

BSc (Hons)/MSc Nutritional Sciences - SC527

Specific Titles:

BSc (Hons) /MSc Nutritional Sciences

BSc (Hons) Nutritional Sciences (Specialisation: Dietetics)

1. Rationale and Objectives

Nutritional Sciences draws upon several disciplines, including biology, biochemistry and physiology to understand the relationships between food, nutrients and human health.

The economic success of the food industry and the nutritional quality and safety of the food supply are linked. In spite of progress in the food industry, technology and food production, nutrition related health problems, hunger and malnutrition continue to plague adults and children throughout the world.

Much remains to be learned about how optimal functioning of the body is influenced by diet. Addressing these problems requires nutritionists to work with specialists in agricultural economics, food policy, international development, development sociology, and the horticultural and animal sciences.

This new programme is a broad-based four-year course with a strong health and clinical oriented bias designed precisely for the need to prepare the student to be a nutritional scientist capable of working at these frontiers.

Beside a core of Nutritional Sciences modules, the re-orientation of the programme into two options enhances capacity building and offers wider prospects of career opportunities, further studies and research in the field.

Thus a wide variety of careers in the food industry, local and national government agencies, health promotion, public relations, journalism and scientific research become accessible.

There is an exit point at Diploma level after two years of study of a thorough grounding in Nutrition and Health Sciences where core topics emphasising human nutrition with areas of study in nutritional quality and safety of the food, fundamentals of biochemistry, human development and physiology essential to the understanding of the digestion, absorption, and metabolism of food components are covered.

Pursuing studies in the third year will allow students to learn much more about how optimal functioning of the body is influenced by diet. Advanced knowledge of biochemistry, food energy metabolism, physiology, and analytical chemistry provide new ways to study energy metabolism and the levels of contaminants in foods. Communication and health promotion and other related sciences are considered.

In the fourth year, students come across a choice of specialised fields such as sports nutrition, links between diet and disease, cancer and obesity. Advances in cell biology and physiology, developments in human genomics, and expanding knowledge of how people's genetic makeup affects their nutritional requirements are considered. The Masters program is thus designed to challenge academically talented students who have a strong interest in nutrition and health research. Tuition fees will be charged for students enrolling in the fourth year.

Students graduating from this programme can seek employment in Health Care Systems, Education, as Scientific and Environmental Officer in the public and private sectors. Adequate attention will also be paid towards the personal development of students in acquiring professional competence and a sense of community responsibility.

BSc (Hons) Nutritional Sciences (Specialisation: Dietetics) - 4 years F/T

Nutrition is the study of the influence of food intake on health and well-being, and dietetics is the application of nutritional knowledge tailored to individual needs in the prevention and management of disease.

Specialisation for this option starts at the end of year 2 and the student is required to undertake the first placement and training in a health care institution. A second placement and a research project preferably in the field of specialisation during Year 3 of study are required. The fourth year comprises of taught modules in the first semester, followed by 4 months of placement and training in a health care institution.

Special Note: The Programme is designed to be a professional course, like the BSc (Hons) Biomedical Sciences, the BSc (Hons) Occupational Therapy and the BSc (Hons) Physiotherapy Programmes currently run by the Department of Health Sciences. Accordingly, the degree of flexibility will differ from most BSc (Hons) Programmes being run by the Faculty.

For students choosing this option, as from the third year all electives will have to be chosen specifically in this specialisation. Assessment methods will be specific to the modules. The programme is designed so that a number of modules are taken jointly with students registered for BSc (Hons)/ MSc Nutritional Sciences, BSc (Hons) Occupational Therapy and BSc (Hons) Physiotherapy.

The programme design has taken into account the minimum requirements for the training and education of dietitians set by the EFAD (European Federation of the Association of Dietitians). BSc (Hons) Nutritional Sciences (Specialisation: Dietetics) graduates will be eligible to apply for registration with professional bodies as dietitian if they satisfy all registration criteria.

However, graduates can also work in the food or pharmaceutical industries, research, and academia or in the media.

Details of Placement

Three blocks of placement are included:

Placement A: 4 weeks of placement in a recognised health care institution, hospital or clinic at the end of the second year after students have cleared 60 credits.

Placement B: 4 weeks of placement in a recognised health care institution, hospital or clinic.

Placement C: 16 weeks of placement in a recognised health care institution, hospital or clinic.

The fourth year of study is designed to meet the research, administrative and management needs of the profession of dietitians including exposure to a longer period of placement - Block C (16 weeks) - followed by debriefing sessions during the course of the practice.

Table 1: Programme breakdown

BSc (Hons)/MSc Nutritional Sciences

BSc (Hons) Nutritional Sciences (Specialisation: Dietetics) (4 years F/T)

OPTIONS	Year	Core Modules	Elective Modules	Mandatory Dietetics Specialisation modules	Project	Placement	Credits Earned	Total
COMMON TO ALL	Year 1	Six (3 credits each)	At least four (3 credits each)		-	-	18 12	30
	Year 2	Six (3 credits each)	At least four (3 credits each)		One (6 credits)		18 12 6	36
Exit with a Diploma in Nutritional Sciences					Min 66 credits			
BSc (Hons)/ MSc Nutritional Sciences	Year 3	Six	Four (3 credits each)		One (10 credits)		18 12 10	40
	Year 4	Five (3 credits each)	Four (3 credits each)		MSc Project (12 credits)		15 12 12	39
Exit MSc Nutritional Sciences					Min 139 credits			
BSc (Hons) Nutritional Sciences (Specialisation: Dietetics)	1 month placement at the end of first 2 years					Block A (2 credits)	2	2
	Year 3	Six		Four (3 credits each)	One (10 credits)	Block B (2 credits)	18 12 10 2	42
	Year 4	Five (3 credits each)		Four (3 credits each)		Block C (8 credits)	15 12 8	35
Exit BSc (Hons) Nutritional Sciences (Specialisation: Dietetics)					Min 139 credits			

2. General Entry Requirements

As per General Entry Requirements for admission to the University for undergraduate degrees.

3. Programme Requirements

Credit in at least five subjects (School Certificate) including English, Biology, Chemistry, and Mathematics.

Pass at GCE 'A' Level in three science subjects including Chemistry. Mathematics counts as a Science subject. Those not holding Biology at 'A' level will need to take Foundation Course in Biology prior to the start of the course.

4. Programme Duration

	Normal	Maximum
Diploma in Nutritional Sciences:	2 Years	3 Years
BSc (Hons) Nutritional Sciences:	3 Years	5 Years
BSc (Hons) Nutritional Sciences (Specialisation: Dietetics):	4 Years	7 Years
MSc Nutritional Sciences:	4 Years	7 Years

5. Minimum Credits Required for Awards

Breakdown as shown in table 1.

Diploma in Nutritional Sciences:	66 credits
BSc (Hons) Nutritional Sciences:	100 credits
BSc (Hons) Nutritional Sciences (Specialisation: Dietetics):	139 credits
MSc Nutritional Sciences:	139 credits

6. Credits per Year

Minimum 18, Maximum 48, subject to regulation 4.

7. Assessment

Each module will be assessed over 100 marks (i.e. expressed as %) with details as follows (unless otherwise specified):

Assessment of a module will be based on a written examination (2-hour duration for 3 credit modules and 3-hour duration for 6 credit modules) and on continuous assessment done during the semester/year. The continuous assessment will count for 25% of the overall percentage mark for the module, except for a programme where the structure makes for other specific provision(s). Continuous assessment may be based on laboratory work, and/or assignments and should include at least 1 class test.

Written examinations for all modules, whether taught in semester 1 or in semester 2 or both, will be carried out at the end of the academic year except for the following modules which will be assessed at the end of semester 1: NTS 3104(5), NTS 3105(5), NTS 3106(5), NTS 4102(5).

The following modules will be assessed jointly at the end of the year:

Year 1: NTS 1201(1)/NTS 1202(1)

Year 2: NTS 2101(3)/NTS 2201(3); NTS 2102(3)/NTS 2202(3)

Year 3: NTS 3101(5)/NTS 3201(5); NTS 3103(5)/NTS 3202(5)

Year 4: NTS 4101(5)/NTS 4105(5); NTS 4201(5)/NTS 4202(5)

A minimum of at least 30% should be attained in each of continuous assessment and written examination, with an overall total of 50% for a candidate to pass a module. Modules will carry the weightings of 1, 3 or 5 depending on their status (Introductory, Intermediate or Advanced). Weighting for a particular module is indicated within parentheses in the module code.

Projects will be carried out normally in the area of specialisation.

Specifications for BSc (Hons) Nutritional Sciences (Specialisation: Dietetics)

Clinical Placement and Training in the form of clinical practice in recognised health care public/private institutions, homes for the elderly will form an essential part of the Professional Programme. Clinical practice will be undertaken in three blocks: A, B and C.

**8. Programme Plan – BSc (Hons) / MSc Nutritional Sciences
(L = Lectures; P = Practical; NA = Not Applicable)**

Code	Module Name	L/P	Credits
<u>YEAR 1</u>			
CORE			
HLS 1011(1)	Foundation Course in Biology	60/30	0
HLS 1261(1)	Biochemistry for Health Sciences I	45/0	3
HLS 1131(1)	Introduction to Human Anatomy and Physiology	45/0	3
HLS 1141(1)	Molecular and Cell Biology for Health Sciences	40/10	3
CSE 1010e(1)	Introduction to Information Technology	O.E.	3
NTS 1201(1)	Food and Analytical Chemistry	30/30	3
NTS 1202(1)	Human Nutritional Needs	45/0	3
ELECTIVES			
HLS 1111(1)	Health in Society I	30/30	3
NTS 1101(1)	Food for Contemporary Living	45/0	3
HLS 1242(1)	Psychology for Health Professionals	45/0	3
HLS 1211(1)	Health in Society II	30/30	3
NTS 1203(1)	Nutritional Problems of Developing Nations & Food Policy	45/0	3
NTS 1204(1)	Communication and Health Promotion	45/0	3
<u>YEAR 2</u>			
CORE			
NTS 2101(3)	Nutrition and Metabolism	45/0	3
NTS 2102(3)	Nutrition Through Life Cycle	45/0	3
HLS 2141(3)	Biology of Disease I	45/0	3
NTS 2201(3)	Physiological Systems	40/10	3
NTS 2202(3)	Health Consequences of Under and Over Nutrition	45/0	3
NTS 2203(3)	Nutritional Assessment and Food Habits	45/0	3
NTS 2000Y(3)	Diploma project (only for those exiting at Diploma)	-	6
NTS 2001	Clinical Practice Block A (Four weeks placement at the end of Year 2 for students opting for BSc (Hons) Nutritional Sciences (Specialisation: Dietetics))	-	2
ELECTIVES			
HLS 2111(3)	Health in Society 3	30/30	3
NTS 2103(3)	Maternal and Child Nutrition	45/0	3

NTS 2104(3)	Physicochemical and Biological Aspects of Foods	30/30	3
NTS 2204(3)	Nutrition Related Diseases	45/0	3
NTS 2205(3)	Nutrition Education and Diet change	45/0	3
NTS 2206(3)	Food Processing and Safety	30/30	3
YEAR 3			
CORE			
NTS 3101(5)	Macronutrients and Micronutrients in Human Health	60/0	4
NTS 3102(5)	Current Nutrition Issues	15/30	2
NTS 3103(5)	Nutrition Science Laboratory	15/60	3
HLS 2241(5)	Biology of Disease II (Pathophysiology)	45/0	3
NTS 3201(5)	Endocrine Regulation and Physiological Control	30/0	2
NTS 3202(5)	Food Microbiology	45/30	4
NTS 3000Y(5)	Project (normally in specialisation field)	-	10
NTS 3001(5)	Clinical Practice Block B (Four weeks placement for students opting for BSc (Hons) Nutritional Sciences (Specialisation: Dietetics))	-	2
ELECTIVES (BSc (Hons)/MSc Nutritional Sciences)			
NTS 3107(5)	Social Science Perspectives on Food and Nutrition	45/0	3
NTS 3108(5)	Herbals, Homeopathy and Dietary Supplements	45/0	3
NTS 3203(5)	Public Health Nutrition	45/0	3
NTS 3204(5)	Sports Nutrition, Lifestyle and Diet	45/0	3
ELECTIVES (BSc (Hons) Nutritional Sciences (Specialisation: Dietetics))			
NTS 3104(5)	Dietetics Professional Practice	45/0	3
NTS 3105(5)	Dietetics	45/0	3
NTS 3106(5)	Art and Science of Food Preparation	15/60	3
NTS 3204(5)	Sports Nutrition, Lifestyle and Diet	45/0	3
NTS 3203(5)	Public Health Nutrition	45/0	3
YEAR 4			
CORE			
NTS 4101(5)	Nutrigenomics	45/0	3
NTS 4102(5)	Neuroendocrine Regulation of Food Intake	45/0	3
NTS 4105(5)	Functional Foods	45/0	3
NTS 4201(5)	Growth and Ageing	45/0	3
NTS 4202(5)	Nutrition and Immunology	30/30	3
NTS 4000Y(5)	Project (for MSc Nutritional Sciences students only)	-	12
NTS 4001(5)	Clinical Practice Block C (Sixteen weeks placement for students opting for BSc (Hons) Nutritional Sciences (Specialisation: Dietetics))	-	8
ELECTIVES (MSc Nutritional Sciences)			
NTS 4103(5)	Obesity, Diabetes and Adverse Effects	45/0	3
NTS 4104(5)	Nutrition and Metabolism of Lipids	40/10	3
PHAR 1121(5)	Environmental Health and Toxicology	45/0	3
NTS 4202(5)	Ethics and Nutrition	45/0	3
ELECTIVES (BSc (Hons) Nutritional Sciences (Specialisation: Dietetics))			
NTS 4103(5)	Obesity, Diabetes and Adverse Effects	45/0	3
NTS 4106(5)	Therapeutic Dietetics	45/0	3
NTS 4107(5)	Management and Food Service	30/60	4
NTS 4203(5)	Nutritional Epidemiology	45/0	3
NTS 4204(5)	Consumer Problems and Influences	45/0	3

NOTE:

(i) PROJECTS

NTS 2000Y(3)	Project at Diploma level	6
NTS 3000Y(5)	Project (normally in specialisation field)	10
NTS 4000Y(5)	Project (normally in specialisation field)	12

The project at Diploma level will be run over both semesters of year 2. Topics will be selected from any field relevant to Nutrition and Health Sciences. Applicable only to students exiting with a Diploma.

For BSc (Hons)/MSc Nutritional Sciences, the project normally has to be in the area of specialisation on an approved topic and should be of about 8000-12000 words excluding figures and tables. It is designed to test the ability of the student to undertake a piece of independent scientific research under guidance and demonstrate analytical capabilities.

(ii) PLACEMENT

Three blocks of placement in hospital and clinics (satisfactory portfolio 50%) accounting for 12 (2+2+8) credits. Applicable only to students opting for BSc (Hons) Nutritional Sciences (Specialisation: Dietetics).

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