

## DEPARTMENT OF ECONOMICS

Welcome

On behalf of all members of staff in the Department of Economics, we welcome you. By accepting you into our Department in the Faculty of Social Sciences at the University of the West Indies, Mona, we are recognizing both your academic achievements as well as your intellectual potential. You are entering a Department which has a long, rich tradition of teaching and academic research, as well as outstanding contributions to both the public and the private sector throughout the Caribbean. We anticipate that you will, by your own activities, continue this important legacy. As members of the Economics Department, we recommend that you be guided by our Mission which is:

“to explore new frontiers of knowledge through academic research and to develop, implement, and maintain excellent, innovative and relevant academic programmes in Economics and Statistics. We are committed to play an integral role in the struggles of Caribbean societies for sustainable economic growth and development.”

We urge you to work hard, think critically, analytically and creatively. In addition, you must develop your problem solving skills, express yourself clearly and honestly, and throughout your university life, operate with professionalism, integrity and high levels of morality. You will also benefit from the strong links which exist between our lecturers and students. Make good use of these opportunities.

We welcome, throughout your university life and even beyond, your recommendations and suggestions as to how our Department can enhance your education as well as your professional development.

Once again, welcome to the Department of Economics.

Claremont Kirton  
Head

## ACADEMIC STAFF

The assigned courses and rooms are subject to changes. Please confirm with the Department.

| Staff                            | Position             | Room                      |
|----------------------------------|----------------------|---------------------------|
| Dr. A. Abdulkadri**              | Lecturer             | McIntyre Bldg-E209        |
| Dr. D. Alleyne                   | Lecturer             | Social Sciences Bldg - 20 |
| Dr. L. Amaghionyeodiwe           | Lecturer             | McIntyre Bldg –E210       |
| Mr. G. Boodraj                   | Lecturer (part-time) |                           |
| Mrs. Sheridan Williams-Ellistons | Assistant Lecturer   | Social Sciences Bldg-17   |
| Ms. P. Fairclough                | Assistant Lecturer   | Social Sciences Bldg-17   |
| Mr. M. Figueroa ***              | Snr. Lecturer        | Social Sciences Bldg -59  |
| Dr. A. Folawewo                  | Lecturer             | McIntyre Bldg-E207        |
| Dr. M. Freckleton**              | Snr. Lecturer        | McIntyre Bldg –E211       |
| Dr. E. Ghartey                   | Snr. Lecturer        | Social Sciences Bldg -11  |
| Mrs. Kelly-Ann Dixon-Hammil      | Assistant Lecturer   | Social Sciences Bldg-15   |
| Ms. A. Kiddoe                    | Assistant Lecturer   | Social Sciences Bldg -14  |
| Dr. D. King**                    | Snr. Lecturer        | McIntyre Bldg-E212        |
| Mr. C. Kirton                    | Snr. Lecturer        | Social Sciences Bldg -16  |

|  |                      |                          |
|--|----------------------|--------------------------|
| Dr. M.K. Kiani                           | Lecturer             | McIntyre Bldg-E206       |
| Dr. Maiju Perala                         | Lecturer             | McIntyre Bldg-E209       |
| Dr. K. Petrick                           | Lecturer             | McIntyre Bldg-I-9        |
| Mr. X. Soares                            | Assistant Lecturer   | Social Sciences Bldg-15  |
| Ms. Nekeisha Spencer                     | Assistant Lecturer   | Social Sciences Bldg-12  |
| Dr. D. Tennant                           | Lecturer             | McIntyre Bldg-E205       |
| Ms. Sophia Terrelonge                    | Assistant Lecturer   | Social Sciences Bldg-14  |
| Ms. Mikhail-Ann Urquhart                 | Assistant Lecturer   | Social Sciences Bldg-12  |
| Mr. Winston Vassell                      | Lecturer (part-time) |                          |
| Dr. M. Witter                            | Snr. Lecturer        | Social Sciences Bldg -18 |
| *** Serving as FSS Dean<br>** Fellowship |                      |                          |

## **PROGRAMMES**

The Department of Economics offers seven (7) undergraduate degree options. These are the BSc. Economics (Special), (Major) and (Minor), BSc. Business Economics and Social Statistics (BESS), BSc. Statistics (Major) and (Minor) and BSc. Banking and Finance (Special). The BSc Banking and Finance is offered jointly by the Departments of Economics and Management Studies.

### **IMPORTANT NOTICE**

- Students must satisfy the programme requirements as set out in the Faculty Handbook for the year in which they join the programme (or for any subsequent year).
- Students taking two (2) majors or a major/minor offered by the Department are required to select an alternative Departmental course where a compulsory course is common to both.
- Students pursuing double majors or a major and two minors may not have the option of free electives.

### **EXEMPTION AND CREDIT FOR CAPE COURSES**

Students registered in the Department of Economics who obtained a grade one (I) through to grade four (IV) in CAPE examinations may be eligible for exemption as follows:

- Economics Unit 1** exemption for **EC10C (ECON1001)**
- Economics Unit 2** exemption for **EC10E (ECON1002)**
- Statistical Analysis** exemption for **EC16A (ECON1005)**
- Sociology Unit 1** exemption for **SY14G (SOC1002)**
- Accounting Unit 1** exemption for **MS15D (ACCT1005)**
- Accounting Unit 2** exemption for **MS15B (ACCT1003)**

Application for exemption must be made through the Faculty Office.

**NB:** Students with exemptions due to CAPE should register for other level I courses.

Please note that the new 8-digit course codes with the prefix "ECON in parenthesis for reference. For example, the new code is ECON1001 and the old code is EC10C.

### **BANKING AND FINANCE (Special)**

This degree is offered jointly by the Departments of Economics and Management Studies.  
As a special degree, this option cannot be combined with any Major or Minor.

**LEVEL I Semester I**

EC10C (ECON1001)-Introduction to Microeconomics

**Either**

EC14C (ECON1003)-Mathematics for the Social Sciences

**OR**

EC18A (ECON1006)-Calculus I for Business and Social Sciences

**Either**

FD10A (FOUN1001)-English for Academic Purposes<sup>1</sup>

**OR**

FD14A (FOUN1401)-Writing in the Disciplines

FD12A (FOUN1201)-Science, Medicine and Technology in Society

MS15D (ACCT1005)-Financial Accounting

**LEVEL I Semester II**

EC10E

(ECON1002)-Introduction to Macroeconomics

EC10H (ECON1007)-Elements of Banking and Finance

EC16A (ECON1005)-Introductory Statistics

FD11A (FOUN1101)-Caribbean Civilization

MS15B (ACCT1003)-Introduction to Cost and Management Accounting

**LEVEL II Semester I**

EC20A- (ECON2000)-Intermediate Microeconomics I

EC21A (ECON2002)-Intermediate Macroeconomics I

MS27B (MGMT2021)-Business Law I

MS23C (MGMT2012)-Introduction to Quantitative Methods

ONE Level II Free Elective

**LEVEL II Semester II**

MS21C (MGMT2005)-Computer Applications

MS28F (MGMT2068)-Risk and Treasury Management

MS28D (MGMT2023)-Financial Management I

TWO Level II Free Electives

**LEVEL III Semester I**

EC30M (ECON3005)-Monetary Economics

EC32K (ECON3011)-Economics of Financial Institutions

MS33G (MGMT3066)-Business Ethics for Bankers

MS37C (MGMT3067)-Regulatory Framework of Banking and Finance

ONE Level II Free Elective

**LEVEL III Semester II**

EC30P (ECON3007)-International Finance

EC31F (ECON3010)-Finance and Development

EC32L (ECON3022)-Economics of Commercial Banking

EC32W (ECON3066)-Credit Analysis and Lending

MS38H (MGMT3048)-Financial Management II

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<sup>1</sup> FD10A is offered to Social Sciences students in Semester I only.

Students registering for FD10A(FOUN1100) MUST have a pass in the English Proficiency Test or UC010.

Students with Grade I or 2 passes in CAPE Communication Studies should take FD14A (FOUN1401) instead of FD10A.

Students who already completed UC120 will automatically receive exemption with credit for FD10A .

## **BUSINESS, ECONOMICS AND SOCIAL STATISTICS (BESS)**

### **LEVEL I Semester I**

EC10C (ECON1001)-Introduction to Microeconomics

EC14C (ECON1003)-Mathematics for the Social Sciences  
(*Students without 'A' Level Mathematics*)

MS15D (ACCT1005) -Financial Accounting (*Students without A' Level Accounting*)

#### **Either**

FD10A (FOUN1001)-English for Academic Purposes <sup>2</sup>

#### **OR**

FD14A (FOUN1401)-Writing in the Disciplines

FD12A (FOUN1201)-Medicine, Science and Technology in Society <sup>3</sup>

### **LEVEL I Semester II**

EC10E (ECON1002)-Introduction to Macroeconomics

EC18A (ECON1006)-Calculus I for Business and Social Sciences

EC16A (ECON1005)-Introductory Statistics  
(*Students without 'A' Level Mathematics (Statistics Option)*)

FD11A (FOUN1101)-Caribbean Civilization

SY14G (SOC1002)-Sociology for the Caribbean

Students with 'A' level Mathematics must substitute GT11A (GOVT1000) - Introduction to Political Institutions for EC14C (ECON1003) - Mathematics for the Social Sciences. Students with 'A' level Mathematics (Statistics option) must **do another Level I course** Students with 'A' level Accounting must substitute GT11A (GOVT1000) for MS15D (ACCT1005) or a Free Elective if GT11A (GOVT1000) was already substituted for EC14C (ECON1003).

### **LEVEL II**

EC23J (ECON2006)-Economic Statistics (*Semester II*)

EC23L (ECON2008)-Statistical Methods I

EC23T (ECON2014)-Sampling Methods

EC24N (ECON2019)-Matrix Algebra for Business and Social Sciences

EC23M (ECON2009)-Statistical Methods II

EC24J (ECON2017)-Calculus II for Business and Social Sciences

#### **FOUR from the following:**

Level II BESS Elective

Level II Social Sciences Elective

Level II Economics Elective

### **LEVEL III Semester I**

EC33P (ECON3031)-Probability and Distribution Theory

EC36C (ECON3049)-Econometrics I

ONE Level III BESS Elective

ONE Level III Social Sciences Elective

### **LEVEL III Semester II**

EC33Q (ECON3032)-Statistical Estimation and Inference

EC34R (ECON3040)-Non-parametric Statistics for Business & Social Science

**EC23P (ECON2010) – Statistical Computing**

ONE Level III BESS Elective

ONE Level III Social Sciences Elective

ONE Level III Course

### **SUMMER INTERNSHIP**

Internships are arranged for students with the Statistical Institute of Jamaica (STATIN) at the end of level II.

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<sup>2</sup> FD10A is offered to Social Sciences students in Semester I only. Students registering for FD10A (FOUN1100) **MUST** have a pass in the English Proficiency Test or UC010. Students with Grade I or 2 passes in CAPE Communication Studies should take FD14A (FOUN1401) instead of FD10A

<sup>3</sup> FD12A is offered to Social Science students in semester I only.

## **ECONOMICS (Special)**

All Economics (Special) students are required to do **both** EC10C (ECON1001) and EC10E (ECON1002). Full-time students normally do EC10C (ECON1001) in semester I and EC10E (ECON1002) in semester II while part-time students do EC10E (ECON1002) in semester I and EC10C (ECON1001) in semester II.

### **LEVEL I Semester I**

#### **Either**

FD10A (FOUN1001)-English for Academic Purposes <sup>4</sup>

#### **OR**

FD14A(FOUN1401)-Writing in the Disciplines

FD12A (FOUN1201)-Medicine, Science and Technology in Society

#### **Either**

EC10C (ECON1001)-Introduction to Microeconomics (*day*)

#### **OR**

EC10E (ECON1002)-Introduction to Macroeconomics (*evening*)

#### **Either**

EC14C (ECON1003)-Mathematics for the Social Sciences

#### **OR**

Level I Free Elective (*Students with 'A' Level Mathematics*)

#### **Either**

EC16A (ECON1005)-Introductory Statistics

#### **OR**

EC23L (ECON2008)-Statistical Methods I  
(*Student with 'A' Level Mathematics - Statistics Option*)

### **LEVEL I Semester II**

#### **Either**

EC10E (ECON1002)-Introduction to Macroeconomics (*day*)

#### **OR**

EC10C (ECON1001)-Introduction to Microeconomics (*evening*)

EC18A (ECON1006)-Calculus I for Business and Social Science<sup>5</sup>

FD11A (FOUN1101)-Caribbean Civilization

#### **Either**

GT11A (GOVT1000)-Introduction to Political Institutions

#### **OR**

GT11B (GOVT1001)-Introduction to Political Philosophy

SY14G (SOC11002)-Sociology for the Caribbean

### **LEVEL II Semester I**

EC20A (ECON2000)-Intermediate Microeconomics I

EC21A (ECON2002)-Intermediate Macroeconomics I

EC24N (ECON2019)-Matrix Algebra for Business and Social Sciences

ONE Level II/III Economics Elective

ONE Other Level II/III Course

### **LEVEL II Semester II**

EC20B (ECON2001)-Intermediate Microeconomics II

EC21B (ECON2003)-Intermediate Macroeconomics II

EC24J (ECON2017)-Calculus II for Business and Social Sciences

TWO Other Level III Courses

### **LEVEL III Semester I**

EC33P (ECON3031)-Probability and Distribution Theory

EC36C (ECON3049)-Econometrics I

THREE Level II/III Economics Electives

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<sup>4</sup> FD10A is offered to Social Sciences students in Semester I only. Students registering for FD10A(FOUN1100) **MUST** have a pass in the English Proficiency Test or UC010. Students with Grade 1 or 2 passes in CAPE Communication Studies should take FD14A (FOUN1401) instead of FD10A.

<sup>5</sup> Students with 'A' Level or equivalent qualifications are urged to do M10A, M10B and not EC18A (ECON1006) if they plan to do graduate work in economics.

### **LEVEL III Semester II**

THREE Levels II/III Economics Electives  
TWO Other Level II/III Courses

### **ECONOMICS (Major)**

#### **LEVEL I Semester I**

**Either**

FD10A (FOUN1001)-English for Academic Purposes <sup>6</sup>

**OR**

FD14A (FOUN1401)-Writing in the Disciplines

FD12A (FOUN1201)-Medicine, Science and Technology in Society

**Either**

EC10C (ECON1001)-Introduction to Microeconomics (*day*)

**OR**

EC10E (ECON1002)-Introduction to Macroeconomics (*evening*)

**Either**

EC14C (ECON1003)-Mathematics for the Social Sciences

**OR**

Level I Free Elective (*Students with 'A' Level Mathematics*)

**Either**

EC16A (ECON1005)-Introductory Statistics

**OR**

EC23L (ECON2008)-Statistical Methods I

(*Student with 'A' Level Mathematics - Statistics Option*)

#### **LEVEL I Semester II**

**Either**

EC10E (ECON1002)-Introduction to Macroeconomics (*day*)

**OR**

EC10C (ECON1001)-Introduction to Microeconomics (*evening*)

EC18A (ECON1006)-Calculus I for Business and Social Science<sup>7</sup>

FD11A (FOUN1101)-Caribbean Civilization

**Either**

GT11A (GOVT1000)-Introduction to Political Institutions

**OR**

GT11B (GOVT1001)-Introduction to Political Philosophy

SY14G (SOC1002)-Sociology for the Caribbean

#### **LEVEL II Semester I**

EC20A (ECON2000)-Intermediate Microeconomics I

EC21A (ECON2002)-Intermediate Macroeconomics I

EC24N (ECON2019)-Matrix Algebra for Business and Social Sciences

TWO Other Level II Courses

#### **LEVEL II Semester II**

EC20B (ECON2001)-Intermediate Microeconomics II

EC21B (ECON2003)-Intermediate Macroeconomics II

EC24J (ECON2017)-Calculus II for Business and Social Sciences

TWO Other Level II Courses

#### **LEVEL III Semester I**

EC33P (ECON3031)-Probability and Distribution Theory

EC36C (ECON3049)-Econometrics

TWO Level III Economics Electives

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<sup>6</sup> FD10A is offered to Social Sciences students in Semester I only. Students registering for FD10A(FOUN100) **MUST** have a pass in the English Proficiency Test or UC010. Students with Grade 1 or 2 passes in CAPE Communication Studies should take FD14A (FOUN1401) instead of FD10A.

<sup>7</sup> Students with 'A' Level or equivalent qualifications are urged to do M10A, M10B and not EC18A (ECON1006) if they plan to do graduate work in economics.

ONE Other Level III Courses

**LEVEL III Semester II**

FIVE Other Level III Courses

**NB:** Students pursuing double majors or a major and two minors may not have the option of free electives.

**STATISTICS (Major)**

**LEVEL I Semester I**

EC10C (ECON1001)-Introduction to Microeconomics

EC14C (ECON1003)-Mathematics for Social Sciences <sup>8</sup>

EC18A (ECON1006)-Calculus I for Business and Social Sciences

**Either**

FD10A (FOUN1101)-English for Academic Purposes

**OR**

FD14A (FOUN1401)-Writing in the Disciplines

FD12A (FOUN1201)-Science, Medicine and Technology in Society <sup>9</sup>

**LEVEL I Semester II**

EC10E (ECON1002)-Introduction to Macroeconomics

SY14G (SOC11002)-Sociology for the Caribbean

EC16A (ECON1005)-Introductory Statistics

FD11A (FOUN1101)-Caribbean Civilization

GT11A (GOVT1000)-Introduction to Political Analysis

**LEVELS II & III**

The following **courses are compulsory** for the Statistics Major.

EC23L (ECON2008)-Statistical Methods I

EC23P (ECON2010)-Statistical Computing

EC23T (ECON2014)-Sampling Methods

EC24N (ECON2019)-Matrix Algebra for Business and Social Sciences

EC33P (ECON3031)-Probability and Distribution Theory

EC23M (ECON2009)-Statistical Methods II

EC33Q (ECON3032)-Statistical Estimation and Inference

THREE Level III Statistics Electives

**STATISTICS (Minor)**

**LEVEL I**

Students pursuing a Statistics Minor must satisfy the level I pre-requisites for compulsory courses listed below:

**LEVELS II & III**

EC23L (ECON2008)-Statistical Methods I

EC23M (ECON2009)-Statistical Methods II

EC23T (ECON2014)-Sampling Methods

TWO Statistics Electives (*at least one from level III*)

**For the purpose of selection, the following are considered as BESS/Statistics Electives:**

EC34L (ECON3037)-Operations Research I

EC34M (ECON3038)-Operations research II

EC34Q (ECON3067)-Applied Econometrics

EC34R (ECON3040)-Non-parametric Statistics

EC36C (ECON3049)-Econometrics I

SY35B (SOC13018)-Demography I

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<sup>8</sup> Students with A'Level Math should register for SY13B

<sup>9</sup> FD10A is offered to Social Sciences students in Semester I only. Students registering for FD10A(FOUN1100) **MUST** have a pass in the English Proficiency Test or UC010. Students with Grade 1 or 2 passes in CAPE Communication Studies should take FD14A (FOUN1401) instead of FD10A

## SY35C (SOCI3021)-Demography II

Compulsory BESS/Statistics courses that are not compulsory for the Statistics Major/Minor may also be taken as electives for the Statistics Major/Minor.

### **ECONOMICS (Minor)**

#### **LEVEL I**

Students pursuing an Economics Minor must satisfy the Level I pre-requisites for the compulsory courses listed below:

#### **LEVELS II & III Semester I**

EC20A (ECON2000)-Intermediate Microeconomics I  
EC21A (ECON2002)-Intermediate Macroeconomics I  
ONE Level III Economics Elective

#### **LEVELS II & III Semester II**

EC20B (ECON2001)-Intermediate Microeconomics II  
EC21B (ECON2003)-Intermediate Macroeconomics II

#### **LIST OF LEVELS II AND III ELECTIVES**

EC20A (ECON2000)-Intermediate Microeconomics I  
EC21A (ECON2002)-Intermediate Macroeconomics I  
EC20B (ECON2001)-Intermediate Microeconomics II  
EC21B (ECON2003)-Intermediate Macroeconomics II  
EC23P (ECON2010)-Statistical Computing  
EC24J (ECON2017)-Calculus II for Business and Social Sciences  
EC25J (ECON2021) -Caribbean Economic Problems  
EC31N (ECON3016)-Public Finance I  
EC31P (ECON3017)-Public Finance II  
MS20A (MKTG2001)-Principles of Marketing  
MS22A (MGMT2008)-Organizational Behaviour  
MS32A (MGMT3017)-Human Resource Management  
MS33D (MGMT3031)-Business Strategy and Policy  
MS33E (MGMT3033)-Business, Government and Society  
MS34B (MGMT3037)-International Business Management  
MS37B (MGMT3046)-Company Law

#### **Summer School**

The courses listed below are usually offered in summer but the Department provides no guarantee that any of these courses will be offered in any given summer.

#### **Courses**

EC08A (ECON0001) - Remedial Mathematics  
EC10C (ECONI001) - Introduction to Microeconomics  
EC10E (ECONI002) - Introduction to Macroeconomics  
EC14C (ECONI003) - Mathematics for Social Sciences  
EC16A (ECONI005) - Introductory Statistics  
EC18A (ECONI006) - Calculus I for Business and Social Sciences  
EC20A (ECON2000) - Intermediate Microeconomics I  
EC20B (ECON2001) - Intermediate Microeconomic II  
EC21A (ECON2002) - Intermediate Macroeconomics I  
EC21B (ECON2003) - Intermediate Macroeconomics II  
EC24J (ECON2017) - Calculus II for Business and Social Sciences  
EC23L (ECON2008) - Statistical Methods I  
EC24N (ECON2019) - Matrix Algebra for Business and Social Sciences  
EC33P (ECON3031) - Probability and Distribution Theory  
EC36C (ECON3049) - Econometric I

#### **Anti-requisites – Note Well**

Students registering for courses in the Department of Economics are asked to note that the following courses cannot be taken together for credit.

EC14C (ECONI003)) with M08C, M10B, M10C

EC16A (ECON1005) with M25A, M25B, SOCI1005 (SY16C)  
 EC18A (ECON1006) with M10B, M10C  
 EC20A (ECON2000) with MS26A  
 EC23K (ECON2007) with M25B, M31E  
 EC23L (ECON2008) with M25B (if taken for credit at level II/III), M31E, SY22G (SOCI1008)  
**EC23L (ECON2006) with ECON2007 (EC23K)**  
 EC23M (ECON2009) with M25B, M31D, SOCI1008 (SY22G)  
 EC23P (ECON2010) with SOCI1009 (SY22K)  
 EC23T (ECON2014) with M34V, SOCI2007 (SY22D)  
 EC24J (ECON2017) with M21A,  
 EC33Q (ECON3032) with M25B, M21B  
 EC24N (ECON2019) with M20B  
 EC25F (ECON2020) with ECON2021 (EC25J)  
 EC33P (ECON3031) with M25A  
**EC34L (ECON3037) with M32B, MS32C**  
**EC34M (ECON3038) with M32C**  
**EC36C (ECON3049) with M31E**  
 MS33F (MGMT3034) – (Please note that Economics major and Banking and Finance students should not register for this course)

**COURSES OFFERED IN THE DEPARTMENT OF ECONOMICS FOR THE ACADEMIC YEAR 2007/2008**

| Semester | Old Codes    | New Codes       | Course Name                                      | Credits  | Pre-requisites  |
|----------|--------------|-----------------|--|----------|---|
| I & 2    | EC10C        | <b>ECON1001</b> | Introduction to Microeconomics                   | 3        | CXC Math Grade III (Grade II Pre 1998) O'Level Math Grade C or ECON0001                                 |
| I & 2    | EC10E        | <b>ECON1002</b> | Introduction to Macroeconomics                   | 3        | Same as ECON1001  |
| I & 2    | EC14C        | <b>ECON1003</b> | Mathematics for the Social Sciences              | 3        | Same as ECON1001  |
| I & 2    | EC16A        | <b>ECON1005</b> | Introductory Statistics                          | 3        | CXC Math Grade III (Grade II Pre 1998) O'Level Math Grade C or A' Level Math or ECON1003 (co-requisite) |
| I & 2    | EC18A        | <b>ECON1006</b> | Calculus for Business and Social Sciences        | 3        | ECON1003 or A' Level Math   |
| I & 2    | EC10H        | <b>ECON1007</b> | Elements of Banking and Finance                  | 3        | Same as ECON1001  |
| I        | EC20A        | <b>ECON2000</b> | Intermediate Microeconomics I                    | 3        | ECON1001, (ECON1003 or ECON1006 or M10B or M10C)  |
| 2        | EC20B        | <b>ECON2001</b> | Intermediate Microeconomics II                   | 3        | ECON2000  |
| I        | EC21A        | <b>ECON2002</b> | Intermediate Macroeconomics I                    | 3        | ECON1002 and (ECON1003 or ECON1006 or M10B or M10C)   |
| 2        | EC21B        | <b>ECON2003</b> | Intermediate Macroeconomics II                   | 3        | ECON2002  |
| <b>2</b> | <b>EC23J</b> | <b>ECON2006</b> | <b>Economics Statistics</b>                      | <b>3</b> | <b>ECON1001, ECON1002, ECON1005 &amp; ECON1006</b>  |
| I        | EC23K        | <b>ECON2007</b> | Business Statistics                              | 3        | ECON1005 and (ECON1003 or A' Level Math or M08C)  |
| I        | EC23L        | <b>ECON2008</b> | Statistical Methods I                            | 3        | ECON1005 and (ECON1006 or M10B or M10C)   |
| 2        | EC23M        | <b>ECON2009</b> | Statistical Methods II                           | 3        | ECON2008  |
| 2        | EC23P        | <b>ECON2010</b> | Statistical Computing                            | 3        | ECON2008 and <b>ECON3049</b>  |
| I        | EC23T        | <b>ECON2014</b> | Sampling Methods of Business and Social Sciences | 3        | ECON2008 (co-requisite)   |
| 2        | EC24J        | <b>ECON2017</b> | Calculus II for Business and Social Sciences     | 3        | ECON1006 or M10B or M10C  |
| I        | EC24N        | <b>ECON2019</b> | Matrix Algebra for Business and Social Sciences  | 3        | ECON1003 or ECON1006, A' Level Math or M10A   |
| I        | EC25F        | <b>ECON2020</b> | The Caribbean Economy                            | 3        | ECON1001 or ECON1002  |
| 2        | EC25J        | <b>ECON2021</b> | Caribbean Economic Problems                      | 3        | ECON1001 or ECON1002  |
| I        | EC26P        | <b>ECON2023</b> | International Economic Relations I               | 3        | ECON1001 or ECON1002  |
| 2        | EC26Q        | <b>ECON2024</b> | International Economic Relations II              | 3        | ECON1001 or ECON1002  |
| I        | EC30M        | <b>ECON3005</b> | Monetary Economics                               | 3        | ECON2000, ECON2002  |
| I        | EC30N        | <b>ECON3006</b> | International Trade Theory and Policy            | 3        | ECON2002  |
| 2        | EC30P        | <b>ECON3007</b> | International Finance                            | 3        | ECON2002  |
| 2        | EC31F        | <b>ECON3010</b> | Finance and Development                          | 3        | ECON2002  |
| I        | EC32K        | <b>ECON3011</b> | Economics of Financial Institutions              | 3        | ECON2002  |
| I        | EC31N        | <b>ECON3016</b> | Public Finance I                                 | 3        | ECON2000, ECON2001  |
| 2        | EC31P        | <b>ECON3017</b> | Public Finance II                                | 3        | ECON3016 or (ECON2000, ECON2001, ECON2002)  |

|          |              |                 |   |          |   |
|----------|--------------|-----------------|---|----------|---|
| 2        | EC32F        | <b>ECON3020</b> | Economics of Integraton   | 3        |   |
| 2        | EC32L        | <b>ECON3022</b> | Economics of Commercial Banking                                       | 3        | ECON2002  |
| <b>2</b> | <b>EC32W</b> | <b>ECON3066</b> | <b>Credit Analysis and Lending</b>                                    | <b>3</b> | <b>ECON2002, MGMT 2068</b>  |
| 2        | EC33M        | <b>ECON3030</b> | Selected Topics/Environmental Economics                               | 3        |   |
| 1        | EC33P        | <b>ECON3031</b> | Probability and Distribution Theory                                   | 3        | ECON2008 and (ECON1006 or M10B or M10C)   |
| 2        | EC33Q        | <b>ECON3032</b> | Statistical Estimation and Inference for Business and Social Sciences | 3        | ECON3031  |
| 1        | EC34L        | <b>ECON3037</b> | Operations Research I   | 3        | ECON2019 or M20B  |
| <b>2</b> | <b>EC34M</b> | <b>ECON3038</b> | <b>Operations Research II</b>   | <b>3</b> | <b>ECON2017 &amp; ECON2008</b>  |
| 2        | EC34R        | <b>ECON3040</b> | Non-parametric Statistics   | 3        | (ECON2017 or M21A), (ECON2009 or M25A and M25B)   |
| 1        | EC36C        | <b>ECON3049</b> | Econometrics I  | 3        | (ECON2008, or ECON3031) or M25A and M25B and (ECON2019 or M20B) two of ECON2000, ECON2001, ECON2002, ECON2003 |
| 1        | EC36M        | <b>ECON3051</b> | Economics Development: Perspectives and Theories                      | 3        | ECON2002  |
| 2        | EC36N        | <b>ECON3052</b> | Economic Development Policies   | 3        | ECON2002  |
| 2        | EC34Q        | <b>ECON3067</b> | Applied Econometrics  | 3        | ECON2019, ECON3049(ECON2009) or M25A and M25B   |

### COURSE DESCRIPTIONS

All courses are worth three (3) credits unless otherwise specified.

#### EC10C (ECON1001): INTRODUCTION TO MICROECONOMICS

**Objective:** This course seeks to give students a basic understanding of how prices are formed in markets. To this end, the basic tools of microeconomic analysis will be developed and, wherever possible, applied to economic issues facing Jamaica and other market-oriented Caribbean economies. This course will explore how individual consumers and firms behave and how they interact with each other. Another issue will be how governmental policies can have a deep impact on these issues faced by consumers and firms and will affect them in one way or another. Finally, students will get a basic introduction to the theory of international trade.

**Outline:** Basic concepts (Economic Problem, Scope and Method of Economics); The Market (Demand, Supply, Comparative Statistics); The Theory of Consumer Choice (Utility Theory and Indifference Curves, Consumer Choice Problem, Comparative Statistics and Demand Elasticities); The Theory of the Firm (Production Choice and Profit Maximization, Costs and Output Decisions in the Short and Long Run); Market failure and Externalities (Perfect vs. Imperfect Competition Externalities and Public Goods); Factor Pricing Marginal Productivity, Labour Market); International trade (Absolute and comparative Advantage, gains from Trade, Protectionism and its Tools, Winners and Losers from Opening for Trade).

#### EC10E (ECON1002): INTRODUCTION TO MACROECONOMICS

**Objectives:** This is an introductory course in macroeconomics designed to provide students with an understanding of the basic tools and methods of macroeconomics. The course begins with conceptual and methodological questions including a definition of macroeconomics. It then deals with the principles of measurement, performance and prediction of the behaviour of the 'typical' Caribbean economy at the aggregative or macro level. The course also covers monetary and fiscal policy, as well as problems of growth, inflation, unemployment, exchange rate instability, and public/private and internal/external indebtedness. The basic tools of macro-economic analysis will be developed and applied to economic issues facing Jamaica and other market-oriented economies. The other objective is to prepare students for other higher level Economics courses both theoretical and applied. Using the basic theoretical tools learned in the course, the student will be able to independently judge the future efficacy of Economic Policies of the Government and intelligently discuss the macro-economic aspects of current issues in the Jamaican and World Economy.

**Outline:** Basic concepts (goals of Macro-economics, Inflation, Unemployment, and Price Index, National Income Accounting); income-expenditure Model (Consumption, Equilibrium in Income-expenditure Model, Multiplier Effect, Aggregate supply, Fiscal Policy); Monetary Sector (Money and Banking, Money Creation and Money Multiplier, Monetary Policy, Debate over Monetary Policy); Open Economy, Economic Growth in Developing Countries)

#### EC10H (ECON1007): ELEMENTS OF BANKING AND FINANCE

**Objective:** The principal objective of this course is to introduce the students to the basic concepts, theories and issues involved in banking and finance. It also seeks to help students master the established principles of the management of bank and non-bank financial institution management, and understand the critical aspects of financial development of Caribbean countries, comparing and contrasting their experiences. Students will be exposed to the use of monetary and financial statistics for key analytical purposes, especially as these relate to financial management.

**Outline:**

- The Financial System and The Real Economy
- Deposit-taking and Non-deposits-taking Institutions

- Life and non-life insurance companies
- The Money and Capital Markets
- Foreign Exchange Markets
- Government Borrowing and Financial Markets

#### **ECI4C (ECI003): MATHEMATICS FOR THE SOCIAL SCIENCES**

**Objective:** The course is designed to review students' knowledge of elementary mathematics and to expose them to some of the mathematical concepts and techniques that are required to study mathematical models in economics and the management sciences. Emphasis will be placed on the understanding of important concepts and developing analytical skills rather than just computational skills, the use of algorithms and the manipulation of formulae.

**Outline:** Functions; Some Special Functions; Remainder and Factor Theorems; Graphs of Functions; Systems of Inequalities; Complex Numbers; Theory of Logarithms and Exponential Functions; Matrix Algebra - Matrix Solution of Linear Systems of Equations in two and three variables; Sequences and Series; Limits; Continuity; Concept of Derivative; Rules of Differentiation; Applications of Differentiation - Maxima and Minima; Vertical and Horizontal Asymptote; Sophisticated Graphing.

#### **ECI6A (ECONI005): INTRODUCTORY STATISTICS**

**Objective:** This course is designed to teach students various concepts in descriptive and inferential statistics. It is also designed to give students an introduction to research methods.

**Outline:** Topics include describing a data set (graphical methods, measures of central tendency, measures of variability, measures of shape); probability and probability distributions (sample space, probability of events, events composition, conditionality and independence, random variables, expectation for discrete random variables, binomial distribution, normal distribution), sampling distributions (central limit theorem), large-sample estimation (confidence intervals, choosing a sample size); large-sample tests of hypotheses.

Overview of the scientific method, the research process, data classification: primary and secondary methods of data collection – observation, questionnaire, interviews. Questionnaire design and administration, theory versus fact, propositions, deductive and inductive reasoning, advantage of using sample surveys, general principles of sample design, probability and non-probability samples, sampling and non-sampling errors, simple random samples, quota samples, stratified samples and cluster samples. Measurement and scaling concepts: nominal, ordinal, interval and ratio scales.

#### **ECI8A (ECONI006): CALCULUS I FOR BUSINESS AND SOCIAL SCIENCES**

**Outline:** Limits; Continuity; Trigonometric Functions; Differentiation of Single Variable Functions; Integration and Applications; Partial Differentiation; Applications of Partial Differentiation; Introduction to Differential and Difference Equations.

#### **EC20A (ECON2000): INTERMEDIATE MICROECONOMICS I**

**Objective:** This course presents the neoclassical theory of markets under the assumption of perfect competition. It bases the analysis of the forces of demand and supply on the theory of the utility maximizing consumer and the theory of the profit-maximizing firm respectively. The emphasis is on partial equilibrium analysis with some exposure to the method of general equilibrium analysis.

**Outline:** Theory of the Consumer (Budget Constraint, Preferences, Choices, Demand, Revealed Preference, Slutsky Equation, Endowment Effects, Inter-temporal Choice, Uncertainty, Risky Assets, Consumer's Surplus, Market Equilibrium, Market Demand and Elasticity, Equilibrium and Taxes.

#### **EC20B (ECON2001): INTERMEDIATE MICROECONOMICS II**

**Objective:** As the sequel to ECON2000, Intermediate Microeconomics II extends the analysis of demand and supply to imperfectly competitive markets. The theory of distribution based on the formation of prices on inputs is an application of demand and supply analysis. Selected topics in market failure are also treated. The methodology is again primarily partial equilibrium analysis with some exposure to general equilibrium analysis.

**Outline:** Theory of the Firm in Imperfectly Competitive Markets, Theory of Income Distribution, Market failure, General Equilibrium and Economic Welfare.

#### **EC21A (ECON2002): INTERMEDIATE MACROECONOMICS I**

**Objective:** The purpose of this course is to present the student with a theoretical framework within which to understand the issue of fluctuations in an economy. The framework is quite general, and does not itself focus on any particular economy. However, by the end of the course, you should be able to use this theoretical framework to understand the economic issues currently relevant to Caribbean economies, such as, (1) why did the inflation rate in Jamaica fall so dramatically over the last five years; (2) why are interest rates lower in the OECD (Organization of Eastern Caribbean States) countries than they are in Jamaica and Trinidad, and (3) how has Barbados managed to maintain exchange rate stability for 20 years. Equally important, by the end of the course you should have become familiar with some of the methodology of macroeconomic analysis, which has broader applications outside of the issues of which we apply them. This course does not

take off immediately from where *Introduction to Macroeconomics*, your first year course, ended. Instead, it builds a complete model, but familiarity with the concepts introduced in that course is helpful.

**Outline:**

- A Basic Short Run Model
- The Role of Financial Markets
- Price Changes and the Medium Run,
- Shocks and Policies and Persistent Inflation.

**EC21B (ECON2003): INTERMEDIATE MACROECONOMICS II**

**Objective:** This course explores in greater detail some of the topics introduced and employed in the earlier Macroeconomic courses. The first course in intermediate Macroeconomics presented a broad model of the economy, employing assumed explanations for consumption, investment, interest rates, and so on. In this course we examine the theoretical foundations of some of these relationships, looking at each of the elements of the broader model in greater detail.

**Outline:** Topics: Consumption, Investment, the Exchange Rate and External Balance, the Market for Money, Economic Growth.

**EC23J (ECON200?): ECONOMIC STATISTICS**

**Outline:** The use of statistical analysis in Economics; Examples from economics are used for implementing statistical tools such as: Sampling Techniques, Regression, Index Numbers, Time Series, Forecasting, Input-Output, National Income Accounting and other Economic Statistics.

**EC23K (ECON2007): BUSINESS STATISTICS**

**Outline:** The use of statistical analysis in business at production and marketing stages (Quality Control Charts, Market Research, Sample Surveys on demand for the product e.t.c.), Organization and presentation of business data, Probability Theory, Discrete Probability Distributions, Continuous Probability Distributions, Sampling Distributions, Test of Hypothesis, Regression and Correlation Techniques, Categorical Data Analysis, Time Series and Projections, Quality Control Methods, Applied Analysis of Variance (ANOVA).

**EC23L (ECON2008): STATISTICAL METHODS I**

**Outline:** Estimation and Hypothesis Testing (Expected Value, Properties of Estimators, Methods of Estimation, Central Limit Theorem, Distribution of Sample Mean and Proportion, Interval Estimation, Large and Small Samples, Hypothesis testing, Types of Errors, T, F and  $X^2$  Distributions, Inferences about Means and Proportions from two populations); Non-Parametric Methods (Situations where NP methods are applied, Runs Test, Mann-Whitney U-Test, Wilcoxon Signed Rank Test); Regression and Correlation (Simple and Multiple Regression, Polynomial Regression, Simple and Partial Correlation).

**EC23M (ECON2009): STATISTICAL METHODS II**

**Outline:** Regression Analysis (Simple and Multiple Regression Analysis, Residual Analysis, Model Selection Procedures), Time Series Analysis (Smoothing and Decomposition Methods, Test of Randomness, Box Jenkins Methods), Analysis of Variance (ANOVA) and Experimental Design (One-way and Two-way Classifications, Fixed, Random and Mixed Effects Model, Latin Squares, Simple Factorial Experiments) and Analysis of Covariance.

**EC23P (ECON2010): STATISTICAL COMPUTING**

**Objective:** This is a practical course that has been designed to teach students to perform data analysis using a variety of computer packages. SPSS will be the main package employed. On completing the course students should be able to generate statistical formulae using computer software and to analyze and evaluate the resultant output.

**EC23T (ECON2014): SAMPLING METHODS FOR BUSINESS AND SOCIAL SCIENCES**

**Outline:** Practical aspects of Sampling, Polls and Census; Types of Sampling; Simple Random Sampling; Stratified Sampling; Systematic Sampling; Planning and Execution of Social Sample Surveys/Censuses.

**EC24J (ECON2017): CALCULUS II FOR BUSINESS & SOCIAL SCIENCES**

This course is a continuation of Calculus I. Differential and Integral Calculus have widespread applications in several areas of the Social Sciences. Therefore this course will prove invaluable to any serious social scientist.

**Outline:** Optimization of Functions of n Variables; Non-Linear Programming (Kuhn-Tucker conditions); Differential Equations; Difference Equations; Optimal Control Theory

**EC24N (ECON2019): MATRIX ALGEBRA FOR BUSINESS AND SOCIAL SCIENCES**

This course provides an introduction to some of the more important topics in the field of Matrix Algebra. Matrix Algebra has widespread applications in the fields of Economics, Psychology and Sociology. Therefore it is essential for students majoring in any of the aforementioned fields to have a working knowledge of Matrix Algebra.

**Outline:** Systems of Linear Equations; Matrices and Matrix Algebra; Determinants and Inverses; Vectors; Eigenvalues and Eigenvectors; Quadratic Forms.

#### **EC25F (ECON2020): THE CARIBBEAN ECONOMY**

**Objective:** This course seeks to introduce the student to the unique characteristics of the Caribbean economy, highlighting the challenges faced and the opportunities that beckon. A brief history of the Caribbean economies will precede an examination of the structure and performance of the economies, with focus being placed on crucial domestic and international issues. The course will also highlight numerous impacts of globalization on the small economies of the Caribbean, and will examine the challenges and possibilities associated with economic integration in the region.

#### **EC25J (ECON2021): CARIBBEAN ECONOMIC PROBLEMS**

**Outline:** The course will examine themes in the following areas: Tourism; Manufacturing; Mining; Agriculture, Financial Services, The Informal Economy, The Role of the State, Income Distribution and Poverty, Adjustment Problems, Economic Integration.

#### **EC26P (ECON2023): INTERNATIONAL ECONOMIC RELATIONS I**

**Objective:** The objective of this course is to introduce students to International Economic Relations. Special consideration is given to the position of developing countries in the International Economic System.

**Outline:** The main topics covered include: the characteristics of underdevelopment, trade and development, economic integration, globalisation and international economic institutions.

#### **EC26Q (ECON2024): INTERNATIONAL ECONOMIC RELATIONS II**

**Outline:** This course covers a range of topics relevant to the Caribbean region. These topics include: Evolution of International Economic Relations from Mercantilism to the present; International Monetary Arrangements; International Trade and Policy.

#### **EC30M (ECON3005): MONETARY ECONOMICS**

**Outline:** This course is designed to cover basic materials in modern Monetary Theory: the Demand for and Supply of Money and Credit; Interest Rate Theory, and Inflation. The conduct of Monetary Policy and its effect on economic activity and the price level will also be discussed.

#### **EC30N (ECON3006): INTERNATIONAL TRADE THEORY AND POLICY**

**Objective:**

- To provide an introduction to International Trade and Theory
- To develop a critical awareness of International Trade Policy with special reference to the less developed countries.

**Outline:** The Law of Comparative Advantage, The Basic Geometry of the Gains from Trade, The Heckscher-Ohlin Theory, New Trade Theories, Economic Growth and International Trade, The Theory of Tariffs, Non-Tariff Trade Barriers, Economic Integration, International Trade and Economic Development, The World Trade Organization.

#### **EC30P (ECON3007): INTERNATIONAL FINANCE**

**Outline:** The Balance of Payments, The Foreign Exchange Markets, Interest Parity Foreign Exchange Risk, International Investment, Theories of the Balance of Payments, Exchange Rate Theories, International Banking

#### **EC31F (ECON3010): FINANCE AND DEVELOPMENT**

**Outline:** This course examines the relationship between finance and economic development. It focuses on critical issues such as: the role of the financial sector in fostering economic growth and alleviating poverty; government policies for the financial sector and their impact on development; and the impact of financial sector crises on economic development. Other local and international sources of finance and their impact on development will also be examined. A key feature of this course will be a number of guest lectures by industry experts.

**Outline:** Topics include: The relationship between the financial sector and economic growth; The role of credit unions; The role of development banks; The role of microfinance; Financial Repression; Financial Liberalization; Financial Regulation and Supervision; Causes and Consequences of, and Responses to Financial Crises; Government Taxation and Borrowing; Private Portfolio Investment.

#### **EC31N (ECON3016): PUBLIC FINANCE I**

**Outline:** This course deals with the evolving role of government in a democratic society. It covers market efficiency, market failures, efficiency and equity or fundamentals of welfare economics; public goods and publicly provided private goods, public mechanisms for allocating resources, alternatives for determining public goods expenditures, externalities and the environment and cost-benefit analysis.

#### **EC31P (ECON3017): PUBLIC FINANCE II**

**Outline:** This course deals with taxation in both theory and in the context of small open economies like Jamaica. It discusses the background of taxation, the incidence of taxation, the efficiency of taxation, issues relating to optimal taxation, tax avoidance, and the recent developments and reforms proposed by the tax review committee in the Jamaica and other developing countries.

### **EC32J (ECON3021): SUSTAINABLE ECONOMIC DEVELOPMENT AND ENVIRONMENTAL PLANNING**

**Objective:**

- To apprise students of the economic tools and techniques applicable for effective environmental management decisions;
- To explore the impact of development policy on environmental management of small developing states and discuss the options available;
- To examine national, regional and global trends in environmental management and the trade-offs between environmental protection and socio-economic considerations in the short and long run;
- Attempt to identify the foremost environmental problems using economic tools essential for effective policy decisions

**Outline:** Sustainable Development, The Economic Theory of Resources and Environment Introduction - Sustainable Development (Defining Sustainable Development, Conditions for Sustainable Development, Intergenerational Equity, the Environmental Resource Base and Human Welfare, Indicators of Sustainability); the Economic System and the Environment (What is Economics, The Market as a Social Process, Environmental Economics, Property Rights, Externalities and Environmental Problems, Pollution and Pollution Control); Current Issues in Resource Accounting (The National Product as a Welfare Measure, an Overview of Conventional National Income Accounting, Estimating the Net National Product as an Index of Social Well-being, Issues in the Construction of a Green National Product, Flows of Goods and Services, Discussion of a Hypothetical Green Accounting System).

### **EC32K (ECON3011): ECONOMICS OF FINANCIAL INSTITUTIONS**

**Objective:** The nature and role of financial institutions in an economy; The economic and financial environment in which Financial Institutions operate; Commercial Banks (performance analysis, structure and regulation); Selected areas in the management of Commercial Banks and non-bank Financial Intermediaries (liquidity measurement, lending policies, investment policies, capital management, and asset and liquidity); Non-bank financial intermediaries (credit unions, building societies, money market funds, life and non-life insurance companies, pension funds, finance companies and investment companies).

### **EC32L (ECON3022): ECONOMICS OF COMMERCIAL BANKING**

**Objective:** Understanding how banks operate is vital in the real world whether you (or your business) is engaged in borrowing, lending, local or international financial transactions, training in financial markets or bank regulation. This course examines the role commercial banks perform in an economy and highlights the basic principles of commercial bank management. The course profiles the financial services provided by commercial banks, as well as dealing with issues related to managing assets and mobilising funds. As far as possible, the focus will be on applying the principles outlined to commercial bank operations in the context of a developing country.

**Outline:** The specific topics covered follow: Commercial banks and their services; the impact of government policy and regulation on banking; the organisation and structure of commercial banks and the banking industry; measuring and evaluating bank performance; asset-liability management techniques; managing the bank's investment portfolio and liquidity position; the management of bank sources of funds; bank lending - policies and procedures, business and consumer loans; banking crises - origins, effects and policy responses.

### **EC32W (ECON3006): CREDIT ANALYSIS AND LENDING**

**Outline:** This course is designed to provide students with a basic, but solid, understanding of the theoretical and practical issues associated with credit analysis and lending. Course topics include lending theory, credit risk management, analysis of various lending products, management of loan portfolios and problem loans.

**Objective:** The fundamental objective of the course is to present students with an understanding of sound banking practices in the area of lending by banks. In addition, students will be able to identify a borrower's needs as well as structure a loan for the client of a financial institution and manage the loan.

### **EC33P (ECON3031): PROBABILITY AND DISTRIBUTION THEORY FOR BUSINESS AND SOCIAL SCIENCES**

**Outline:** Concepts (classical probability, mathematical and empirical concepts of probability in terms of set theory concepts of events (mutually exclusive, conditional, independent etc.), axioms and rules of probability - Baye's theorem etc. Mathematical expectation (random variables, expectations, probability frequency function, probability density functions, joint density function, moments and moment generating function, Chebysheff's theorem, law of large numbers etc.); Probability distributions (discrete uniform distribution, binomial distribution, hypergeometric distribution, family of exponential distributions, normal distribution and normal approximation to the binomial distribution etc.); sampling distributions t, chi-square and F distributions - applications).

### **EC33Q (ECON3032): STATISTICAL ESTIMATION AND INFERENCE BUSINESS AND SOCIAL SCIENCES**

**Outline:** Concepts of estimation, estimate and estimator - point estimate and interval estimation - desirable properties of a point estimator; estimation theory (mathematical definition/ concept of desirable properties of the estimators (techniques of estimation of parameters, method of moments, method of maximum likelihood and Minimum Variance Unbiased (MVU) estimators Cramer-Rao inequality etc., confidence intervals for the mean, variance and differences between means etc. - applications; hypothesis testing (basic concepts in hypothesis testing type I

and type II errors, level of significance etc., Neyman-Pearson lemma - Power function of a test, likelihood ratio tests - Application in terms of normal, t, F and Chi-square tests etc. - Sequential analysis; regression and correlation (estimation in linear, bivariate and multiple regression - Least squares estimation - method of estimation of correlation coefficients etc.

#### **EC34L (ECON3037): OPERATIONS RESEARCH I**

**Outline:** Constrained and Unconstrained Static Optimization, Linear Programming-Graphical Method, Simplex Method, Two-Phase Method, Dual Simplex Method, Linear Programming Models: Transport, Assignment; Advanced Linear Programming: Revised Simplex Method, Network Theory, Queuing Theory, Goal Programming.

#### **EC34M (ECON3038): OPERATIONS RESEARCH II**

**Outline:** Introduction to Game Theory: The Normal Form, The Extensive Form; Static Games with Complete Information: Pure Strategy Nash Equilibrium, Mixed Strategy Nash Equilibrium; Dynamic Games with Complete Information: Subgame Perfect Equilibrium; Games with Incomplete Information: Bayesian Nash Equilibrium, Perfect Bayesian Nash Equilibrium; Applications: Oligopoly, Strategic Trade Policy, Bargaining.

#### **EC34Q (ECON3067): APPLIED ECONOMETRICS**

**Outline:** This course presumes knowledge of the material covered in Econ3049. The student is introduced to the multivariate regression model at the outset. Extensive use is made of matrix algebra throughout. The CLRM is reviewed and the properties of the ordinary least squares estimators discussed. Students are exposed to alternative estimation techniques including the use of instrumental variables, the method of maximum likelihood and the method of moments. The course covers advanced topics including models with lagged dependent variables, simultaneous equation systems and time series econometrics. Diagnostic problems and problems of estimation are emphasized. A project paper is required from each student. Specific case studies will be taken from Caribbean economic activity and econometric models of various Caribbean countries will be reviewed. Computing Packages will be used extensively in exploring the content of the course.

#### **EC34R (EC3040): NON-PARAMETRIC STATISTICS FOR BUSINESS AND SOCIAL SCIENCES**

**Outline:** Non-parametric Estimation and Tests of Hypothesis (the Binomial Test and Estimation of p, Order Statistics, the Quantile Test and Estimation of  $x_p$ , the Sign Test, Variations of the Sign Test); Contingency Tables - r x c Contingency Tables, the Median Test, Measures of Dependence, the Chi-square goodness of Fit Test; Statistical Inferences based on ranks and other topics will be examined.

#### **EC36C (ECON3049): ECONOMETRICS I**

**Outline:** This is an introductory course. In the context of the simple two-variable model the classical linear regression model (CLRM) is thoroughly examined. Ordinary least squares estimators and the Gauss-Markov theorem in regression are presented. Tests of hypotheses, confidence intervals are covered. Problems that arise when the assumptions of the CLRM are relaxed are examined. The basic Linear Regression Model Assumptions, Ordinary Least Squares, Properties of least Squares Estimators. Estimation of Economic Models, Testing of Economic Hypothesis Using Various Test Statistics; Multiple Co linearity, Seasonality, Dummy Variables, Auto Correlation and Specification Errors, Applicators of Econometric Methods to Specific Caribbean examples.

#### **EC36M (ECON3051): ECONOMIC DEVELOPMENT: PERSPECTIVES AND THEORIES**

**Objective:** This course introduces the field of economic development. It examines a number of definitions and measures of development and highlights the structural diversity and common characteristics of less developed countries (LDCs). The theories of development are reviewed, and numerous multi-disciplinary perspectives on development are highlighted.

**Outline:** Topics include: Development economics and the Concept of Development; Classification of Developing Countries using Statistical indices; Caribbean Development Overview; Multi-Disciplinary Perspectives on Development (Culture and Development, The Politics of Development, Gender and Development, The Environment and Development); Theories of Development and Underdevelopment (Limiting Factor Theories, Stages of Growth Theories, Structural Change Models, External/International/Dependence Explanations of Underdevelopment, The Neo-Classical Counter-Revolutionary Models; The New Growth Theory).

#### **EC36N (ECON3052): ECONOMIC DEVELOPMENT POLICIES**

**Objective:** This course addresses some of the major economic policy challenges now facing developing countries, with particular reference to the Caribbean. Domestic issues such as poverty, unemployment and income distribution will be examined, as will be a number of crucial international trade and debt issues. The Stabilization Programmes of the IMF, as well as the Structural Adjustment Programmes of the World Bank will be critically reviewed. Focus will also be placed on crucial issues related to sustainable development.

**Outline:** Topics include: The Concept and Indices of Economic Development; Roles of the State and the Market in the Development Process; Selected Domestic Problems and Policies (Poverty, Income Distribution, Unemployment, Rural-Urban Migration, Sustainable Development); Selected International Problems and Policies (Common Trade Problems Faced by LDCs, Trade Strategies for Development, Foreign Direct Investment and Foreign Aid, LDC Debt Crisis, IMF Stabilization Programmes, World Bank Structural Programmes).