Tentative Course Syllabus

(The most updated version of this syllabus will be maintained on the eCollege course shell; students, please refer to that version for most up-to-date information).

TEXAS A&M UNIVERSITY – COMMERCE
CSCI 516 FUNDAMENTAL CONCEPTS OF COMPUTING / MACHINE ORGANIZATION (ASSEMBLY LANGUAGE PROGRAMMING)

CSCI 516 Section 01W 40849

Summer 2015 (06/08/2014 through 08/13/2015)

CLASS MEETINGS: **Time & Location:** Web-based, E-College Course Shell will be used: https://secure.ecollege.com/tamuc or http://online.tamuc.org	Instructor Office Hours: I will be responding to your questions on the Virtual Office utility of the e-College course shell and email. Use the Virtual Office utility and post your questions there. If you email me, put "CSCI 516 " in the subject line of your email.

INSTRUCTOR:
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TEXTBOOK:
Assembly Language for Intel-Based Computers, 6th Edition by Kip R. Irvine, Prentice Hall.
ISBN-13: 978-0-13-602212-1

COURSE DESCRIPTION:
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. **Credit hours: 3. Pre/Co-requisite: CSCI 515.**

STUDENT LEARNING OUTCOMES:
Students will be able to
(SLO #1) identify numbering systems and do conversions **(**from one number system to another);
(SLO #2) identify basic computer organization, general concepts of IA-32 and its processor architecture (identify theoretical concepts to design digital diagrams, basic circuits and gates; the link between Boolean functions, circuits, processor, micro code, machine code),
(SLO #3) identify concepts of machine instructions, interrupts, Assembly language and linking (do Assembly Language programming, work with the basic elements of Assembly Language; constants, words, identities, directives, instructions; assemble, link and run a program; identify I/O devices and memory mapped I/O; identify keyboard input, read, display and copy, common Interrupts, MS-DOS services; read and display 64 bit integers; perform Direct Addressing),

(SLO #4) identify unconditional jumps, flags, subroutines, stacks (identify arithmetic, flags, registers; work with jump and loops; search an area for positive numbers; do nested procedure calls; implement stack operations, work with shift and rotate instructions, do 64 bit addition),
(SLO #5) identify arrays, addressing modes, memory management, indirect addressing, conditional loops and floating point,
(SLO #6) identify advanced procedures, local variables, stack parameters and frames, strings, and link to high level language.

COURSE OUTLINE/CONTENT:

Week 1 (6/8 – 6/12)	Chapter 1. Basic Concepts Chapter 2. x86 Processor Architecture
Week 2 (6/15 – 6/19)	Chapter 3. Assembly Language Fundamentals
Week 3 (6/22 – 6/26)	Chapter 4. Data Transfers, Addressing and Arithmetic
Week 4 (6/29 – 7/3)	Chapter 5. Procedures
Week 5 (7/6 – 7/10)	Chapter 6. Conditional Processing
7/10/2015	**Midterm Exam, Online on eCollege** *(Midterm exam ~ this week, covers Chapters 1-5, exact time to be announced in eCollege course shell)*
Week 6 (7/13– 7/17)	Chapter 7. Integer Arithmetic
Week 7 (7/20 – 7/24)	Chapter 8. Advanced Procedures
Week 8 (7/27 – 7/31)	Chapter 9. Strings and Arrays
Week 9 (8/3 – 8/7)	Chapter 10. Structures and Macros
Week 10 (8/10 – 8/13)	Chapter 12 (*Partial Chapter) Floating-point Processing and Instruction Encoding Chapter 13 (*Partial Chapter) High-level language interface **Only parts of these two chapters will be covered.*
8/13/2015	**Final Exam, Online on eCollege** *Covers all chapters covered in the course, exact time to be announced in eCollege course shell)*

EXAMS & GRADING:

E-Attendance/E-Activity, E-Participation/Discussions	10%
Homeworks Assignments & Popquizzes	40%
Midterm Exam	20%
Final Exam (Comprehensive of all the material covered)	30%

COURSE REQUIREMENTS:

Study: To plan a minimum of three hours of outside preparation for each hour of class is a safe time allocation for successfully completing the course. This is a 10-week course, so it is accelerated when compared with the standard 15 week course; this means that you need to study about 10 hours/week to be successful in this course.

Students are expected to go through the slides and any other uploaded material every week in eCollege course shell. Online discussion/activities may be required and online activities may be assigned to reinforce material in the text. Please see eCollege course shell for further details.

eCollege: You will need to activate and access your eCollege course shell account. Visit https://secure.ecollege.com/tamuc or http://online.tamuc.org for details:

"If at any time you experience technical problems (e.g., you can't log in to the course, you can't see certain material, etc.) please contact the eCollege HelpDesk, available 24 hours a day, seven days a week. The HelpDesk can be reached by sending an email tohelpdesk@online.tamuc.org or by calling 1-866-656-5511".

Assignments: There will be regularly assigned written problem sets and programming assignments. Assignments will be given and returned via the online eCollege system. ***It is the student's responsibility to login and check the course's eCollege site at least twice daily for announcements, assignments, quizzes and course-related content. It is very important that students follow the instructions carefully on the assignments.*** The assignments will be uploaded by the instructor to eCollege course shell. The student may have to upload it to the course shell's Dropbox by following the instructions on the assignment; or the assignments may be entirely online tests. It is the student's responsibility to return or solve all assignments ready on time by the given due date. Late assignment may *not* be accepted or may be *penalized* and assignment may not be accepted beyond a certain time.

Popquizzes: There will also be unannounced popquizzes on eCollege. I may upload a quiz and ask you to complete and submit it the very same day. ***That is another reason why you need to login at least twice daily to the course shell.***

Exams: Two exams will be given, one midterm exam and one final exam. The instructor may add other necessary exams if he sees necessary. The exams will be delivered online on the dates indicated above.

Attendance/E-participation, Discussions: Student participation will be graded by the level of class participation and attendance. Students are expected to attend/participate the weekly discussion topics which will be posted in the course shell almost every week and read all of the uploaded slides which (e-participation). Each student's e-participation time details can be monitored on eCollege by the instructor and the participation of the students in the discussions will also be monitored by the instructor. The student may fail the course if the e-participation is below certain percentage. Students will be able to view their graded assignment, quiz and exam scores on eCollege. The students have one week to inquire about their grade after the assignment/quiz/exam is done. Grades accumulated so far in the class by the students may be provided on eCollege to the students as a courtesy by the instructor so that the students can see where they stand gradewise; however, those grades might not be very accurate. The overall course grades are finalized after all the exams, assignments, quizzes and attendances are complete and then they are put in a spreadsheet, weighed and evaluated at the end of the semester by the instructor.

Programming assignments: Programming is a part of this class. Some of the homeworks, quizzes and exams will include programming assigments. Programs will receive a letter grade based on whether he program compiles, executes, and produces the required correct results without any errors. Programs with copied code or other cheating (all or in part) receive grade 0. Students who share their homework or code with others will also receive a grade of 0. A program with extra features, fancy output may receive extra score. A program with sloppy coding or editing, no comments, spacing, etc may have points deducted. The professor reserves the rights to reward students for hard/extra work.

Web-based / online class: This is a web-based / online class. Assignments will be uploaded to eCollege course shell. Students are responsible for obtaining and setting up their eCollege account using their TAMUC student login. They need to follow the eCollege course shell daily for the course announcements, downloading and uploading the assignments, and other course activities. Students also need to check their leomails daily.

The instructor maintains the right to modify the course syllabus & policies within the semester if need arises.

ACADEMIC ETHICS:
"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, Policies and Procedures, Conduct). Ethics include the issue of plagiarism, and copying parts or whole of assignments, quizzes and exams is just as serious as any other type of plagiarism. If you are caught sharing or using other people's work, you will receive a 0 grade and a warning on the first instance. A subsequent instance will result in receiving an F grade for the course, and possible disciplinary proceedings. The student who shares as well as the one who copies will both receive a 0.

ATTENDANCE POLICY :
Student participation will be graded by the level of class participation and attendance. Since this is a web-based / online class, the students are expected to participate in the required activities as described in the eCollege course shell for each and every week's lecture. At the beginning of every week, reading material / lecture slides will be uploaded tyo course shell and the students are required to go through the assigned reading material and/or lecture slides. Student'sactivity is monitored/logged by eCollege in great detail and the participation as logged by the system will also be used as part of your participation grade. *The student may fail the course if the attendance/participation is below a certain percentage.*
Any student wishing to withdraw from the course must do so officially as outlined in the class schedule. THE INSTRUCTOR CANNOT DROP OR WITHDRAW ANY STUDENT.

COURSE REQUIREMENT DEADLINES:
Credit will be given for ONLY those exam(s), program(s), and/or project(s) turned in no later than the deadline(s) as announced by the instructor of this class unless prior arrangement has been made with the instructor. Late assignments will be penalized, and the instructor may not accept late assignments after a specified period.

METHOD OF EVALUATION (Tentative):
Final average Letter grade
90 – 100 A
80 – 89.99 B
70 – 79.99 C
60 – 69.99 D
Below 60 F

STUDENTS WITH DISABILITIES REQUIRING ASSISTANCE:
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:

University 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.

UNIVERSITY RULES AND PROCEDURES can be accessed at http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/
Section 13 is about **Students (Academic)**.