

# **Degree and Study Plan**

College: Agricultural & Marine Sciences
Department: Food Science and Nutrition

Cohort: 2008 - 2009

Degree: Bachelor of Science

Major: Human Nutrition & Dietetics

Summary of Credits:	
University Requirements (UR)	12
English Requirements	6
Arabic	3
Contemporary Omani Society	1
Oman & Islamic Civilization or Islamic	2
Culture	
<b>University Electives (UE)</b>	6
See List A	
College Requirements (CR)	31
See list B	
College Electives (CE)	6
See list C	
Departmental Requirements (DR)	
See list D	
<b>Departmental Electives (DE)</b>	
See list E	
Major Requirements (AR)	54
See list F	
Major Electives (AE)	20
See list G	
Specialization Requirements (SR)	
See list H	
Specialization Electives (SE)	
See list I	
Minor Requirements (IR)	3
See list J	
Minor Electives (IE)	15
See list K	
TOTAL	129

For reference contact: **Dr. Nejib Guizani** Ext. 1256

HoD: **Dr. Nejib Guizani**Dean's Office: **Dr. S. A. Prathapar**Admission and Registration:

Date:
Date:

# DEPARTMENT OF FOOD SCIENCE AND NUTRITION HUMAN NUTRITION & DIETETICS

Study Plan: for Cohort 2008-2009

Sem.	Course Code	Course Title	Cr.	Pre-req./Co-req.*	Cat.
ONE		Intensive English	0		UR
FALL	TOTAL		0		
	ARAB1001	Arabic	3		UR
	LANC2040	English for Agriculture I	3	=LANC2140	UR
TWO	CAMS2000	Intro. CAMS	1		CR
TWO SPRING	CAMS2001	Computer Applications I	3		CR
3i itiivo	MATH1106	Pre-Calculus	4		CR
		University Elective	2		UE
	TOTAL		16		
	HIST1010	Oman & Islamic Civilization	2		UR
	LANC2041	English for Agriculture II	3	LANC2040 or LANC2042 / =LANC2141	UR
	BIOL2101	General Biology I	4		CR
THREE FALL	NREC2003	Introduction to Natural Resource Economics	3	LANC2040 or LANC2140 / =CAMS2003	CR
FALL		University Elective	2		UE
		University Elective	2		UE
	TOTAL	Oniversity Elective	16		Ü.
	TOTAL		10	<u>.</u>	
	SOCI3320	Contemporary Omani Society	1	SOCY1001	UR
	CAMS3001	Biometry and Experimental Design in AMS	3	CAMS2001, LANC2041, MATH1106	CR
	CAMS4002	Seminar & Presentation Skills	2	CAMS2001, LANC2041 / =CAMS3000	CR
FOUR	CHEM2101	General Chemistry I	4	MATH1106	CR
SPRING	FSHN2071	Principle of Food Science	3	BIOL2101 or CHEM2101 or PHYS2101	CE
	FSHN2301	Introduction to Human Nutrition	3	BIOL2101 or CHEM2101 or PHYS2101	CE
	TOTAL		16		I
				•	
	PHYS2101	General Physics I	4	MATH1106	CR
	BIOL3441	Microbiology	3	BIOL2101	AR
FIVE	FSHN2001	Agricultural Biochemistry	3	BIOL2101, CHEM2101/ =FSHN2302	AR
FALL	FSHNXXXX	Major Elective	3	Check pre-requisites	AE
	FSHNXXXX	Major Elective	3	Check pre-requisites	AE
	TOTAL		16		
	ANVS3006	Systemic Physiology	3		AR
	CHEM2091	Organic Chemistry for Agriculture	3	CHEM2101/=CHEM2301	AR
SIX	FSHN4303	Life Cycle Nutrition	3	FSHN2301	AR
SPRING	FSHNXXXX	Major Elective	3	Check pre-requisites	AE
	FSHNXXXX	Major Elective	3	Check pre-requisites	AE
	TOTAL		15		
1					
	FSHN3072	Food Analysis	3	CHEM2091, FSHN2001	AR
	FSHN3073	Food Microbiology I	3	BIOL3441	AR
SEVEN	FSHN3303	Nutrition Assessment & Planning	3	FSHN2301	AR
FALL	FSHN3444	Macronutrients in Human Nutrition	3	FSHN2301	AR
	FSHNXXXX	Major Elective	3	Check pre-requisites	AE
	TOTAL		15		

	TOTAL		16		
	NURS4004	Sociology	2		AE
Spring	NURS3007	Psychology	2		AR
Eight	FSHN4502	Nutritional Toxicology	3	FSHN3301 or FSHN3071	AR
	FSHN4501	Community Nutrition	3	FSHN2301	AR
	FSHN3401	Nutrition and Disease I	3	FSHN3303, ANVS3006	AR
	FSHN3333	Micronutrients in Human Nutrition	3	FSHN2001, FSHN2301	AR

	FSHN4800	Food & Nutrition Internship	3	After 80 Credits, CAMS4002	AR
Summer	TOTAL		3		

	TOTAL		16		
	FSHNXXXX	Major Elective	3	Check pre-requisites	AE
	NURS5001	Health Education	2		AR
FALL	NURS4009	Health Promotion	2		AR
NINE	FSHN4401	Nutrition and Disease II	3	FSHN3401	AR
	FSHN4302	Clinical Nutrition	3	FSHN3401	AR
CAMS4001 Management & Business Skills	Management & Business Skills	3	BIOL2101, CHEM2101, CAMS3001, CAMS4002, PHYS2101	CR	

#### DEPARTMENT OF FOOD SCIENCE AND NUTRITION

#### **HUMAN NUTRITION & DIETETICS**

## LIST B: College Requirements (31 Credits)

Course Code	Course Title	Cr.	Pre-Requisite / Comments	Equivalents
BIOL2101	General Biology I	4		
CAMS2000	Introduction to Agricultural and Marine Science	1		
CAMS2001	Computer Applications I	3		
CAMS3001	Biometry and Experimental Design in AMS	3	CAMS2001, LANC2041, MATH1106	CROP3001
CAMS4001	Managements and Business Skills	3	BIOL2101, CHEM2101, CAMS3001, CAMS4002, PHYS2101	
CAMS4002	Seminar and Presentation Skills	2	CAMS2001, LANC2041	CAMS3000
CHEM2101	General Chemistry I	4	MATH1106	
MATH1106	Pre-calculus Math	4		
NREC2003	Introduction to Natural Resource Economics	3	LANC2040	CAMS2003
PHYS2101	General Physics I	4	MATH1106	

## LIST C: College Electives (6 Credits)

Course Code	Course Title	Cr.	Pre-Requisite	Equivalents
ANVS2001	Principles of Animal Science	3		
ANVS2002	Introduction to Veterinary Technology	3		
CROP2510	Introduction to Crop Production	3		
FSHN2071	Principles of Food Science	3		
FSHN2301	Introduction to Human Diet	3	BIOL2101 or CHEM2101 or PHYS2101 or PHYS2107	
MASF2001	Introduction to Fisheries	3	711132101 01 711132107	MASF2003
MASF2002	Introduction to Marine Science	3		MASF2003
SWAE2001	Introduction to Agricultural Engineering	3		
SWAE2201	Introduction to Soils and Water	3		

#### DEPARTMENT OF FOOD SCIENCE AND NUTRITION

#### **HUMAN NUTRITION & DIETETICS**

LIST F: Major Requirements (54 Credits)

Course Code	Course Title	Cr.	Pre-Requisite	Equivalents
ANVS3006	Systemic Physiology	3	BIOL2101	
BIOL3441	Microbiology	3	BIOL2101	
CHEM2091	Organic Chemistry for Agriculture	3	CHEM2101	CHEM2301
FSHN2001	Agricultural Biochemistry	3	BIOL2101, CHEM2101	FSHN2302
FSHN3072	Food Analysis	3	CHEM2091, FSHN2001	
FSHN3073	Food Microbiology I	3	BIOL3441	
FSHN3303	Nutrition Assessment and Planning	3	FSHN2301	
FSHN3333	Micronutrients in Human Nutrition	3	FSHN2301, FSHN2001	
FSHN3401	Nutrition and Disease I	3	FSHN3303, ANVS3006	FSHN3304
FSHN3444	Macronutrients in Human Nutrition	3	FSHN2301, FSHN2001	
FSHN4302	Clinical Nutrition	3	FSHN3401	
FSHN4303	Life Cycle Nutrition	3	FSHN2301	
FSHN4401	Nutrition and Disease II	3	FSHN3401	FSHN4304
FSHN4501	Community Nutrition	3	FSHN2301	
FSHN4502	Nutritional Toxicology	3	FSHN3301 or FSHN3071	
FSHN4800	Food and Nutrition Internship	3	After 80 credits, CAMS4002	
NURS3007	Psychology	2		NURS1007
NURS4009	Health Promotion	2		NURS4020
NURS5001	Health Education	2		NURS4020

#### LIST G: Major Electives (20 Credits) \*

Course Code	Course Title	Cr.	Pre-Requisite	Equivalents
ANVS3005	Fundamentals of Nutrition	3	BIOL2101	
BIOL2003	Introduction to Ecology and Behaviour	3		
FSHN3071	Food Chemistry I	3	CHEM2091, FSHN2001	
FSHN3075	Food Sanitation and Quality Control	3	FSHN2071 or FSHN3073	
FSHN4010	Public Sanitation	3	-	
FSHN4077	Food Product Development	3	FSHN3076, FSHN4171, FSHN4271	
FSHN4271	Sensory Evaluation of Food	3	FSHN2071	
FSHN4900	Food and Nutrition Special Problems	3	Manual Registration; GPA>2.0; CAN CAMS4002	IS3001,
NREC3010	Production Economics	3	NREC2003	
NURS2011	Anatomy & Physiology I	3		
NURS4004	Sociology	2		NURS1002
PHAR2004	General Pharmacology	1		

<sup>\*</sup> Courses from any Department (preferably related to a Minor) of the College of Agricultural and Marine Sciences or another College, may be selected with the approval of Academic Advisor, Head of Department and Assistant Dean of Undergraduate Studies. No course will be approved without filling the substation form and getting all necessary approvals prior registering any course not listed in the above degree plan.

#### DEPARTMENT OF FOOD SCIENCE AND NUTRITION

#### **HUMAN NUTRITION & DIETETICS**

## LIST J: Minor Requirements (3 Credits)

Course Code	Course Title	Cr.	Pre-Requisite
FSHN2301	Introduction to Human Nutrition and Dietetics	3	BIOL2101 or CHEM2101 or PHYS2101

#### LIST K: Minor Electives (15 Credits)

Course Code	Course Title	Cr.	Pre-Requisite
FSHN3303	Nutrition Assessment and Planning	3	FSHN2301
FSHN3333	Micronutrients in Human Nutrition	3	FSHN2301, FSHN2001
FSHN3401	Nutrition and Disease I	3	FSHN3303, ANVS3006
FSHN3444	Macronutrients in Human Nutrition	3	FSHN2301, FSHN2001
FSHN4303	Life Cycle Nutrition	3	FSHN2301
FSHN4401	Nutrition and Disease II	3	FSHN3401
FSHN4502	Nutritional Toxicology	3	FSHN3301 or FSHN3071

## LIST J: MINOR REQUIREMENTS

#### Within CAMS (18 credits):

#### J1. Minor in Animal Science (18 credits)

Course Code	Course Title	Cr.	Pre-Requisite / Co-Req. *
ANVS2001	Principle of Animal Science	3	BIOL2101 or CHEM2101 or PHYS2101
One course fro	om the following		
ANVS3002	Animal Health	3	ANVS2001, BIOL2101
ANVS3003	Principles of Animal Diseases	3	ANVS2001, BIOL2101
Three courses	from the following		
ANVS3004	Anatomy and Histology	3	ANVS2001, BIOL2101
ANV\$3005	Fundamentals of Nutrition	3	ANVS2001, BIOL2101
ANVS3006	Systemic Physiology	3	ANVS2001, BIOL2101
ANVS3007	Animal Reproductive Physiology	3	ANVS2001, BIOL2101
ANVS4001	Dairy and Beef Production	3	ANVS2001, BIOL2101
ANVS4002	Poultry Production	3	ANVS2001, BIOL2101
ANVS4004	Camel Physiology and Husbandry	3	ANVS2001, BIOL2101
ANVS4006	Sheep and Goat Production	3	ANVS2001, BIOL2101
ANVS4007	Animal Nutrition	3	ANVS2001, BIOL2101
ANVS4008	Meat Science	3	ANVS3005
ANVS4011	Horse Management & Care	3	ANVS2001, BIOL2101

#### J2. Minor in Crop Sciences (18 credits)

Course Code	Course Title	Cr.	Pre-Requisite / Co-Req. *
CROP2510	Introduction to Crop Sciences	3	BIOL2101 or CHEM2101 or PHYS2101
CROP3522	Plant Pathology	3	BIOL2101
CROP3526	General Entomology	3	BIOL2101
One course fro	om the following		
CROP2001	Genetics in Agriculture	3	BIOL2101
CROP2011	Ornamental Horticulture	3	-
CROP2201	Introduction to Agricultural Biotechnology	3	BIOL2101 or CHEM2101 or PHYS2101
One course fro	om the following		
CROP3512	Vegetable Production	3	CROP2510
CROP3514	Fruit Production	3	CROP2510
CROP3502	Forages and Pastures	3	BIOL2101
One course fro	om the following		
CROP4001	Crop Physiology	3	BIOL3101
CROP4002	Methods in Plant Breeding	3	CROP2001
CROP4005	Field Crop Production	3	CROP2510
CROP4006	Weeds and their Control	3	BIOL2101
CROP4011	Plant Propagation	3	CROP2510
CROP4512	Post-harvest Physiology	3	BIOL2101
CROP4514	Landscape & Plant Management	3	CROP2510
CROP4517	Nursery and Greenhouse Management	3	CROP2510
CROP4520	Crop Growth and Management	3	BIOL2101
CROP4523	Medical and Veterinary Entomology	3	BIOL2101
CROP4524	Biological Control of Arthopod Crop Pests	3	CROP3526
CROP4526	Economic Entomology	3	CROP3526
CROP4529	Pesticides in Agriculture	3	CROP3526
CROP4530	Insect Biotechnology	3	CROP2201 or BIOL2102 or ANVS3001 or BIOC2011
CROP4541	Plant Pathogens	3	CROP3522
CROP4542	Diseases of Economic Crops	3	CROP3522
CROP4546	Integrated Disease Management	3	CROP3522, CROP3526

#### J3. Minor in Food Science (18 credits)

Course Code	Course Title	Cr.	Pre-Requisite / Co-Req. *
FSHN2071	Principles of Food Science	3	BIOL2101 or CHEM2101 or PHYS2101
Four courses f	rom the following		
FSHN3071	Food Chemistry I	3	CHEM2091, FSHN2001
FSHN3072	Food Analysis	3	CHEM2091, FSHN2001
FSHN3073	Food Microbiology I	3	BIOL3441
FSHN3075	Food Sanitation and Quality Control	3	FSHN2071 or FSHN3073
FSHN3076	Food Processing I	3	FSHN2071
FSHN4073	Food Microbiology II	3	BIOL4030 or FSHN3073
FSHN4171	Food Packaging	3	FSHN3102 or PHYS2102

#### J4. Minor in Human Nutrition & Dietetics (18 credits)

Course Code	Course Title	Cr.	Pre-Requisite / Co-Req. *
FSHN2301	Introduction to Human Nutrition and Dietetics	3	BIOL2101 or CHEM2101 or PHYS2101
Four courses f	rom the following		
FSHN3303	Nutrition Assessment and Planning	3	FSHN2001, FSHN2301
FSHN3333	Micronutrients in Human Nutrition	3	FSHN2001, FSHN2301
FSHN3401	Nutrition and Disease I	3	FSHN3303, ANVS3006
FSHN3444	Macronutrients in Human Nutrition	3	FSHN2301, FSHN2001
FSHN4303	Life Cycle Nutrition	3	FSHN2301
FSHN4401	Nutrition and Disease II	3	FSHN3401
FSHN4502	Nutritional Toxicology	3	FSHN3301 or FSHN3071

#### J5. Minor in Marine Science and Fisheries (18 credits)

Course Code	Course Title	Cr.	Pre-Requisite / Co-Req. *			
a. Marine Scie	a. Marine Sciences					
MASF 2002	Introduction to Marine Sciences	3	BIOL2101 or CHEM2101 or PHYS2101			
MASF3020	Oceanography	3	MASF2001, MASF2002			
MASF 3026	Marine Biology	3	MASF2001, MASF2002			
MASF4020	Marine Ecology	3	MASF3022			
Two courses fi	rom the following					
MASF3100	Marine Tourism	3	MASF2001, MASF2020			
MASF4100	Marine Natural Products	3	CHEM2101, MASF3026			
MASF4110	Marine Ecosystem Modeling	3	MASF4020			
MASF4200	Satellite Oceanography	3	MASF3001, PHYS2101			
b. Fisheries Sc	ience					
MASF2001	Introduction to Fisheries Sciences	3	BIOL2101 or CHEM2101 or PHYS2101			
MASF3040	Ichthyology	3	MASF2001			
MASF4043	Fisheries Management I	3	MASF4042			
MASF4042	Fisheries Biology	3	MASF3040			
Two courses fi	rom the following					
MASF3033	Coastal Navigation	3	MASF2001, PHYS2101			
MASF3082	Seafood Quality	3	-			
MASF3090	Fishing Gear & Vessel Technology	3	MASF2001			
MASF4064	Advanced Aquaculture	3	MASF3062			
MASF4080	Pop Dynamics & Stock	3	MASF4042			
NREC3011	Economics of Fisheries Management	3	NREC2003			

## J6. Minor in Natural Resource Economics (18 credits)

Course Code	Course Title	Cr.	Pre-Requisite / Co-Req. *
CAMS2003	Introduction to Natural Resource Economics	3	LANC2040
Four courses f	rom the following:		
NREC2004	The World Food Problem	3	
NREC3010	Production Economics	3	NREC2003
NREC3011	Economics of Fisheries Management	3	NREC2003
NREC3101	Marketing of Agricultural and Fisheries Products	3	NREC2003
NREC3102	Agricultural and Food Policies	3	NREC2003
NREC3103	Macroeconomic Policy and Natural Resources	3	LANC2141
NREC3104	Intermediate Microeconomics for Natural Resource Management	3	CAMS2003
NREC3220	Agribusiness Management	3	NREC2003
NREC3300	Natural Resource and Environmental Economics	3	NREC2003
NREC4010	Applied Econometrics	4	CAMS3001, NREC2003
NREC4230	Agricultural Finance	3	CAMS3001
NREC4410	International Agricultural Trade	3	NREC2003
NREC4420	Economic Development	3	CROP3001, NREC2003
NREC4430	Benefit Cost Analysis	3	CAMS2003
NREC4440	Mathematical Economics	3	CAMS2003, CAMS3001
NREC4450	The Management of Natural Resource Projects	4	CAMS2003, CAMS3001
NREC4500	Extension Methods and Techniques	3	CAMS4002, CROP3001, NREC2003

# J7. Minor in Soil Sciences (18 credits)

<b>Course Code</b>	Course Title	Cr.	Pre-Requisite / Co-Req. *
SWAE2201	Introduction to Soil and Water	3	BIOL2101 or CHEM2101 or PHYS2101
Four courses fi	rom the following		
SWAE3302	Environmental Soil Chemistry	3	CHEM2101, SWAE2201
SWAE3304	Soil and Water Conservation	3	PHYS2101, (SWAE2001 or SWAE2201)
SWAE3311	Environmental Soil Physics	3	PHYS2101, (SWAE2001 or SWAE2201)
SWAE3411	Environmental Soil Microbiology	3	BIOL2101
SWAE4401	Water and Nutrients in Soil-Plant Environments	3	SWAE2201
SWAE4404	Soil Genesis and Classification	3	ERSC2101 or SWAE2201
SWAE4412	Management of Salt-Affected Soils	3	SWAE2201

## J8. Minor in Water Technology (18 credits)

Code	Title	Cr.	Pre-Requisite / Co-req. *
SWAE2201	Introduction to Soil and Water	3	BIOL2101 or CHEM2101 or PHYS2101
Four courses	from the following		
SWAE3303	Elements of Hydrology	3	CHEM2101, PHYS2101
SWAE3315	Water Quality	3	CHEM2101, SWAE2201
SWAE3402	Irrigation Principles	3	SWAE2201
SWAE4305	Water Control and Supply	3	SWAE2201, SWAE3310
SWAE4325	Water Treatment	3	CHEM2101, MATH2107, SWAE3315
SWAE4400	Ground Water Hydrology	3	SWAE3303
SWAE4415	Water Resources Management and Legislation	3	MATH2107

#### Minors outside CAMS (19 credits):

## **Minors from the College of Science**

#### J10. Biology (19 credits)

Course Code	Course Title	Cr.	Pre-Requisite / Co-Req. *
BIOL2101	General Biology I	4	
BIOLXXXX	Any 2000/3000/4000 level courses in Biology (excluding University Electives)	15	Check Pre-requisites

#### J11. Biotechnology (19 credits)

Course Code	Course Title	Cr.	Pre-Requisite / Co-Req. *
BIOL2101	General Biology I	4	
BIOL2102	General Biology II	4	BIOL2101
BIOL3201	Molecular Biology I	3	BIOL2101
BIOL3441	Introductory Microbiology	3	BIOL2101
BIOL4045	Fundamentals of Biotechnology	3	BIOL3201
One Course fro	om the following		
BIOL4030	Bacteriology	3	BIOL3441
BIOL4034	Biochemistry	3	BIOL2101, CHEM3321 or CHEM3327
BIOL4432	Genetics	3	BIOL3201
BIOL4500	Cell Biology	3	BIOL4034

#### J12. Chemistry (19 credits)

Course Code	Course Title	Cr.	Pre-Requisite / Co-Req. *
CHEM2101	General Chemistry I	4	MATH1106
CHEMXXXX	Any 2000/3000/4000 level courses in Chemistry (excluding University Electives)	15	Check Pre-requisites

#### J13. Computer Science (19 credits)

Course Code	Course Title	Cr.	Pre-Requisite / Co-Req. *
COMP2101	Introduction to Computer Science	4	
Five Courses for	rom the Following		
COMP2103	Introduction to OOP	3	COMP2101
COMP3314	Data Structures	3	COMP2103
COMP3518	Computer Org. & Assembly Lang.	3	COMP3314, MATH3316
COMP3316	Digital Logic & Switching Circuits	3	MATH3340
COMP4414	Database Management	3	COMP3314
COMP4471	Computational Methods I	3	COMP2101, MATH2108, MATH2202
COMP4511	Introduction to Computer Graphics	3	COMP3314, MATH2202
COMP4513	Artificial Intelligence	3	COMP3314, STAT2102
COMP4517	Design and Analysis of Algorithms	3	COMP3314

#### J14. Earth Science (19 credits)

Course Code	Course Title	Cr.	Pre-Requisite / Co-Req. *
ERSC2101	Introduction to Geology I	4	
Five Courses f	rom the Following		
ERSC2011	Palaeontology I	3	ERSC2101
ERSC2102	Introduction to Geology II	4	ERSC2101
ERSC3001	Mineralogy I	3	ERSC2102
ERSC3021	Structural Geology I	3	ERSC2102
ERSC3041	Stratigraphy	3	ERSC2011
ERSC3210	Palaeontology II	3	ERSC2011
ERSC3301	Mineralogy II	3	ERSC3001
ERSC4011	Igneous Petrology	3	ERSC3301
ERSC4012	Metamorphic Petrology	3	ERSC4011
ERSC4013	Sedimentary Petrography	3	ERSC3001, ERSC3301
ERSC4031	Geochemistry	3	CHEM2101, CHEM2201, ERSC2102
ERSC4041	Introduction to Geophysics	3	ERSC2101, PETR3246, PHYS2101
ERSC4051	Hydrogeology	3	CHEM3341, ERSC2101, PETR3246
ERSC4321	Structural Geology II	3	ERSC3021
ERSC5021	Marine Geology	3	ERSC2102

#### J15. Mathematics (19 credits)

Course Code	Course Title	Cr.	Pre-Requisite / Co-Req. *	
MATH1106	Pre-calculus	4		
Five Courses from the Following				
MATH2107	Calculus I	3	MATH1106	
MATH2108	Calculus II	3	MATH2107	
MATH2202	Linear Algebra I*	3	MATH1106	
MATH3109	Calculus III*	4	MATH2108	
MATH3171	Linear Algebra & Mult. Cal. for Eng.*	3	MATH2108	
MATH3207	Math for Teachers I (Algebra)	3	MATH2107	
MATH3210	Math for Teachers II (Geometry)	3	MATH2107	
MATH3302	Ordinary Differential Equations	3	MATH2108	
MATH3360	Discrete Mathematics for CSs	3	MATH2350	
MATH3573	Graph Theory	3	MATH3340, MATH3350, MATH3357	
MATH3744	Introduction to Mathematical Modeling	3	MATH3109, MATH3302	

<sup>\*</sup> Students who pass MATH3171 cannot take MATH2202 or MATH3110 and vice versa.

## J16. Physics (19 credits)

Course Code	Course Title	Cr.	Pre-Requisite / Co-Req. *
PHYS2101 or PHYS2107	General Physics I or Physics for Engineering	4	MATH1106
PHYSXXXX	Any 2000/3000/4000 level courses in Physics (excluding University Electives)	15	Check Pre-requisites

#### J17. Statistics (19 credits)

Course Code	Course Title	Cr.	Pre-Requisite / Co-Req. *
STAT1001	Introduction to Statistics	4	English
Five Courses from the Following			
STAT2102	Introduction to Probability	3	STAT1001, MATH2108*
STAT3334	Introduction to Inference	3	STAT2102
STAT3335	Sampling Techniques	3	STAT3334
STAT3338	Statistical Methods	3	STAT3334
STAT3336	Computational Techniques in Statistics	3	COMP2216, STAT2102
STAT4432	Regression Analysis	3	STAT3334
STAT4433	Design and Analysis of Experiments	3	STAT3338
STAT4434	Nonparametric Statistics	3	STAT3334

# J18. Minor from College of Commerce (15 credits)

Only Natural Resource Economics students are entitled for this minor. NREC students must successfully complete 5 from the following 7 courses

Code	Title	Cr.	Pre-Requisite / Co-req. *
ACCT1111	Introductory Accounting I	3	MNGT1510
ACCT2112	Introductory Accounting II	3	ACCT1111
BCOM2911	Business Communications	3	LANC2070
MNGT2511	Fundamentals of Management	3	MNGT1510, LANC2070*
MRKT3611	Principles of Marketing	3	ECON1211, ECON2221
POMG2711	Introduction to Management Science	3	(MATH1062 or MATH1102), STAT1811, STAT2812*
POMG3712	Operations Management	3	POMG2711