GRAYSON COLLEGE
 COSC2425

Course Information
COSC2425 Computer Organization and Machine Language

Please Note: Due to extenuating circumstances, including public health issues, course and testing delivery methods, instructional schedules, housing contracts, campus procedures and/or operating hours may be altered, interrupted and/or ceased for a limited or extended period of time. Such changes will be posted on the College website and on your Canvas course.

Professor Contact Information
Deena White   903-463-8664   whited@grayson.edu
Office hours: Please send email or Canvas message to request an appointment.

Course Pre-requisites, Co-requisites, and/or Other Restrictions

COSC1437 or 'A' in COSC1336

Course Description
COSC 2425 Computer Organization and Machine Language (3-4-3) (formerly COSC2325)
The organization of computer systems is introduced using assembly language. Topics include basic concepts of computer architecture and organization, memory hierarchy, data types, computer arithmetic, control structures, interrupt handling, instruction sets, performance metrics, and the mechanics of testing and debugging computer systems. Embedded systems and device interfacing are introduced. Computer organization and capabilities will be discussed as well as hands-on training in 8086/8088 assembly language using MicroSoft Macro Assembler via Visual Studio. (RM)
The Texas Success Initiative (TSI) is required by Texas law to ensure students enrolled in Texas public colleges possess the academic skills needed to perform effectively in college-level course work. TSI includes a testing component designed to identify and provide diagnostic information about the reading, mathematics and writing skills of each student. This course has been identified as a *Reading and Math Intensive* course for the purposes of TSI.

Student Learning Outcomes:
Explain contemporary computer system organization.
Describe data representation in digital computers.
Explain the concepts of memory hierarchy, interrupt processing, and input/output mechanisms.
Measure the performance of a computer system.
Design and develop assembly language applications.
Explain the interfaces between software and hardware components.
Explain the design of instruction set architectures.
Develop a single-cycle processor.
Explain the concept of virtual memory and how it is realized in hardware and software.
Explain the concepts of operating system virtualization.

COSC 2425 is part of the curriculum leading to an associate degree in the computer programming/analyst discipline. Inherent in COSC 2425 is the development of thinking skills and the application of reading, math, and logic skills.

Required Textbooks (ISBN # included) and Materials
1. *A cloth face coving is* **REQUIRED** *in class and in all areas of the school. Please observe social distancing practices.*
2. **Textbook:** Assembly Language for x86 Processors, 7/e, Irvine ISBN 978-0-13-376940-1 **I highly recommend a hard copy of the text –** you will need assembly reference material for some of your Junior/Senior courses
3. Microsoft Visual Studio 2019 – Supplied through your instructor
4. **Materials:** USB Flash drive. 3 Ring Binder.

Required Assignments & Academic Calendar
 In case of inclement weather, emergency closings, or other unforeseen disruptions to scheduled classes, student must log onto their Canvas accounts for directions on where or how to continue their coursework.
Week 1 -   Introduction
Week 2 -   Conversions
Week 3 -   Hardware
Week 4 –   Assembly Coding
Week 5 -   Exam
Week 6 -   Data Sections
Week 7 -   Transfer of Control/Procedures
Week 8 -   Exam
Week 9 -   Math
Week 10 -   Shift/Rotate
Week 11 -   Macros/Tables
Week 12 -   Macros/Tables
Week 13 -   Exam
Week 14 -   Lab
Week 15 -   Lab
Week 16 -   **Final Exam Week**
Consult Canvas Modules for specific assignments and due dates.

Methods of Evaluation

A*	90-100%
B	80-89%
C	70-79%
D	65-69%
F	Less than 65%
Exams: up to 4 tests (including final)	40%
Lab Assignments:	40%
Homework/Quizzes/Subjective:	20%

A grade of A requires completion of all assignments as well as an A average in your work. Grades and feedback be posted on Canvas. If your final attendance falls under 85% a full letter grade will be deducted from your final grade.

Methods of Instruction
Class time will be used for lecture, reading, instructor guided hands-on practice, and self paced laboratory time for one on one instruction and completion of the required lab assignments. Most classes require at least 4 hours a week in class attendance and self-paced lab time. This does not include time spent on homework or study. 8 week and summer courses will require more student effort per week. The primary method of delivery for this class is **lecture** – so you MUST attend class!
At least two hours of lab time are required outside of lecture hours.
Since your assignments must be submitted on-line, you should allow yourself ample time to submit the assignment before the due date. *An excuse of "I couldn't access the computer to turn in my assignment because . . ." will not gain you any sympathy or extra time.* No assignments, exams, quizzes or postings are accepted late for any reason.
You may not "test out" of this class. If you feel that the course level is below your present abilities, please contact your instructor during the first week of class so you can be enrolled in a more challenging computer science course.

Course & Instructor Policies No late work is accepted for any reason, including problems with your computer, Internet access or Campus problems. Turn in your work ahead of schedule to avoid any problems. Student athletes and students missing classes for school sponsored activities are **REQUIRED** to report absences in advance and make arrangements to turn in all work before the due date, take any missed exams in advance, and obtain class notes from a classmate.
Any assignment or discussion posting that does not use proper capitalization, punctuation, or that uses 'texting' type grammar will be given a grade of 0. Any emails that do not use proper capitalization, punctuation, or that use 'texting' type grammar will not be answered. You are in college and expected to pay attention to your grammar and spelling in all your school work. If you do assignments from your cell phone, make sure you know where the 'shift' key is!
No cell phones are permitted during lecture. Computer monitors should be turned off, Motivation and effort on the part of the student determines success in class. Here are some guidelines and suggestions for you to follow if you are a new student and want to succeed. Prepare a calendar which lists all test and homework assignment due dates for all classes and consult this calendar daily. Prepare and print your assignments at least two days BEFORE they are due. Review your work before it is due to make sure you haven't left out any answers. Ask questions! If you don't understand something, chances are someone else doesn't either and they're too scared to ask! Turn in all work on time, **read the textbook, and make use of the web site resources provided by the publisher of your textbook**. Remember that what you get out of college is directly proportional to the amount of time and effort you put into college.

 Class Attendance
Attendance will be recorded as attending lecture and/or completing assignments.
Academic success is closely associated with regular classroom attendance and course participation.

All successful students, whether on campus or online, are expected to be highly self-motivated. All students are required to participate in courses regularly and are obliged to participate in class activities and complete and submit assignments following their professors' instructions. Students taking courses during compressed semester time frames such as mini-mester, summer sessions, and mid-semester should plan to spend significantly more time per week on the course. Responsibility for work missed because of illness or school business is placed upon the student. More than two (2) absences are considered to be excessive. If your final attendance grade is less than 85% I will deduct one letter grade from your final score. Tardiness does affect attendance. Please make every effort to attend every class lecture on time. Students' eligibility to receive financial aid or live in a College dormitory can be affected by withdrawal from courses. When withdrawal occurs, any tuition refund would be made in accordance with state regulations.

Student athletes and students missing classes for school sponsored activities are **REQUIRED** to report absences in advance and make arrangements to turn in all work before the due date, take any missed exams in advance, and obtain class notes from a classmate.

Student with symptoms of COVID19 should **NOT** attend class. Report your absence to your instructor and the school immediately. Your instructor email is whited@grayson.edu and the Covid exposure form can be found at
https://grayson.edu/campus-life/campus-police/Coronavirus%20Info/Exposure%20Form.html

Students who are late for class will not be permitted to begin any quiz or test in progress.

THE CASE OF THE "DISAPPEARING STUDENT":
If you find yourself in over your head, please observe the drop dates on the course calendar. You may drop this course by contacting your instructor via Canvas message or email. Please do not "disappear" for two or three weeks and suddenly "reappear" and ask to be given special permission to make up the required work. If you are going to be out of town for any length of time during the semester, let your instructor know via e-mail or in person.

Student Conduct & Discipline
Please communicate with your instructor via Canvas message. I attempt to read and return messages daily.
Attendance will be taken each face-to-face class meetings and during any required labs.
Attendance for Internet courses will be determined weekly based on course activity.
Students are expected to maintain classroom decorum that includes respect for other students and the instructor, prompt and regular attendance and an attitude that seeks to take full advantage of the educational opportunity.
You are personally responsible for your conduct and achievement in this course. Please be aware of this statement and philosophy and plan accordingly.
No late work is accepted in this class, so please make sure you begin and submit any assignments in plenty of time to deal with any hardware, Internet, or Canvas outages.

Academic Integrity
The faculty expects from its students a high level of responsibility and academic honesty. Because the value of an academic degree depends upon the absolute integrity of the

work done by the student for that degree, it is imperative that a student demonstrate a high standard of individual honor in his or her scholastic work.

Scholastic dishonesty includes but is not limited to cheating, plagiarism, collusion, and the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts. Plagiarism, especially from the web, from portions of papers for other classes, and from any other source is unacceptable.

Any instance of scholastic dishonesty will result in an F in this course and possible referral to the disciplinary committee.

Student Responsibility

You have already made the decision to go to college; now the follow-up decisions on whether to commit to doing the work could very well determine whether you end up working at a good paying job in a field you enjoy or working at minimum wage for the rest of your life. Education involves a partnership that requires both students and instructors to do their parts. By entering into this partnership, you have a responsibility to show up for class, do the assignments and reading, be engaged and pay attention in class, follow directions, and put your best effort into it. You will get out of your experience here exactly what you put into it, nothing more and nothing less.

Title IX

GC policy prohibits discrimination on the basis of age, ancestry, color, disability, gender identity, genetic information, national origin, race, religion, retaliation, serious medical condition, sex, sexual orientation, spousal affiliation and protected veterans status.

Furthermore, Title IX prohibits sex discrimination to include sexual misconduct: sexual violence (sexual assault, rape), sexual harassment and retaliation.

For more information on Title IX, please contact:

- Dr. Molly M. Harris, Title IX Coordinator (903)463-8714
- Ms. Logan Maxwell, Title IX Deputy Coordinator - South Campus (903) 415-2646
- Mr. Mike McBrayer, Title IX Deputy Coordinator - Main Campus (903) 463-8753
- Website: http://www.grayson.edu/campus-life/campus-police/title-ix-policies.html
- GC Police Department: (903) 463-8777- Main Campus) (903-415-2501 - South Campus)
- GC Counseling Center: (903) 463-8730
  For Any On-campus Emergencies: 911

Grayson College is not responsible for illness/injury that occurs during the normal course of classroom/lab/clinical experiences.
These descriptions and timelines are subject to change at the discretion of the Professor.
Grayson College campus-wide student policies may be found on our Current Student Page on our website: http://grayson.edu/current-students/index.html (Links to an external site.)Links to an external site.