

## **ELECTRICAL/ELECTRONICS DEPARTMENT**

***Chair: Mr. Robert Modeste***

We pledge to take you from where you are to where you want to go.

In our department, we strive to make learning as exciting and interesting as possible while not compromising the technical knowledge that the programs demand. It is our belief that for any society to advance, it must possess a high caliber of skilled technicians especially in the fields of Electronics, Electricity, Computer Technology, and Refrigeration and Air Conditioning. As such, we are endeavoring to train well equipped technicians who will be able to cater to the needs of the society as they arise.

### **Programs**

The programs offered in the Electrical/Electronic Technology Department are Refrigeration Technology, Electrical Engineering Technology, Micro Computer Technology and Consumer Electronic Technology.

The Consumer Electronic Technology Program is offered at two levels: Technician Level and the Associate Degree. The Micro computer Technology also runs at the same two levels. Presently, the other two programs are offered at the Technician level.

### ***Programs offered and Teaching Faculty***

| <b>No.</b> | <b>Programs Offered</b>   | <b>Teaching Faculty</b>   |
|------------|---|---|
| 1.         | Associate of Applied Science Degree<br>in Micro-Computer Repair<br><br>Level II Certificate in Mirco-<br>Computer Repair Technology         | Mr. Robert Modeste<br>Mr. George Matthew  |
| 2.         | Associate of Applied Science Degree<br>in Consumer Electronics Technology<br><br>Level II Certificate in Consumer<br>Electronics Technology | Mr. Carl John<br>Mr. Elbert Phillip   |
| 3.         | Level II Certificate in Electrical<br>Engineering Technology<br><br>Level I Certificate in Electrical<br>Engineering Technology             | Mrs. Patricia Benjamin<br>Mr. Telfa Charles<br>Mr. Rudolph Harris<br>Mr. Vladimir Hernandez |
| 4.         | Level II Certificate in Refrigeration<br>and Air Conditioning   | Mr. Michael Cadore<br>Mr. Peter Hosten  |

|  |  |  |
|--|--|--|
|  | Level I Certificate in Refrigeration<br>and Air Conditioning |  |
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## PROGRAMMES

### Associate of Applied Science Degree in Micro-Computer Repair Technology Technician Level II Certificate in Micro-Computer Repair Technology

#### ENTRY REQUIREMENTS

- **Associate Degree and Level II Certificate:** Applicants should have a minimum of four CSEC/GCE passes including Mathematics, English language, a science subject and any other. Students who have six subjects or more but lack Mathematics and/or Language may be given a provisional entry with the proviso that the student provides evidence of having acquired the qualification before the beginning of the second year.
- Mature students – a person 25 years or older with the relevant work experience in the field will be considered
- The prospective trainee will also have to show an aptitude and an interest in the discipline.

#### PROGRAMME OUTLINE

| Course Number        | Course Name                         | Credits    |
|----------------------|-------------------------------------|------------|
| <b>MAJOR COURSES</b> |                                     |            |
| HEL110               | Health and Safety                   | 2 Credits* |
| MCR112               | Computer Basics                     | 3 Credits* |
| MCR114               | Primary System Components           | 3 Credits* |
| MCR120               | Operating Systems                   | 3 Credits* |
| MCR122               | Storage Devices                     | 3 Credits* |
| MCR130               | Peripheral Devices                  | 3 Credits* |
| ELS132               | Digital Electronics                 | 3 Credits* |
| MCR212               | Networking I                        | 3 Credits* |
| MCR214               | Printers                            | 2 Credits* |
| MCR220               | Networking II                       | 3 Credits* |
| MCR222               | Advanced Troubleshooting Techniques | 2 Credits* |
| MCR226               | Project (Individual or group)       | 4 Credits* |
| ELS 228              | Control Systems                     | 3 Credits  |
| MAT221               | Advanced Mathematics                | 3 Credits  |
| ELS120B              | Electronic Circuits & Units         | 2 Credits  |
| ELS130B              | Telecommunication                   | 2 Credits  |
| ELS112B              | Electronic Components               | 2 Credits  |

|   |                               |                       |
|---|-------------------------------|-----------------------|
| ELS224                                    | Monitor and Television Repair | 2 Credits             |
| ELS114B                                   | Instruments and Tools         | 2 Credits*            |
| <b>RELATED COURSES</b>                    |                               |                       |
| ELY110                                    | Related Electricity           | 2 Credits             |
| CAD211                                    | Computer Aided Design         | 3 Credits             |
| PRO110                                    | Introduction to Programming   | 2 Credits             |
| PHY110                                    | Related Science               | 2 Credits             |
| WEB110                                    | Web Page Design               | 2 Credits             |
| MAT121                                    | Applied Mathematics 1         | 3 Credits             |
| MAT211                                    | Applied Mathematics 2         | 3 Credits             |
| <b>GENERAL EDUCATION COURSES</b>          |                               |                       |
| MAT110                                    | Fundamentals of Mathematics   | 3 Credits*            |
| COM100                                    | English & Communication 1     | 3 Credits*            |
| COM121                                    | English & Communication 2     | 3 Credits*            |
| SOS111                                    | Social Skills                 | 3 Credits             |
| ENT211                                    | Entrepreneurial Skills        | 3 Credits             |
| ICT120                                    | Computer Applications         | 3 Credits             |
| PHI200                                    | Critical Thinking             | 3 Credits*            |
| CAS101                                    | Caribbean Studies             | 3 Credits*            |
| COS101                                    | Community Services            | 1 Credit*             |
| <b>Total Credits Possible for Program</b> |                               | <b>92<br/>Credits</b> |

## GRADUATION REQUIREMENTS

1. A candidate for graduation must meet the requirement in one of the following areas:

- **Associate Degree:** Students will be required to obtain a minimum of 78 credits: 47 credits in the major courses, 12 credits in the related courses and 19 credits in the general education. All major and related courses must be passed with at least a Grade "C".

For the above the students will be required to obtain 6 credits from Communication Skills, 3 credits from Mathematics/Science, 3 credits from Critical Thinking, 3 credits from Caribbean Studies, 3 credits from Computing, and 1 credit from Community Services/Physical Education.

- **Level II Certificate:** Students will be required to obtain a minimum of 55 credits: 35 credits in the majors, 8 credits in the related courses and 12 credits in general

education courses. All major and related courses must be passed with at least a Grade "C".

For the above successful passes are required in approved major courses. In addition, students are expected to obtain credits from approved courses in the following areas: 3 credits from Communication Skills, 3 credits from Mathematics/Science, 3 credits from Computing, and 3 credits from Entrepreneurial Skills.

2. Have at least 85% attendance in all classes.
3. Obtain a cumulative Grade Point Average (GPA) of at least 2.00.

**Associate of Applied Science Degree in Consumer Electronics Technology**  
**Technician Level II Certificate in Consumer Electronics Technology**

**ENTRY REQUIREMENTS**

- **Associate Degree and Level II Certificate:** Applicants should have a minimum of four CSEC/GCE passes including Mathematics, English language, a science subject and any other. Students who have six subjects or more but lack Mathematics and/or Language may be given a provisional entry with the proviso that the student provides evidence of having acquired the qualification before the beginning of the second year.
- Mature students – a person 25 years or older with the relevant work experience in the field will be considered.

**PROGRAMME OUTLINE**

| <b>Course Number</b>   | <b>Course Name</b>            | <b>Credits</b> |
|------------------------|-------------------------------|----------------|
| <b>MAJOR COURSES</b>   |                               |                |
| HEL110                 | Health and Safety Practices   | 2 Credit*      |
| ELS112                 | Electronic Components         | 3 Credits*     |
| ELS114                 | Instruments and Tools         | 2 Credits*     |
| ELS120                 | Electronic Circuits and Units | 3 Credits*     |
| ELS122                 | AC Electronics                | 2 Credits*     |
| ELS132                 | Digital Electronics           | 3 Credits*     |
| ELS130                 | Telecommunication Systems     | 3 Credits*     |
| ELS210                 | Consumer Products 1           | 3 Credits*     |
| ELS212                 | Control Systems               | 3 Credits      |
| ELS220                 | Consumer Products 2           | 3 Credits*     |
| ELS226                 | Project (Individual or Group) | 4 Credits*     |
| ELS222                 | Troubleshooting Techniques    | 2 Credits*     |
| ELS224                 | Security Systems              | 2 Credits*     |
| MAT221                 | Advanced Mathematics          | 2 Credits      |
| MCR112B                | Computer Basics               | 2 Credits*     |
| MCR120B                | Operating Systems             | 2 Credits      |
| MCR114B                | Primary System Components     | 2 Credits      |
| MCR122B                | Storage Devices               | 2 Credits      |
| MCR130B                | Peripheral Devices            | 2 Credits      |
| <b>RELATED COURSES</b> |                               |                |

|   |                             |                   |
|---|-----------------------------|-------------------|
| ELY110                                    | Related Electricity         | 2 Credits         |
| CAD211                                    | Computer Aided Design       | 2 Credits         |
| PRO110                                    | Introduction to Programming | 2 Credits         |
| PHY110                                    | Related Science             | 2 Credits         |
| MAT121                                    | Applied Mathematics 1       | 2 Credits         |
| MAT211                                    | Applied Mathematics 2       | 2 Credits         |
| <b>GENERAL EDUCATION COURSES</b>          |                             |                   |
| MAT110                                    | Fundamentals of Mathematics | 3 Credits*        |
| COM100                                    | English & Communication 1   | 3 Credits*        |
| COM121                                    | English & Communication 2   | 3 Credits*        |
| SOS111                                    | Social Skills               | 3 Credits         |
| ENT211                                    | Entrepreneurial Skills      | 3 Credits         |
| ICT120                                    | Computer Applications       | 3 Credits         |
| PHI200                                    | Critical Thinking           | 3 Credits*        |
| CAS101                                    | Caribbean Studies           | 3 Credits*        |
| COS101                                    | Community Services          | 1 Credit*         |
| <b>Total Credits Possible for Program</b> |                             | <b>84 Credits</b> |

*\* Courses required for Level II Certification*

## GRADUATION REQUIREMENTS

1. A candidate for graduation must meet the requirement in one of the following areas:

- **Associate Degree:** Students will be required to obtain a minimum of 77 credits: 46 credits in the major courses, 12 credits in the related courses and 19 credits in the general education. All major and related courses must be passed with at least a Grade “C”.

For the above, the students will be required to obtain 6 credits from Communication Skills, 3 credits from Mathematics/Science, 3 credits from Critical Thinking, 3 credits from Caribbean Studies, 3 credits from Computing, and 1 credit from Community Services/Physical Education.

- **Level II Certificate:** Students will be required to obtain a minimum of 55 credits: 34 credits in the majors, 9 credits in the related courses and 12 credits in general education courses. All major and related courses must be passed with at least a Grade “C”.

For the above, successful passes are required in approved major courses. In addition, students are expected to obtain credits from approved courses in the following areas: 3 credits from Communication Skills, 3 credits from Mathematics/Science, 3 credits from Computing, and 3 credits from Entrepreneurial Skills.

2. Have at least 85% attendance in all classes.
3. Obtain a cumulative Grade Point Average (GPA) of at least 2.00.

**Technician Level II Certificate in Electrical Engineering Technology**  
**Technician Level I Certificate in Electrical Engineering Technology**

**ENTRY REQUIREMENTS**

- **Level II and Level I Certificate:** Applicants should have a minimum of three CSEC/GCE subjects including Mathematics and English Language. A science subject (especially Physics) will be an asset. Students who have six subjects or more but lack Mathematics and/or Language may be given a provisional entry with the proviso that the student provides evidence of having acquired the qualification before the beginning of the second year.
- Mature students – a person 25 years or older with the relevant work experience in the field will be considered.
- The prospective trainee will also have to show an aptitude and an interest in the discipline.

**PROGRAM OUTLINE**

| Course Number        | Course Name                         | Credits    |
|----------------------|-------------------------------------|------------|
| <b>MAJOR COURSES</b> |                                     |            |
| HEL110               | Health and Safety Practices         | 2 credits* |
| ELY112               | Circuit Analysis                    | 3 credits* |
| ELY113               | Distribution Systems                | 3 credits* |
| ELY120               | Measurements                        | 3 credits* |
| ELY124               | Planning and Arrangement 1          | 3 credits* |
| ELY211               | Electrical Machines                 | 3 credits* |
| ELY130               | Semi-conductor Devices              | 3 credits  |
| ELY212               | Planning and Arrangement 2          | 3 credits  |
| ELY220               | Control Systems                     | 3 credits  |
| ELY224               | Project Design                      | 3 credits* |
| ELY132               | Logic and Switching Circuits        | 3 credits  |
| ELY228               | Advanced Troubleshooting Techniques | 2 credits* |
| ELY226               | Use and Care of Tools               | 2 credits* |
| <b>RELATED AREAS</b> |                                     |            |
| BTG 110A             | Architectural Drawing               | 2 credits* |
| BTG 110B             | Architectural Drawing               | 2 credits* |
| CAD 211              | Computer aided design               | 2 credits  |
| BLC 111              | Related Construction                | 2 credits  |

|   |                             |                       |
|---|-----------------------------|-----------------------|
| PLB 110                                   | Related Plumbing            | 2 credits             |
| ELS110                                    | Related Electronics         | 2 credits             |
| <b>GENERAL EDUCATION</b>                  |                             |                       |
| MAT110                                    | Fundamentals of Mathematics | 3 credits*            |
| MAT121                                    | Applied Mathematics 1       | 3 credits             |
| COM100                                    | English & Communication 1   | 3 credits*            |
| SOS111                                    | Social Skills               | 3 credits             |
| ENT211                                    | Entrepreneurial Skills      | 3 credits             |
| ICT110                                    | Introduction to Computers   | 3 credits             |
| <b>Total Credits Possible for Program</b> |                             | <b>66<br/>Credits</b> |

*\* Courses required for Level I Certification*

**GRADUATION REQUIREMENTS**

1. A candidate for graduation must meet the requirement in one of the following areas:

- **Level II Certificate:** Students will be required to obtain a minimum of 55 credits: 35 credits in the majors, 8 credits in related courses and 12 credits in general education courses.

For the above, students are expected to obtain credits from approved courses in the following areas: 3 credits from Communication Skills, 3 credits from Mathematics, 3 credits of computing, and 3 credits from Entrepreneurial Skills.

- **Level I Certificate:** A student must obtain a minimum of 36 credits: 24 credits in the major courses, 6 credits in the related courses, 6 credits in the general education.

For the above, students are expected to successfully complete 3 credits from Communication Skills and 3 Credits from Mathematics.

2. Have at least 85% attendance in all classes.

3. Obtain a cumulative Grade Point Average (GPA) of at least 2.00.

**Technician Level II Certificate in Refrigeration & Air Conditioning**  
**Technician Level I Certificate in Refrigeration & Air Conditioning**

**ENTRY REQUIREMENTS**

- **Level II and Level I Certificate:** Applicants must have passes in a minimum of 4 CSEC/GCE subjects including English, at grades I, II or III. Mathematics and/or a science subject would be an asset. However, students without the English requirement may be given provisional entry with the proviso that the student submits evidence of having acquired the equivalent qualification before the beginning of the second year.
- Mature students (25 years and older) with the relevant employment experience will be considered.

**PROGRAM OUTLINE**

| <b>Course Number</b> | <b>Course Name</b>          | <b>Credits</b> |
|----------------------|-----------------------------|----------------|
| <b>MAJOR COURSES</b> |                             |                |
| HEL110               | Health and Safety Practices | 2 credits*     |
| RAC112               | Refrigeration Fundamentals  | 3 Credits*     |
| RAC124               | Welding and Brazing         | 3 Credits*     |
| RAC116               | Tools & Instruments         | 3 Credits*     |
| RAC121               | Domestic Refrigeration 1    | 3 Credits      |
| RAC224               | Auto AC Systems             | 2 Credits      |
| RAC130               | Domestic Refrigeration 2    | 3 Credits      |
| RAC212               | Commercial Refrigeration    | 3 Credits*     |
| RAC222               | Air Conditioning Systems    | 3 Credits      |
| RAC214               | Control Systems             | 3 Credits      |
| RAC132               | Heating Systems             | 3 Credits<br>* |
| RAC226               | Individual Projects         | 4 Credits*     |
| RAC228               | Troubleshooting Techniques  | 2 Credits*     |
| <b>RELATED AREAS</b> |                             |                |
| BTG 110A             | Architectural Drawing       | 2 credits*     |
| BTG 110B             | Architectural Drawing       | 2 credits*     |
| CAD 211              | Computer aided Design       | 2 credits      |
| BLC 111              | Related Construction        | 2 credits      |
| PLB 110              | Related Plumbing            | 2 credits      |
| ELS110               | Related Electronics         | 2 credits      |

|   |                             |                       |
|---|-----------------------------|-----------------------|
| ELY110                                    | Related Electricity         | 2 Credits             |
| DCF110                                    | Duct Fabrication            | 2 Credits             |
| <b>GENERAL EDUCATION</b>                  |                             |                       |
| MAT110                                    | Fundamentals of Mathematics | 3 credits*            |
| MAT121                                    | Applied Mathematics 1       | 3 credits             |
| COM100                                    | English & Communication 1   | 3 credits*            |
| SOS111                                    | Social Skills               | 3 credits             |
| ENT211                                    | Entrepreneurial Skills      | 3 credits             |
| ICT110                                    | Introduction to Computers   | 3 credits             |
| <b>Total Credits Possible for Program</b> |                             | <b>71<br/>Credits</b> |

*\* Courses required for Level I Certification*

## GRADUATION REQUIREMENTS

1. A candidate for graduation must meet the requirement in one of the following areas:

- **Technician Level II Certificate:** For a student to graduate from the programme, he/she is expected to obtain an overall minimum of 58 credits, 36 of which must come from the major areas, 10 from the related and 12 from the general education areas. All major and related courses must be passed with a minimum “C” grade.

For the above, students are expected to obtain credits from approved courses in the following areas: 3 credits from Communication Skills, 3 credits from Mathematics, 3 credits of Computing, and 3 credits from Entrepreneurial Skills.

- **Technician Level 1 Certificate:** This certificate will be given to students who obtain a minimum of 37 credits, 25 of which must come from the major areas, 6 from the related areas and 6 from the General Education Area. All major and related courses must be passed with a minimum “C” grade.

For the above, students are expected to successfully complete 3 credits from Communication Skills and 3 credits from Mathematics.

2. Have at least 85% attendance in all classes.
3. Obtain a cumulative Grade Point Average (GPA) of at least 2.00.

