COSC 1310 – Procedural programming

Instructors: Dr. Mircea Agapie  
Dr. Zdenek Tronicek  

Office: SCIENCE 213-C  
Office: SCIENCE 213-N  

Phone: (254) 968-0792  
Phone: (254) 968-0793  

E-mail: agapie@tarleton.edu  
Website: www.agapie.net  
Include course # and assignment in subject line, e.g. 1310, Lab 1  

Office hours: Dr. Agapie: Mon, Wed 11-12, Tue, Thu 9 - 11.  
Dr. Tronicek: TBA  

This course has one section, taught in SCIENCE 208 (lecture and lab)  

<table>
<thead>
<tr>
<th>Lecture</th>
<th>Lab</th>
<th>Final exam</th>
</tr>
</thead>
<tbody>
<tr>
<td>MWF 9-9:50 AM</td>
<td>Tue 2:40-4:30 PM</td>
<td>Dec. 12, 8-10:30 AM</td>
</tr>
</tbody>
</table>

Text:  

Expanded Course Description: The basic concepts of structured programming in a procedural language (C) are addressed. The core elements of programming are covered including control statements, primitive data elements and structures, program structure using functions, basic input and output, and the software development process. Emphasis is placed on developing the ability to write well-formed and well-structured programs, using all the main elements of a procedural programming language (C). The student is expected to be able to read and write programs using structured programming techniques.

Effort expected: The average amount of work recommended for college classes is 45 hours of out-of-class work (during the entire semester) per credit hour. Our class has 3 credit hours, and the semester is 15 weeks long, which gives 9 hours of work per week. After subtracting the 2 hours of lab, we are left with 7 hours of out-of-class work per week for this course. Please reserve these 7 hours on your weekly schedule. What you should do during this time:
- Immerse yourself in C 😊
- 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, and solve the additional “individual work” problems assigned during class or lab.
- Develop your own “memory sheet”.

Intended Student Learning Outcomes:

At the conclusion of the course, a successful student will be able to do the following:

- understand the nature of procedural programming, the process of converting source code to executable code and how the code is executed by the computer hardware
- write sequential code by developing applications that implement algebraic type equations
- use control structures (if, switch, for, while etc.) in programs, in simple and nested form
- create complex algebraic and logical expressions using control structures
- use arrays in programs that initialize, manipulate and display arrays
- use structures by developing applications that initialize, manipulates and display structures
- use pointers by developing applications that incorporate pointers to access and manipulate both simple and complex data types
- pass parameters to functions, using both passing by value and passing by reference (pointer)
- write and analyze recursive functions
- open files for sequential access, read and write data to and from a sequential file

---

1 Hence the title of our text: “… in One Hour [of Individual Work] a Day”
Keeping in touch: the following channels of communication will be used. Please do your best to check them often (evening before class is a good idea):

- Email. Please check your Tarleton student email and 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

Grading:

- **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:** About six sets of problems will be assigned throughout the semester, due in one week.
  - The homework is due at the beginning of class. Late submissions will not be credited. Exceptions are allowed only in extraordinary circumstances, if you have notified the instructor before the due date.
  - All homework will involve programming; give the instructor a hard-copy, but keep all your programs in electronic form for reference.
- **Lab** reports are due at the end of the lab. Upon request, we can discuss homework problems – let me know at the beginning of the lab.
- **Exams:** Two during the semester: In the labs on Sep.27 and Nov.1, and the Final (see table above).
- **100-page notebook:** Carry it with you to all lectures, labs and exams. Contains: 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. **About one page of notes for each lecture and lab is expected.**

  - **Weights:** 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.

Useful dates:

- Sep.14: Last day to drop a 16- week class with no record
- Nov. 4: Last day to drop a 16-week course with a "Q" or withdraw with a "W"
- No classes: Sep.5 (Labor Day), Nov.24-25 (Thanksgiving, no classes or labs after noon on the 23rd)
- Last day of classes: Dec.7 (Wed.)

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 and lab work, it is allowed (actually recommended) for students to brainstorm and develop solutions together, however, **the writing and coding have to be done individually.**
- **It is forbidden to use a solutions manual, or to copy solutions found online.**

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.

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. Let instructor know in advance of any absence/make-up issues. **No make-up requests after the due date!**

Students with disabilities: It is the policy of Tarleton State University to comply with the Americans with Disabilities Act and other applicable laws. If you are a student with a disability seeking accommodations for this course, please contact the Center for Access and Academic Testing at 254.968.9400 or caat@tarleton.edu. The office is located in Math 201. More information can be found at www.tarleton.edu/caat, in the University Catalog, or at www.ada.gov.