Assembly Language

- **Course number and name:**
  CC 417 – Assembly Language

- **Credits and contact hours**
  Credits Hours: 3Hrs
  Contact Hours: In Lecture 2Hrs, In Tutorial 2Hrs.

- **Instructor's or course coordinator's name**
  Coordinator Name: Prof. Dr. Ahmed Fahmy

- **Text book, title, author, and year**
  - Irvine K.R. "Assembly language for Intel-based computers" (4ed., PH, 2003)

- **Specific course information**
  - **a. Catalog description**
    Introduction to 80386 instructions & directories, Assembly language fundamentals, Input/Output operations, conditional processing, Arithmetic, string processing, disk storage, file processing, terminate and stay resident programs (TSRs), Bootloaders, Protected mode, Project.
  - **b. prerequisites or co-requisites**
    Prerequisites: CC421
  - **c. Type of the course (required, elective, or selected elective course) in the program**
    Elective Course

- **Specific goals for the course**
  - **a. Specific outcomes of instruction**
    After the completion of this course the students will be able to:

	Course Learning Outcomes	SO
1	Learn the assembly language instructions set, directives, macros, and data allocation statements.	B
2	Interact with the operating system including memory management and input/output services.	D
3	Introduction to the hardware and software architectures and assembly language fundamentals.	J
4	Use the assembler. Apply input/output services conditional processing, arithmetic and string operations.	B,D

Topics to be covered

- Introduction to assembly
- Layout of assembly program
- Assemble, link and run programs
- Input/Output services
- Program control instructions and skills
- Structure programming
- Arithmetic skills
- Numeric concepts
- String properties
- Create libraries
- Macro usage
- Disk manipulation
- Disk and file usage
- Boot loaders
- Protected mode