# PROGRAM GOAL
# COMPUTER ENGINEERING
# HIGHER DIPLOMA PROGRAM

**Goal:**

To provide an integrated educational experience directed toward development of the ability to apply pertinent knowledge to the solution of practical problems in the graduate's engineering technology specialty. To expand scientific and engineering knowledge by preparing our graduates for employment as technicians supervisors through innovative research and hands-on training that responds to the need and challenge of our ever-changing world.

# PROGRAM OBJECTIVES
# COMPUTER ENGINEERING
# HIGHER DIPLOMA PROGRAM

**The program should enable the student to:**

1. Contribute to society in a broad range of careers
2. Flourish professionally in an increasingly international and rapidly changing world
3. Effectively understand, use, develop, and implement modern Computer systems
4. Develop skills for clear communication and responsible teamwork, and to inculcate professional attitudes and ethics, so that one is prepared for the complex modern work environment
5. Acquire sufficient breadth and depth for successful subsequent upper-level studies, or lifelong learning
6. Develop and apply critical thinking skills, enhancing the ability to address unstructured problems specific to technical specialties in computer engineering
7. Acquire technical and managerial skills necessary to enter careers in the design, application, installation, management, operation and/or maintenance of computer systems

**PROGRAM OUTCOMES**
**COMPUTER ENGINEERING**
**HIGHER DIPLOMA PROGRAM**

**The graduate should be able to:**

1. Demonstrate an appropriate mastery of the knowledge, techniques, skills, and tools of modern engineering, including the use of modern computer-based technologies such as the writing of programs, the use of professional software, and the use of modern electronic media, effectively in the practice of computer engineering

2. Apply knowledge of:
   a. Science and engineering to the analysis of the performance of computer engineering processes and systems

   b. Advanced mathematics, including calculus, linear algebra, complex variables, vector calculus, and discrete mathematics necessary to analyze and design complex electrical and electronics devices, software, and computer systems containing hardware and software components.

   c. Transform methods, or applied deferential equations in support of computer systems

3. Design and conduct experiments in computer engineering, make engineering measurements, analyze and interpret data, and apply experimental results to improve processes

4. Apply creativity in the:
   a. Analyses, design, and implementation of computer systems

   b. Analyses and implementation of switching technologies, wide area networking technologies, and policy

5. Function effectively on multidisciplinary teams involving people from diverse backgrounds

6. Identify and address problems in computer engineering by extending the concept of simple building blocks to system level design

7. Communicate effectively through a series of peer and faculty reviews, to include oral and written reports

8. Employ study skills and computer knowledge for lifelong learning for a successful career in computer engineering

9. Demonstrate knowledge of the professional and ethical responsibilities incumbent upon the practicing computer technician

10. Demonstrate the knowledge of contemporary global and societal issues and their relationship to professional ethics and engineering solutions

11. Demonstrate commitment to quality, timeliness, and continuous improvement