



UNIVERSITY
of
TECHNOLOGY,
MAURITIUS

School of Sustainable Development And Tourism

Department of Environment, Science & Social Sustainability

BSc (Hons) Sustainable Urban Planning

PROGRAMME DOCUMENT
(DRAFT VERSION)

VERSION 1.2

BSUP 1.2

May 2018

University of Technology, Mauritius
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BSc (Hons) Sustainable Urban Planning

A. Programme Information

This programme is designed to meet the growing needs of professionals in the field of urban planning whilst allowing the participants to explore some of the trivial issues facing today's and tomorrow's societies in relation to housing, climate change, sustainable development, infrastructure management with respect to planning in a more sustainable way. Although the programme is mostly geared towards planning and environment, it also provides for an interdisciplinary field of study which offers the participants with general skills in basic management, applied technology and relevant legal aspects. Alongside, students will also develop a broad understanding of the social, political and economic context within which urban planning decisions are made.

B. Programme Aims

This course in Urban Planning aims at those working in the practice setting or those wishing to start their career in urban planning be it at the public or private sectors. Students will be provided with appropriate skills required to deal with the necessary know-how to preserve and promote sustainable planning both at the local and national level whilst also helping each local community. It also enables participants to identify and deal with the potential risk and difficulties associated to urban development whilst providing useful insights about environmental factors affecting planning.

C. Programme Objectives

The programme develops the intellectual and analytical skills that professional urban planners need in the 21st century. Correspondingly, this course will enable students to:

- have a coherent understanding of urbanism and the built environment;
- combine a sound theoretical foundation with an awareness of practice in the field of planning;
- gain knowledge about the various roles and responsibilities of urban professionals in society;
- understand sustainability issues and adopt inter-disciplinary approaches;
- gain basic skills in management, applied technology and communication.

PART I - Regulations

D. General Entry Requirements

As per UTM'S Admissions Regulations, and 'Admission to Programmes of Study at Degree Level'.

E. Programme Entry Requirements

Candidate should possess at least a credit in Mathematics at O' level.

F. Programme Mode and Duration

Full Time: Minimum - 3 Years
 Maximum – 6 Years

Part Time: Minimum - 4½ Years
 Maximum – 7½ Years

Each academic year includes two semesters.

G. Teaching and Learning Strategies

The programme will employ a wide variety of teaching methods, including lectures, individual or group projects, presentations, workshops, continuous skills development (CSD), field visits, work placement and talks by guest speakers.

Self-learning will be the key feature of the programme, enabling students to explore, investigate and research into the various topics, interact with practitioners, and work in teams on projects. Through-out the course, Case-Studies will be used so as to familiarise the students with real-life situations and to learn how to cope with these.

The University recognises the importance of practical experience and its value to employers. Work Placement holds a significant place in the degree as it allows students to obtain first-hand exposure before taking up employment after graduation

H. Student Support and Guidance

In addition to traditional lectures, group tutorials or individual tutorials are arranged for students.

I. Attendance Requirements

As per UTM's Regulations and Policy.

J. Credit System

The modules carry 3 or 4 credits as per the programme structure.

Work placement (full-time mode) - 4 credits

Portfolio (part-time mode) - 4 credits

Dissertation- 9 credits

For the award of a Certificate, 36 credits are required

For the award of a Diploma, 72 credits are required

For the award of a Degree, 106 credits are required

1 credit = 15 hours of lecture

1 credit = 30 hours of practical/tutorials/seminars

1 credit = 75 hours of Work Placement

K. Student Progress and Assessment

For the award of the Degree, all modules must be passed in the examinations, coursework and other forms of assessment.

The programme will be assessed as follows:

1. The module 'Essentials of Statistics' will be assessed through 50% coursework and 50% exams. The Coursework should include at least 2 class tests and a formal assignment.
2. The following modules will be assessed 100% coursework as follows:
 - Lifelong Skills and Good Practices will be assessed as per UTM *Lifelong Skills and Good Practices* Guidelines.
 - Environmental GIS will be assessed based on a practical project applying the Environmental GIS techniques learnt.
 - Research Methods for Environmental and Health Sciences will be assessed based on an assignment applying research methods learnt.
 - Full-time students will be assessed for the Work Placement in Year 2 Semester 2 which will be conducted for a total of 300 hours as per the Work Placement Guidelines and Policy. The learning objectives for the Work Placement will be specified in a learning contract between the placement supervisor and the learner. The placement supervisor will be required to fill out a feedback appraisal form pertaining to student's performance during the placement. Students must demonstrate that they have achieved the learning objectives specified in the learning contract.
 - Part-time students will be assessed for Portfolio as per the portfolio guideline.
 - The overall pass mark for a module shall be 40%.

L. Evaluation of Performance

Grading

Overall Marks	Grade
$70 \leq X \leq 100$	A
$60 \leq X < 70$	B
$50 \leq X < 60$	C
$40 \leq X < 50$	D
$X < 40$	F
A-D	Pass
F	Fail

The % mark at Level 1 contributes a 20% weighting towards the degree classification.

The % mark at Level 2 contributes a 30% weighting towards the degree classification.

The % mark at Level 3 contributes a 50% weighting towards the degree classification.

M. Award Classification

First Class with Honours	: CPA \geq 70
Second Class First Division with Honours	: $60 \leq$ CPA < 70
Second Class Second Division with Honours	: $50 \leq$ CPA < 60
Third Class with Honours	: $45 \leq$ CPA < 50
Pass	: $40 \leq$ CPA < 45
No Award	: CPA < 40

N. Programme Organisation and Management

Programme Development Committee:

Mrs. V. Ramasamy-Coolen	Email: vr.coolen@umail.utm.ac.mu
Mrs T. Makoondlall-Chadee	t.m.chadee@umail.utm.ac.mu
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Dr. S.D. Lukea-Bhiwajee	sbhiwajee@umail.utm.ac.mu

Part II - Programme Structure

O. BSc(Hons) Sustainable Urban Planning– Full Time (Version 1.1)

YEAR 1									
Semester 1				Semester 2					
Code	Modules	Hrs/Wk		Credits	Code	Modules	Hrs/Wk		Credits
		L	T				L	T	
UPLN 1101B	Introduction to Urban Planning	3	2	4	SSDV 1102B	Principles of Sustainability	3	0	3
ENVT 1114B	Earth, Climate and the Ecological System	3	2	4	UPLN 1501B	Planning and Environmental Law	3	2	4
COMM 1101B	Business Communication	3	0	3	STAT 1104B	Essentials of Statistics	3	0	3
MBUS 1102B	Principles and Practice of Management	3	0	3	UPLN 1102B	Design Principles in the Built Environment	3	2	4
UPLN 1401B	Introduction to Urban Sociology	3	2	4	UPLN 1103B	Physical Infrastructure	3	2	4
→ Start of Level 1				Finish of Level 1 →					
YEAR 2									
Semester 1				Semester 2					
Code	Modules	Hrs/Wk		Credits	Code	Modules	Hrs/Wk		Credits
		L	T				L	T	
UPLN 2104B	Sustainable Urban Design and Development	3	2	4	UPLN 2107B	Traffic and transportation planning	3	2	4
UPLN 2105B	Public Infrastructure Management and Planning	3	2	4	UPLN 2201B	Urban Economics	3	2	4
ENVT 2118B	Environmental Management and Planning	3	2	4	ENVT 2601B	Environmental GIS	3	2	4
UPLN 2106B	Property Development and Planning	3	2	4	WPL 2102B	Professional Placement			4
LSGP2000B	Life skills and Good Practices			4					
Start of Level 2 →				Finish of Level 2 →					

YEAR 3									
Semester 1				Semester 2					
Code	Modules	Hrs/Wk		Credits	Code	Modules	Hrs/Wk		Credits
		L	P				L	P	
STAT 3307B	Research Methods for Environmental and Health Sciences	3	2	4	UPLN 3302B	Urban Disaster Risk Management	3	2	4
UPLN 3108B	Conservation of the Built Environment	3	2	4	ENVT 3201B	Waste Management	3	0	3
OPS 3205B	Project Management	3	0	3	OPS 3308B	Quality Management	3	0	3
ENVT 3119B	Urban Environmental Systems	3	2	4	DISS 3000B	Dissertation			9
	<i>Dissertation Starts</i>								
→ Start of Level 3				Finish of Level 3 →					

BSc (Hons) Sustainable Urban Planning– Part Time (Version 1.1)

YEAR 1									
Semester 1				Semester 2					
Code	Modules	Hrs/Wk		Credits	Code	Modules	Hrs/Wk		Credits
		L	T				L	T	
UPLN 1101B	Introduction to Urban Planning	3	2	4	UPLN 1401B	Introduction to Urban Sociology	3	2	4
ENVT 1114B	Earth, Climate and the Ecological System	3	2	4	SSDV 1102B	Principles of Sustainability	3	0	3
COMM 1101B	Business Communication	3	0	3	UPLN 1501B	Planning and Environmental Law	3	2	4
MBUS 1102B	Principles and Practice of Management	3	0	3					
→ <i>Start of Level 1</i>									
YEAR 2									
Semester 1				Semester 2					
Code	Modules	Hrs/Wk		Credits	Code	Modules	Hrs/Wk		Credits
		L	T				L	T	
STAT 1104B	Essentials of Statistics	3	0	3	UPLN 2104B	Sustainable Urban Design and Development	3	2	4
UPLN 1102B	Design Principles in the Built Environment	3	2	4	UPLN 2105B	Public Infrastructure Management and Planning	3	2	4
UPLN 1103B	Physical Infrastructure	3	2	4	ENVT 2118B	Environmental Management and Planning	3	2	4
<i>Finish of Level 1</i> →				→ <i>Start of Level 2</i>					
YEAR 3									
Semester 1				Semester 2					
Code	Modules	Hrs/Wk		Credits	Code	Modules	Hrs/Wk		Credits
		L	T				L	T	
UPLN 2106B	Property Development and Planning	3	2	4	UPLN 2201B	Urban Economics	3	2	4
LSGP 2000B	Life skills and Good Practices			4	ENVT 2601B	Environmental GIS	3	2	4
UPLN 2107B	Traffic and transportation planning	3	2	4	PORT 2000B	Portfolio			4
<i>Finish of Level 2</i>								→	

YEAR 4									
Semester 1				Semester 2					
Code	Modules	Hrs/Wk		Credits	Code	Modules	Hrs/Wk		Credits
		L	T				L	T	
STAT 3307B	Research Methods for Environmental and Health Sciences	3	2	4	ENVT 3119B	Urban Environmental Systems	3	2	4
UPLN 3108B	Conservation of the Built Environment	3	2	4	UPLN 3302B	Urban Disaster Risk Management	3	2	4
OPS 3205B	Project Management	3	0	3		<i>Dissertation Starts</i>			
→ <i>Start of Level 3</i>									
YEAR 5									
Semester 1				Semester 2					
Code	Modules	Hrs/Wk		Credits	Code	Modules	Hrs/Wk		Credits
		L	T				L	T	
ENVT 3201B	Waste Management	3	0	3					
OPS 3308B	Quality Management	3	0	3					
DISS 3000B	Dissertation			9					
<i>Finish of Level 3</i>								→	

Q. NON-PRESCRIPTIVE MODULE OUTLINE

UPLN 1101B: Introduction to Urban Planning

Nature of urban planning; Basic planning models and theories in the context of urbanisation and globalisation as an important force shaping modern human settlements; Planning processes and principles; History of urbanisation; Urban forms; Organic growth of urban settlements; Urban design and conservation; Concept plan and master plan; Development control/ planning implementation; Planning analysis; Population and transportation; Public participation in planning.

ENVT 1114B: Earth, Climate and Ecological System

Introduction to earth system science; The sun and the solar system; The earth as part of the solar system; Earth materials; Mineral and rock forming processes; Origin mode of magma, volcanoes and igneous rocks; External structure of the earth; Formation of continents; Plate tectonics; Continental movement; Hydrosphere; Surface water processes; Soil water processes; Concept of Ecosystem; Ecological Equilibrium and population dynamics; Atmosphere; Weather systems; Climate; The biosphere; Origin and evolution of life; Impact of man; Mineral and energy sources; Global changes; Population, community and ecosystem effects

COMM 1101B: Business Communication

Importance of communicating effectively; Internal & external Communication ; Verbal & non Verbal communication; Process of communication; Communication Barriers; Intercultural communication; Teamwork; Conflict & communication; Writing for business audiences – letters, reports, memorandums, e-communication; Interviews – preparing for job interviews, letter of application, curriculum vitae writing; Grooming; Customer Service and Communication

MBUS 1102B: Principles and Practice of Management

Definition, Meaning & Scope of Management, Brief overview of Management Approaches, Roles & functions of Managers, Understanding & Managing Business Environment; Decision making; Motivation; Leadership; Teams & team building; Managing for sustainability – managerial behaviour & effectiveness; Perception & communications; Values, Ethics & Professionalism, Corporate Social Responsibility.

UPLN 1401B: Introduction to Urban Sociology

Perspectives in sociology, evolution of the community, social organisation, social inequality, crime, race and poverty, urban economics, urban geography, immigration, housing policy; Community Development principles and processes; Causes of social exclusion; Drugs, crimes and communities; Capacity building with communities; New developments in regeneration; Urban Change; Multi-agency partnerships.

SSDV 1102B: Principles of Sustainability

Broad overview of the origins & concept of sustainability; The guiding principles for the development process; Key concepts & drivers of sustainability; Roles of stakeholders, institutions, the business community, government, consumers & NGOs; Sustainable development issues & socio-cultural sustainability; The triple bottom line: economics, environment & equity; Resource production & consumption; Environmental impacts & environmental indicators; Climate change; Fundamental ecological concepts; Ecosystem services; Sustainable industry & business; The future of energy; Eco-efficiency & carbon trading

UPLN 1501B: Planning and Environmental Law

Introduction to Law, Ideas and functions of Law, Nature of constitutional and administrative law, Current legislative frameworks of Mauritius in terms of planning law, and applying this knowledge in plan formulation; Planning processes and environmental law as referenced to current approaches in planning, and the analysis, implementation and evaluation of plans; The implications of current planning and environmental laws and reforms.

STAT 1104B: Essentials of Statistics

Introduction to Statistics; Type of data; Measurement and scaling techniques; Data collection and data preparation; Graphical representation of data; Measures of location and dispersion; Basic probability; Distribution of random variables: Binominal and Normal distribution; sampling distribution and estimation interval estimation.

UPLN 1102B: Design Principles in the Built Environment

Visual and aesthetic issues involved in 'design of the built environment'; Sustainable Architecture; Material Selection; Energy Efficiency; Building for quality and durability; Design for reuse and recycling; Carbon Footprinting; Design Standards; Biomicry; Renewability; Eco-design; Topography and siting; spatial planning; SMART principles and design.

UPLN 1103B: Physical Infrastructure

Types of infrastructure; Transport infrastructure; Energy Infrastructure; Water Management Infrastructure; Communications Infrastructure; Solid Waste Management Infrastructure; Governance Infrastructure; Economic, social and recreational Infrastructure ; Green Infrastructure; Sustainable physical infrastructure; Water supply; Water demand forecasting; impacts and mitigation measures of water service; Wastewater treatment capacity; Drainage pollution control; Electricity, natural gas, telephone and cable services; Standards; Regulations; Impacts and mitigation measures; Fire and emergency services; Police protection.

UPLN 2104B: Sustainable Urban Design and Development

Principles of urban ecology and its articulation to design and development in urban settings; increasing need for symbiosis between nature and built environment; analysis, design, management and evaluation of urban and environment spaces; trends and issues of sustainable urban design and development; representational dimension of urban and environmental design essential to the professional practices of ecologically sound urban and environmental design; design for resilience.

UPLN 2105B: Public Infrastructure Management and Planning

Environmental issues associated with the supply and use of public infrastructure; Energy, water and sewage services - end use analysis; Demand side management - efficiency and conservation; PI and the environment -carbon, acid depositions, waste; Insecurity and Sustainable use of resources; PI Policy; PI Planning.

ENVT 2118B: Environmental Management and Planning

Environmental Impact Assessment; Social and Cultural impacts; Life Cycle Assessment; Planning for land and resource use; Waste Management and Environmental emergencies; ISO 14001; Pollution monitoring and Control; Clean Technologies; Environmental Monitoring; Global Reporting Initiative; Environment Management Systems; Environmental Auditing; Basic planning methods; environmentalplanning instruments (especially landscape planning, environmental compatibility check, e.g. compatibility check according to FFH-directive; intervention, regulation and landscape maintenance settlements.

UPLN 2106B: Property Development and Planning

Key players in the property development industry; motivations for developing property; land acquisition; raising of funds for financing development, and managing property assets; the role of the public and private sectors in assembling land for development; key property development sectors of primary relevance to land use planning, including housing, retail and commercial office development; developing and managing major property development schemes; demographics and planning.

LSGP2000B: Life Skills and Good Practices

Employability Skills Development, Prevention of Corruption (as per topics proposed by ICAC and covering 24 hours of lecture), Good Governance, Personal Development Skills, Coping Skills, addressing Societal Challenges including Substance Abuse, Poverty, Climate Change, Social Media and Family problems.

UPLN 2107B: Traffic and transportation planning

Social, economic and financial aspects of transportation; Urban structure, land-use and transportation implications; Concept of accessibility, mobility; Transportation Systems and Studies; Functional classification and hierarchy, functions of transportation; Traffic flow theories; Parking layout and design, Park & Walk; Traffic generation, distribution, assignment, impact calculation and presentation, mitigation measures; Control strategies; Goods Transportation; Pedestrian and Bicycle Circulation; Environmental Aspects Related to Transportation.

UPLN 2201B: Urban Economics

Key concepts and theories of economics, as applied to problem diagnosis and policy making in urban development concepts of regional and interregional labour markets, principles of urban decline and renewal, principles of land use economics and analysis of changing spatial patterns of urban economic activity; Concepts and processes in economic development; Governance of local economic development; The local economy; Approaches to local economic development, The top down approach; Community economic development and social enterprise; The local labour market; principles in practice, Local Business growth: indigenous and inward investment

ENVT 2601B: Environmental GIS (100 % coursework)

Basics, concepts and applications of Geographical Information Systems (GIS); Functions of GIS systems; Theoretical introduction to technical aspects of a GIS: geo-referencing, file formats, coordinate systems; Census Geography; Data Sources; Map types; Geocoding; Geoprocessing Spatial Analysis; Creating buffers. Basic geographic concepts: features, attributes and theme; Map projection systems and coordinate systems; Categories of GIS data; Geoprocessing procedures; Creating soil/plant polygons, organizing views and calculating areas of polygons; Spatial interpolation, classification analysis and geostatistics,

WPL 2000B/PORT 2000B: Work Placement/Portfolio

A work placement of 300 hours will be undertaken by full-time students.
Part-time students will have to submit a portfolio.

STAT 3307B: Research Methods for Environmental and Health Sciences (100% coursework)

Introduction to survey research methodology: The research process, Formulating the research problem, Research questions and research objectives; Experimental, cross-sectional, longitudinal, quantitative and Qualitative Research Design: Types of samples and sampling methods; Data collection methods; Questionnaire Design; Ethical consideration in Research; Data analysis: Introduction to SPSS: statistical techniques used for analysing simple environmental data; Writing up research results: Structure of a report/dissertation, Referencing.

UPLN 3108B: Conservation of the Built Environment

Vulnerability of the environment to the society's impact, concern of planners, architects and conservationists with regards to the countryside, conservation and regeneration of urban areas especially inner cities and town centres,
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effective conservation in relation to the active involvement of a wide range of organisations: professional, voluntary and governmental, focus on the practicalities of conservation practice, local heritage awareness.

OPS 3205B: Project Management

Introduction, Philosophy & Concepts; Project Lifecycle; Project Selection; Planning Fundamentals; Network Scheduling; PERT & CPM; Resource Planning & Allocation; Cost Estimating & budgeting; Scope Management; Managing Risks in Projects; Project Control, Evaluation, Reporting & Termination; Project Organisation structure & Integration; Project Quality Management; Project Communication; Teams & Leadership

ENVT 3119B: Urban Environmental Systems

Community and landscape planning and design techniques aimed at achieving a synergistic fit between ecological integrity and human use; Low Impact Development (L.I.D.) design; natural heritage systems planning and management; ecosystem restoration and sustainable development planning; Vegetation community composition; Habitat Creation and Enhancement.

UPLN 3302B: Urban disaster risk management

Trends in disaster occurrence; impact and frequency; Elements of risk and vulnerability in communities; Urbanisation, climate change and risk reduction; Terms and processes involved in DRM; Framework for accomplishing DRM; Urban governance structures and functions; Basic elements of disaster valuation; Disaster Risk Assessment.

ENVT 3201 : Waste Management

Introduction to Wastewater Management; Waste as an environmental issue; Industrial Wastewater Treatment Technologies; Sludge Processing and Disposal; Waste minimisation: Recycling and Reuse; Management of Industrial Solid Wastes; Processing and Resource Recovery; Ultimate Disposal of Solid and Hazardous Wastes: Landfills.

OPS 3308B: Quality Management

Definitions and concepts; Management Philosophies on Quality; Quality Management Systems: ISO 9000; Quality Assurance; Total Quality Management; Service Quality; Continuous improvement (CI); CI Tools and techniques; Benchmarking; Statistical Quality Control; Improvement team leadership: motivation, change and culture.

DISS 3000B: Dissertation

A 10,000-12,000 words dissertation will have to be submitted at the end of the semester. The work submitted should conform to the Undergraduate Dissertation Guidelines.