The process of design. Relevant topics relating to design projects. Space, form, proportion, scale. Organising principles. Circulation. Theory: Bauhaus, Modern Movement, International Style. (Total tuition time: ± 28 hours)

THEORY OF DESIGN II (THD206P)**CONTINUOUS ASSESSMENT***(Module custodian: Department of Architecture and Industrial Design)*

Visits to buildings. The process of design: Relevant topics relating to design projects. Theory: Romantic pragmatism. Christopher Alexander. Arts and Crafts movement, Art Nouveau, Art Deco, Classicism. History: Cape settlement. 18th and 19th Century South African architecture. Indigenous Southern African design. Neo-classicism in Pretoria and Johannesburg. (Total tuition time: ± 21 hours)

THEORY OF DESIGN III (THD307P)**CONTINUOUS ASSESSMENT***(Module custodian: Department of Architecture and Industrial Design)*

Visits to buildings. The process of design: Part 3. Relevant topics relating to design projects. Environmental effect on buildings. Theory: the Post-Modern Movement, deconstruction, Late Modern Period. History: the Modern Movement in Pretoria and Johannesburg. The vernacular architecture of Africa. (Total tuition time: ± 21 hours)



THEORY OF DESIGN IV (THD408P)

CONTINUOUS ASSESSMENT

(Module custodian: Department of Architecture and Industrial Design)

Visits to buildings. Relevant topics relating to design projects. Green architecture. Pro-bono architecture and architecture for the poor. Selected topic from the social and behavioural sciences. Speculative architecture. Selected period from the fine arts, including painting and sculpture. Theory: the work of international and local architects and architectural firms. (Total tuition time: ± 21 hours)

