CIS 2570

Division: Career and Technical Education
Department: Computer Information Systems
Course: CIS 2570
Title: Programming Language - PC Assembler Language
Catalog Description:

This is a course presenting programming concepts, commonly used instructions, actual programming and debugging in the native language of the defacto industry standard PC microcomputer. It includes use of Assembler subroutines by other languages to perform functions which are awkward or impossible to do in the host languages.

General Education Requirements: N/A
Semesters Offered: TBA
Credit/Time Requirement: Credit: 3; Lecture: 3; Lab: 1
Clock/Hour Requirements: 60
Offered for Non-Credit: No
Prerequisites: CIS 1050

Corequisites: None

Justification:

Job Entry:

- This course should help to broaden the range of employment opportunities particularly among software houses producing high performance software by catering to one of the faster growing segments of the software development marketplace

Technical Expertise:

- The background provided by this language is useful even for those who never become Assembler language programmers since it is commonly used for a wide variety of support functions by all of the higher level languages. Also, it helps the student to understand the computer better by studying machine languages.

This course prepares students for job readiness at graduation and/or transfer to a four-year college.

Student Learning Outcomes:

Upon completion of this course, students will be able to:

- understand syntax of the most commonly used instructions
- understand structured programming principles
- understand syntax and functions of the most commonly used Operating System facilities
- design well structured Assembler programs
- program working assembler programs using the most commonly used instructions
- proficiently debug Assembler programs
- develop and implement an Assembler subroutine used by a higher level language.

Content:

Course objectives will be accomplished by:

- educating students in the native language of the PC micro-computer used in high-performance software
- emphasizing the most frequently used commands
- reviewing principles of structured programming and techniques of sound program design
- the lab providing hands-on experience in developing actual programs, demonstrating the principles taught, including approaches used in debugging such programs
- describing the interplay between an application program written in Assembler language and the facilities provided by the Operating System
- reviewing the use of Assembler language subroutines by higher level languages to accomplish functions not available or awkwardly done by other languages, including language interface conventions.

General Education Outcomes:

4) Retrieve, evaluate, interpret, and deliver information through a variety of traditional and electronic media.

Students will research technical issues through the internet, industry journals, and reference manuals.

5) Apply a cultural and historical awareness to a variety of phenomena.

Students will be aware of the changing nature of the computer field and how it impacts use of dated software with newer and older hardware. An awareness of the history and development of computers is a must for professional preparation.

Key Performance Indicators:

Student grades will be based on a combination of lab exercises (5-25%), quizzes (5-25%), tests (10-50%), and a final exam or project (20-50%).

Representative Text and/or Supplies:

- Robert Lafore, *Assembler Language Primer for the IBM PC & XT*, current edition, New York: New

American Library.

- Supplementary materials: Each student will be provided a diskette for storing programs and data files.

Optimum Class Size: 12
Maximum Class Size: 20

Signatures:

I hereby submit this course syllabus:

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I hereby find this course consistent with the goals and resources of the Computer Information Systems Department:

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Michael P. Medley, MBA, Assistant Professor, Chair

I hereby find this course consistent with the goals and resources of the Career and Technical Education Division:

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Michael P. Medley, MBA, Assistant Professor, Dean

I have discussed the need for library resources related to this class with the person submitting the syllabus:

_____

Lynn Anderson, MLIS, Technical Services Librarian (Main Campus)

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Michelle Olsen, MLS, Campus Librarian (Richfield Campus)