UWI

ST. AUGUSTINE CAMPUS

POSTGRADUATE

INFORMATION GUIDE

FACULTY OF FOOD & AGRICULTURE

REGULATIONS & SYLLABUSES

2012 2013

CONTENTS

MESSAGE BY THE DEAN

As we begin this new phase in the history of Agriculture on the St Augustine Campus, we take great pleasure in welcoming you to the new Faculty of Food and Agriculture and the 2012-2013 academic year. For those of you who are with us for the first time, we bid you a very special welcome. We are very proud that you have selected this University and the Faculty of Food and Agriculture for your graduate studies. We especially welcome new graduate students in the equally new Department of Geography.

The primary focus of our new Faculty is to produce the human resources needed for our Region to attain Food and Nutrition Security and the Faculty is uniquely positioned to make a significant contribution, with its wide range of graduate degree offerings in Agriculture, Agribusiness, Food and Nutrition, Geography and related areas. The University is also implementing its new Strategic Plan which places renewed emphasis on "Faculty-led research and innovation" and "Graduate and student research". Therefore, there is already one area where you can make your own, individual contribution to the University and to the Region and this is in the research that you carry out as a graduate student. Thus we urge you to select topics relevant to the Region's focus and to conduct your research with due diligence and resolve.

Furthermore, we encourage you to get fully involved in Campus affairs, through your academic programme and also with the various groups and societies, including graduate student groups that exist on campus. These groups provide portals to opportunities and experiences that can assist you to become better-rounded individuals, both personally and professionally. In addition to the post graduate seminars, take advantage of every opportunity to present papers and attend the wide range of conferences and seminars held, not only on campus, but regionally and internationally. There are also a number of exchange programs available and these afford you the opportunities to spend a semester abroad, to gain valuable international experience.

Again, welcome to the new Faculty of Food and Agriculture and may all your goals and aspirations be achieved.

Carlisle A Pemberton
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Faculty of Food and Agriculture

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GENERAL INFORMATION ON POSTGRADUATE STUDIES IN THE FACULTY

1. SCHOOL FOR GRADUATE STUDIES AND RESEARCH (SGS&R)

The School for Graduate Studies and Research has the overall responsibility for the development of graduate studies and research on all four campuses of The University of the West Indies. The School is chaired by its Dean, PVC (Graduate Studies) and is governed by the Board for Graduate Studies and Research. There is a committee of the SGS&R on each campus called the Campus Committee for Graduate Studies and Research. The SGS&R works closely through these four Campus Committees to manage and administer activities related to research and graduate studies. The School assists academic departments with the maintenance and development of coherent graduate studies programmes and, through the Board for Graduate Studies and Research, approves the establishment of new postgraduate programmes and the award of degrees.

2. TYPES OF GRADUATE PROGRAMMES OFFERED IN THE FACULTY OF FOOD AND AGRICULTURE

The Faculty offers a wide range of certificates, diplomas, taught Master's degrees as well as research degrees (MPhil and PhD).

(a) **Taught Programmes**

The programmes for the Master of Science (MSc) degrees and for Postgraduate Diplomas consist mainly of a set of lectures , seminars, coursework assignments and either a project or a research paper. The Faculty also offers Diplomas and Certificates by distance

(b) (i) **Research Degrees**

The Master of Philosophy (MPhil) and the Doctor of Philosophy (PhD) degrees are research degrees. Research degrees involve independent study, directed by one or more supervisors. All MPhil and PhD programmes of study culminate in the presentation of a thesis conveying the results of the independent study and research carried out by the graduate student. It is necessary that graduate students, supervisors, advisory committees and examiners ensure that the qualitative and quantitative distinction between the MPhil Degree and PhD Degree be understood and maintained.

(ii) **The MPhil Thesis**

The MPhil thesis reviews the state of knowledge in a particular field, creates and evaluates a new design or novel experiments in a particular aspect of an area of study or makes an appropriate critique or interpretation of the subject. The Master's Thesis should be evidence of the graduate student's ability to effectively review the relevant literature in the field, to undertake independent research and to present the results in a clear, systematic and scholarly form.

It is normally expected that a Master's Thesis will make some independent contribution to knowledge or understanding in the subject area in which the student is working.

(iii) **The Doctoral Thesis**

A Doctoral thesis must set forth a significant contribution to knowledge or understanding, adding to or critiquing through approved research methodologies the current theoretical underpinnings and empirical base in the student's field of study.

The thesis must be set forth in a scholarly manner demonstrating the original and independent investigations conducted and setting forth unambiguously its achievements, contributions and findings in a format appropriate to Doctoral Theses in the particular discipline.

The Doctoral Thesis must reflect not only mastery of the subject area under investigation and competence in research techniques, but also the ability to select an important problem for investigation and to deal with it in a mature, competent manner.

The Doctoral Degree is, by nature and tradition, the highest certificate of membership in the academic community. It is meant to indicate the presence of superior qualities of mind, intellectual interest and high attainment and knowledge in a chosen field. It is not conferred merely as a certificate for a prescribed course of study and research, no matter how faithfully pursued. Independent achievement at a high intellectual level is a prerequisite to its conferment. A Doctoral Thesis or parts thereof must be judged to be potentially publishable.

The award of a PhD also requires the candidate to defend his/her thesis at a public oral examination. Many research degrees now contain a taught element. The intention of these taught courses is to provide students with research techniques and skills that will not only help them complete their current research topic, but will also stand them in good stead for life after University.

With the exception of holders of MPhil degrees from recognised Universities, candidates interested in pursuing the PhD degree are normally required to register for the MPhil Degree in the first instance. If your Supervisors are happy with your progress, then provisions exist to upgrade your registration from the Master's to Doctoral level without first submitting a Master's dissertation.

If you decide to pursue a research degree, it is very important that the thesis topic you choose is of genuine and sustainable interest to you.

3. Registration

The academic year is divided into two semesters as follows:
Semester I - August to December
Semester II - January to May

Candidates for the MPhil or PhD degree may register during the first two weeks of either Semester but it is more usual for such candidates to begin their studies at the start of the academic year. A candidate wishing to pursue a taught Master's Degree or an Advanced Diploma programme MUST begin his/her studies at the start of the academic year unless otherwise specified.

Students from Trinidad & Tobago may be registered for full-time or part-time studies. You will not be registered for full-time studies if you spend an average of twelve or more hours a week in paid employment. For a student registering as part-time, proof of leave of absence from your job must be submitted at the time of registration. Overseas students will normally be required to register for full-time studies.

No allowances will be made with respect to attendance at lectures, laboratories, tutorials or examinations for students on the condition of their employment.

4. Time Limitation

The following table shows IN GENERAL the time limitation for graduate degrees:

PROGRAMME	FULL TIME		PART TIME	
	Minimum	Maximum	Minimum	Maximum
Diplomas	1		2	
MSc (taught)	1	2	2	4
MPhil	2	3		5
PhD	3	5	5	7

5. Academic Supervisor

Each research student is assigned one or more supervisors who will guide the student through his/her studies. The appointment of a supervisor(s) is recommended by the relevant Head of Department after careful consideration of the Faculty member's expertise and experience. Also, a Committee of Advisors shall be appointed by the Board for Graduate Studies and Research for each MPhil and PhD student. This Committee shall comprise a minimum of three persons, including the supervisor(s) of your research programme.

6. Assessment

a. Taught Programmes

The methods of assessment may vary, but examinations are conducted mainly by written papers supplemented by in-course testing, practical examinations, a project report, a research paper, or a combination of these methods.

Candidates are required to pass all courses and all coursework, designated by the Department as forming part of the higher degree programme for which they are registered, with a mark of 50% or better.

b. MPhil/ PhD Thesis and Examination

All research degrees are examined by theses. In addition, research students will be required to pass courses amounting to a MINIMUM of 6 credits for the MPhil and 9 credits for the PhD degree. For the MPhil degree the candidate may be required to defend his/her thesis by an examination. Every candidate for the PhD must defend his/her thesis by an oral examination.

A candidate who is unsuccessful in the examination for the PhD may apply to the Board for Graduate Studies and Research for transfer of registration to the relevant MPhil and for permission to resubmit the relevant thesis or a revised version of it for examination for a Master's degree. Where the application is approved, the registration for the PhD will lapse and the registration for the MPhil will be deemed to have started from the date of registration for the PhD.

7. Upgrading of Registration

Postgraduate students who are registered for the MPhil degree and who wish to be considered for the upgrading of their registration to PhD must apply to do so in the second year of registration on the written recommendation of their supervisor(s). Applications for upgrading will normally not be considered after the third year of registration. Applicants for upgrade must have completed all departmental coursework requirements by this time and must defend their proposal for upgrading at a Faculty seminar.

A supervisor must state why he/she considers the student to be outstanding and whether in his/her opinion the work can be developed to the level of the PhD

All recommendations from Departments for PhD upgrade registrations are subject to the approval of the Board for Graduate Studies and Research.

8. Graduate Research Seminars

All postgraduate research students are required to present at least two seminars on their work at the MPhil level and three seminars at the PhD level. These seminars will be examined and graded on a "pass or "fail" basis. Students are also required to attend a minimum of 75% of all Departmental/Faculty seminars. A Seminar attendance register will be kept by all Departments.

9. **Postgraduate Course in "Scientific Presentation and Critique"**
   These courses are designed for MPhil. and PhD. students. Its purpose is to:
   Immerse graduate students into a culture of reading and critical analysis of research in their field and related disciplines.
   Expose students to a broad range of research topics in and related to their discipline.
   Involve students in regular scientific discourse involving their own work and the work of others.
   Develop students' analytical and critical thinking skills as well as their oral presentation and writing skills.

NOTE: Current School of Graduate Studies state that MPhil students are required to present two assessed seminars and PhD students must present three. This course may be used as a forum for these presentations which will be assessed in the manner prescribed for such "assessed seminars".

MPhil
GRSM 7004 - Scientific Presentation and Critique 1
GRSM 7005 - Scientific Presentation and Critique 2
GRSM 7006 - Scientific Presentation and Critique 3

PhD
GRSM 8004 - Scientific Presentation and Critique 1
GRSM 8005 - Scientific Presentation and Critique 2
GRSM 8006 - Scientific Presentation and Critique 3

GENERAL INFORMATION ON THE FACULTY OF FOOD AND AGRICULTURE

The FFA comprises three teaching and research departments which are organised as follows:

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TEACHING AND/OR RESEARCH UNITS:

The Faculty also includes the following teaching and/or research units.

(i) THE UNIVERSITY FIELD STATION (UFS):
This is located approximately 4 km from the main campus, has facilities for livestock and crop production work including a rabbitry, cattle, sheep and poultry facilities, a laboratory, a machine shop, plant propagation facilities, and temperature-controlled rooms for vegetable and fruit storage work. In addition there is an abbatoir and a milk pasteurisation facility.

(ii) THE COCOA RESEARCH UNIT (CRU):
This unit, which is the custodian of the International Cocoa Genebank, Trinidad, has a collection of some 2,300 accessions. The CRU is involved in a number of multi-disciplinary research programmes, which include collection and conservation of germplasm, morphological and molecular characterisation, germplasm enhancement, evaluation for resistance to major diseases and flavour assessment. In addition, the CRU plays a role in the improvement of cocoa by providing useful and diverse germplasm to cocoa producing countries. The Unit is involved in several international research projects, collaborates with other research institutions, and continues to attract local and external funding to support its research activities.

ENTRY REQUIREMENTS

Candidates seeking entry to the Diploma, or MSc, or MPhil programmes in the Faculty must satisfy the minimum requirements of the School for Graduate Studies and Research (Lower Second Class Honours for MSc and Upper Second Class Honours or equivalent for MPhil) AND must hold a BSc degree at the prescribed level in Agriculture or Natural Sciences (or an equivalent qualification) from an approved university. In exceptional cases, students may be admitted with a pass degree and considerable work experience in a related area.

For direct entry into the PhD programme, a student must satisfy minimum entry requirements of the School of Graduate Studies & Research AND have obtained a MPhil degree (or an equivalent qualification) in an appropriate field of study in science or agriculture from an approved tertiary level institution.

PROGRAMMES

The FFA which comprises the departments of Agricultural Economics and Extension, Food Production and Geography, has a long history of excellence in teaching, research and outreach dating back to 1924 in the Imperial College of Agriculture (ICTA). The Faculty is staffed by well-qualified and experienced academic and technical staff.

Research in the Faculty is focused on the problems of low productivity of the agricultural sector in the Caribbean, as well as competitiveness and sustainability in the new global environment; agricultural biotechnology; soil and water conservation; crop and livestock production and post-harvest technology. Research is done in close collaboration with the Department of Life Sciences, the Faculty of Engineering and the School of Veterinary Science.

Research work is financed from University funds, augmented by grants from the private sector, international agencies and the Government of the Republic of Trinidad & Tobago.

The FFA offers postgraduate degrees in the following areas:

Postgraduate Diploma in:
- Agricultural and Rural Development(By Distance);
- Agri-Food Safety and Quality Assurance

Master of Science (MSc) Degrees in:
- Agricultural and Rural Development (By Distance);
- Agricultural Economics;
- Agri-Food Safety and Quality Assurance
- Crop Protection;
- Marketing and Agribusiness;
- Tropical Animal Science and Production;
- Tropical Commodity Utilisation; Mounting of these courses in any given year is subject to obtaining a suitable number of students.

Master of Philosophy (MPhil) and Doctor of Philosophy (PhD) Degrees in:
- Agricultural Economics;
- Agricultural Extension;
- Crop Science;
- Earth and Environmental Science;
- Food Safety and Quality;
- Geography;
- Horticulture
- Human Ecology
- Livestock Science;
- Soil Science

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PROGRAMME OFFERINGS

The Department offers:

- MSc in Agricultural Economics which has courses in three core areas of specialisation:
  - Trade Policy and Competitiveness
  - Marketing and Agribusiness Management
  - Environmental and Natural Resource Economics
- MSc in Marketing and Agribusiness
- MPhil and PhD degrees in Agricultural Extension and Agricultural Economics.
- MPhil and PhD in Human Ecology

  The Agricultural Economics degrees qualify graduates for potential employment as Agricultural Economists, Agricultural Planners, Development Bankers, Marketing Specialists, Rural Development Specialists, Environmental Specialists, Consultants or University Lecturers while the Agricultural Extension degrees qualify graduates for potential employment as Extension Programme Planners, Communication Specialists, Rural Sociologists, Rural Development Specialists, University Lecturers, Consultants, Nutrition Extension Specialists and Youth Counsellors. The Human Ecology degree is aimed at producing individual who can function at the leadership and policymaking levels in the various areas of specialisation

RESEARCH AGENDA

Research in the Department addresses current issues in the agricultural sector of Caribbean countries with the objective of making a contribution towards the development and transformation of agriculture.

The research programme in Agricultural Economics and Human Ecology focuses on contemporary policy areas for the regional agricultural sector. These include:

i. Human Nutrition;
ii. Rural Development;
iii. Trade and Agricultural Policy;
iv. Marketing and Agribusiness Management;
v. Environmental and Natural Resource Management

The research programme in Agricultural Extension includes:

i. Rural development using a multidisciplinary framework
ii. The organisation and management of Extension especially current trends such as decentralisation and privatisation
iii. Planning, delivery (including the use of ICTs) and evaluation of Extension programmes dealing with trade liberalisation, competitiveness, food and nutrition, environmental issues.
iv. Emerging models such as Farmer Field Schools, Fisheries Extension and Forestry Extension

DETAILS OF DEGREE PROGRAMMES

(I) MSC MARKETING AND AGRIBUSINESS

Entry Requirements

The general pre-requisite for entry into the MSc Marketing and Agribusiness is at least a Lower Second Class Honours BSc Degree in Agribusiness, Agribusiness Management, Management Studies, Economics or Agriculture or in a related subject (or equivalent qualifications and working experience).

Duration of Course

The MSc in Marketing and Agribusiness will normally extend over 2 years of full-time or 4 years of part-time study.

Award of the Degree

To qualify for the award of the degree, candidates must pass all six Core courses, two Electives and the Research Project. The degree shall be awarded in two categories - Distinction and Pass. For the award of the degree with Distinction, the candidate must have obtained an average mark of 70% or more, across all core courses and electives as well as 70% or more in the Research Project.

Programme Structure

A candidate electing to do the MSc in Marketing and Agribusiness will be required to take SIX Core Courses, TWO Elective Courses and a Research Project- a total of 44 credits.

(e) Core Courses (COMPULSORY)

AGBU 6102:	Statistics and Mathematics for Agribusiness	(4 credits)
AGBU 6301:	Research Methodology	(4 credits)
AGBU 6202:	Agribusiness Management	(4 credits)
AGBU 6201:	Agricultural Marketing	(4 credits)
AGBU 6002:	International Trade and Marketing	(4 credits)
AGBU 6602:	Quantitative Methods II (Econometrics)	(4 credits)
AGBU 6999:	Research Project	(12 credits)

(f) Elective Courses (Any Two)

AGBU 6303:	Investment Analysis and Financing for Agribusiness	(4 credits)
AGBU 6302:	Quantitative Methods I (Operations Research)	(4 credits)
AGBU 6103:	Sustainable Rural Development	(4 credits)
AGBU 6903:	Advanced Agricultural Marketing	(4 credits)
AGBU 6691:	Advanced Agribusiness Management	(4 credits)

(g) Course of Study

YEAR 1

Semester 1

Code	Title	Credits
AGBU 6301	Research Methodology	4
AGBU 6201	Agricultural Marketing	4
AGBU 6102	Statistics and Mathematics for Agribusiness	4

Semester 2

AGBU 6202	Agribusiness Management	4
AGBU 6002	International Trade and Marketing	4
AGBU 6602	Quantitative Methods II (Econometrics)	4

YEAR 2

Code	Title	Credits
AGBU 6999	Research Project*	12
AGBU 6903	Advanced Agricultural Marketing I	4
AGBU 6303	Investment Analysis and Financing for Agribusiness	4

YEAR 2

Semester 2

Code	Title	Credits
AGBU 6999	Research Project*	12
AGBU 6103	Sustainable Rural Development	4
AGBU 6302	Quantitative Methods I (Operations Research)	4
AGBU 6691	Advanced Agribusiness Management	4

*This is extended across two semesters

(II) MSc AGRICULTURAL ECONOMICS

(a) This degree is offered with specialisation in the following areas:

- Trade Policy and Competitiveness
- Marketing and Agribusiness Management
- Environmental and Natural Resource Economics

(b) Areas of Specialisation will be offered subject to student demand and the availability of staff.

(c) Entry Requirements

At least a Lower Second Honours BSc degree (minimum GPA of 2.0 or equivalent) in Agribusiness, Agribusiness Management, Agriculture, Agricultural Economics, Economics, Management or related areas.

(d) Qualifying Year

Candidates not considered suitable for minimum entry requirements may be admitted to a qualifying year as determined by the Department. Such candidates will be required to read courses to improve their competency in Economic Theory, Agricultural Economics, Mathematics or Statistics and which may be read on any of the campuses of The University of the West Indies.

These courses may include:

- ECON 2002: Intermediate Macroeconomics I (3 credits)
- ECON 2003: Intermediate Macroeconomics II (3 credits)
- ECON 2000: Intermediate Microeconomics I (3 credits)
- ECON 2001: Intermediate Microeconomics II (3 credits)
- ECON 2015: Mathematical Methods in Economics I (3 credits)
- ECON 2006: Economic Statistics (3 credits)

The qualifying year will be designed to suit the needs of the individual student.

(e) Course of Study

- Candidates, on admission may be required to improve their competency in Economic Theory, Agricultural Economics, Mathematics or Statistics by reading one or more of the courses listed above under the qualifying year.

CORE COURSES (COMPULSORY)

The following core courses are required for ALL areas of specialisation:

- AGBU 6102: Statistics and Mathematics for Agribusiness (4 credits)
- AGBU 6602: Quantitative Methods II (Econometrics) (4 credits)
- AGBU 6301: Research Methodology (4 credits)
- AGBU 6103: Sustainable Rural Development (4 credits)
- AGBU 6501: Microeconomics (4 credits)
- AGBU 6302: Quantitative Methods I (Operations Research) (4 credits)
- AGBU 6999: Research Project (12 credits)

Other core and elective courses required for EACH AREA OF SPECIALISATION are:

1. Trade Policy and Competitiveness

CORE COURSES

- AGBU 6901: Agricultural Policy and Analysis (4 credits)
- INRL 5007: International Trade and Economic Development (3 credits)

PLUS

One (1) Elective Course (equivalent to 4 credits), which may include:

- AGBU 6002: International Trade and Marketing (4 credits)

  OR

  Any other relevant course approved by the Head of Department

2. ***Environmental and Natural Resource Economics***

CORE COURSES

- ENVI 6001: Introduction to Environmental Planning and Management (4 credits)
- AGBU 6902: Environmental Economics II (4 credits)

PLUS

One (1) Elective Course (equivalent to 4 credits) which may include:

- ENVI 6100: Environmental Impact Assessment (4 credits)

OR

Any other relevant course approved by the Head of Department

3. ***Marketing and Agribusiness Management***

CORE COURSES

- AGBU 6201: Agricultural Marketing (4 credits)
- AGBU 6202: Agribusiness Management (4 credits)

PLUS

One (1) Elective Course (equivalent to 4 credits) which may include:

- AGBU 6302: Investment Analysis and Financing for Agribusiness (4 credits)
- AGBU 6902: Advanced Agricultural Marketing I (4 credits)
- AGBU 6691: Advanced Agribusiness Management (4 credits)

(f) Nature of Elective Course

The Elective Course shall be relevant to the candidate's area of research interest and must be approved by the Department.

(g) Duration of Study

The MSc (Agricultural Economics) is available to full time and part-time students. Full-time students will normally be required to complete the degree within 2 years of registration.

Part-time students will normally be required to complete the degree within 4 years of registration.

The normal load for a part-time student is half that of a full-time student.

(h) Examination

Evaluation in all courses will normally be by both coursework and final examinations. Candidates must pass both coursework and final examination.

In Course AGBU 6999 Research Project, a project report will be evaluated.

(i) Award of Degree

The MSc (Agricultural Economics) degree will be awarded on successful completion of all prescribed courses including the Research Project (AGBU 6999). The degree shall be awarded in the categories – Distinction and Pass. For the award of the degree with Distinction, the candidate must have obtained a minimum average mark of 70% in all core and elective courses as well as a minimum of 70% in the Research Project.

(III) MPhil AGRICULTURAL ECONOMICS

(a) Entry Requirements

1. At least an upper second class honours degree (minimum GPA of 3.0 or equivalent) in Agricultural Economics, Economics, Agriculture, Agribusiness, Agribusiness Management, Management Studies, Marketing or related area.

2. This is a research degree and candidates admitted to this programme will normally be expected to have a good undergraduate or postgraduate academic record.

3. Previous experience in research will be given special consideration in assessing a candidate's suitability for admission.

(b) Course of Study

Candidates will be expected to complete AGBU 6301 (Research Methodology), a Graduate Research Seminar Course (GRSM 7000) and a minimum of eight credits from among the following courses:

- AGBU 6102: Statistics and Mathematics for Agribusiness (4 credits)
- AGBU 6602: Quantitative Methods II (Econometrics) (4 credits)
- AGBU 6301: Research Methodology (4 credits)
- AGBU 6501: Microeconomics (4 credits)
- AGBU 6302: Quantitative Methods I (Operations Research) (4 credits)
- AGBU 6103: Sustainable Rural Development (4 credits)

(c) Thesis

The candidate must fulfill the MPhil thesis requirements of the Faculty of Science Food and Agriculture and successfully defend his/her thesis at a public oral examination.

(IV) PhD AGRICULTURAL ECONOMICS

(a) Entry Requirements

1. For admission to the PhD Agricultural Economics programme, candidates should have successfully completed the MPhil degree in Agricultural Economics or an MSc degree in Agricultural Economics or Economics from an approved University and which should have included the writing of a substantial thesis, or an MSc degree with distinction in a relevant discipline.

2. All other candidates will be required to register for the MPhil degree in Agricultural Economics and seek an upgrade to the PhD degree in accordance with University Regulations.

(b) Course of Study

Candidates would normally be expected to have completed the following courses (or equivalent) on entry into the PhD programme. *

- AGBU 6102: Statistics and Mathematics for Agribusiness (4 credits)
- AGBU 6602: Quantitative Methods II (Econometrics) (4 credits)
- AGBU 6301: Research Methodology (4 credits)
- AGBU 6103: Sustainable Rural Development (4 credits)
- AGBU 6501: Microeconomics (4 credits)
- AGBU 6302: Quantitative Methods I (Operations Research) (4 credits)

***CANDIDATES WHO HAVE NOT FULFILLED THESE REQUIREMENTS WILL BE REQUIRED TO COMPLETE THESE COURSES.**

(c) Coursework Examinations

1. The PhD in Agricultural Economics is awarded on the successful completion of prescribed courses AND a thesis.

2. The following courses are required for ALL areas of specialisation:
   AGBU 6610: Economic Theory (4 credits)
   AGBU 8000: Quantitative Methods III (4 credits)

3. Courses required for EACH area of specialisation are:
   (i) Trade Policy and Competitiveness
   AGBU 6650: Economic Development and International Trade (4 credits)
   (ii) Environmental and Natural Resource Economics
   AGBU 6692: Advanced Natural Resource and Environmental Economics (4 credits)
   (iii) Marketing and Agribusiness Management
   AGBU 6690: Advanced Agricultural Marketing II (4 credits)

(d) Programmes of study in the areas of specialisation will normally be offered according to the requirements of students and subject to the availability of staff.

(e) PhD Thesis

1. On successful completion of the Departmental COURSEWORK REQUIREMENTS, candidates must prepare a research proposal in the area of the thesis topic to be presented at a Departmental Seminar.

2. The procedures for the presentation of the PhD thesis are outlined in the Postgraduate General Regulations of The University of the West Indies.

(v) THE MPhil DEGREE IN AGRICULTURAL EXTENSION

1. The MPhil Degree is offered both on a part-time and full-time basis. It is awarded on the successful completion of the required graduate courses and a thesis.

2. The normal time for the completion of this degree is two years for full-time students and four years for part-time students.

Entry Requirements

3. This is a research degree and candidates should have strong undergraduate academic qualifications. The normal requirement is at least an Upper Second Class Honours degree (minimum GPA of 3.0 or equivalent) in the following disciplines or other approved areas:
   - Agriculture
   - Agribusiness
   - Aquaculture
   - Forestry
   - Natural Resource Management
   - Human Ecology

4. Special consideration will also be given to candidates with lower level qualifications but whom, in the opinion of the Board for Graduate Studies and Research, have adequate research or teaching experience in relevant disciplines.

5. Promising research candidates with undergraduate degrees not considered suitable for direct admission may be admitted to a qualifying year. (Please refer to the general postgraduate regulations regarding Qualifying Examinations)

Departmental Course Requirements

6. In addition to the basic requirements for admission, candidates will be expected to have at least nine credits of approved undergraduate Extension courses at Level II/III or the equivalent. Candidates without these required number of credits will be required to take appropriate undergraduate courses, which they must pass before submitting the proposal for the thesis.

Taught Graduate Courses

7. Candidates accepted into the M. Phil. programme will be required to register for at least four taught graduate courses including Research Methodology AGBU 6301. Students who enter the programme with a taught Master's Degree or Postgraduate Diploma may be granted exemption from the course requirements. However, such students may be required to take additional courses to provide a specific knowledge base for their proposed research.

8. Students who fail more than 50% of their courses in their first attempt will normally be required to withdraw. Only one repeat attempt for each failed course will be allowed.

Thesis

9. The candidate must fulfill the MPhil thesis requirements of the Faculty of Food and Agriculture and successfully defend his/her thesis at a public oral examination

(VI) THE PhD DEGREE IN AGRICULTURAL EXTENSION

1. The PhD degree in Agricultural Extension is offered both on a part-time and full-time basis. It is awarded on the successful completion of required departmental courses and a thesis.

2. The maximum time allowed for completing this degree is five years after registration for full-time students and seven years for part-time students.

Entry requirements

3. Applicants who hold an MPhil Degree or other research-based Master's Degree in Agricultural Extension or related disciplines are eligible for direct entry to the PhD programme.

4. Applicants who hold taught Master's degrees may also be eligible for direct entry if the programmes included a research component of at least 25% of the total credits for the degree and if they attained at least a B+ average in both the taught courses and the research project.

5. All other candidates with Master's qualifications applying for admission to the PhD must register first for the MPhil and then apply to upgrade their registration to the PhD programme in accordance with the general regulations.

Taught Graduate Courses

6. Candidates gaining direct entry into the PhD programme are required to pass a minimum of 12 credits of taught graduate courses approved by the department.

PhD Thesis

The requirements for submission of the PhD thesis are outlined in the general regulations for postgraduate students.

(VII) THE MPhil DEGREE IN HUMAN ECOLOGY

ENTRY REQUIREMENTS

At least an Upper Second Class Honours degree (minimum GPA of 3.0 or equivalent) in Human Ecology, Family and Consumer Sciences or Human Nutrition and Dietetics, or a related discipline.

This is a research degree and candidates admitted to this programme will normally be expected to have a good undergraduate or postgraduate academic record.

Previous experience in research will be given special consideration in assessing a candidate's suitability for admission.

Candidates who do not qualify for entry as specified in (1) above will be required to do a qualifying year consisting of a minimum of eighteen (18) credits of supplementary courses in the area of Human Nutrition.

Course of Study

Candidates will be expected to complete the following courses:

Course Code	Title
AGRI 6620	Statistics (4 credits)
AGBU 6301	Research Methodology (4 credits)
GRSM 7001	Graduate Research Seminar I
GRSM 7002	Graduate Research Seminar II

PLUS

Eight (8) additional credits from courses relevant to the students area of specialization from the following list:

Course Code	Title	
HUEC 5000	Advanced Foodservice Systems Management	(4 credits)
HUEC 5020	Advanced Clinical Nutrition	(4 credits)
HUEC 5040	Advanced Community Nutrition	(4 credits)
AGBU 6103	Principles of Rural Sociology	(4 credits)
AGBU 6002	International Trade and Marketing	(4 credits)
AGBU 6201	Agricultural Marketing	(4 credits)
AGBU 6202	Agribusiness Management	(4 credits)
FOSQ 6001	Agri-food Safety	(4 credits)

Thesis

The candidate must complete the MPhil thesis (HUEC 7000) of the Faculty of Food and Agriculture and may defend his/her thesis at a public oral examination.

(VIII) THE PhD DEGREE IN HUMAN ECOLOGY

Areas of specialization for the degree are:

- **Nutritional Sciences**
- **Family and consumer Sciences**
- **Food Service Management**

ENTRY REQUIREMENTS

For direct admission to the PhD programme, candidates should have successfully completed the MPhil Degree in Human Sciences, Family and Consumer Sciences or Human Nutrition and Dietetics, **OR** an MSc degree in Human Ecology Family and Consumer Sciences or Human Nutrition and Dietetics or a related discipline from an approved university and which should have included the writing of a substantial thesis, or an M.Sc. degree with distinction in a relevant discipline.

All other candidates with degrees in Human Ecology, Family and Consumer Sciences or Human Nutrition and Dietetics will be required to register for the MPhil degree in Human Ecology and seek an upgrade to the PhD degree in accordance with University Regulations.

Applicants who do not qualify for entry as specified in (1) and (2) above may be required to do a qualifying year consisting of supplementary courses in the area of specialization to a minimum of 18 credits.

COURSE OF STUDY

Candidates are normally expected to complete the following courses:

Course Code	Title
AGRI 6620	Statistics (4 credits)
AGBU 6301	Research Methodology (4 credits)
GRSM 8001	Graduate Research Seminar I
GRSM 8002	Graduate Research Seminar II
GRSM 8003	Graduate Research Seminar III

PLUS

Twelve (12) additional credits from courses relevant to the students area of specialization from the following list:

Course Code	Title	
HUEC 5000	Advanced Foodservice Systems Management	(4 credits)
HUEC 5020	Advanced Clinical Nutrition	(4 credits)
HUEC 5040	Advanced Community Nutrition	(4 credits)
AGBU 6103	Principles of Rural Sociology	(4 credits)
AGBU 6002	International Trade and Marketing	(4 credits)
AGBU 6201	Agricultural Marketing	(4 credits)
AGBU 6202	Agribusiness Management	(4 credits)
FOSQ 6001	Agri- food Safety	(4 credits)

Thesis

The candidate must complete the PhD thesis (HUEC 8000) of the Faculty of Food and Agriculture and successfully defend his/her thesis at a public oral examination.

DEPARTMENT OF AGRICULTURAL ECONOMICS & EXTENSION

COURSE DESCRIPTIONS

SEMESTER: 2
COURSE CODE: AGBU 6002
COURSE TITLE: INTERNATIONAL TRADE AND MARKETING
NUMBER OF CREDITS: 4
PREREQUISITE: NONE

COURSE DESCRIPTION: International trade in agricultural commodities, products and natural resources and the impact of international trading arrangements. Partial and general equilibrium models applied to problems in agricultural and natural resource trade and marketing. Analysis of trade and marketing policies of various countries. The impact of macroeconomic policy through exchange rates, interest rates, and inflation on international agricultural and resource markets.

Assessment:

Coursework	40%
Final examination	60%

SEMESTER: 1
COURSE CODE: AGBU 6102
COURSE TITLE: STATISTICS AND MATHEMATICS FOR AGRIBUSINESS
NUMBER OF CREDITS: 4
PREREQUISITE: AGBU 2003 OR AGBU 3005 OR EQUIVALENT OR ECON 2006 OR HUEC 1005

COURSE DESCRIPTION: Probability distributions; mathematical expectations; estimation of parameters; tests of hypotheses; analysis of variance; functions of one and several variables; partial derivatives; total derivatives; matrices and determinants; integrals; constrained optimisation.

Assessment:

Coursework	40%
Final examination	60%

SEMESTER: 2
COURSE CODE: AGBU 6103
COURSE TITLE: SUSTAINABLE RURAL DEVELOPMENT
NUMBER OF CREDITS: 4
PREREQUISITE: NONE

COURSE DESCRIPTION: Advanced concepts of economic growth and sustainable development are covered especially as they relate to agriculture. The use of economic tools and theories to analyse the performance of the agricultural sector and assessing the potential for sustainable development through the wise use of available resources. The Human Development Index as it relates to Caribbean countries. The role of women in the development process is studied in-depth using real-life field situations. Analysis of the principal causes of rural environmental problems in the Caribbean and the provision of solutions to reduce their negative impact.

Assessment:

Coursework	40%
Final examination	60%

SEMESTER: 1
COURSE CODE: AGBU 6201
COURSE TITLE: AGRICULTURAL MARKETING
NUMBER OF CREDITS: 4
PREREQUISITE: NONE
COURSE DESCRIPTION: Marketing Management. Market research and development. Critical appraisal of existing marketing arrangements/institutions for agricultural commodities. The role of the public sector. Location theory.
Assessment:

Coursework	40%
Final examination	60%

SEMESTER: 1
COURSE CODE: AGBU 6202
COURSE TITLE: AGRIBUSINESS MANAGEMENT
NUMBER OF CREDITS: 4
PREREQUISITE: NONE
COURSE DESCRIPTION: Concepts of Management; Forms of Business Organisation; Financial Management for Agribusiness; Production/Operations Management; Business Development; Human Resource Management; Information and Decision-Making; Project Management
Assessment:

Coursework	40%
Final examination	60%

SEMESTER: 1
COURSE CODE: AGBU 6301
COURSE TITLE: RESEARCH METHODOLOGY
NUMBER OF CREDITS: 4
PREREQUISITE: NONE
COURSE DESCRIPTION: Critical discussion of the application of scientific methodology of research. The role of inductive and deductive logic in Scientific research in the Caribbean. Preparation of research proposals, theses and research project reports.
Assessment:

Coursework	50%
Final examination	50%

SEMESTER: 2
COURSE CODE: AGBU 6302
COURSE TITLE: QUANTITATIVE METHODS I (OPERATIONS RESEARCH)
NUMBER OF CREDITS: 4
PREREQUISITE: AGBU 3005- QUANTITATIVE METHODS OR EQUIVALENT
COURSE DESCRIPTION: Specification, estimation and interpretation of economic models. Application to empirical problems of agriculture. Use and interpretation of operations research techniques for problems encountered by agricultural economists. Linear programming and its variations such as transportation models, network analysis, spatial equilibrium models.
Assessment:

Coursework	40%
Final examination	60%

SEMESTER: 1
COURSE CODE: AGBU 6303
COURSE TITLE: INVESTMENT ANALYSIS AND FINANCING FOR AGRIBUSINESS
NUMBER OF CREDITS: 4
PREREQUISITE: AGBU 3000 - FARM BUSINESS MANAGEMENT OR EQUIVALENT
COURSE DESCRIPTION: Investment/Project Analysis; Capital Acquisition: Methods and Source of Finance; Developing and Evaluating Financing Packages; Managing Debt Portfolio; Business Planning and Development; Case Studies; Project Exercise.
Assessment:

Coursework	40%
Final examination	60%

SEMESTER: 1
COURSE CODE: AGBU 6501
COURSE TITLE: MICROECONOMICS
NUMBER OF CREDITS: 4
PREREQUISITES: AGBU 2002 or ECON 2015, ECON 2000 and ECON 2001 or equivalent
COURSE DESCRIPTION: This course provides an advanced treatment of the scope and importance of economic theory, and shows how mathematical methods may be used in microeconomic analysis. It reviews the theory of the consumer: consumer budget, preferences and utility: choice and demand. Consumer surplus and market equilibrium. Theory of production: technology; profit maximisation; profit function; cost minimisation; cost functions; duality. Theory of the firm: competitive markets; monopoly; monopolistic competition; oligopoly. It also reviews welfare analysis, public goods and externalities.
Assessment:

Coursework	40%
Final examination	60%

SEMESTER: 2
COURSE CODE: AGBU 6602
COURSE TITLE: QUANTITATIVE METHODS II (Econometrics)
NUMBER OF CREDITS: 4
PREREQUISITE: NONE
COURSE DESCRIPTION: Evaluation of statistical estimation and testing of economic models, for use in agricultural policy development, marketing and production research. Emphasis is on the application of the multivariate linear regression model for estimating relationships important for agriculture and agribusiness management. Violations of basic assumptions: multicollinearity; misspecification; heteroskedasticity; autocorrelation. Estimation using panel data. Non-linear least squares. Time Series Modeling. Integrated use of software to support analysis and application to real-world problem solving.
Assessment:

Coursework	40%
Final examination	60%

SEMESTER: 2
COURSE CODE: AGBU 6610
COURSE TITLE: ECONOMIC THEORY
NUMBER OF CREDITS: 4
PREREQUISITE: AGBU 6501 - MICROECONOMICS
COURSE DESCRIPTION: In-depth Treatment of Selected Topics given under AGBU 6501 (AM 65A). Foundations of macro-economics. Public Sector economics
Assessment:

Coursework	40%
Final examination	60%

SEMESTER: 2
COURSE CODE: AGBU 6650
COURSE TITLE: ECONOMIC DEVELOPMENT AND INTERNATIONAL TRADE
NUMBER OF CREDITS: 4
PREREQUISITE: NONE
COURSE DESCRIPTION: Main modern development theories. Survey of international trade theories with special reference to problems of small developing economies. Functioning of the international economic system; the new international economic order. Economic integration. International Competitiveness with special reference to Caribbean Agricultural Commodities.
Assessment:

Coursework	40%
Final examination	60%

SEMESTER: 2
COURSE CODE: AGBU 6690
COURSE TITLE: ADVANCED AGRICULTURAL MARKETING II
NUMBER OF CREDITS: 4
PREREQUISITE: AGBU 6903 - ADVANCED AGRICULTURAL MARKETING I
COURSE DESCRIPTION: Current developments affecting market structure and conduct including effects of contractual arrangements, vertical integration, governmental policies and regulation. Wholesale and retail marketing of food. Strategic marketing behaviour including entry and pricing strategies. Global market research. Supply chain management. Futures markets.
Assessment:

Coursework	40%
Final examination	60%

SEMESTER: 2
COURSE CODE: AGBU 6691
COURSE TITLE: ADVANCED AGRIBUSINESS MANAGEMENT I
NUMBER OF CREDITS: 4
PREREQUISITE: NONE
COURSE DESCRIPTION: Problems, issues, regulations, policies, and procedures relevant to global agribusiness, with specific reference to perishable and storable agricultural commodities and food products. Recent advances in farm and agribusiness management with the focus on firm-level agribusiness concepts, international agribusiness and import and export management.
Assessment:

Coursework	40%
Final examination	60%

SEMESTER: 2
COURSE CODE: AGBU 6692
COURSE TITLE: ADVANCED NATURAL RESOURCE AND ENVIRONMENTAL ECONOMICS
NUMBER OF CREDITS: 4
PREREQUISITE: AGBU 6902 - ENVIRONMENTAL ECONOMICS II
COURSE DESCRIPTION: Static and Dynamic modeling of environmental and natural resources. Environmental governance. Advanced valuation techniques and analysis. Spatial modeling and management of resource use. Applying environmental policy instruments.
Assessment:

Coursework	40%
Final examination	60%

SEMESTER: 2
COURSE CODE: AGBU 6901
COURSE TITLE: AGRICULTURAL POLICY AND ANALYSIS
NUMBER OF CREDITS: 4
PREREQUISITE: NONE
COURSE DESCRIPTION: Conceptual approaches to economic analyses of public policy issues and programmes with emphasis on the relationship among institutes, behaviour of participants and performance.
Assessment:

Coursework	40%
Final examination	60%

SEMESTER: 2
COURSE CODE: AGBU 6902
COURSE TITLE: ENVIRONMENTAL ECONOMICS II
NUMBER OF CREDITS: 4
PREREQUISITE: NONE
COURSE DESCRIPTION: Green national accounts. Macroeconomic policies and the environment. Trade and the environment. Poverty-environment linkages. Resource taxation: Payment for ecosystem services. Global public goods: Theory and practice. Benefit -Cost analysis and valuation techniques. Risk assessment : alternative approaches.
Assessment:

Coursework	40%
Final examination	60%

SEMESTER: 2
COURSE CODE: AGBU 6903
COURSE TITLE: ADVANCED AGRICULTURAL MARKETING I
NUMBER OF CREDITS: 4
PREREQUISITE: AGBU 3005 - QUANTITATIVE METHODS OR EQUIVALENT
COURSE DESCRIPTION: An examination of concepts in economic theory and quantitative methods as they are applied to the solution of marketing problems. The focus will be on concepts that enhance abilities to: identify market problems, place these problems in an analytical framework with testable hypotheses, empirically implement the resulting hypothesis tests and draw policy implications from the results of hypothesis tests.
Assessment:

Coursework	40%
Final examination	60%

SEMESTER: 1 & 2
COURSE CODE: AGBU 6999
COURSE TITLE: RESEARCH PROJECT
NUMBER OF CREDITS: 12
PREREQUISITE: NONE
COURSE DESCRIPTION: A research project in the area of specialisation involving field studies at the farm/household/ organisational level or related archival investigation to provide experience of the research process and of relevant empirical techniques.

SEMESTER: NOT OFFERED IN 2012/2013
COURSE CODE: AGBU 8000
COURSE TITLE: QUANTITATIVE METHODS III
NUMBER OF CREDITS: 4
PREREQUISITE: AGBU 6602 OR EQUIVALENT
COURSE DESCRIPTION: Detailed treatment of problems associated with single equation estimation: auto-correlation, errors in variables, multi-collinearity, heteroskedasticity, lagged variables. Simultaneous equation system: the concept of identification, structural equations and the reduced form, two-staged econometric models, mathematical programming and simulation application to agricultural economic research.
Assessment:

Coursework	40%
Final examination	60%

SEMESTER: 1
COURSE CODE: AGEX 6001
COURSE TITLE: PRINCIPLES OF RURAL SOCIOLOGY
NUMBER OF CREDITS: 4
PREREQUISITE: NONE
COURSE DESCRIPTION: Theoretical perspectives for studying rural communities and developing societies in general. Profiles of rural communities and households in the Caribbean. Sociological variables in development projects. Case studies of rural development projects in the Caribbean and other countries. Field observations and exercises involving rural communities.
Assessment:

Coursework	40%
Final examination	60%

SEMESTER: 2
COURSE CODE: AGEX 6002
COURSE TITLE: PROGRAMME PLANNING, MONITORING, AND EVALUATION IN AGRICULTURE AND RURAL DEVELOPMENT
NUMBER OF CREDITS: 4
PREREQUISITE: NONE
COURSE DESCRIPTION: Advanced principles and procedures for planning, conducting, monitoring and evaluating extension programmes in agriculture, natural resource management, community nutrition etc. The roles of the frontline extension worker, the supervisor, and programme manager. The study of some important concepts in programme development--stakeholder participation involving multidisciplinary teams and other participatory approaches, group dynamics, leadership, motivation. Current models and approaches for developing various types of extension programmes. Field experiences and assignments in various aspects of the course.
Assessment:

Coursework	40%
Final examination	60%

SEMESTER: 2
COURSE CODE: AGEX 6003
COURSE TITLE: TRENDS AND EMERGING ISSUES IN EXTENSION
NUMBER OF CREDITS:
PREREQUISITE: NONE
COURSE DESCRIPTION: Advanced concepts and current issues in Extension including Agricultural Knowledge and Information System (AKIS), decentralisation, privatisation of Extension systems, role of Extension in poverty-oriented development etc. Analysis of case studies from the Caribbean and worldwide involving Extension reforms. The course includes participation in available email forums and other ongoing events.
Assessment:

Coursework	25%
Final examination	75%

AGEC 7000 MPhil THESI AGRICULTURAL ECONOMICS
AGEC 8000 PhD THESIS AGRICULTURAL ECONOMICS
AGEX 7000 MPhil THESIS AGRICULTURAL EXTENSION
AGEX 8000 PhD THESIS AGRICULTURAL EXTENSION

SEMESTER: 1
COURSE CODE: HUEC 5000
COURSE TITLE: ADVANCED FOODSERVICE SYSTEMS MANAGEMENT
NUMBER OF CREDITS: 4
PREREQUISITES: Restricted to students registered for the Diploma in Institutional and Community Dietetics and Nutrition and the MPhil/PhD in Human Ecology.
COURSE DESCRIPTION: A comprehensive review of the organisational management and operational aspects of food service including menu-planning and evaluation; procurement, receiving, storage of food and supplies; human resource needs, quantity food production with regard to recipe standardisation, nutrient and quality preservation, portion and quality control, costs, sanitation and safety; equipment requirements and specifications, layout and design; quality assurance and continuous improvement in Foodservice.
Assessment:
Final Examination 100%

SEMESTER: 2
COURSE CODE: HUEC 5020 COURSE TITLE: ADVANCED CLINICAL NUTRITION
NUMBER OF CREDITS: 4
PREREQUISITES: RESTRICTED TO STUDENTS REGISTERED FOR THE DIPLOMA IN INSTITUTIONAL AND COMMUNITY DIETETICS AND NUTRITION AND THE MPHIL/PHD IN HUMAN ECOLOGY.
COURSE DESCRIPTION: A comprehensive review of the principles of nutritional care process as it relates to specified diseases and needs; the role of drugs in nutritional care, disease of the upper and lower gastrointestinal tract, endocrine and metabolic disorders, energy balance, hepatic and biliary system, disorders of the skin and skeletal system; physiological stress and hyper metabolic conditions; neoplastic diseases, AIDS; cardiovascular, nervous and respiratory systems; nutritional support and counselling techniques.
Assessment:
Final Examination 100%

SEMESTER: 4
COURSE CODE: HUEC 5040
COURSE TITLE: ADVANCED COMMUNITY NUTRITION
NUMBER OF CREDITS: 4
PREREQUISITES: RESTRICTED TO STUDENTS REGISTERED FOR THE DIPLOMA IN INSTITUTIONAL AND COMMUNITY DIETETICS AND NUTRITION AND THE MPHIL/PHD IN HUMAN ECOLOGY.
COURSE DESCRIPTION: Providing nutrition services in primary care; promoting and protecting the health of women, infants and children; promoting the health of adults, older adults; safeguarding the food supply; maintaining nutrition and food service standards in group care; planning and evaluating community nutrition services.
Computer-aided Food and Nutrition applications; hands-on learning experience with computer software in food and nutrition surveillance, health analysis, diet/exercise analysis, growth and development in childhood and pregnancy, menu-planning, and food and nutrition planning. Practical experience in preparing nutrition information for delivery through the various media (radio, print, graphics). Project development: the process of developing a project (proposal) is outlined with clearly defined objectives, implementation strategy, costing, time analysis, and evaluation. Individual practice is gained in developing a nutrition-related project, using one of the models presented, for a seminar presentation at the end of the programme.
Assessment:
Final Examination 100%

DEPARTMENT OF FOOD PRODUCTION

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ABOUT THE DEPARTMENT

The increasingly globalising research environment can present challenges to many institutions in small-island developing states as it relates to impact. It nevertheless provides an excellent opportunity for such bodies to tailor their research programmes to address those issues that are pertinent to their realities, and so establish themselves as centres of excellence in their respective disciplines. In recognition of this, and in response to key regional issues such as food and nutrition security, competitiveness and sustainability of the agricultural sector, and environmental management, the Department of Food Production offers a diverse and dynamic graduate programme in the areas of Crop Science, Animal Science and Soil Science and Food Safety and Quality Assurance.
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The key areas of focus in each of these programmes include:
Crop Science – this programme focuses on increasing productivity, quality and profitability of crop production systems. Agronomic and horticultural experimentation are key components of the crops programme. Additional areas covered include crop genetic improvement, postharvest physiology and tropical commodity utilization.

Animal Science - work is on-going with ducks, dairy cattle and goats, tropical hair sheep, poultry, rabbits and forage production, and the captive rearing of wildlife species, in particular the agouti. Various synchronisation protocols for use in tropical hair sheep, the development and the use of timed artificial insemination protocols for dairy cattle and water buffalypsoes are also evaluated. Work on the characterisation of the growth and reproductive ability of various neo-tropical animal species and the evaluation and design of management systems for duck and wild birds is also undertaken.

Soil Science – this programme focuses on the management of soil/plant systems in relation to enhancing nutrient availability with emphasis on nitrogen and phosphorus; soil organic matter dynamics and its role in soil fertility maintenance; soil genesis; land use studies; hillside management; biological nitrogen fixation ; pollution abatement; water yield and quality management; fertilizer management and use efficiency; performance and management of cricket pitches; enhancing productivity and efficiency in key regional agro-industries.

Agri-Food Safety and Quality - the programmes adopt a holistic approach to agri-food safety and quality through the food chain- from farm or sea to plate. The courses relate to food safety and quality assurance in primary agriculture production, animal husbandry, sea-food harvesting and processing, post-harvest, food processing, marketing of products, export trade, food service and distribution to consumers. The programmes target graduates who are farm managers, food processors, food service managers, nutritionists, regulators, public health inspectors, veterinarian, policy makers, importers and exporters who may want to upgrade their skills.

PROGRAMME OFFERINGS

Currently the Department offers four (4) MSc programmes in the following areas, subject to a minimum number of admissions:

- Tropical Animal Science and Production
- Crop Protection
- Commodity Utilisation
- Agri-Food Safety and Quality

It also offers MPhil and PhD degrees in the areas of Crop Science, Horticulture, Livestock Science, Food Quality and Safety, Soil Science.

PRIZES

HON. MINISTER OF FOOD PRODUCTION PRIZE
Awarded for the best performing student in the core courses of the Diploma/M.Sc. Agric-Food Safety and Quality Assurance

HON. MINISTER OF FOOD PRODUCTION PRIZE
Awarded for the best performing student in the mandatory research project of the M.Sc. Agric-Food Safety and Quality Assurance

The MSc Degree in Tropical Animal Science and Production

Coordinator – Professor Gary Garcia

OBJECTIVE
The MSc Degree in Tropical Animal Science and Production is designed to provide the graduate with a deeper knowledge and sensitivity of the needs for the Science of Livestock Production in Developing Tropical Environments with respect to domestic and non-domestic livestock species. The programme offers advanced training in the science of animal production and captive rearing of untamed animals.

Areas covered include Advanced Animal Nutrition, Reproductive Physiology, Advanced Animal Production and Forage Utilisation, Livestock Development and Wildlife (Neo-tropical) Production, Utilisation, Management and Conservation.

ENTRY REQUIREMENTS

Admission into the MSc programme will normally be available to holders of a Bachelor's Degree of at least Lower Second Class Honours (minimum GPA of 2.0 or equivalent) standing in Agriculture, or any other relevant discipline from recognised institutions.

Candidates who, lack sufficient undergraduate training in Livestock Science, may be required to make up the deficiencies by taking relevant courses from among the undergraduate offerings from the Department of Food Production.

COURSE OF STUDY

This programme is offered only as part of the Evening University at the St. Augustine campus. The programme will normally require 2 years of study, exclusive of the time required for taking departmental prerequisite courses where necessary.

The maximum time limit for completion of the programme is 4 years.

The MSc Degree in Tropical Animal Science and Production will be awarded on the successful completion of FIVE core courses (20 credits), TWO elective courses (10 credits) and a Research Project (12 credits).

Core courses (4 credits each)

Course Code	Title
SEMESTER I	
AGLS 6001	Tropical Animal Science
AGLS 6002	Advanced Tropical Forage Utilisation
AGLS 6005	Advanced Non-Ruminant Production

SEMESTER II

Course Code	Title
AGLS 6003	Tropical Livestock Development

YEAR LONG

Course Code	Title
AGLS 6006	Research Project – compulsory (12 credits)

Elective courses (5 credits each)
Electives are offered subject to student registration.

Course Code	Title
AGRI 6901	Product Development
AGLS 6502	Tropical Zoo and Wildlife Production and Management
AGLS 6201	Advanced Animal Nutrition I*
AGLS 6202	Advanced Animal Nutrition II*
AGLS 6203	Advanced Animal Nutrition III*
AGLS 6302	Animal Breeding
AGLS 6401	Reproductive Physiology
AGLS 6402	Environmental Physiology
AGLS 6804	Tropical Commodity Utilisation (Livestock)

Note: Advanced Animal Nutrition courses should be taken sequentially from I to III in that order.

Candidates are required to submit a project proposal for approval by the Department of Food Production within six (6) months of being registered in the programme. The topic of the project must be on the subject matter dealt with in one of the elective courses. Each candidate will be required to present a seminar on the proposed research project before the start of the project.

The research project must be presented in the form of a report of not more than 100 pages. This report must conform to the style approved by the University for MSc project Reports.

The MSc project assessment is based on examination of the report and presentation. To attain a pass on the project the candidate must obtain at least 50% in the assessment of project report and presentation.

For the award of the MSc with Distinction, candidates must have obtained an average of 70% or more in ALL written courses, and at least 70% in the Research Project.

TIME LIMIT

Candidates who at the end of two years have not completed the programme of study leading to the MSc in Tropical Animal Science and Production will be required to withdraw from the programme unless they have been granted special permission by the Board for Graduate Studies to continue.

AWARD OF THE DEGREE

To qualify for the award of the degree, candidates must successfully complete all required courses and the project. The degree shall be awarded in 2 categories: Distinction and Pass.

EXAMINATION

A candidate must attain at least 50% in the coursework and 50% in the final examination in order to secure a passing grade for each course.

COURSEWORK

The coursework component of each course will be 40%. Coursework assessment may consist of review papers in selected areas and/or in-course tests and reports on practical investigations.

FINAL EXAMINATION

Candidates will be required to sit a final written examination in each course. The written examination shall consist of one 3-hour paper in each course. Final examination of each course will be held at the end of the semester in which it is offered.

The final examination contributes 60% of the final mark. Candidates, who fail no more than two courses, may be permitted to rewrite examinations only by the Board for Graduate Studies and Research on the recommendation of the Faculty's Board of Examiners. Such examinations will be held during the Semester 3 or July/August Examinations period.

Candidates who fail more than two courses or who fail any course more than twice may be required to withdraw from the programme.

Candidates who do not sit examinations in courses for which they are registered shall be deemed to have failed.

The Postgraduate Diploma and MSc Degree in Tropical Crop Protection

Coordinator - Dr. Wendy-Ann Isaac

OBJECTIVE

The Postgraduate Diploma and MSc in Crop Protection offer advanced training in Tropical Crop Protection with emphasis on control of pests and weeds and management of tropical diseases of plants. Special emphasis is given to biological control of tropical pests, diseases and pathogens.

ENTRY REQUIREMENTS

POSTGRADUATE DIPLOMA AND MSc

Candidates applying for admission to the Postgraduate Diploma and MSc in Tropical Crop Protection are required to satisfy the University's Regulations governing entry to Master's degrees, and should normally hold a Bachelor's degree of at least lower second class Honours (minimum GPA 2.0 or equivalent) in Agriculture or in a related discipline.

COURSE OF STUDY

The course of full-time study covers a ten-month period from September of one year, to June of the following year for successful completion of the Postgraduate Diploma and a twelve-month period from September of one year, to August of the following year for the completion of the MSc. in Tropical Crop Protection.

POSTGRADUATE DIPLOMA

Core Courses (4 credits each)

SEMESTER I

Course Code	Title
AGRI 6210	Biology, Ecology and Epidemiology of Pests
AGRI 6221	Pesticide Technology
AGRI 6230	Integrated Pest Management

SEMESTER II

Course Code	Title
AGRI 6121	Global Phytosanitary Issues and their Application
AGRI 6222	Molecular Techniques in Crop Protection

Course Code	Title
AGRI 6300	Internship (6 weeks)

Elective courses (6 credits each)

Students are required to select ONE course from the following list of electives.

Course Code	Title
AGRI 6252	Nematology
AGRI 6241	Plant Pathology and Virology
AGCP 6250	Weed Science
AGRI 6250	Applied Entomology

MSc. DEGREE
Core Courses (4 credits each)
SEMESTER I

Course Code	Title
AGRI 6210	Biology, Ecology and Epidemiology of Pests
AGRI 6221	Pesticide Technology
AGRI 6230	Integrated Pest Management
FOSQ 6011	Research and Statistical Skills for Food and Agriculture

SEMESTER II

Course Code	Title
AGRI 6121	Global Phytosanitary Issues and their Application
AGRI 6222	Molecular Techniques in Crop Protection

Course Code	Title
AGRI 6300	Internship (6 weeks)
AGRI 6200	Research Project (independent study and oral presentation included)

Candidates will be allowed to submit the Research Project/ Report, only after successful completion of the core and elective courses.

Elective courses (6 credits each)
Students are required to select ONE course from the following list of electives.

Course Code	Title
AGRI 6252	Nematology
AGRI 6241	Plant Pathology and Virology
AGCP 6250	Weed Science
AGRI 6250	Applied Entomology

Candidates who at the end of two years have not completed the programme of study leading to the Postgraduate Diploma or the MSc in Crop Protection will be required to withdraw from the programme unless they have been granted special permission by the Board for Graduate Studies to continue.

AWARD OF THE DEGREE

Diploma programme: The Diploma programme comprises 30 credits of taught courses. The Diploma will be awarded upon successful completion of all the prescribed courses and an internship. This programme does not include a research project. During the end of the second semester break the internship should be completed.

MSc. programme: The MSc programme comprises 34 credits of taught courses and a compulsory 9 credit research project and independent study (based on research discipline), for a total of 43 credits. The M.Sc. degree shall be awarded upon successful completion of all the prescribed courses and the compulsory research project, internship and independent disciplinary study in Tropical Crop Protection.

The degree shall be awarded in two categories - Distinction and Pass. For the award of the degree with Distinction, the candidate must have obtained a minimum average mark of 70% or more in all core and elective courses as well as 70% or more in the Research Project.

EXAMINATION

A candidate must attain at least 50% in order to secure a passing grade for each course. For some courses, coursework accounts for 100% of the marks, and there is no final examination.

The MSc Degree in Tropical Commodity Utilisation

Co-ordinator – Dr. Lynda Wickham

OBJECTIVE

To introduce students to all the elements of food science and utilisation necessary to allow graduates the flexibility of self employment as well as preparing them for successful employment in several sectors of the food industry. Training is student-focused and geared to facilitate individual interests. Both research and scheduling of teaching are flexible, arranged to encourage full student participation. Graduates of the MSc Programme are trained in areas of postharvest technology, commodity utilisation, food chemistry, food quality, food safety and food product development and are qualified to work in the food sector.

ENTRY REQUIREMENTS

Candidates applying for admission to the MSc in Tropical Commodity Utilisation are required to satisfy the University's Regulations governing entry to taught M.Sc. programmes, and should normally hold a B.Sc. degree of at least lower second class honours (minimum GPA 2.0 or equivalent) in Agriculture or in a related discipline.

COURSE OF STUDY

Courses may be offered in any semester depending on the demand for the course and in order to facilitate students who are registered on a part-time basis. Candidates will be required to register for the following courses:

Courses (5 credits each)
SEMESTER I

Course Code	Title
AGCP 6101	Postharvest Physiology and Biochemistry
AGRI 6201	Chemistry of Foods
AGRI 6301	Food Microbiology I

SEMESTER II

Course Code	Title
AGRI 6702	Food Quality and Food Analysis
AGRI 6802	Tropical Commodity Utilisation

Course (12 credits)

Course Code	Title
AGRI 6901	Product Development (includes Research Project)

The research project shall normally be of not more than six months duration and candidates will be expected to begin the practical aspect of the project in January and be required to submit the written report on the research project by the 15th July but no later than 15th August of the same year.

TIME LIMIT

The course of full-time study covers a twelve-month period from September of one year, to August of the following year. Candidates will normally be expected to complete all their examinations within one year as full-time students. Part-time students will normally be expected to complete the programme in two (2) years. Candidates must complete all their examinations within two years maximum as full-time students or within four years maximum as part-time students.

AWARD OF THE DEGREE

To qualify for the award of the degree, candidates must have successfully completed six (6) courses (5 credits each) and the research project (7 credits).

The degree shall be awarded in two (2) categories – Distinction and Pass. For the award of the degree with distinction, the candidate must have obtained an average of 70% in all courses and in the research project.

EXAMINATION

A candidate must attain at least 50% in the coursework and 50% in the final examination in order to secure a passing grade for each course.

COURSEWORK

The coursework component is specified for each course. Coursework assessment will consist of all or a combination of the following: preparation of review papers in selected areas, seminar presentations and conduct of and written reports on practical investigations and laboratory sessions.

FINAL EXAMINATION

Candidates will be required to sit final written examinations in each course. The written examination shall consist of one 3-hour paper. The final examination for each course will be held at the end of the semester in which it is offered. The contribution of the final examination to the total course mark is specified for each course. Candidates, who fail no more than two courses in a given semester, will be permitted to rewrite examinations for those courses, at the next available sitting, on the recommendation of the Faculty's Board of Examiners.

Candidates who fail more than three courses, overall, or who fail any course more than once, will normally be required to withdraw from the programme and may be permitted to continue only on approval of the Board for Graduate Studies and Research, on recommendation by the Faculty's Board of Examiners. Normally, a candidate who does not sit a final examination for a course for which he/she is registered shall be deemed to have failed that course.

Post-Graduate Diploma and MSc Degree in Agri-Food Safety and Quality Assurance

Co-ordinator – Professor Neela Badrie

OBJECTIVE

The overall objective of these programmes is to provide quality and relevant education, training and research in food safety and quality to graduates who are farm managers, food processors, food service managers, nutritionists, regulators, public health inspectors, policy makers, importers and exporters regionally and world-wide who want to upgrade their skills. The programmes therefore seek to:

- Adopt a holistic approach to agri-food safety that encompasses the whole food chain- from farm or sea to plate and those aspects of food safety related to quality;
- Apply tracing techniques from the primary producers, animal husbandry, through post-harvest treatment, food processing, marketing of products, export trade and distribution to the consumers;
- Adopt a risk-based approach to agri-food control systems;
- Assess the current agri-food safety standards and food safety management programmes throughout the food chain;
- Examine strategic elements such as rick analysis, scientific advice, consumer education in food and agriculture;
- Foster interactive exchange of information and opinions throughout the risk analysis process concerning hazards and risks, risk related factors and risk perceptions among risk assessors, risk managers, consumers, industry, the academic community, policy makers and other interested parties.

Candidates will have the option of pursuing either the postgraduate Diploma or the MSc programmes.

POST-GRADUATE DIPLOMA

ENTRY REQUIREMENTS

In order to be admitted to the postgraduate Diploma, candidates must normally:

a. Have a first degree in Agriculture, Agri-Business, Natural Sciences, Life Sciences, Medical Sciences, Human Ecology, Public Health, Environmental Sciences, Chemical Engineering, Food Sciences, Veterinary Medicine or any related areas or;
b. Have previous equivalent level of education and relevant experience which would be acceptable to the University;
c. Mature students who do not satisfy the above requirements but who have considerable work experience and who are deemed capable of achieving the standard of work required for the programmes may be permitted to enter these programmes at the discretion of the Faculty and the University.

COURSE OF STUDY
The Diploma programme comprises of 24 credits of courses as follows:

SEMESTER I

Course Code	Title
FOSQ 5001	Agri-Food Safety
FOSQ 5002	Project Management in Food and Agriculture
FOSQ 5003	Food Quality Assurance & Evaluation of Agri-Food Policies

SEMESTER II

Course Code	Title
FOSQ 5004	Agri Food Safety Risk Analysis
FOSQ 5005	Epidemiology and Food-borne diseases
FOSQ 5006	International Trade and Agri-Food Legislation

Duration
The academic year is divided into two semesters as follows: August to December and January to May.
Diploma full-time: 2 semesters of courses
Diploma part-time: 4 semesters of courses

Award of the Diploma
To qualify for the award of the Diploma, candidates must successfully take and pass 6 courses (4 credits each) for a total of 24 credits.

MSC PROGRAMME

ENTRY REQUIREMENTS
In order to be admitted to the M.Sc. programme, candidates must normally:

- Have a first degree (minimum grade of a lower second class honours or equivalent) in Agriculture, Agri-Business, Natural Sciences, Life Sciences, Medical Sciences, Human Ecology, Public Health, Environmental Sciences, Chemical Engineering, Food Sciences, Veterinary Medicine or any related areas **OR;**
- Students with a pass degree may gain entry to the M.Sc. programme subject to Departmental support and completion of qualifying courses.

Candidates who have successfully completed the requirements for the Diploma in Agri-Food Safety and Quality Assurance may apply to upgrade to the M.Sc. degree. In the event that such candidates are unable to complete the requirements for the M.Sc., the post-graduate diploma will be awarded on successful completion of the prescribed courses.

M.Sc. students who have been unable to complete the requirements within the maximum time but who have met the requirements for the Diploma may be awarded the Diploma.

Persons initially admitted to the post-graduate Diploma and wishing to transition into the masters without being awarded the Diploma must complete 24 credits required for the Diploma plus the additional 12 credits from the compulsory courses as required for direct entry into the Masters.

Persons who apply for admission to the Masters within a 5 year award of the post-graduate Diploma will not be exempted from more than 50% of the credits required for the Masters on the basis of credits earned from the Diploma.

COURSE OF STUDY
The MSc programme comprises 28 credits of courses and a compulsory research project for 8 credits.

Core Courses (4 credits each)

SEMESTER I

Course Code	Title
FOSQ 6001	Agri-Food Safety
FOSQ 6002	Project Management in Food and Agriculture
FOSQ 6003	Food Quality Assurance and Evaluation of Agri-Food Policies

SEMESTER II

Course Code	Title
FOSQ 6004	Agri-Food Safety Risk Analysis
FOSQ 6005	Epidemiology and Food-borne diseases
FOSQ 6006	Trade and Agri-Food Legislation
FOSQ 6011	Research and Statistical Skills for Food and Agriculture

SEMESTER 3 (SUMMER)

Course Code	Title
FOSQ 6010	Research Project on Agri-Food Safety and Quality Assurance (8 credits)

Duration
The academic year is divided into two semesters as follows: August to December and January to May.
MSc full-time: 2 semesters of courses and research programme -12 months (minimum) – 15 months (maximum)
MSc part-time: 4 semesters of courses and research programme - 24 months (minimum) – 30 months (maximum)

Award of the MSc. Degree
To qualify for the award of the Degree, candidates must have successfully completed 7 courses (4 credits each) for 28 credits, and the research project in the food safety and quality for 8 credits for a total of 36 credits.

THE MPHIL AND PHD DEGREES

The Department currently offers MPhil and PhD degrees in the areas of Crop Science, Horticulture, Livestock Science, Food Quality and Safety, Soil Science, and Earth and Environmental Science.

CROP SCIENCE

Students admitted to pursue research degrees in the programme can carry out their research in aspects of crop production and utilisation spanning areas from crop propagation and agronomy to post-harvest physiology and commodity utilisation including tropical products development. The department can also provide training in sustainable farming systems and diversity studies in tropical root crops and selected tropical tree crops.

HORTICULTURE

This programme provides advanced training in tropical horticulture that will equip graduates for careers in research, development and higher education. Research areas include germplasm evaluation, propagation and management of horticultural crops, landscape plants and turfgrasses and management of green spaces.

LIVESTOCK SCIENCE

Students admitted to pursue research degrees in Livestock Science have the opportunity to choose from a wide range of research activities in Tropical Livestock Science and production. Current departmental research involves research in ruminant production and improvement; poultry production; rabbit production and captive production of the Neo-tropical animals (e.g. agouti, deer, lappe (paca), and peccary).

SOIL SCIENCE

Students admitted into research programmes in Soil Science may choose to pursue research in one of the following areas:

- Organic waste management and utilisation
- Soil and land use studies
- Soil conservation and erosion management
- Engineering properties of soils
- Soil fertility and plant nutrition

FOOD QUALITY AND SAFETY

This programme provides quality education, training and research in food safety and quality to graduates in support of consumers, farmers, food businesses, regulatory agencies and export industries regionally. Effective food control systems are critical in enabling countries to assure the safety and quality of their foods entering international trade and to ensure that imported foods conform to standard requirements. The new global environment for food trade places considerable obligations on both importing and exporting countries to strengthen their food control systems and to implement and enforce risk-based food control strategies.

DEPARTMENTAL REQUIREMENTS:

In addition to Faculty requirements, students admitted for advanced research degrees in the department are required to take and pass the following two courses (4 credits each)

Course Code	Title
AGRI 6620	Statistics
AGBU 6301	Research Methodology

All postgraduate research students are required to present at least two seminars on their work at the MPhil level and three seminars at the PhD level. These seminars will be examined and graded on a "pass or "fail" basis.

DEPARTMENT OF FOOD PRODUCTION COURSE DESCRIPTIONS

SEMESTER: YEAR LONG
COURSE CODE: AGCP 6100
COURSE TITLE: RESEARCH PROJECT
NUMBER OF CREDITS: 7
PREREQUISITE: COMPLETION OF OTHER COURSES IN THE PROGRAMME
COURSE DESCRIPTION: This course provides the avenue for students to apply the principles of commodity utilisation studied throughout the programme to the development of a value added product of potential commercial significance.
Assessment:

Written Project Report	100%

SEMESTER 1 OR 2 (BASED ON REGISTRATION NUMBERS)
COURSE CODE: AGCP 6101
COURSE TITLE: POST-HARVEST PHYSIOLOGY AND BIOCHEMISTRY
NUMBER OF CREDITS: 5
PREREQUISITE: NONE
COURSE DESCRIPTION: The physiology and biochemical processes in fresh tropical crop produce which influence postharvest behaviour and storage potential are emphasised. Topics covered include: maturation and maturity indices, ripening and senescence, stress metabolism, dormancy and growth regulation. The physiology, including membrane function, and biochemistry of stored crop produce, including effects of environmental modifications, are studied.
Assessment:

Coursework	40%
Final examination	60%

SEMESTER: 2
COURSE CODE: AGCP 6250
COURSE TITLE: WEED SCIENCE
NUMBER OF CREDITS: 6
PREREQUISITE: NONE
COURSE DESCRIPTION: This course introduces students to: the role of weeds in crop ecosystems; weed biology; dissemination; cultural, chemical and biological control of important weed species of tropical crops. All topics have particular reference to Caribbean agriculture. Practicals and field trips are included.
Assessment:
Coursework 100%

SEMESTER: I OR 2 (BASED ON REGISTRATION NUMBERS)
COURSE CODE: AGCP 6251
COURSE TITLE: CROP PRODUCTION I
NUMBER OF CREDITS: 5
PREREQUISITE: NONE
COURSE DESCRIPTION: This course provides a broad scope of physiology of vegetative and reproductive growth, and production technology of some of the most important perennial crops of economic importance in the tropics including: coffee, citrus, cocoa, banana, palms, pineapple and a number of popular tree fruits (e.g. guava, mango and cashew). Current tree crop management research and research needs for tropical species are emphasised.
Assessment:
Coursework 40%
Final examination 60%

SEMESTER: I OR 2 (BASED ON REGISTRATION NUMBERS)
COURSE CODE: AGCP 6252
COURSE TITLE: CROP PRODUCTION 2
NUMBER OF CREDITS: 5
PREREQUISITE: NONE
COURSE DESCRIPTION: The crops dealt with in this course include the cereals, root crops, sugarcane, oil seeds and pulses, tobacco, fibre and vegetable crops. A description of the technology of production of the most important short-term crops cultivated in the tropics is provided.
Assessment:
Coursework 40%
Final examination 60%

SEMESTER: 1
COURE CODE: AGLS 6001
COURSE TITLE: TROPICAL ANIMAL SCIENCE
NUMBER OF CREDITS: 4
PREREQUISITE: NONE
COURSE DESCRIPTION: This course covers the different aspects involved in improving output from Tropical livestock, including through breeding, health, feeding and housing programmes integrated in animal production systems and aspects of processing livestock products. The course also exposes the students to the concept of matching the animal to the available resources.
Assessment:
Coursework 40%
(3 review papers and 3 seminars on the review papers)
Final examination 60%

SEMESTER: 1
COURE CODE: AGLS 6002
COURSE TITLE: ADVANCED TROPICAL FORAGE UTILISATION
NUMBER OF CREDITS: 4
PREREQUISITE: NONE
COURSE DESCRIPTION: This is a course emphasising the nutrition of ruminants with particular reference to forage utilisation. Included here are those factors affecting forage utilisation and production, and methods of forage utilisation, including hay and silage production and feeding. Pasture management including the use of electric fencing is looked at, as a tool to improve utilisation. Forage tree crop and multipurpose tree crop production and utilisation. Production and utilisation schedules of selected forages. Fodder budgeting.
Assessment:
Coursework 40%
Final examination 60%

SEMESTER: 1
COURE CODE: AGLS 6005
COURSE TITLE: ADVANCED NON-RUMINANT PRODUCTION
NUMBER OF CREDITS: 4
PREREQUISITE: NONE
COURSE DESCRIPTION: The use of innovative techniques for arriving at improvements in and increased production of meat, plumage and hides from poultry, pigs and rabbits are dealt with in this course. This focuses on such areas as: Management for breeding; Management of the housing and environment to alleviate heat and humidity stress; Physiology of heat stress management of non-ruminants; Unconventional methods of feeding non-ruminants; elements of feed milling and mixing.
Assessment:
Coursework 40%
Final examination 60%

SEMESTER: 2
COURE CODE: AGLS 6003
COURSE TITLE: TROPICAL LIVESTOCK DEVELOPMENT
NUMBER OF CREDITS: 4
PREREQUISITE: NONE
COURSE DESCRIPTION: Areas covered in this course include: What is Livestock Development? Sustainable Livestock Development. Agricultural Diversification and Livestock Development, Factors influencing Livestock Development - Globally, in the tropics and in the Caribbean. Some technical imperatives are also discussed including; demand for livestock products; efficiency criteria; choice of production technology. Livestock Production Systems - Pastoralism ranching, intensive and extensive production systems; landless livestock production systems, integrated systems. The nature of livestock products and market for livestock products. Government and the Livestock Sector, the Private Sector's and Government's role in Livestock Development, International Trade and the effect of GATT on Livestock Development in the Developing Tropics.
Assessment:
Coursework 40%
(1 project 10% and 3 seminars - 30%)
Final examination 60%

SEEMSTER: 2
COURE CODE: AGLS 6004
COURSE TITLE: ADVANCED RUMINANT PRODUCTION
NUMBER OF CREDITS: 4
PREREQUISITE: NONE
COURSE DESCRIPTION: Here, those techniques used for providing improvements in and increased production of meat, milk and hides from sheep, goats, dairy and beef cattle, including water buffalo are studied. This includes management of the housing and environment to alleviate stresses. Heat stress management, non-conventional methods of feeding ruminants.
Assessment:

Coursework	40%
Final examination	60%

SEMESTER: 1 OR 2 (BASED ON REGISTRATION NUMBERS)
COURE CODE: AGLS 6201
COURSE TITLE: ADVANCED ANIMAL NUTRITION I - ELECTIVE
NUMBER OF CREDITS: 5
PREREQUISITE: NONE
COURSE DESCRIPTION: More in-depth hands-on experience of laboratory techniques and experimental designs in animal nutrition research are exposed to students in this course.
Assessment:

Coursework	40%
Final examination	60%

SEMESTER: 1 OR 2 (BASED ON REGISTRATION NUMBERS)
COURSE CODE: AGLS 6202
COURSE TITLE: ADVANCED ANIMAL NUTRITION II - ELECTIVE
NUMBER OF CREDITS: 5
PREREQUISITE: AGLS 6201
COURSE DESCRIPTION: Energy and protein metabolism in farm animals.
Assessment:

Coursework	40%
Final examination	60%

SEMESTER: 1OR 2 (BASED ON REGISTRATION NUMBERS)
COURSE CODE: AGLS 6203
COURSE TITLE: ADVANCED ANIMAL NUTRITION III - ELECTIVE
NUMBER OF CREDITS: 5
PREREQUISITE: AGLS 6201 & AGLS 6202
COURSE DESCRIPTION: Mineral and vitamin nutrition in farm animals.
Assessment:

Coursework	40%
Final examination	60%

SEMESTER: 1 OR 2 (BASED ON REGISTRATION NUMBERS)
COURSE CODE: AGLS 6302
COURSE TITLE: ANIMAL BREEDING - ELECTIVE
NUMBER OF CREDITS: 5
PREREQUISITE: NONE
COURSE DESCRIPTION: Reproductive efficiency in farm livestock; methods of selection and rates of genetic improvement. Progeny and Sib-testing for one or more characters. Genetic environment interactions. In-breeding, line breeding and cross breeding. Resistance to pests and diseases, techniques of control.
Assessment:

Coursework	40%
Final examination	60%

SEMESTER: 1 OR 2 (BASED ON REGISTRATION NUMBERS)
COURSE CODE: AGLS 6401
COURSE TITLE: REPRODUCTIVE PHYSIOLOGY - ELECTIVE
NUMBER OF CREDITS: 5
PREREQUISITE: NONE
COURSE DESCRIPTION: The course will entail a discussion of the concepts underlying reproductive physiology in male and female farm animals. In particular, it explores the reproductive physiology of bovines, including water buffalo, sheep, goats, pigs, rabbits, dogs, poultry and equines. Semen collection and evaluation, artificial insemination techniques, induction and synchronisation of ovulation and embryo transfer in selected animal species.
Assessment:

Coursework	30%
Final examination	70%

SEMESTER: 2
COURSE CODE: AGLS 6502
COURSE TITLE: TROPICAL ZOO AND WILDLIFE - ELECTIVE PRODUCTION AND MANAGEMENT
NUMBER OF CREDITS: 5
PREREQUISITE: NONE
COURSE DESCRIPTION: The history and role of zoos in the world with particular reference to the tropics, the history of domestication, and the Neo-tropics and Neo-tropical animals. The management of non-domestic animals in captivity. Approaches to the management of zoos. What is Wildlife Management? Strategies and Methods used in Wildlife Management. Endangered species and the CITIES accord. Local laws for the protection of wildlife and endangered species. A practical on-site investigation is included. Includes an exciting 2 nights and 3 day camp in one of the Natural Ecosystems in Trinidad and Tobago. This is designed to bring the student in touch with nature and her many splendours, while learning about the fragility of these systems.
Assessment:

Coursework	40%
Final examination	60%

SEMESTER: 1 OR 2 (BASED ON REGISTRATION NUMBERS)
COURSE CODE: AGLS 6804
COURSE TITLE: TROPICAL COMMODITY - ELECTIVE UTILISATION (LIVESTOCK) - ELECTIVE
NUMBER OF CREDITS: 5
PREREQUISITE: NONE
COURSE DESCRIPTION: Alternative methods of utilising of tropical crop and animal products for food and other uses from the foundation of this course, including utilisation of culls.
Factors affecting availability are studied, as are processing, options and their effect on food quality and commodity utilisation. Relationships among technical and socio-economic factors of production, availability, processing, marketing and utilisation are focused on. A practical project is a significant part of this course.
Assessment:

Coursework	40%
(2 practical Investigations and 2 research seminars)	
Final examination	60%

SEMESTER: 1
COURSE CODE: AGRI 6110
COURSE TITLE: PRINCIPLES OF CROP PROTECTION
NUMBER OF CREDITS: 4
PREREQUISITE: NONE
COURSE DESCRIPTION: The definition of pest; the historical development of crop protection in tropical agriculture; crop losses due to pests; methods for the development of an effective crop protection programme; a review of relevant case studies.
Assessment:

Coursework	25%
Final examination	75%

SEMESTER: 2
COURSE CODE: AGRI 6121
COURSE TITLE: GLOBAL PHYTOSANITARY ISSUES AND THEIR APPLICATION
NUMBER OF CREDITS: 4
PREREQUISITE: NONE
COURSE DESCRIPTION: This course covers some of the major current global issues in crop protection, particularly with regard to their impact on international trade in agricultural commodities. It aims to provide modern-day plant protection specialists with the information and tools to deal with some of the key issues which they will encounter in their day-to-day work situations, especially in the role of plant protection officer whether in the private or public sector. Also and equally importantly, the course will provide an understanding of a country's Phytosanitary obligations under the major international agreements such as the International Plant Protection Convention and the WTO Agreement on the Application of Sanitary and Phytosanitary Measures, as well as provide some insight into other contemporary issues such as invasive alien species and the impact of climate change on agriculture and crop pests
Assessment

Coursework	100%

SEMESTER: YEAR LONG
COURSE CODE: AGRI 6200
COURSE TITLE: RESEARCH PROJECT
NUMBER OF CREDITS: 8
PREREQUISITE: SUCCESSFUL COMPLETION OF CORE COURSES AND ELECTIVE
COURSE DESCRIPTION: Candidates who successfully complete the core courses, the elective course and research papers in the MSc Crop Protection, will be allowed to undertake a 13-week independent research project. This project may involve field, greenhouse and/or laboratory investigations in some aspect of crop protection and may be conducted anywhere in the region providing suitable arrangements can be made. At the end of the project, students are required to do an oral examination.

SEMESTER: 1
COURSE CODE: AGRI 6201
COURSE TITLE: CHEMISTRY OF FOODS
NUMBER OF CREDITS: 5
PREREQUISITE: NONE
COURSE DESCRIPTION: The chemistry of crop and animal produce relating to their compositional and other characteristic, functional properties that are important in their manufacture into food products are studied, with emphasis on tropical commodities.
Assessment:

Coursework	40%
Final examination	60%

SEMESTER: 1
COURSE CODE: AGRI 6210
COURSE TITLE: BIOLOGY, ECOLOGY AND EPIDEMIOLOGY OF PESTS
NUMBER OF CREDITS: 4
PREREQUISITE: NONE
COURSE DESCRIPTION: An introduction to: ecological principles and the concept of the ecosystem; cropping systems and the pest concept; the ecological origins of pest status; crop yields and assessment methods in relation to an effective crop protection programme; biology, ecology and epidemiology of plant pathogens including the classification, symtomatology and pathogenesis; abiotic diseases; the biology, ecology and recognition of insects, mites, rodents, birds and other crop pests; biology, ecology and recognition of weeds, weed identification and weed surveys.
Assessment:

Coursework	25%
Final examination	75%

SEMESTER: 1
COURSE CODE: AGRI 6221
OURSE TITLE: PESTICIDE TECHNOLOGY
NUMBER OF CREDITS: 4
PREREQUISITE: NONE
COURSE DESCRIPTION: Practical and Chemical control, pesticide chemistry, bioassays, formulations and application equipment, pesticide selectivity, consequences of pesticide abuse, resistance and environmental impact and human health, legislative control, mechanisms of resistance to pest attack.
Assessment:

Coursework	100 %

SEMESTER: 2
COURSE CODE: AGRI 6222
COURSE TITLE: MOLECULAR TECHNIQUES IN CROP PROTECTION
NUMBER OF CREDITS: 4
PREREQUISTS: NONE
COURSE DESCIPTION: Introduction to the molecular and immunological tools used in plant disease, pest and weed diagnosis and identification. This includes a brief introduction to nucleic acid and protein based technologies, discussion of the relevance to population and diversity studies, sampling strategies and quarantine implications. The lab component will allow the development of skills in nucleic acid extraction, PCR and hybridisation techniques, sequencing and sequence analysis and the bases of serological techniques.
Assessment
Coursework 100 %

SEMESTER: 1
COURSE CODE: AGRI 6230
COURSE TITLE: INTEGRATED PEST MANAGEMENT (IPM)
NUMBER OF CREDITS: 4
PREREQUISITE: NONE
COURSE DESCRIPTION: The principles of Integrated Pest Management (IPM) and the applications of these principles for pest management in crop production are presented. The essential building blocks for the creation of IPM programs are considered; these include surveys of pests, diseases and weeds, alternative practices and non-chemical means of control, monitoring and forecasting methods, and strategies for management and their implementation. The course concludes with some examples of existing IPM programs in practice. This course provides a holistic view of pest management, emphasizing the integration of different methods for maintaining pests, diseases and weeds below damaging levels, with the goal of minimizing the use of chemical pesticides that disrupt the environment.
Assessment:
Coursework 100 %

SEMESTER: 2
COURSE CODE: AGRI 6241
COURSE TITLE: PLANT PATHOLOGY and VIROLOGY
NUMBER OF CREDITS: 8
PREREQUISITE: NONE
COURSEDESCRIPTION: The importance, etiology, epidemiology and control of crop diseases under different farming systems in the Caribbean is studied here, including those caused by fungi, bacteria, viruses, nematodes, mycoplasma and abiotic agents. Strategies for disease control examine the merits and demerits of chemical, cultural, integrated and other cheap and practical measures. Practicals include field trips to farmers' fields and a plant disease clinic where students learn to recognise, diagnose and control disease.
Assessment:
Coursework 25%
Final examination 75%

SEMESTER: 2
COURSE CODE: AGRI 6250
COURSE TITLE: APPLIED ENTOMOLOGY
NUMBER OF CREDITS: 8
PREREQUISITE: NONE
COURSE DESCRIPTION: The major topics covered in this course are: population dynamics and the regulation of insect populations; introduction to insect toxicology; profit analysis and LD50 measurements; description and identification of major pest groups including mites; biology and control of pests of important crop groups in the tropics with special reference to the Caribbean. Practical classes and field trips are included.
Assessment:
Coursework 25%
Final examination 75%

SEMESTER: 2
COURSE CODE: AGRI 6252
COURSE TITLE: NEMATOLOGY
NUMBER OF CREDITS: 6
PREREQUISITE: NONE
COURSE DESCRIPTION: The biology of plant-pathogenic nematodes and their economic importance in plant protection; current methods and techniques in plant nematology; the ecological factors that influence nematode populations and disease development; alternative management systems for the control of plant parasitic nematodes; use of nematodes for the biological control of insect pests of crops and as indicators of environmental pollution.
Assessment:
Coursework 100 %

SEMESTER: 2
COURSE CODE: AGRI 6300
COURSE TITLE: INTERNSHIP
NUMBER OF CREDITS: 4
PREREQUISITE: NONE
COURSE DESCRIPTION: Students can gain experience in crop protection through different responsibilities in the world of work in the crop protection field. Gives students the opportunity to apply and visualise the link between their theoretical knowledge and the world of work.
Assessment:
Coursework 100 %

SEMESTER: 1
COURSE CODE: AGRI 6301
COURSE TITLE: FOOD MICROBIOLOGY I
NUMBER OF CREDITS: 5
PREREQUISITE: NONE
COURSE DESCRIPTION: This course explores the nature and function of micro-organisms in tropical foods. This includes post-harvest pathology; food borne illness; effects of food processing, storage and distribution on food microorganisms; techniques for isolation and identification of microorganisms from foods; factors governing microbial changes in tropical foods; bacterial fermentations; modern concepts in quality assurance programmes; problem-solving in the food industry. A practical project is included.
Assessment:

Coursework	40%
Final examination	60%

SEMESTER: 1 OR 2 (BASED ON REGISTRATION NUMBERS)
COURSE CODE: AGRI 6620
COURSE TITLE: STATISTICS
NUMBER OF CREDITS: 4
PREREQUISITE: NONE
COURSE DESCRIPTION: Overview of statistics, analysing continuous data-one and two samples problems, analyzing attribute data; experiment design and analysis of variance with applications to the agricultural and medical sciences; regression and correlation analyses with agriculture, medical and related applications.
Assessment:

Coursework	40%
Final examination	60%

SEMESTER: 2
COURSE CODE: AGRI 6702
COURSE TITLE: FOOD QUALITY AND FOOD ANALYSIS
NUMBER OF CREDITS: 5
PREREQUISITE: NONE
COURSE DESCRIPTION: This course examines the physiological and biochemical basis of quality in fresh tropical produce. Topics covered include the physical, chemical and biochemical properties of foods; effects of storage and processing on the fundamental attributes of flavour, odour, colour, texture and nutrition; pathological effects; Assessment of analytical methods and instruments in order to understand their principles, application and limitations in the analysis of food and food products with particular reference to the chemical, physical, nutritional and organoleptic qualities of food is included.
Assessment:

Coursework	40%
Final examination	60%

SEMESTER: 1 OR 2 (BASED ON REGISTRATION NUMBERS)
COURSE CODE: AGRI 6720
COURSE TITLE: AGRICULTURAL ENGINEERING
NUMBER OF CREDITS: 5
PREREQUISITE: NONE
COURSE DESCRIPTION: Inferential tools for simple sample and two samples problems are introduced. Students are grounded in farm power, tractor and implement mechanics are the major topics covered here. Important control systems, internal and external hydraulics, and traction and traction aids. The theory of cultivations, including design of soil engaging implements, selection of implements for tillage and cultivation operations under different soil physical conditions are areas also focussed on in this course.
Assessment:

Coursework	40%
Final examination	60%

SEMESTER: 2
COURSE CODE: AGRI 6802
COURSE TITLE: TROPICAL COMMODITY UTILISATION
NUMBER OF CREDITS: 5
PREREQUISITE: NONE
COURSE DESCRIPTION: This course is a study of alternative methods of utilisation of tropical crop and animal products for food. Topics covered include: utilisation of culls; factors affecting raw material availability; processing options and their effect on food quality and commodity utilisation. Relationships among technical and socio-economic factors of production, availability, processing, marketing and utilisation are explored.
Assessment:

Coursework	40%
Final examination	60%

SEMESTER: 2
COURSE CODE: AGRI 6901
COURSE TITLE: PRODUCT DEVELOPMENT
NUMBER OF CREDITS: 5
PREREQUISITE: NONE
COURSE DESCRIPTION: A study of the elements that are important in the development of tropical food products for local and international markets. Topics covered include: strategies, processes and methods needed to accelerate and optimize new product development; generation and management of new ideas and quality traits that drive successful research for innovative products; sensory and consumer research in food product development; container development; labelling. A research project.
Assessment:

Coursework	50%
Final examination	50%

SEMESTER: 1
COURSE CODE: FOSQ 5001
COURSE TITLE: AGRI-FOOD SAFETY
NUMBER OF CREDITS: 4
PREREQUISITE: NONE
COURSE DESCRIPTION: This course focuses on the application of modern scientific principles for the inspection systems, based on good agricultural and manufacturing practices and the analysis of hazards and critical control points along the food chain. ISO 22000:2005 specifies requirements for a food and agriculture safety management system where an organization in the food chain needs to demonstrate its ability to control food safety hazards in order to ensure that food is safe at the time of human consumption. It is applicable to all organizations, regardless of size. The course is comprised of two assignments and a final exam.
Assessment:

Coursework	40%
Final examination	60%

SEMESTER: 1
COURSE CODE: FOSQ 5002
COURSE TITLE: PROJECT MANAGEMENT IN FOOD AND AGRICULTURE
NUMBER OF CREDITS: 4
PREREQUISITE: NONE
COURSE DESCRIPTION: The course project management in Food and Agriculture will introduce the students to the rationale, context and methods of planning and assessing food and agriculture management projects. Management issue and will be the starting point to explore deeply into the necessary processes for the successful preparation and management of the projects. It will create a common basis from the project definitions and the project management and form the relation between this and other administrative disciplines, and with other related efforts. The understanding of the phases and the life cycle of a project, the identification of the "stakeholders" – those project-related individuals or institutions – and the organizational and socioeconomic influences to which the project is subject, will be achieved with the study of the project management context. It will establish the usefulness of the project management to among other things, satisfy the users' needs to ensure that the available resources are used in the most efficient possible way, and to plan, implement and control the management of company and government strategies. The financial and economic analysis of food projects will be included. The course will provide supplementary reading material, case studies and the presentation of project management-related issues by students. The objective of the learning experiences is to promote the critical thinking with a view to solving the current problems in the project management field. The course is examined by two assignments for course work and a final exam.
Assessment:

Coursework	40%
Final examination	60%

SEMESTER: 1
COURSE CODE: FOSQ 5003
COURSE TITLE: FOOD QUALITY ASSURANCE AND EVALUATION OF AGRI-FOOD POLICIES
NUMBER OF CREDITS: 4
PREREQUISITE: NONE
COURSE DESCRIPTION: The course covers areas such as agricultural produce and food quality, food quality assurance, total quality management, agriculture and food quality management systems, fertilizer use and sustainable pesticide management, genetically modified biosafety and quality standard systems, formulation, implementation, evaluation of agricultural and food public policies from domestic and international trade perspectives. The socio-economic and environmental change and its influence on public policies' viability are examined. The course also describes the process of food security public policy formulation, implementation, monitoring and evaluation. The role and functions of institutions and other stakeholders involved in the process of public policy formulation and implementation as it relates to food safety and quality. The role of international trade in agricultural and food safety, current debates about the effect of globalization on developing countries and evolution of trade policies. The course comprises of two assignments, laboratory practical and a final exam.
Assessment:

Coursework	40%
Final examination	60%

SEMESTER: 2
COURSE CODE: FOSQ 5004
COURSE TITLE: AGRI-FOOD SAFETY RISK ANALYSIS
NUMBEROF CREDITS: 4
PREREQUISITE: NONE
COURSE DESCRIPTION: This course will deal with the components of risk assessment, risk management and risk communication as well as their application to support the management of food and agriculture safety programmes.
Assessment:

Coursework	40%
Final examination	60%

SEMESTER: 2
COURSE CODE: FOSQ 5005
COURSE TITLE: EPIDEMIOLOGY AND FOOD-BORNE DISEASES
NUMBER OF CREDITS: 4
PREREQUISITE: NONE
COURSE DESCRIPTION: The course includes epidemiological methods and concepts of food borne diseases that are critical in the evaluation, analysis and interpretation of data related to public health. To get around the problems posed by such under-reporting and describe disease burden more adequately, a number of innovative and creative approaches have been used in recent years for some food-borne diseases from various causes. These include the use of active surveillance and field studies, risk assessment methods, and epidemiological disease modelling. Students have the opportunity to work on exercises and case studies as related to the topics. The topics include epidemiological surveys, investigating food-borne illness outbreaks, basic epidemiological methods and food borne diseases. The course comprises of two assignments, laboratory practical and a final exam.
Assessment:

Coursework	40%
Final examination	60%

SEMESTER: 2
COURSE CODE: FOSQ 5006
COURSE TITLE: INTERNATIONAL TRADE AND AGRI-FOOD LEGISLATION
NUMBER OF CREDITS: 4
PREREQUISITE: NONE
COURSE DESCRIPTION: The course covers International Trade and Food Legislation in food and agriculture produce safety and quality. Current debates about the effect of globalization on food and agriculture produce safety and quality on developing countries. The course examines some guidelines for strengthening the national food control systems, food bioterrorism, the Food Safety Modernization Act 2011, trade theories and international trade agreements, International Food Safety Systems such as World Trade Organization, applications of Sanitary and Phytosanitary Measures, Technical Barriers to Trade, Codex Alimentarius, Agreement on Agriculture and the harmonization of food and agriculture legislation for world food trade, and the consequences of food safety in world food trade. The course would be examined by two assignments and a final exam.
Assessment:

Coursework	40%
Final examination	60%

SEMESTER: 1
COURSE CODE: FOSQ 6001
COURSE TITLE: AGRI-FOOD SAFETY
NUMBER OF CREDITS: 4
PREREQUISITE: NONE
COURSE DESCRIPTION: This course focuses on the application of modern scientific principles for the inspection systems, based on good agricultural and manufacturing practices and the analysis of hazards and critical control points along the food chain. ISO 22000:2005 specifies requirements for a food and agriculture safety management system where an organization in the food chain needs to demonstrate its ability to control food safety hazards in order to ensure that food is safe at the time of human consumption. It is applicable to all organizations, regardless of size. The course is comprised of two case study assignments and a final exam.
Assessment:

Coursework	40%
Final examination	60%

SEMESTER: 1
COURSE CODE: FOSQ 6002
COURSE TITLE: PROJECT MANAGEMENT IN FOOD AND AGRICULTURE
NUMBER OF CREDITS: 4
PREREQUISITE: NONE
COURSE DESCRIPTION: The course project management in Food and Agriculture will introduce the students to the rationale, context and methods of planning and assessing food and agriculture management projects. Management issue and will be the starting point to explore deeply into the necessary processes for the successful preparation and management of the projects. It will create a common basis from the project definitions and the project management and form the relation between this and other administrative disciplines, and with other related efforts. The understanding of the phases and the life cycle of a project, the identification of the "stakeholders" – those project-related individuals or institutions – and the organizational and socioeconomic influences to which the project is subject, will be achieved with the study of the project management context. It will establish the usefulness of the project management to among other things, satisfy the users' needs to ensure that the available resources are used in the most efficient possible way, and to plan, implement and control the management of company and government strategies. The financial and economic analysis of food projects will be included. The course will provide supplementary reading material, case studies and the presentation of project management-related issues by students. The objective of the learning experiences is to promote the critical thinking with a view to solving the current problems in the project management field. The course is examined by two assignments for course work and a final exam.
Assessment:

Coursework	40%
Final examination	60%

SEMESTER: 1
COURSE CODE: FOSQ 6003
COURSE TITLE: FOOD QUALITY ASSURANCE AND EVALUATION OF AGRI-FOOD POLICIES
NUMBER OF CREDITS: 4
PREREQUISITE: NONE
COURSE DESCRIPTION: The course covers areas such as agricultural produce and food quality, food quality assurance, total quality management, agriculture and food quality management systems, fertilizer use and sustainable pesticide management, genetically modified biosafety and quality standard systems, formulation, implementation, evaluation of agricultural and food public policies from domestic and international trade perspectives. The socio-economic and environmental change and its influence on public policies' viability are examined. The course also describes the process of food security public policy formulation, implementation, monitoring and evaluation. The role and functions of institutions and other stakeholders involved in the process of public policy formulation and implementation as it relates to food safety and quality. The role of international trade in agricultural and food safety, current debates about the effect of globalization on developing countries and evolution of trade policies. The course comprises of two assignments, laboratory practical and a final exam.
Assessment:

Coursework	40%
Final examination	60%

SEMESTER: 2
COURSE CODE: FOSQ 6004
COURSE TITLE: AGRI-FOOD SAFETY RISK ANALYSIS
NUMBER OF CREDITS: 4
PREREQUISITE: NONE
COURSE DESCRIPTION: This course will deal with the components of risk assessment, risk management and risk communication as well as their application to support the management of food and agriculture safety programmes.
Assessment:

Coursework	40%
Final examination	60%

SEMESTER: 2
COURSE CODE: FOSQ 6005
COURSE TITLE: EPIDEMIOLOGY AND FOOD-BORNE DISEASES
NUMBER OF CREDITS: 4
PREREQUISITE: NONE
COURSE DESCRIPTION: The course includes epidemiological methods and concepts of food borne diseases that are critical in the evaluation, analysis and interpretation of data related to public health. To get around the problems posed by such under-reporting and describe disease burden more adequately, a number of innovative and creative approaches have been used in recent years for some food-borne diseases from various causes. These include the use of active surveillance and field studies, risk assessment methods, and epidemiological disease modelling. Students have the opportunity to work on exercises and case studies as related to the topics. The topics include epidemiological surveys, investigating food-borne illness outbreaks, basic epidemiological methods and food borne diseases. The course comprises of two assignments, laboratory practical and a final exam.
Assessment:

Coursework	40%
Final examination	60%

SEMESTER: 2
COURSE CODE: FOSQ 6006
COURSE TITLE: INTERNATIONAL TRADE AND AGRI-FOOD LEGISLATION
NUMBER OF CREDITS: 4
PREREQUISITE: NONE
COURSE DESCRIPTION: The course covers International Trade and Food Legislation in food and agriculture produce safety and quality. Current debates about the effect of globalization on food and agriculture produce safety and quality on developing countries. The course examines some guidelines for strengthening the national food control systems, food bioterrorism, the Food Safety Modernization Act 2011, trade theories and international trade agreements, International Food Safety Systems such as World Trade Organization, applications of Sanitary and Phytosanitary Measures, Technical Barriers to Trade, Codex Alimentarius, Agreement on Agriculture and the harmonization of food and agriculture legislation for world food trade, and the consequences of food safety in world food trade. The course would be examined by two assignments and a final exam.
Assessment:

Coursework	40%
Final examination	60%

SEMESTER: SUMMER & SEMESTER 3
COURSE CODE: FOSQ 6010
COURSE TITLE: RESEARCH PROJECT ON AGRI-FOOD SAFETY AND QUALITY ASSURANCE
NUMBER OF CREDITS: 8
PREREQUISITE: COMPLETION OF ALL WRITTEN COURSES

The chosen project could to link to job description and interest and should contribute to knowledge and application in managing safety and quality in food and agriculture. The project would draw upon previous knowledge and experience gained in the courses completed in the MSc degree programme. The project will be based on an oral presentation and an examination on submission of written project. Students must obtain at least 50% to pass the project component.

Assessment

Oral presentation	10%
Written project	90%

The project will be based on an oral presentation and an examination on submission of written project. The written project will be examined by internal and external examiners.

SEMESTER: 1
COURSE CODE: FOSQ 6011
COURSE TITLE: RESEARCH AND STATISTICAL SKILLS FOR FOOD AND AGRICULTURE
NUMBER OF CREDITS: 4
PREREQUISITE: NONE

This course involves the use of research tools and appropriate statistical packages for data processing and presentation. It is anticipated that those enrolled in the course would be able to read and critique research papers in published journals particularly for the living sciences, microbiology, food science, animal/livestock science, crop sciences, human and veterinary medicine. The topics covered are types of research methods, planning research projects, writing reports and research papers and statistical methods and applications by descriptive analysis, estimation techniques, correlation, multiple regression, analysis of variance, non-parametric statistics, multivariate analysis and principal component analysis. The course will be taught using a blended approach through computer packages, face to face lectures, myeLearning, Webinars and podcasts. The course comprises two in course assignments and a final exam.

Assessment

Coursework	60%
Final examination	40%

DEPARTMENT OF GEOGRAPHY

HEAD OF DEPARTMENT

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THE MPHIL AND PHD DEGREES:

The Department currently offers MPhil and PhD degrees in the following areas:

EARTH AND ENVIRONMENTAL SCIENCE

This programme will train students for careers in research and teaching in Tropical Earth and Environmental Science. A graduate of the MPhil programme could expect to take up a position as a research technician, or apply their skills in consultancy. The PhD graduates of the programme are expected to make a significant contribution to the field and be able to carry out independent research. These graduates would be suited as research scientists in forestry, agriculture or the oil industry, environmental consultants, university or college lecturers or other positions requiring sophisticated training at the PhD level.

GEOGRAPHY

This programme provides high quality research training in multi-disciplinary geographical research methods, to facilitate candidates to conduct research in areas of regional importance and international significance, and to produce graduates capable of developing and leading their own research projects, either in academia or industry.

DEPARTMENTAL REQUIREMENTS:

In addition to Faculty requirements, students admitted for advanced research degrees in the department are required to take and pass the following two courses (4 credits each)

Course Code	Course Title
AGRI 6620	Statistics
AGBU 6301	Research Methodology

BUSINESS DEVELOPMENT UNIT

Certificate/Postgraduate Diploma and MSc in Agricultural and Rural Development (by Distance)

INTRODUCTORY NOTES

1. In order to complete the requirements for the Diploma and MSc students must take and pass a total of four or seven courses respectively. Before you register, please consider carefully the following information about how courses are organised and the study commitment they require. Students should note that distance education demands a high degree of commitment, determination and self-discipline on the part of students.

2. The duration of each course is -31 - 35 weeks of teaching/ study time and 4 weeks allocated for revision and preparation for examinations at the end of the course. At the beginning of the academic year you will receive your distance learning course packages. These packages will form the bulk of your study load and should be completed before examinations are held.

3. **COURSE PACKAGE:**
   Each course study package will consist of:
   - A course file, which is a detailed guide including exercises and assignment topics
   - Core textbook(s)
   - Other published texts and/or an integrated collection of readings
   - Supplementary study materials (audiocassettes, calculator etc. as necessary)

4. **TUTOR MARKED ASSIGNMENTS (TMAs):**
   Each course file contains three (3) or four (4) Tutor Marked Assignments (TMAs) printed on green paper. The TMAs are expected to be completed and submitted in a timely manner to the EPA Office for assessment by the course tutor. The TMAs provide feedback to both tutors and students. Experience has shown that students who complete their TMAs are more likely to be successful in their examinations and students are therefore encouraged to complete the TMAs for each course even though these assignments are not credited towards the course assessment.

5. **TUTORIAL SESSIONS:**
   An Induction Workshop (at the beginning of the academic year) and tutorial sessions will be conducted for registered students through The UWI's teleconferencing facility (UWIDEC). These tutorial sessions are normally held on Saturdays during the study year. Teleconferencing facilities do not exist in Guyana and Suriname. The schedule for the tutorials is prepared in advance, and students are strongly advised to attend sessions

6. **STUDY REQUIREMENTS:**
The average weekly study target for each course is six to seven hours. In practice, some students will find that they need more than six hours a week to study, particularly in the early stages of a course until they become familiar with the method of study as well as the subject matter. This is perhaps most relevant if you have not studied a particular discipline before, or if your knowledge of the discipline is ërusty'. In view of the above we strongly recommend that you start with no more than two courses.

7. **METHOD OF EXAMINATION:**
For each course there will be a three hour written examination. Examinations in the UWI campus territories are normally held in St. Augustine, Mona and Cave Hill, while in non-campus territories the School of Continuing Studies or other authorised bodies administer them.

8. **NOTIFICATION OF COURSES TO BE TAKEN IN A PARTICULAR YEAR**:
Students are requested to notify the EPA Office as early as possible of the courses that they wish to take in the following year.

9. **COMMUNICATIONS:**
All correspondence about the Postgraduate Diploma or MSc degree should be addressed to:

Academic Coordinator
External Programme in Agriculture
Faculty of Food and Agriculture
The University of the West Indies
St. Augustine, Trinidad
Tel: (868) 662-3719/2686 or 662-2202
Exts. 83327/82318/83322
Fax: (868) 663-9686
E-mail: epa@sta.uwi.edu

REGULATIONS

1. QUALIFICATIONS FOR ADMISSION

(a) In order to be admitted to the Postgraduate Diploma a student must:
(i) Have a first Degree in agriculture, agronomy, agricultural economics, or other appropriate discipline, or equivalent qualifications.
or
(ii) Have previous education and relevant experience, which is acceptable to the University.

(b) In order to be admitted to the MSc a student must:
(i) Have a First degree of at least Lower Second Class Honours standing (minimum GPA 2.0 or equivalent) in agriculture, agronomy, agricultural economics, the biological sciences, economics or other appropriate disciplines.
or
(ii) Have completed the requirements for the Diploma in Agricultural and Rural Development with a B+ average or better.

2. COURSE OF STUDY

(a) In order to be eligible for the award of the Postgraduate Diploma, students must satisfactorily complete FOUR (4) courses equivalent to 24 credits taken from among the following **Part 1 Courses**.

PART I courses (6 credits each)

Course Code	Course Title
AGPD 6001	Agricultural Economics for Development
AGPD 6002	Managing Agricultural Development
AGPD 6003	Agricultural Policy Analysis
AGPD 6004	Business Management for Agricultural Enterprises
AGPD 6005	Project Planning, Monitoring and Evaluation
AGPD 6006	Sociology of Agrarian Transformation & Rural Development
AGPD 6007	Finance, Investment & Credit for Agribusiness & Rural Development
AGPD 6000	Research Methods and Data Analysis

The courses taken for the Diploma will be considered to fulfill the requirements of Part I of the MSc Degree.

Courses not taken during completion of Part I of the programme may be added to the list of Part II courses and may be substituted according to the students area of interest. But such choices should be made at the start of the programme, particularly for those students who wish to follow the full MSc Degree programme.

Students will not be permitted to begin Part II of the Programme until all the requirements of Part I are met.

MSc in Agricultural and Rural Development

(a) MSc DEGREE

- In order to be eligible for the award of the MSc students are required to complete seven (7) courses, four from Part I above and three from Part II below, which must include Research Methods and Data Analysis and a Research Project.

- Students who wish to register for a project are required to submit a Research Proposal to the EPA office for approval, no later than the end of the previous academic year.

(b) Courses not taken during completion of Part 1 of the programme may be added to Part II courses and may be substituted according to the student area of interest. But such choices should be made at the start of the programme, particularly for those students who wish to follow the full MSc Degree Programme.

PART II COURSES (6 CREDITS EACH)

Course Code	Course Title
AGPD 6501	Agricultural & Food Marketing in Developing Countries
AGPD 6502	Land Degradation and Sustainability
AGPD 6503	Gender Issues in Agrarian and Environmental Change
AGPD 6504	Applied Econometrics for the Agricultural & Food Sector
AGPD 6505	Crop Production and Development
AGPD 6506	Livestock Development for Small States
AGPD 6507	A Research Project

Pre-requisite: AGDP 6000 Research Methods & Data Analysis

In exceptional cases where the conduct of a research project is not deemed practical or possible, a student may apply to the Board for Graduate Studies and Research for permission to read a substitute course. In cases where such permission is granted, the Board will also specify the nature of the substitute course to be taken.

Where a student takes an additional course over and above those prescribed for Part II of the Degree, such a course shall not count towards the award of the Degree. Each student will be required to indicate at the time of entry into the examination those courses in which they wish to be examined for the Degree.

3. REGISTRATION

a. Students must normally register for courses within the first four (4) weeks of the academic year.

b. The maximum number of courses, for which Diploma and MSc students may register in any one year, is four.

c. A student who has recorded a pass in a course will not be permitted to re-register for that course.

d. Registration for a course includes registration for the associated examination and any student who, having registered for a course and examination, fails to take the examination shall be deemed to have failed the examination unless:
   i. Prior approval was given for the student to withdraw from the examination by the Chairman, Campus Committee for Graduate Studies and Research; (see 8, deferral of exam) or
   ii. He/she could not attend because of illness or other grave cause.

e. A student wishing to withdraw from a course must apply in writing to the Senior Assistant Registrar (Postgraduate) for permission to do so. The EPA Office should receive such applications no later than the end of the 28th week after the start of teaching in any given year. In such cases the candidate must take the examination in the following academic year and will be allowed to do so without penalty. Deferral of the examination in a course will not normally be allowed on more than one occasion.

f. Students will not be permitted to repeat a failed course more than once, but may register for another course, subject to permission from the Chair, Campus Committee for Graduate Studies and Research and provided that the maximum time is not exceeded.

4. UPGRADING/RE-GRADING OF REGISTRATION

Upgrade from Postgraduate Diploma to MSc

(a) Students who have completed the requirements for the Postgraduate Diploma may apply to upgrade their registration from the Postgraduate Diploma to the MSc Degree. The success of such applications would be dependent on the performance in the Postgraduate Diploma examinations.

(b) In the event that such students are unable to complete the requirements for the MSc the Postgraduate Diploma will be awarded.

Re-grading of MSc students to Postgraduate Diploma

(c) MSc students who have been unable to complete the requirements within the maximum time but who have met the requirements for the Postgraduate Diploma may be awarded the Postgraduate Diploma.

5. TIME LIMITS FOR COMPLETION

The minimum and maximum times for completion of the MSc degree/diploma are as follows:

MSc
(a) Minimum: two (2) academic years from entry into the Programme.
(b) Maximum: six (6) academic years from entry into the Programme.

Diploma (a) Minimum: one (1) academic year from entry into the Programme.

(b) Maximum: four (4) academic years from entry into the Programme.

In special cases, students who have not completed the requirements within the prescribed maximum period and require one course to graduate may apply for an extension of time. Such cases will be determined on an individual basis.

6. LEAVE OF ABSENCE

(a) A candidate who for good reason wishes to be absent from the programme for an academic year must apply for formal leave of absence to the Campus Committee for Graduate Studies and Research through the Office of the External Programme in Agriculture, stating reasons for the application;

(b) The length of such leave of absence, if granted, will be subject to approval by the Campus Committee for Graduate Studies & Research, but will not exceed one academic year in the first instance, terminating at the end of the academic year for which the application is approved;

(c) Leave of absence will not be granted for more than two consecutive academic years;

7. RULES OF PROGRESSION

In order to enter Part II of the MSc Degree a student must normally: Either

(a) have successfully completed Part I of the Degree or

(b) have transferred their registration from the Postgraduate Diploma to the MSc Degree following a recommendation by the Board of Examiners that their performance in the Diploma examination was such that they may proceed to Part II of the Degree.

(c) In the circumstances of paragraph 7 (b) above the Board of Examiners may also recommend, if they think it appropriate, that students who transfer their registration from the Postgraduate Diploma to the MSc Degree may hold their pass at the Postgraduate Diploma to their credit in the event that they do not satisfy the Board of Examiners at Part II of the Degree.

(d) The Board of Examiners may also recommend, after completion of either the Part I or Part II examination for the MSc Degree, that a student should not be awarded the Degree, but be invited to apply instead for the award of the Diploma.

8. DEFERRAL OF EXAMINATION

a. In exceptional cases where a student may not be able to take the examination(s) in a particular academic year it may be possible to arrange for the examination(s) to be taken in the following academic year. Request for deferral of examination for any course(s) must be sent to the External Programme in Agriculture Office in writing, formally requesting a deferral no later than the 28th week of the academic year.

b. In the case where a request for a deferral has been denied, the examination will have to be taken as scheduled. You are strongly advised to continue the examination preparation until/unless you receive from the External Programme in Agriculture Office approval for deferral.

c. The time limit for completion will not be modified to take deferral into account. For example, if you are registered for the Postgraduate Diploma and you have no passes to your credit by the end of the third academic year of registration, deferral will not be granted and you must successfully complete the requisite four courses in the fourth year in order to comply with the maximum time limit for the completion of the Postgraduate Diploma (Reg. 5).

9. METHODS OF EXAMINATION

a. Each individual course for the Postgraduate Diploma and MSc in Agricultural and Rural Development will be examined by a three (3) hour written paper. Examinations will be supervised and held at authorised university centres. All examinations shall be completed without aids unless otherwise prescribed.

b. There shall be at least two internal examiners approved by the Board for Graduate Studies for each examination. In addition, there shall be one external examiner approved by the Board for Graduate Studies

10. CONDUCT OF EXAMINATIONS

a. Students taking written Examinations shall be subject to the University Examination Regulations for First Degrees, Diplomas and Certificates save that the functions assigned to the Campus Committee on Examinations shall be performed by the Campus Committee for Graduate Studies or its Chairman.

b. Students will be informed (by letter) of the Examination timetable in respect of written examinations at least one month before the series of examinations begins. Students will also be informed by letter of any subsequent change in dates, and in no case will any such change be made later than one week prior to the commencement of the examination series.

c. Students should be at the examination room at least ten minutes before the scheduled time of any examination. Students shall be admitted up to half an hour after the start of the examination. Students arriving late shall not be allowed extra time. A student arriving more than half an hour late may be admitted to the examination room but his/her work will be accepted for marking only if he/she could satisfy the Campus Registrar as to his/her reason for being late.

d. Whilst in the Examination Room students are required at all times to comply with the instructions of the Chief Invigilator and/or Assistant Invigilators. Failure to comply may result in the student being disqualified from the examination. Disorderly behaviour may result in the student being expelled from the Examination Room. In such cases the Chief Invigilator shall write a report to the Campus Registrar.

e. Any student, who, for reason of permanent or temporary incapacity, desires special arrangements during examinations, shall apply to the Campus Registrar through the EPA office. The arrangements desired should be specified and the Registrar may require a Medical Certificate as proof of such incapacity. Such student(s) shall not be given extra time in which to write. The Registrar shall inform the Board of Examiners of the circumstances under which the examination was performed.

f. The Campus Registrar shall approve any amanuensis or secretarial assistance provided to handicapped or incapacitated students. Normally the university will defray the additional costs involved. No extra time shall be allowed for any examination so written.

g. In cases of illness, the student shall present to the Campus Registrar a Medical Certificate as proof of illness, signed by the University Health Officer or by other Medical Practitioners approved for this purpose by the University. The student shall send the Medical Certificate to the Campus Registrar within seven days from the date of the examination in which the performance of the student is affected. A certificate received after this period will be considered only in exceptional circumstances.

h. Where in the opinion of the medical advisor concerned a student is unable to submit a Medical Certificate in person, the Medical advisor may do so on his/her behalf within the prescribed time.

i. Students who, for good reason, cannot sit the examinations in their country of residence may apply to be examined elsewhere. Such applications must normally reach the EPA Office no later than two months before the scheduled start of examinations.

j. The University is not responsible for any expenses incurred by students in attending examinations.

k. In the event that there is an excessive delay in the start of an examination at any venue, a new paper for the relevant course will be prepared and the examination held with as little deviation as possible from the original date assigned. Students are required to abide by any such revised arrangements.

l. The student should collect an Examination Card from the Examinations section of the UWI in his/her respective campus territory, or from the SOCS in their country of residence at least two weeks before the start of the examination period. A student who has not received this Examination Card within ten days of the date of their first examination should contact the EPA Office immediately.

m. If the performance of a student in any part of any examination is likely to have been affected by factors of which the examiners have no knowledge, the student may report the circumstances in writing to the Campus Registrar. If the student decides to report such circumstances, he must do so within seven days of that part of the examination which, may have been affected.

n. The Campus Registrar may pass the information to the Chairperson of the Board of Examiners if in his opinion it is likely to assist the examiners in the performance of their duties. Boards of Examiners shall not take cognisance of illness or other circumstances which, have not been referred to them by the Campus Registrar.

1. Students are required to supply themselves with pens, pencils, rulers, erasers, and the usual geometrical instruments. No books, paper, printed or written document or pictures or any unauthorised aid may be taken into or be received in an examination room by any student, except as specifically permitted and stated in the rubric of the question paper.
2. Silent, cordless, non-programmable electronic calculators may be used in examination rooms where examiners so decide, provided that this is stated in the rubric of the examination paper.

- Students are required to deposit all unauthorised material including bags, briefcases, folders, clipboards and notebooks at the place provided for this purpose before the start of each examination. Where a student fails to comply with this Regulation a report shall be made to the Campus Registrar who shall report the matter to the Chairperson, Campus Committee for Graduate Studies and Research.

o. A student must not directly or indirectly give assistance to any other student, or permit any other student to copy from or otherwise use his/her papers.

p. A student must not directly or indirectly accept assistance from any other student or use any other student's papers.

(i) If any student is suspected of cheating, the circumstances shall be reported in writing to the Campus Registrar who shall refer the matter to the Chairperson Campus Committee for Graduate Studies and Research. If the Chairperson so decides, the Committee shall invite the student for interview and shall conduct an investigation. If the student is found guilty of cheating or of attempting to cheat, the Committee shall disqualify the student from the examination and may, subject to the student's right of appeal to the Senate, exclude him from all further examinations of the University. If the student fails to attend and does not offer a satisfactory excuse, the Committee may hear the case in the student's absence. The Campus Committee for Graduate Studies and Research, in dealing with such cases, shall proceed as described in the University Examination Regulations for First Degrees, Diplomas and Certificates.

(ii) An Appeal Committee of Senate shall hear appeals against decisions of Campus Committees for Graduate Studies and Research. Such an Appeal Committee may uphold or reverse the decision and may vary the penalty in either direction within the limits prescribed in (i) above.

q. Every script shall bear the student's index/identification number but not his/her name.

r. The University reserves the right to require students to remain within the examination hall or its precincts for the duration of the relevant paper, and to retain the question papers of candidates.

11. NOTIFICATION OF RESULTS AND AWARD OF CERTIFICATES:

(a) The results of the examinations for the Postgraduate Diploma and MSc will be published annually, and an individual notification of grades will be sent to each student at the same time.

(b) A certificate for the Postgraduate Diploma or the MSc Degree, under the seal of the University, will be delivered to each student who is awarded a Postgraduate Diploma or MSc Degree respectively.

(c) The University reserves the right to withhold the results of any student not in good financial standing, up to the time of release of examination results.

12. REVIEW OF EXAMINATION RESULTS

(a) A student who is dissatisfied with the results of an examination, may inform the Campus Registrar no later than two weeks after the date of mailing of the results that he/she wishes to have his/her script re-marked and pay a fee of US$50.00 to have the script re-marked by a new examiner.

(b) Where the re-marking of a script (as in (a) above) results in a higher mark than that previously recorded, the fee shall be refunded provided that the increased mark results in a change of grade.

(c) The Campus Registrar shall inform the candidate of the result of the re-marking.

13. COURSE FEES AND REFUNDS:

(a) In order to register for the Postgraduate Diploma or MSc, students are required to pay an initial registration fee of US$ 700 or US$ 1000 respectively, which is valid for a period of four or six years respectively.

(b) In addition students are also required to pay a fee of US$ 900 for each course of study taken in a particular year.

(c) Alternatively, Postgraduate Diploma students may make a single payment of US$ 4300 covering the registration fee and the fees for the four courses required for the award of the Postgraduate Diploma. While MSc students may make a single payment of US$ 7300 covering the registration fee and the fees for the seven courses required for the award of the degree.

(d) Fees are to be paid by certified cheque or bankers draft made payable to "University of the West Indies - EPA" and should be sent by registered mail to the External Programme in Agriculture, Office of the Dean, Faculty of Science and Agriculture, University of the West Indies, St. Augustine, Trinidad.

(e) Sponsors may pay fees. In such cases, a letter of undertaking is required from the sponsoring body in order that the student may be registered.

14. REPEAT EXAMINATION

(a) A student who enters an examination on a second occasion having failed on the first occasion, must pay a repeat examination fee of US$120 for one paper; US$180 for two papers and US$245 for three papers. If the student wishes, further tutorial guidance on assignments is available for an additional US$145 for each course. The deadline for payment of an examination re-entry fee shall be the date of the examination to be re-taken.

15. TRANSFER OF REGISTRATION

(a) When a student's registration is transferred from the Diploma to the MSc Degree, the following fees shall be payable:
- the difference between the two registration fees:- US$300
- the relevant course fees.

16. REFUNDS

Registration and course fees shall not be refunded except as provided below:
- In the event of cancellation of registration by a student, the following schedule of refunds shall apply:
- Half of the Programme registration fee provided that cancellation has been applied for within one year of the initial registration;
- US$130 for each course registered for in the year in which the cancellation of registration is sought;
- The full course fees for all courses for which the student has already paid but has not yet received materials.
- In exceptional circumstances and in accordance with the principles above, the registration and course fees already remitted may be refunded at the discretion of the Dean, Faculty of Science and Agriculture provided that such medical or other evidence is submitted as may be required.
- Refunds consequent upon an amendment to a student's original notification of courses to be taken in a particular year shall be at the discretion of the Dean, Faculty of Science and Agriculture.
- The University reserves the right to change the fee structure. In such cases, students will be given notice prior to the implementation of such adjustment.

INTERPRETATION OF THESE REGULATIONS

On all matters concerning the interpretation of these Regulations, or on which they are silent, the decision of the UWI shall be final.

Certificate/ Postgraduate Diploma and MSc in Agricultural and Rural Development (by Distance)

COURSE DESCRIPTIONS

COURSE CODE: AGPD 6000
COURSE TITLE: RESEARCH METHODS AND DATA ANALYSIS
NUMBER OF CREDITS: 6
COURSE DESCRIPTION: This course covers two main areas of interest to students of developing countries, one focusing on research methods, the other concerned with statistical techniques relevant to social scientists. The first part introduces the student to the nature and role of research in developing countries, including how to identify and formulate research problems, as well as the use of secondary information. In addition, a variety of research and data collection methods are explored, emphasising both qualitative and quantitative approaches. The second part of the course, which begins with an examination of formal sampling design and methods, focuses on techniques of data analysis, including hypothesis testing, measures of association and correlation, and an introduction to regression analysis.
Assessment:
Final examination 100%

COURSE CODE: AGPD 6001
COURSE TITLE: AGRICULTURAL ECONOMICS FOR DEVELOPMENT
NUMBER OF CREDITS: 6
COURSE DESCRIPTION: This course is one that students are strongly recommended to take in their first year. The first part of the course covers production economics, including production functions and technical change. The second part focuses on supply and demand, including the analysis of market structures. The third part deals with welfare economics, and introduces the analysis of international trade in agricultural commodities, and of food and agricultural policy.
Assessment:
Final examination 100%

COURSE CODE: AGPD 6002
COURSE TITLE: MANAGING AGRICULTURAL DEVELOPMENT
NUMBER OF CREDITS: 6
COURSE DESCRIPTION: This course examines the main theoretical approaches used to study organisations and management, and demonstrates where and how these are relevant to agricultural development. It investigates management practices in different activities concerned with agricultural development, and discusses how management may be improved or reformed. Part one examines the structure and behaviour of organisations and the main tasks of management, while Part two looks at these tasks in more detail and questions the applicability of management theory. Part three is concerned with the application of management theory and practice in relation to specific areas of activity, while Part four considers the current issues in reforming and improving the management of agricultural development.
Assessment:
Final examination 100%

COURSE CODE: AGPD 6003
COURSE TITLE: AGRICULTURAL POLICY ANALYSIS
NUMBER OF CREDITS: 6
COURSE DESCRIPTION: This course focuses is concerned with policy in the agriculture and food sectors of developing countries. The first part introduces agricultural policy analysis and incorporates a case study of a country undergoing economic reforms. The second part examines macroeconomic influences on the agricultural sector, with consideration of expenditure revenue, monetary, balance of payments and exchange rate issues. The third part is concerned with trade, agricultural and food sector policies. Part four deals with policy analysis techniques. Finally, Part five covers issues in policy reform in the agricultural and food sectors including adjustment programmes, theory and evidence on the economic and social effects of adjustment and problems in the transition of the formerly centrally planned economies.
Assessment:
Final examination 100%

COURSE CODE: AGDP 6004
COURSE TITLE: BUSINESS MANAGEMENT FOR AGRICULTURAL ENTERPRISES
NUMBER OF CREDITS: 6
COURSE DESCRIPTION: This course is concerned with the rationale and methods of business management as used in agricultural enterprises, with the main emphasis on the principles and practice of financial management and planning. Part one of the course focuses on the process of business organisation and management, and Part two is concerned with the various types of financial accounting. Part three demonstrates methods of budget construction and explains the role of budgetary control, while Part four is concerned with procedures for optimising resource use within agricultural businesses, and the role of operations research.
Assessment:
Final examination 100%

COURSE CODE: AGPD 6005
COURSE TITLE: PROJECT PLANNING, MONITORING AND EVALUATION
NUMBER OF CREDITS: 6
COURSE DESCRIPTION: This course considers the planning and management of public investment in the agricultural sector. It teaches economic concepts for project identification, preparation and appraisal and the methodologies of logical framework, and financial and economic cost benefit analysis. Detailed financial analysis from the viewpoint of the farmer, project organisation and government is explained. Exercises are used at each stage to reinforce understanding of techniques. Social and environmental issues in planning are identified and approaches for their more effective integration into project appraisal reviewed. The course also provides guidelines for the design and management of project monitoring and evaluation, essential activities for effective project monitoring and implementation and the project cycle. It concludes by assessing the relation of agricultural projects to their wider macroeconomic and policy context.
Assessment:
Final examination 100%

COURSE CODE: AGPD 6006
COURSE TITLE: THE SOCIOLOGY OF AGRARIAN TRANSFORMATION AND RURAL DEVELOPMENT
NUMBER OF CREDITS: 6
COURSE DESCRIPTION: Is a new course about the sociology of development within agrarian and rural societies. The course is divided into six parts. The first and second parts introduce the basic sociological concepts and definitions and discuss various theoretical perspectives on development, particularly those that are more relevant to developing societies. Part three gives a historical overview of agriculture and rural development, followed by Part four, which identifies the historical and contemporary approaches, models and strategies for development for agrarian/rural communities. The next section describes the socio-cultural and economic profiles of rural people and communities. The course concludes with part six, which address policy issues important for future agriculture and/or rural development particularly the generation and transfer of appropriate technologies, nutrition and food security, credit, marketing and trade agreements
Assessment:
Final examination 100%

COURSE CODE: AGPD 6007
COURSE TITLE: FINANCE INVESTMENT AND CREDITS FOR AGRIBUSINESS AND RURAL DEVELOPMENT
NUMBER OF CREDITS: 6
COURSE DESCRIPTION: This new course was designed to meet the need for training by bankers and rural development personnel in the areas of business, finance, credit and investment. The course provides a general background to financial management and relevant institutions servicing the rural community. Sections on financial management of the farm business and financial planning discuss issues on land control, estate management, valuation of stocks, shares and debt financing. The latter sections develop the areal of credit management, commercial credit, asset valuation and inflation accounting issues. The course concludes with section on capital investment appraisals and planning, monitoring and evaluation of development projects.
Assessment:
Final examination 100%

COURSE CODE: AGPD 6500
COURSE TITLE: ECONOMICS OF WATER RESOURCES
NUMBER OF CREDITS: 6
COURSE DESCRIPTION: This course focuses on how economic concepts can be used to inform policy decisions regarding the use of surface and groundwater in developing economies. The first part of the course reviews recent and current trends in the water sector both globally and regionally, exploring in detail the reasons for its increasing scarcity. In Part two, a framework, within which a number of policy approaches are explained, is developed allowing the assessment of alternative policy responses to a given situation. The third part of the course considers the possibilities for improving irrigation system performance by examining the relative advantage of agency and farmer management. Finally, the political and social dimensions of water use at project, sectoral and international levels are discussed.
Assessment:
Final examination 100%

COURSE CODE: AGPD 6501
COURSE TITLE: AGRICULTURAL AND FOOD MARKETING IN DEVELOPING COUNTRIES
NUMBER OF CREDITS: 6
COURSE DESCRIPTION: This course explores the various activities involved in the marketing of agricultural and food products. Two main approaches are followed. The first concerns the analysis of markets from an economic perspective. After defining the subject matter and its relationship to economic development, a framework for the economic analysis of markets is developed, together with analytical methods for assessing market system performance. These are elaborated with reference to case studies of performance analysis and an exploration of policy issues. The second approach focuses on the adoption of a business orientation to marketing. The introduction to key concepts of marketing management such as marketing research and market strategies and planning, is followed by case studies which explore the practice of marketing management by different institutional types.
Assessment:
Final examination 100%

COURSE CODE: AGPD 6502
COURSE TITLE: LAND DEGRADATION AND SUSTAINABILITY
NUMBER OF CREDITS: 6
COURSE DESCRIPTION: This course sets out to explain the wide variety of ways in which the productive capacity of land is being reduced. It critically reviews the mechanical and biological means by which land degradation might be controlled and sometimes reversed. It suggests longer term changes in land use and management, by which agriculture and forestry may continue more or less indefinitely. The overall context in which this takes place is that of human societies and ideologies within which conservation and the sustainable use of land has to be achieved. The course is extensively illustrated with case study materials.
Assessment:
Final examination 100%

COURSE CODE: AGPD 6503
COURSE TITLE: GENDER ISSUES IN AGRARIAN AND ENVIRONMENTAL CHANGE
NUMBER OF CREDITS: 6
COURSE DESCRIPTION: This course demonstrates the importance of understanding the interrelationships between gender relations and environmental and agrarian change. It focuses on the ways in which the outcomes of development programmes are affected by gender relations and, in turn, the ways in which development programmes themselves affect and change the roles and responsibilities of men and women. The first module of the course provides an introduction by looking at the extent to which women's work is often ignored or undervalued in agrarian and environmental development. The second module focuses on issues of policy and practice, looking critically at the ways in which gender analysis has been incorporated into environmental and agrarian policy, and including practical frameworks for gender analysis. The third module looks at gender analysis and practice in specific sectors and the final section is concerned with research and needs analysis methods for gender issues.
Assessment:
Final examination 100%

COURSE CODE: AGPD 6504
COURSE TITLE: APPLIED ECONOMETRICS FOR AGRICULTURAL AND FOOD SECTOR
NUMBER OF CREDITS: 6
COURSE DESCRIPTION: This course is concerned with the application of econometric methods to the estimation and testing of the unknown parameters of economic relationships. Priority is given to both the statistical reasoning underlying the methodology and the practical considerations involved in using this methodology with a variety of models and real data. The focus of the course is on the classical linear regression model, and the content spans the principles of regression analysis and its statistical foundations; simple and multiple regression models; non-classical disturbances; dynamic modelling and aspects of model specification. A feature of the course is the practical exercises designed to reinforce each stage of the learning. For this purpose, the Microsoft software package is provided together with detailed, step by step guides to assist students in its use.
Assessment:
Final examination 100%

COURSE CODE: AGPD 6505
COURSE TITLE: CROP PRODUCTION FOR DEVELOPMENT
NUMBER OF CREDITS: 6
COURSE DESCRIPTION: Is a new course written to complement the revised course on Livestock Development. The first section describes the importance of specific tropical crops in terms of production, trade and production systems as well as the factors, which contributed to their development and the crop's development process. The second section discusses the economic, policy, social and technical factors which determine the potential for crop development and provide guidelines for the design of appropriate production systems. The final section addresses issues on the sustainability of cropping systems and consideration for consumer health.
Assessment:
Final examination 100%

COURSE CODE: AGPD 6506
COURSE TITLE: LIVESTOCK DEVELOPMENT FOR SMALL STATES NUMBER OF CREDITS: 6
COURSE DESCRIPTION: The Course on Livestock Development has been completely rewritten to include issues specifically related to small states and the recent advances in livestock development. The specific needs of small states have been highlighted. The livestock industry in small states is explored including the role, functions and production systems of traditional livestock. A new section on the role and potential of non-traditional livestock has been included. The next section discusses the factors affecting livestock development including economic and financial issues and their relationship between trade (local and international) and the stakeholders in the industry. The course concludes with a module on the approaches to livestock development for small states beyond the year 2000, by linking the units with each of the step suggested for developing the strategies.
Assessment:
Final examination 100%

COURSE CODE: AGPD 6507
COURSE TITLE: RESEARCH PROJECT
NUMBER OF CREDITS: 6
COURSE DESCRIPTION: For the research project, students will be expected to illustrate their ability to apply research and problem-solving techniques to the analysis of a problem in their workplace or country of residence. This exercise should draw upon previous knowledge and experience gained in the courses completed in the MSc degree Programme. In addition to local supervision, provision is made for limited travel of campus-based project supervisors to the location of both the project and the candidate for discussions related to the student's work.
Assessment: Final examination 100%