

BSc (Hons) Sustainable Product Design – E304 (Under Review)

1. Introduction

Sustainable development, resource-efficient products and services and transition to a low-carbon economy is strategic for small island states like Mauritius. Mauritius has limited natural capital (fresh water, land, and forests), fragile ecosystems and significantly unique biodiversity. The unchecked erosion or degradation of the natural capital would be irreversible with potentially unknown risks and damaging consequences.

*‘Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs’**. Sustainable development therefore requires that each generation should pass on to the next generation at least as large a productive base as it inherited. Resource-constrained states should formulate policy and act now before the costs of sustainable development become unaffordable.

Sustainable design is a key component of sustainable development. Worldwide there are intense social, economic and environmental concerns with respect to the broad manufacturing and service sectors as globalised supply chains; fast commoditisation, higher disposable incomes and rampant consumerism drastically inflate the carbon footprint of these sectors. There is thus a critical need to integrate relevant technology, best practices and the human element that would lead to the emergence of an ethical and sustainable manufacturing and services sector in Mauritius. Moreover, Mauritius is regarded as a high-end tourist destination and eco-tourism is, therefore, a potential growth area. Mauritius lies almost at the centre of the trade corridor between Africa and Asia. It has the opportunity to position itself as an ethical, fair and sustainable supplier of goods and services, mainly focusing on the fundamental ‘customer-service’ part of the value-chain.

The programme will therefore equip potential students with knowledge, insights and future strategies in the broad area of social, ethical, environmental and economic sustainability.

*The Brundtland Commission Report, 1987.

2. Scope

While there is no clear demarcation between design-driven versus functionality-driven consumer goods, for the purpose of this programme of study and research/students' projects the following largely design-driven products would be considered:

Textiles, clothing, leather and footwear products, sports goods, toys, interior products made of different materials such as decorative furniture/objects, floor, wall and window coverings, kitchen ware, glassware and spectacles, watches, jewellery, bags & accessories as well as the design oriented packaging of these products. Primarily function-driven consumer goods categories such as motor vehicles, consumer electronics or white goods **will not be considered** although these do rely on design to add value and achieve competitive advantage/differentiation.

3. Employability

Nowadays, it is considered that the human resource is the most valuable asset of any successful organisation. However, the current lack of trained personnel with a holistic background in the field of sustainability is strongly being felt by many authorities worldwide. This programme will, therefore, attempt to fill this gap by providing potential students with a sound academic and practical understanding of the technological, managerial, financial and social dimensions of sustainability. Such graduates will be able to integrate the line management and middle management levels of both manufacturing and service companies directly or indirectly related to the design industry. They will be able to assist relevant institutions and contribute intensively in policy-making, planning, implementation and forecasting from a 'sustainability' perspective. Furthermore, they will constitute a pool of qualified persons who may readily cope and keep pace with the continuous and rapid evolution of sustainability issues in the various sectors of the industry. The graduates will be expected to find entry in the job market as trainee managers, technologists, sustainability executives, product designers, merchandisers, planning and marketing officers, corporate social responsibility officers, and other related positions.

4. Aim

The aim of this programme is to produce graduates with a sound understanding of sustainability concepts, their implications and practical applications in the field of product design.

The objectives of this programme are:

- to introduce interdisciplinary concepts and tools that would holistically address issues such as sustainable development, sustainable wealth creation, climate change, biodiversity, corporate social responsibility, etc;
- to introduce applied sustainability concepts in product design, product life cycles, technology integration, sustainable materials and packaging, recycling, and waste management, with a view to reduce the carbon footprint of industry and associated services;
- to highlight the concepts of energy efficiency, energy conservation, and integration of renewable energies in the manufacturing and services sector;
- to introduce concepts of optimisation in logistics such as distribution routes, fuel-efficient transportation and the reduction of logistics packaging materials;
- to consolidate and increase awareness of social, ethical and environmental standards in manufacturing and services.

5. General Entry Requirements

As per General Entry Requirements for admission to the University for Undergraduate Degrees

6. Programme Requirements

Five credits at SC/ 'O' Level, including Mathematics.

Any 2 GCE 'A' Level Passes. A Foundation in Art, Design & Technology or in a design-related subject awarded by a recognised awarding body is also acceptable as NQF level 5.

OR alternative qualifications acceptable to the UoM

In case of a tie between applicants' grades, preference will be given to candidates having studied design-related subjects at 'A' level, such as Design and Technology.

7. (i) Minimum Requirements for Degree Award – 103 credits

(ii) Minimum Requirements for Diploma Award – 60 credits

A student may exit with a Diploma provided s/he satisfies the following minimum requirements, Table hereunder. The request for exit at the Diploma level should be made in writing to the Dean of Faculty. A Diploma project is compulsory and would normally be of 12 weeks duration, commensurate with work input of at least 90 contact hours. Diploma Project carries 5 credits.

Minimum Credits Required for the Award

MODULES	Minimum Credits Required	
	Degree	Diploma
GEM	3	3
Humanities & Management	15	9
Technology & Engineering	15	9
Departmental	70	39
TOTAL	103	60

8. Programme Duration : Full-Time

	Normal (Years)	Maximum (Years)
Degree:	3	5

9. Credits per Year

Minimum 6, Maximum 48, subject to Regulations 7 & 8 above.

10. Assessment

Examinable Modules

A given module can either be taught in semester 1 only or in semester 2 only or throughout the two semesters.

Assessment will be based on a written examination of 2 to 3-hour duration (normally a paper of 2-hour duration for modules carrying less or equal to 3.5 credits and a 3-hour paper for modules carrying five or more credits) and on continuous assessment carried out during the semester or year.

Written examinations for all yearly modules will be carried out at the end of the academic year. Written examinations for semester modules will be carried out at the end of each respective semester.

The continuous assessment will count for 20-40% of the overall percentage mark of the module(s), except for a Programme where the structure makes for other specific provision(s). Continuous assessment may be based on laboratory work, seminars and at least 2 assignments/tests per year per module.

There will be a compulsory class test for all modules at the end of the semester/academic year, unless otherwise stated in the programme structure.

An overall total of 40% for combined continuous assessment and written examination components would be required to pass the module, without any minimum thresholds within the individual continuous assessment and written examination. The same criterion will apply for modules being assessed jointly.

Special examinations (e.g. class tests) will be arranged at the end of semester 1 or semester 2 for exchange students who have registered only for one semester. In case of yearly modules, credits will be assigned on a pro-rata basis.

The following modules will be assessed as specified hereunder:

DASE 1103Y(3), DASE 1101Y(3), DASE 1201(3), CSE 2014Y(3) & DASE 2102Y(3)

There will be a minimum of 3 assignments and 1 mini-project per yearly module, and/or a minimum of 1 assignment and/or 1 mini-project per semester module, which will account for 60% of total marks. A final assessment based on 40% of total marks will be conducted at the end of the semester/academic year by the resource person concerned under examination conditions.

11. GEMs

GEMs are 'General Education Modules'. Students are allowed to choose any GEM on offer, at the start of the semester.

12. List of Modules – BSc (Hons) Sustainable Product Design

CORE MODULES

Code	Module Name	Hrs/Wk L+P	Credits
Humanities & Management			
COMS 1010(1)	Communication Skills	D.E.	3
MGT 1102(1)	Fundamentals of Entrepreneurship	3+0	3
MGT 2088(3)	Business Planning and Development	3+0	3
Technology & Engineering			
DASE 1104(1)	Computer Applications for Designers	2+2	3
DASE 2201(3)	Quality Concepts	3+0	3
DASE 1201(3)	Creativity and Innovation	2+2	3
CSE 2014Y(3)	Graphic Design	1+4	6
Departmental			
DASE 1101Y(1)	Applied Drawing Techniques	1+4	6
DASE 1102Y(1)	Materials I	3+2	8
DASE 1202(1)	Biodiversity & Climate Change	3+0	3
DASE 1103Y(3)	Fundamentals of Design	1+4	6
DASE 2001(1)	Philosophy of Design	3+0	3
DASE 2100Y(3)	Materials II	3+2	8
DASE 2101Y(3)	Sustainable Business Practices	3+0	6
DASE 2102Y(3)	Sustainable Product Design & Prototyping	1+4	6
DASE 3010Y(5)	Sustainability Standards & Auditing	3+0	6
DASE 1200	Industrial Training I	8 weeks	0
DASE 2200	Industrial Training II	8 weeks	0
DASE 3000Y(5)	Sustainable Design Project	0+6	6
DASE 3001Y(5)	Dissertation	-	9
TOTAL (Departmental)			67
DASE 2000 (3)	Diploma Project	12 Weeks	5
GEM		3+0	3

ELECTIVES

Code	Module Name	Hrs/Wk L+P	Credits
Humanities & Management			
DASE 1100Y(1)	Business Language	3+0	6
MGT 1067Y(1)	Principles and Practice of Management	3+0	6
MGT 2083Y(3)	Brand Management	3+0	6
Departmental			
ECON 2191(3)	Economics of Sustainability	3+0	3
DASE 2103Y(3)	Low Carbon Logistics & Supply Chain Management	3+0	6
DASE 3100(3)	Consumer Education & Empowerment	3+0	3

YEAR 1							
Semester 1				Semester 2			
Code	Module Name	Hrs/ Wk L+P	Credits	Code	Module Name	Hrs/ Wk L+P	Credits
SEMESTER CORE MODULES							
GEM		3+0	3				
DASE 1104(1)	Computer Applications for Designers	2+2	3	DASE 1202(1)	Biodiversity & Climate Change	3+0	3
COMS 1010(1)	Communication Skills	D.E.	3	DASE 1201(3)	Creativity & Innovation	2+2	3
MGT 1102(1)	Fundamentals of Entrepreneurship	3+0	3	DASE 1200	Industrial Training 1	8 wks	0
YEARLY CORE MODULES							
DASE 1101Y (1)	Applied Drawing Techniques					1+4	6
DASE 1102Y(1)	Materials I					3+2	8
DASE 1103Y(3)	Fundamentals of Design					1+4	6
	YEARLY ELECTIVE MODULE						
DASE 1100Y(1)	Business Language					3+0	6
MGT 1067Y(1)	Principles & Practice of Management					3+0	6
YEAR 2							
Semester 1				Semester 2			
Code	Module Name	Hrs/Wk L+P	Credits	Code	Module Name	Hrs/Wk L+P	Credits
SEMESTER CORE MODULES							
DASE 2001(1)	Philosophy of Design	3+0	3	DASE 2200	Industrial Training II	8 wks	0
				DASE 2201 (3)	Quality Concepts	3+0	3
				MGT 2088(3)	Business Planning and Development	3+0	3
YEARLY CORE MODULES							
DASE 2100Y(3)	Materials II					3+2	8
DASE 2101Y(3)	Sustainable Business Practices					3+0	6
CSE 2014Y(3)	Graphic Design					1+4	6
DASE 2102Y(3)	Sustainable Product Design & Prototyping					1+4	6
YEARLY ELECTIVE MODULE							
DASE 2103Y(3)	Low Carbon Logistics & Supply Chain Management					3+0	6
SEMESTER ELECTIVE MODULE							
ECON 2191(3)	Economics of Sustainability	3+0	3				

YEAR 3							
Semester 1				Semester 2			
Code	Module Name	Hrs/ Wk L+P	Credits	Code	Module Name	Hrs/Wk L+P	Credits
YEARLY CORE MODULES							
DASE 3010Y(5)	Sustainability Standards & Auditing					3+0	6
DASE 3000Y(5)	Sustainable Design Project					0+6	6
DASE 3001Y(5)	Final Year Dissertation					-	9
YEARLY ELECTIVE MODULE							
MGT 2083Y(3)	Brand Management					3+0	6
SEMESTER ELECTIVE MODULE							
DASE 3100(3)	Consumer Education & Empowerment	3+0	3				