CS 102 – Introduction to Computer Science

The lab does meet the first week of classes (today!) at 2PM

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Website: www.agapie.net  Office hours: Tue, Thu 10-12, Wed 2-4

Class:  SCIEN 208  MWF 10-10:50 AM.  Lab:  SCIEN 208  Mon 2-4 PM.

Keeping in touch: the following channels of communication will be used. Please do your best to check them often (evening or morning before class is a good idea):
• Email. I am using your “preferred” email address from DuckTrax. If you need to change it, email me with the new address. Make sure you clean your mailbox regularly – if it’s full, the messages will bounce back.
• Messages posted on the course website www.agapie.net

Individual work and quizzes (not graded): During most classes, short quizzes will be assigned to solve on the spot. At the end of class, the instructor will provide a list of easy problems which are recommended to solve before the next class. They are intended as a self-check for the student, to make sure the material covered was understood. Solve both quizzes and individual work in your notebook (see below).

Homework: One set of problems will be assigned for most chapters, due in 1 week.
• Since we discuss the solutions in the lab, late submissions cannot be credited. Exceptions are allowed only on a case-by-case basis, if you have notified the instructor before the due date.
• It is OK to write your homework by hand or in electronic form, but give the instructor a hard-copy. The homework is due at the beginning of class.

Labs: Meet in the regular classroom, SCIENCE 208. Lab reports are due at the end of the lab, and they count as 20% of the final grade (see Grading below). Most of the time is devoted to learning the Python programming language, which is used to illustrate many other CS topics. Upon request, we discuss homework problems. I’ll do my best to post all lab assignments on the web page immediately after the lab. Exam problems are closely modeled after the problems covered in the lab.

Exams: Mid-terms on Sept. 24 and Oct. 22, Final Exam on Wed, Dec. 12, 3-5:30pm (according to the University calendar), all in the regular classroom, SCIEN 208. There will be a review session before each exam.

Notebook: You will need a 100-page notebook for this class, to contain: class notes, solutions to individual work problems, quizzes, cheat-sheets, interesting tidbits from the lab, etc. You may want to attach a section of code printouts. At least one page of notes for each lecture and lab is expected.

Grading:
Homework  15%
Lab reports  15%
Notebook  10%
3 exams 20% each
Intervals: 90-100 = A, 80-90 = B, 70-80 = C, 60-70 = D, below 60 = F.
Up to 5% of the final score can be gained as extra-credit for answering questions in class or lab, or for solving homework problems assigned as extra-credit.

**Intended Student Learning Outcomes:**
At the conclusion of the course, a successful student will know the following:
- The history and evolution of computer hardware and software
- How to represent numbers and non-numerical data in binary
- Analysis and design of simple combinational circuits at the gate level
- The role and parameters of the main components of a computer
- How to write simple programs in machine and assembly language
- How to design algorithms in pseudocode, then implement them in a high-level programming language\(^1\).
- **Object-oriented** concepts: classes, instantiation, constructors, inheritance
- Basic **searching** and **sorting** algorithms, including recursive algorithms and basic Abstract Data Types (ADT) – stacks, queues, lists, trees, graphs
- OS concepts: memory, process and CPU management
- One or two computer applications\(^2\) in more depth

**Academic Conduct:** Students guilty of academic dishonesty, cheating, or plagiarism in academic work shall be subject to disciplinary action. The instructor may initiate disciplinary action in any case of academic misconduct. For homework, term paper and lab work it is allowed (actually recommended) for students to brainstorm and develop solutions together, however, the writing and coding has to be done individually.

**Absence Policy:** Attendance will not be recorded for this course. The student is responsible for any material covered in class and in the lab, and for obtaining assignments and other materials for classes from which they are absent.

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\(^1\) We’re currently using Python.
\(^2\) AI/Robotics – see Ch.13 of “Illuminated” 5th ed.
Make-up Policy: The instructor has the responsibility and authority to determine if work can be made-up because of absences. Students may request to make-up work for valid and verifiable reasons such as: illness, death in the immediate family, legal proceedings, or participation in sponsored University activities. Please let the instructor know in advance of any absence/make-up issues. Absolutely no make-up requests after the due date!

Drop Policy:
- A student who withdraws from a course on or before Sept. 4 receives no grade, and the course will not be listed on that student's permanent record (“drop with no record”). By that time your first homework will be graded, so you’ll know if somehow you’re in this class by mistake.
- A student who withdraws from a course on or before Sept. 28 receives a grade of Q (“drop without F”) or W. By that time the first midterm will be graded, so you’ll have a good idea of how you’re doing in the class.

Students with disabilities: It is the policy of Tarleton State University to comply with the Americans with Disabilities Act (http://www.ada.gov/) and other applicable laws. If you are a student with a disability seeking accommodations for this course, please contact Trina Geye, Director of Student Disability Services, at 254.968.9400 or geye@tarleton.edu. Student Disability Services is located in Math 201. More information can be found at www.tarleton.edu/sds or in the University Catalog.

Effort level expected for this class: You are expected to clock in 3 hours of individual work for every hour of lecture. Per week, we have 3 hours of lecture, so 3x3= 9 hours of individual work. The lab covers 2, so make sure you schedule another 7 hours each week. During individual work, you will do one of the following:
- Study the material covered from the textbook, along with the notes taken in class.
- Solve the individual work problems assigned for the next class.
- Solve homework problems.
- Go over quiz problems.
- Practice programming.

Notes:
- In the event that the University is closed for a scheduled class time, whatever was scheduled and/or due that day will be scheduled and/or due the next class.
- CS Club meeting, LAN party
- Robots
- Please turn off cellphones during class and lab. During class, do not use the computers (logoff!) unless instructed otherwise.