University of Pretoria Yearbook 2019

BSc Landscape Architecture (12132019)

Minimum duration of study	3 years
Total credits	412
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Programme information

Landscape architecture is the science and art of the design of outside areas for the use and enjoyment of people. Parks, game reserves, recreational areas and marinas are only a few of the environments which the landscape architect designs. They create urban oases in the form of plazas and pedestrian routes, and design environments around shopping centres and residential developments. The landscape architect can join a private firm, start an own business, or accept employment in central, provincial or local government in departments that handle water usage and research, forestry, environmental matters, sport, recreational and fishing areas, and nature conservation.

Students are advised to work in the offices of an architect or a landscape architect to gain practical experience during the university recesses.

BScLArch is a three-year degree and is regarded as an exit level that enables the graduate to register as a candidate landscape architectural technologist who is a professional person registered by the South African Council of the Landscape Architectural Profession in terms of the Act on the Landscape Architectural Profession (Act 45 of 2000). Such practitioners provide assistance in the practices of the disciplines of landscape architecture and urban design where their responsibilities would be the documentation of projects, project administration and site management. Candidates wishing to become professional landscape architects must hereafter apply to register for the BLHons degree (one year full-time), and thereafter the ML(Prof) degree (one year full-time).

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.
- Selection programme: Selection includes an interview.
- Tuition will be presented in English only.

Minimum requirements
Achievement level

English Home Language or English First Additional Language		Mathematics		Physical Science or Geography or Life Sciences		APS
NSC/IEB	AS Level	NSC/IEB	AS Level	NSC/IEB	AS Level	
5	C	4	D	4	D	**27**

* 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.

Additional requirements

Please Note: Students wishing to transfer to other programmes in the Department of Architecture must obtain written consent from the admissions committee.

Other programme-specific information

Concurrent presentation

In the third year of study Design, Construction, Environmental studies, Plant science and Earth studies must be examined in the same year.

Awarding of degree

The degree is awarded to those students who have obtained all the prescribed credits for the programme modules.

Promotion to next study year

A student is promoted to a subsequent year of study after acquiring all the prerequisite module credits of the preceding year of study.
A student is deemed to be in the year of study for which he or she is registered in Design.
If the student is not registered for Design the highest passed year of Design determines the year of study.

Please Note: Students not promoted to the next year of study must obtain the approval of the programme co-ordinator and the head of department to register for modules in the subsequent year of study. Students must re-apply for admission to the Department of Architecture in instances where:

i. a student is not promoted to the second year of study;
ii. a student after repeating any year of study, is not promoted to the following year of study.

Pass with distinction

The BScLArch degree is conferred with distinction on a student who, at first registration, simultaneously passes Design 302 and Construction 320 with distinction (75%) with the proviso that the degree is completed within the minimum prescribed time and all other final-year modules are passed on first registration without any supplementary/special examinations.

Curriculum: Year 1

Minimum credits: 116

Fundamental modules

Academic information management 102 (AIM 102)

Module credits	6.00
Service modules	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 2

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 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

Earth studies 110 (AAL 110)

Module credits	10.00
Prerequisites	No prerequisites.
Contact time	3 lectures per week
Language of tuition	Module is presented in English
Department	Architecture
Period of presentation	Semester 1

Module content
Introduction to the basic concepts of ecology, natural resources and stress on the environment; systems thinking; earth as system; changing paradigms and values; ecological design principles; geo-referencing; geo-mapping, basic site survey.

Digital visual communication 110 (ARC 110)

Module credits	6.00
Prerequisites	No prerequisites.
Language of tuition	Module is presented in English
Department	Architecture
Period of presentation	Semester 1

Module content

Basic overview and understanding of digital architectural visualisation using tools such as prescribed open source photo editing software that enhances hand drawing techniques.

Construction 111 (KON 111)

Module credits	8.00
Prerequisites	No prerequisites.
Contact time	3 lectures per week
Language of tuition	Module is presented in English
Department	Architecture
Period of presentation	Semester 1

Module content

The context of architectural technology and the relationships between technology, theory, structure and materials. Drawing conventions.The typical city site. The construction and materials of a single storey dwelling with masonry walls and a pitched roof, from preparation for building work to substructure, retaining walls and floors.

Construction 121 (KON 121)

Module credits	8.00
Prerequisites	KON 111 GS
Contact time	3 lectures per week, 1 practical per week
Language of tuition	Module is presented in English
Department	Architecture
Period of presentation	Semester 2

Module content

Continuation of the construction and materials of a single storey dwelling. Superstructure: walls, opening, roofs, finishes and services.

Design communication 120 (OKU 120)

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

Quarter 3: Introduction to basic computer aided design.
Quarter 4: Introduction to the theory of structures: Forces, moments, stresses, strains, Young's Modulus, Structural components: beams, columns and trusses.

Environmental theory 110 (OML 110)

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 1

Module content

Introductory contextualisation of twentieth century artefacts within the framework of history from Antiquity to Modernity. Building types as artefacts of material culture. Approaches and guidelines to the study of history of the environment. Understanding of the process of endemic construction and its monumentalisation, settlement and urbanisation of various ages and environments. An interdisciplinary investigation of living spaces as shapers of social interaction. The history of the environment of the Mediterranean Antique, Bronze Age, Classical and Biblical societies.

Environmental studies 120 (OML 120)

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

The history of the environment of and the link between North-Europe and the Mediterranean area, the Arabic peninsula and the Indies, from the fall of Jerusalem up until the fall of Constantinople in 1453 AD. Tao, Shinto and the landscape of the Far East.

Design 100 (ONT 100)

Module credits	60.00
Prerequisites	No prerequisites.
Contact time	2 lectures per week, 17 studio hours per week
Language of tuition	Module is presented in English
Department	Architecture
Period of presentation	Year

Module content

Introduction to design and integration with supporting modules. Design principles, skills and techniques. Small-scale design projects and environmental influences (physical, social, cultural, historical), space requirements and creative interpretation. Acquisition of skills in design communication through imagination, intuition and conceptual thinking. Relation of internal to external space. Anthropometry and ergonomics; visual literacy (visual media, analysis and interpretation) and criticism. The designer as visual thinker. Perception; ideograms. Development of a vocabulary to describe and illustrate the discipline of design. Pertinent theory that informs and supports the design process.

Curriculum: Year 2

Minimum credits: 144

Core modules

Earth studies 210 (AAL 210)

Module credits	8.00
Prerequisites	No prerequisites.
Contact time	3 lectures per week
Language of tuition	Module is presented in English
Department	Architecture
Period of presentation	Semester 1

Module content

Meso-environment:
Climate: atmospheric constituents and processes, weather systems, heat radiation and transfer, solar charts, sun movement and heat gain control.
Air: airflow patterns around structures, natural ventilation.
Water vapour: diffusivity, transfer and condensation.
Heat: thermal comfort and comfort indices, thermal performance of materials and structures, time lag, decrement and periodic heat transfer.

Geomorphology of the built environment 265 (GGY 265)

Module credits	12.00
Service modules	Faculty of Engineering, Built Environment and Information Technology
Prerequisites	No prerequisites.
Contact time	4 lectures per week
Language of tuition	Afrikaans and English are used in one class
Department	Geography Geoinformatics and Meteorology
Period of presentation	Quarter 3

Module content

*This module is for Architecture and Landscape Architecture students only.
The theory component covers geomorphological aspects of the built environment including landscape identification; weathering or deterioration of natural stone and application to design and preservation of buildings and monuments; slope hydrology and stability conditions; soil erosion processes and construction impacts; drainage modification in urban areas; wetland identification, human impacts and rehabilitation; recreational impacts and management. In addition to the theory a field-based project is undertaken.

Introductory soil science 250 (GKD 250)

Module credits	12.00

Service modules	Faculty of Engineering, Built Environment and Information Technology
Prerequisites	CMY 117 GS or permission from the HOD
Contact time	3 lectures per week, 1 practical per week
Language of tuition	Separate classes for Afrikaans and English
Department	Department of Plant and Soil Sciences
Period of presentation	Semester 1

Module content

Origin and development of soil, weathering and soil formation processes. Profile differentiation and morphology. Physical characteristics: texture, structure, soil water, atmosphere and temperature. Chemical characteristics: clay minerals, ion exchange, pH, buffer action, soil acidification and salinisation of soil. Soil fertility and fertilisation. Soil classification. Practical work: Laboratory evaluation of simple soil characteristics. Field practicals on soil formation in the Pretoria area.

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 210 (KON 210)

Module credits	8.00
Prerequisites	KON 111 and KON 121

Contact time	3 lectures per week
Language of tuition	Module is presented in English
Department	Architecture
Period of presentation	Semester 1

Module content

Double-storeyed buildings: reinforced concrete, steel and timber-framed structures. Offshutter concrete. Load-bearing masonry. Low-pitch roofs and waterproofing, other pitched-roof finishes. Lightweight partitioning. Glass. Joinery. Small precast elements.

Construction 220 (KON 220)

Module credits	8.00
Prerequisites	KON 210 GS
Contact time	3 lectures per week
Language of tuition	Module is presented in English
Department	Architecture
Period of presentation	Semester 2

Module content

Soil mechanics: foundations, basement construction and waterproofing. Site structures: geotextiles and geomembranes, stairs, walls, retaining walls, fences, ramps, gabions, prefabricated retaining blocks. Built planters, lapas, braais, pavilions, decks.

Landscape architecture 212 (LAN 212)

Module credits	8.00
Prerequisites	No prerequisites.
Contact time	3 lectures per week
Language of tuition	Module is presented in English
Department	Architecture
Period of presentation	Semester 1

Module content

Introductory Botany and plant diversity; plant design philosophy; criteria and process for plant material selection and preparing plant material lists; plant classification; identification of genera and species.

Landscape architecture 222 (LAN 222)

Module credits	8.00
Prerequisites	LAN 212 GS
Contact time	3 lectures per week
Language of tuition	Module is presented in English

Department	Architecture
Period of presentation	Semester 2

Module content

The role of plant geography in plant selection and the identification of plant species specific to their natural environment; practical considerations in plant selection.

Environmental theory 210 (OML 210)

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 1

Module content

The history of the environment and the link between North-Europe and a newly discovered world from the time of the circumnavigation of the southernmost Cape Point of Africa till the Industiral Revolution.

Environmental studies 220 (OML 220)

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

History of the environment of Western societies and their dominions from the Industrial Revolution up to the intellectual questioning of Modernism. Southern African housing typologies and Western artefacts as manifestation of socio-political realities since 1488 AD.

Design 202 (ONT 202)

Module credits	60.00
Prerequisites	AAL 110, KON 111, KON 121, OML 110, OML 120 and ONT 100
Contact time	17 studio hours per week, 2 lectures per week
Language of tuition	Module is presented in English
Department	Architecture
Period of presentation	Year

Module content

The process and product of design through the integration of supporting modules. Site planning and design; design determinants. Exploration of meaning and integrity in landscape design. Skills: programming, site analysis, creative design, time management, advanced graphic techniques, reprographic techniques. Pertinent theory that informs and supports the design process in landscape architecture.

Curriculum: Final year

Minimum credits: 152

Core modules

Earth studies 320 (AAL 320)

Module credits	6.00
Prerequisites	AAL 210
Contact time	2 lectures per week
Language of tuition	Module is presented in English
Department	Architecture
Period of presentation	Semester 2

Module content

Ecosystemic thinking for the designer in terms of culture, science and environment. The designer as critic; analysis of precedents. Application of principles of sustainable development and ecological design including energy demand and efficiency and energy dissipation.

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.

Construction 310 (KON 310)

Module credits	8.00
Prerequisites	KON 210 and KON 220
Contact time	3 lectures per week
Language of tuition	Module is presented in English
Department	Architecture
Period of presentation	Semester 1

Module content

Roads: design and construction, materials and finishes, kerbing. Water features: design and construction. Street furniture. Construction equipment. Site and building services: water lines, sanitary plumbing and pipe systems above ground and indoors, underground sewer systems, electricity and gas. Electrical lighting: light, lamp types, luminaires; lighting requirements. Design application.

Construction 320 (KON 320)

Module credits	8.00
Prerequisites	KON 310 GS
Contact time	2 lectures per week
Language of tuition	Module is presented in English
Department	Architecture
Period of presentation	Semester 2

Module content

Integration of the foregoing coursework. Introduction to construction norms and standards, technical drawing practice and specifications. Cost estimates, feasibility and payability. Advanced materials: ceramics, polymers, adhesives, paint, metals, glass. Human transportation systems: types, applications. Design of a small commercial building/landscape/interior space (in DESIGN) and the preparation of its construction drawings.

Design communication 313 (OKU 313)

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

Module content

Advanced graphic and presentation techniques.

History of the environment 310 (OMG 310)

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 1

Module content
History of the environment of African societies between the tropics within global context until the present.

History of the environment 320 (OMG 320)

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
History of the environment of Southern African societies from the old Stone Age until the present.

Environmental studies 310 (OML 310)

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 1

Module content
Normative positions: Normative positions that guide design thinking: Surface features, broad inclinations and differentiating features. Problems of substantiation. Theory and practise.
Theory of design disciplines: A hermeneutic appraisal of contemporary philosophical directions defining the current intellectual context in which the design disciplines are practised and appraised. Contextualising culture, philosophy and science as the ecosystem of the designer.
Housing studies: Contemporary theory, approaches and projects in housing. Developing a personal approach.

Environmental studies 320 (OML 320)

Module credits	6.00
Prerequisites	OML 310 GS
Contact time	2 lectures per week
Language of tuition	Module is presented in English
Department	Architecture
Period of presentation	Semester 2

Module content

The relationship between global intellectual movements and the local debate. Appraising the state of current design production and the establishment of identity through design. Presentation is programme specific.

Design 302 (ONT 302)

Module credits	60.00
Prerequisites	KON 210, KON 220, OML 210, OML 220 and ONT 202
Contact time	17 studio hours per week, 2 lectures per week
Language of tuition	Module is presented in English
Department	Architecture
Period of presentation	Year

Module content

Semester 1
The process of design through the integration of supporting modules. Understanding and investigating urban form, urban ecology and site ecology. Site planning: exploration of complexities at neighbourhood and regional scale including ecological, economic and social planning aspects. Design: framework and master planning at regional context. Skills: technology-backed reprographic techniques, competitions and exhibitions, decision making and time planning.
Semester 2
The product of design through the integration of supporting modules. Exploration of detail urban ecology, economic and social aspects, and historic and cultural environments. Site planning: Interdisciplinary problem solving with emphasis on site design and sustainable and appropriate technologies. Design: complex detail design and sketch plans developed to construction drawings in KON 320.

Practice management 320 (PJS 320)

Module credits	8.00
Prerequisites	No prerequisites.
Contact time	3 lectures per week
Language of tuition	Module is presented in English
Department	Construction Economics
Period of presentation	Semester 2

Module content

The structure of the built environment in South Africa; basic principles and techniques of project management and financial management; methodology of measuring; building cost estimates; feasibility studies; economic design; contract administration; valuation of buildings.

Plant science 312 (PWT 312)

Module credits	8.00
Prerequisites	LAN 212 and LAN 222

Contact time	3 lectures per week
Language of tuition	Module is presented in English
Department	Architecture
Period of presentation	Semester 1

Module content

Plant community studies and conservation within the context of urban open space; implications and management of weeds and invaders, red-data lists and rare and endangered species.
Technical aspects regarding the establishment of plants and the maintenance thereof. Approaches to the establishment of planting in complex urban environments.

Plant science 322 (PWT 322)

Module credits	8.00
Prerequisites	PWT 312 GS
Contact time	3 lectures per week
Language of tuition	Module is presented in English
Department	Architecture
Period of presentation	Semester 2

Module content

Ecological principles for planting in reclamation and resettlement. Environmental legislation with reference to environmental management and monitoring.

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.