

About FENC

In 1998 the University of Technology, Jamaica (UTech) was reorganized into five Faculties. Emerging from the rationalization of the university's academic and administrative units, the Faculty of Engineering and Computing (FENC) became an entity. FENC comprises the following schools:

- School of Engineering
- School of Computing and Information Technology

FENC is the second largest such faculty in the Caribbean region and it is also the second largest faculty within UTech.

Vision Statement

To be the preferred partner in providing education and training for engineering and computing scholarship in Jamaica and the Caribbean.

Mission Statement

Build an education and training framework that responds to local and regional needs by:

- Promoting excellence in staff, students and graduates.
- Emphasizing quality in teaching and research.
- Developing relevant curricula based on student-centred learning concepts.
- Fostering innovative use of technology in teaching methods and laboratory exercises.

- Maintaining a strong commitment to research, service and teamwork.
- Developing applied research projects for industrial renewal.
- Building collaboration with engineering and computing training institutions locally and internationally.



Application & Registration

1. Applications should be made on the prescribed form, which is available at the Student Affairs Office.
2. Course Participants are encouraged to register in advance by completing and submitting the application form
3. Final Payments should be made at least **two weeks** before commencement of the course. Payments are accepted in Cash, Debit/Credit Cards, or Manager's Cheques.

Cancellation

1. Courses may be cancelled where enrolment is insufficient, in which case, a refund of course fees will be made.
2. Student cancellation must be received one (1) week prior to the commencement of the course, failing which the individual or sponsor will be held responsible for the payment of fees.

Contact

Student Affairs Office

Faculty of Engineering & Computing
University of Technology, Jamaica
237 Old Hope Road, Kingston 6
Phone: (876) 970-5163, 970-5165
Email: nmgordon@utech.edu.jm



University of Technology,
Jamaica

Faculty of Engineering & Computing

Air-Conditioning & Refrigeration



"Solution Driven, Development Bound"

OBJECTIVE

To develop the competencies of practicing A-C & Refrigeration Technicians in satisfaction of industry standards as stipulated in the industry "Code of Practice". This code is the established guideline from the Ozone Commission of the National Environment & Planning Agency (NEPA) for the A-C & Refrigeration Industry. The course prepares participants with the knowledge required to perform effectively in the Air Conditioning and Refrigeration industry and as preparation for the American RETA—CARO certification

PRE-REQUISITE

There are no pre-requisites for the basic level. For the intermediate level, the basic level or a pre-test is required. With three passes at CXC General Proficiency with grades at 1&2 (Grade 3 as of 1998) or at GCE '0' Level, with grades at A, B or C. Compulsory subjects are English Language and Mathematics OR 1 year relevant work experience.

Basic Level 81 Hours

Introduction to Air Conditioning & Refrigeration

- Fundamental Principles
- Basic Refrigerant Circuit
- Basic Refrigeration process
- Refrigerants
- Basic Electric Components
- Basic Tools and Equipment

Further Introduction to Air Conditioning & Refrigeration

- Calculations using the Mollier Chart, T-S & P-h Diagrams
- Components (with cut-away-views and animations)
 - Compressors
- Evaporators
- Condensers
- Expansion Devices
- Electrical Circuits
 - Introduction to Electricity & magnetism
 - Introduction to Automatic Controls
- Workshop-Troubleshooting Basic Controls

Intermediate Level 78 Hours

Domestic, Commercial/Industrial Air-conditioning System

- Intermediate Principles
- Systems

- Domestic Systems
- Commercial/Industrial System
- Electronics for the Refrigeration & AC Technician

Domestic, Commercial and Industrial Refrigeration System

- Systems
- Components and Applications
- Detailed treatment of Electrical Motors

Good Practices in Air Conditioning & Refrigeration

- Good Practices
- Introduction to Hydro-Carbon (HC) Refrigerants
- Welding
- Occupational Health and Safety

Advanced Level 63 Hours

Workshop & Troubleshooting

- Workshop
- Safe Handling
- Troubleshooting
- System Conversion to Alternative Refrigerants

Introduction to Air Duct Design and Distribution

- Ducts, Distribution and Ventilation

EVALUATION

- Tests
- Class Participation
- Laboratory & Course work

AWARD

On successful completion of each level, , i.e. where a student gains a mark of at least 50%, the individual will be awarded a "Certificate of Competence." Preparations for the American Ret-Caro certification will be complete at the end of the intermediate level and students who successfully challenge the exams will be awarded their certification. Re-certification is the student 's responsibility.

