SYLLABUS FALL 2015
CSCI 516 – Fundamental Concepts of Computing/Machine Organization
SECTION: 516.02E, Room: EDS 133
Day and Time: M 4:30PM-7:10PM, Meets 8/31/2014 through 12/18/2014

Instructor: Dr. Abdullah N. Arslan
Office Hours: T 11:50am-1:50pm, 4:30pm-6:30pm,
              R: 4-5pm,
              F: 4:10pm-6:10pm
Office: JOUR206
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Office Phone: 903 468 3097

Please when you e-mail include 516 in the subject of your message

COURSE DESCRIPTION

Prerequisite: CSCI515 or programming experience in a higher level language.


Course Content: Concepts of assembly language programming and machine organization of a
modern digital computer are presented. Students will have the opportunity to study machine
addressing, stack operations, subroutines, programmed and interrupt driven I/O, machine
organization and computer architecture at the register level. Students will utilize the 80x86
instruction set and will perform programming exercises.

Main Objective: To learn basics of machine organization and how to program in assembly
language.

Student Learning Outcomes (SLO):

1. Students will demonstrate knowledge of the Binary, Decimal, Hexadecimal numbering
   systems be able to convert from one system to another and demonstrate knowledge of two's
   complement notation.

2. Students will demonstrate knowledge of basic Computer Organization: design logic; digital
   diagrams, and basic circuits and gates, and the link between Boolean functions, circuits,
   processor and machine code.

3. Students will demonstrate knowledge of the concepts of machine instructions; interrupts;
   assembly language programming, assembly, linking and running of a program; I/O devices;
   memory mapped I/O; assembly language addressing modes.

4. Students will demonstrate knowledge of the concepts of Jumps, flags, subroutines,
   procedures, and stacks.

5. Students will demonstrate knowledge of the concepts of Arrays, addressing modes and
   Floating Point memory management, indirect addressing.

6. Students will demonstrate knowledge of the concepts of advanced procedures, local
   variables, stack parameters, strings, and links to higher level languages.

COURSE EVALUATION

Basis for Evaluation:

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<tr>
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<th>Percentage</th>
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<tbody>
<tr>
<td>Midterm Exams</td>
<td>30%</td>
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<tr>
<td>In-class Problems</td>
<td>10%</td>
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Programming Assignments 20%
Quizzes 20%
Final Exam 20%

Grading Policy: 

A: 100%- 90%
B: 89% - 80%
C: 79% - 70%
D: 69% - 60%
F: Less than 59%

TOPICS COVERAGE: CHAPTERS FROM THE TEXTBOOK WILL BE COVERED IN THE ORDER OF THE LISTED SLO’S ABOVE.

<table>
<thead>
<tr>
<th>Final Test</th>
<th>Section: 516.02E</th>
<th>Date: TBA</th>
<th>Time: TBA</th>
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Quizzes: are to be solved independently during the class period. The quizzes will be administered in class. Makeup quizzes will not be given. Any class material missed by the student is the student's responsibility to acquire.

Tests: The two in-class midterm exams will be given roughly at regular intervals. Students will be informed of the test dates around a week in advance. There will be a final exam too. The test will take one class period and will be given at the scheduled times only. No opportunity will be given to take the test at earlier or later times except in extreme cases as judged by the instructor.

Makeup: Except extreme cases (as judged by the instructor), no individual makeup test will be permitted.

All quizzes and tests are closed book.

During the lectures and exams laptops and phones must be switched off all the time.

Attendance:

From the Students’ Handbook: "Students are expected to be present for all class meetings of any course for which they are enrolled. Per University Procedure A13.02, effective September 1, 1996, students are responsible for learning about and complying with the attendance policy stated in the catalog, Student’s Guidebook, and/or faculty syllabus. It is the prerogative of the faculty to drop students from courses in which they have accrued excessive absences as defined in the course syllabus."

Student Handbook

The instructor will take the attendance at the beginning of each lecture and only once.

If a student misses 3 or more lectures without legitimate reasons, the instructor will make the student drop the course. If this is not possible, the letter grade of ‘F’ will be assigned to the student.

Lateeness and leaving class early may count as an absence and are not acceptable unless you are ill or a family emergency exists. If you miss a class, it is your responsibility to obtain notes from a fellow student. Office hours are not meant for individual lectures. Any class material missed by the student is the student’s responsibility to acquire.

Academic Dishonesty:

Academic integrity is the pursuit of scholarly activity free from fraud and deception and is an educational objective of this institution. Academic dishonesty includes, but is not limited to, cheating, plagiarizing, fabricating of information or citations, facilitating acts of academic dishonesty by others, having unauthorized possession of examinations, submitting work of another person or work previously used without informing the instructor, or tampering with the academic work of other students. If you are caught in an academic dishonesty situation on any course work, you will be given a grade of F for the course and referred to the Dean of Students for further disciplinary action.

"All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment." (See Student’s Guide Handbook, Polices and Procedures, Conduct).
**Withdrawal Policy:**
There are deadlines for withdrawing from this course. It is the student’s responsibility to follow these deadlines.

**Students with Disabilities:**
The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

**Office of Student Disability Resources and Services**  
Texas A&M University-Commerce  
Gee Library  
Room 132  
Phone (903) 886-5150 or (903) 886-5835  
Fax (903) 468-8148  
StudentDisabilityServices@tamuc.edu

**Smoke, Vapor & Tobacco Free Environment:** Procedure 34.05.99.R1 now prohibits the use of vapor/electronic cigarettes, smokeless tobacco, snuff and chewing tobacco inside and adjacent to any building owned, leased, or operated by A&M – Commerce.

The professor will make supplementary information for the course available in eCollege. These include class notes, assignments, PowerPoint slides, class announcements, the course syllabus, test dates, etc. The professor will announce in class when such information becomes available electronically. It is the student’s responsibility to follow these announcements.

The professor maintains the right to modify the course policy within the semester if need arises. **Some changes are possible within the first few weeks.**