CSC 202.003 - Computer Programming Principles
Spring 2016

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Office Hours - Office 304P and Online
Monday: 10:00 a.m. – 12:00 p.m. & 1:15 p.m. – 2:15 p.m.
Tuesday: 9:20 a.m. – 10:45 a.m. & 1:15 p.m. – 2:30 p.m.
Wednesday: 10:00 a.m. – 12:00 p.m. & 1:15 p.m. – 2:15 p.m.
Thursday: 9:20 a.m. – 10:45 a.m.
Friday: by appointment
The office hours above are just a starting point. I am often online and I am frequently available outside these hours. Please feel free to Skype/Page any time you see me online. You may also email me at any time.
I will gladly make appointments for other times (either online or in person).

Class meeting time and place:
CSC 202.003
9:00 a.m. – 9:50 a.m. Monday, Wednesday, and Friday
Robert T. McKibben Building (Education Building)
Room 322

Credit Hours: 3
Prerequisites: CSC 102
Grade Reminder: Must have a C or better in each prerequisite course.

Catalog Description

Problem solving and algorithm design, program structures, data types, software development methods, and programming style.
Required Materials For CSC 202:

*OR* Computer Science 202 SFA (Custom Edition of the 10th Edition)
  ISBN 10: 1-269-82353-1

Storage Device, example: USB Flash drive

Other Materials:

Software for Flowchart Template
Word Processing and Typing Software/Skills
Calculator – “four function”

Purpose of Course

To introduce a disciplined approach to problem solving methods and algorithm development; to introduce procedural and data abstraction; to teach program design, coding, debugging, testing, and documentation using good programming style; to teach a block-structured high-level programming language; and to provide a foundation for further studies in computer science.

Educational Objectives

Upon successful completion of the course, students should be able to:

1. Apply a disciplined approach to problem solving and algorithm design.

2. Use the following: strategies for problem solving, techniques for analyzing problems and defining requirements, tools for representing algorithms, and methods for verifying and validating algorithms and programs.

3. Write programs in a modern block-structured procedural programming language.

4. Design and, by means of the programming language being learned, implement imperative solutions to moderately complex problems.

5. Demonstrate through artifact creation and testing, a solid knowledge of and an ability to properly use these programming features and facilities: data types, fundamental data structures (arrays, records, and arrays of records) control structures, procedures, functions, parameters, text files, and binary files.

6. Demonstrate through artifact creation, familiarity with abstract data types, pointers, and recursion.
7. Use operating system tools (command system, editor, compiler, linker, and loader) in single and multiuser environments.

8. Write cooperatively on software development projects.

**Course Calendar/Timeline:**

<table>
<thead>
<tr>
<th>Topic</th>
<th>Approximate % of course devoted to topic</th>
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<tbody>
<tr>
<td>Computer Terminal or Microcomputer Skills Review</td>
<td>2</td>
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<tr>
<td>Use of operating system and editor command languages</td>
<td>2</td>
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<tr>
<td>Problem Solving and Algorithm Design</td>
<td>22</td>
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<tr>
<td>Strategies for problem solving--problem decomposition, solution by analogy</td>
<td>22</td>
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<td>Problem analysis and requirements definition--understanding the problem, describing the output requirements, identifying the input data</td>
<td>22</td>
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<td>Algorithm representation--pseudocode and graphical techniques including structure charts and flowcharting</td>
<td>22</td>
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<td>Algorithm verification--desk checking with and without test data</td>
<td>22</td>
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<tr>
<td>Program Structures</td>
<td>22</td>
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<td>Control structures--sequential, iterative, and selective</td>
<td>22</td>
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<tr>
<td>Subprograms--procedures and functions, parameters, scope of identifiers, subprogram nesting, and introduction to recursion</td>
<td>22</td>
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<tr>
<td>Data Types, Operations, and Storage</td>
<td>31</td>
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<td>Standard scalar types--integer, real, boolean, character</td>
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<tr>
<td>Structured types--arrays, character strings, records, arrays of records</td>
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<tr>
<td>Standard user-defined types--subrange, enumerated</td>
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<tr>
<td>Introduction to abstract data types</td>
<td>31</td>
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<td>Files--text files for data, source programs, and operating system commands; binary files for data, object programs, and load modules</td>
<td>31</td>
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<td>Program Development--Methods and Style</td>
<td>16</td>
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<td>Design--procedural abstraction, data abstraction, top-down design and stepwise refinement, modular design, block structure, information hiding</td>
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<td>Coding--use of structured control statements and modern programming style including proper indentation and choice of appropriate descriptive identifiers</td>
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<tr>
<td>Program debugging and verification--generation of test data, debugging techniques including manual and built-in tracing as well as use of stubs and drivers, top-down versus bottom-up testing External and internal program documentation techniques</td>
<td>16</td>
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<tr>
<td>Exams (Plus Final)</td>
<td>7</td>
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A more detailed listing of the topics that the course will cover and approximate amount of time to be devoted to each is available at http://cs.sfasu.edu/cs/pdf/syll_202.pdf.

Specific exam dates and assignment due dates will be available on the Calendar tool in the Desire2Learn learning management system. Once registered, students can access Desire2Learn via https://d2l.sfasu.edu using their mySFA username and password.

**Grading Policy:**

**Examinations:**
Two Regular Lab Exams (20% each)
- Tentative Exams Dates
  - February 17, 2016
  - March 23, 2016
- Comprehensive Final Examination (30%)
  - NO Exemptions
  - Wednesday, April 27, 2016
  - Wednesday, May 11, 2016 8:00 a.m. – 10:00 a.m.

All class examinations are considered to be a major part of the course work upon which a large part of the course grade depends. If you have a conflict with another university event, you must contact me well in advance of examination. In case of an extreme emergency, contact me before the scheduled examination. Failure to do so will result in an examination grade of zero. **Once a student leaves the room on the day of an examination, they will not be permitted to return.** Once the first person has left the room on the day of an examination, no one else will be permitted to begin the exam. Please note that being in possession of a cell phone or other electronic device during an exam will result in an examination grade of zero.

Note: There are **no exemptions** for the final examination and **no changes** in taking the final examination. **All students must take the final exam. A zero on the final exam will result in an F in the course.** Check the final examination time. If the final examination time is a problem, you need to drop this course. Please see the SFASU policy at http://www.sfasu.edu/policies/final-examination-scheduling_7.14.pdf.

**Assignments and Quizzes:**
Assignments and quizzes account for 30% of the course grade. Periodic in class and online quizzes will be given. Assignments/quizzes will be of unequal weight. Not all assignments/quizzes will be graded. **No Make ups.**

All assignments are due at the announced time on the specified due date. If you have a conflict, please contact me in advance. Please note: You may be given assignments and quizzes during the last five class days of the semester.
Help Support Resources:

AARC Tutors: The AARC tutors are in 324 Robert T. McKibben Building.
  - Monday & Wednesday: 4:00 p.m. – 7:00 p.m.
  - Tuesday & Thursday: 5:00 p.m. – 7:00 p.m.
You may access this and more information at http://library.sfasu.edu/aarc/walk-in-tables/.

Lab 316 Robert T. McKibben Building
  - Monday, Wednesday, & Friday: 11:00 a.m. – 12:50 p.m.

The Library Linc is open:
  - Monday – Thursday: 7:00 a.m. - 1:00 a.m.
  - Friday: 7:00 a.m. to 6:00 p.m.
  - Saturday: 10:00 a.m. – 8:00 p.m.
  - Sunday: 12:00 p.m. - 1:00 a.m.

Desire2Learn: This course will use the Desire2Learn Management System. The course login page may be accessed directly, https://d2l.sfasu.edu/.

Attendance: Seating Assignments will be made and roll will be taken regularly. Attendance and participation may be taken into consideration for your final grade. **IF YOU ARE ABSENT FROM CLASS PLEASE MAKE SURE TO GET NOTES FROM A CLASSMATE.** Please remember there is no smoking, no chewing of tobacco, no eating or drinking, no bare feet, and no cell phone use during class. Cell phones and other electronic communication devices must be turned off during class. Possession of a cell phone or other electronic communication device during an exam will result in an examination grade of zero. Please keep your feet off of the seat backs and seats. Inappropriate student behavior and offensive language in class, computer science facility or other related activity will not be tolerated. Do not sleep in class, I will wake you up. Only students officially registered for the course and approved assistants may attend class.

Acceptable Student Behavior: Classroom behavior should not interfere with the instructor’s ability to conduct the class or the ability of other students to learn from the instructional program (see the Student Conduct Code, policy D 34.1). Unacceptable or disruptive behavior will not be tolerated. Students who disrupt the learning environment may be asked to leave class and may be subject to judicial, academic or other penalties. This prohibition applies to all instructional forums, including electronic, classroom, labs, discussion groups, field trips, etc. The instructor shall have full discretion over what behavior is appropriate/inappropriate in the classroom. Students who do not attend class regularly or who perform poorly on class projects/exams may be referred to the iCare Early Alert Program. This program provides students with recommendations for resources or other assistance that is available to help SFA students succeed.

Smoking and Use of Tobacco Products: Per the Texas Education code sections 101.41 and 95.21 (b), smoking and the use of tobacco products are prohibited in all buildings, facilities, and vehicles owned or leased by Stephen F. Austin State University, except in areas so designated by the university. Smoking and the use of tobacco is further prohibited within 20 feet of any entrance to a building or facility (http://www.sfasu.edu/policies/smoking_tobacco_prod.asp).
Academic Integrity: Please review the University policy on Academic Integrity. Academic integrity is a responsibility of all university faculty and students. Faculty members promote academic integrity in multiple ways including instruction on the components of academic honesty, as well as abiding by university policy on penalties for cheating and plagiarism.

Definition of Academic Dishonesty:
Academic dishonesty includes both cheating and plagiarism.

Cheating includes but is not limited to:
(1) using or attempting to use unauthorized materials to aid in achieving a better grade on a component of a class;
(2) the falsification or invention of any information, including citations, on an assigned exercise; and/or
(3) helping or attempting to help another in an act of cheating or plagiarism.

Plagiarism is presenting the words or ideas of another person as if they were your own. Examples of plagiarism are:
(1) submitting an assignment as if it were one's own work when, in fact, it is at least partly the work of another;
(2) submitting a work that has been purchased or otherwise obtained from an Internet source or another source; and
(3) incorporating the words or ideas of an author into one's paper without giving the author due credit.

Please read the complete policy at www.sfasu.edu/policies/academic_integrity.asp.

If in my judgment an instance of academic dishonesty on an EXAM has occurred, a grade of zero will be assigned and a minimum of one (1) letter grade will be lost in the course grade. Please note that being in possession of a cell phone or other electronic device during an exam will result in an examination grade of zero. A student found cheating on an examination may not drop the course.

If in my judgment a student is found cheating on any part of a HOMEWORK ASSIGNMENT OR QUIZ, the student will receive negative points will be given. A negative grade will not be replaced by any possible bonus assignment. I consider the person who did the work (homework, quiz, and test) and the person copying the work as both cheating.

Do your own work. Do not share your work with others. A course grade of F may be assigned depending on the situation.

University Drop Policy: The official university add/drop policy is located at: http://www.sfasu.edu/policies/add_drop.asp. If you have questions concerning registration, add/drop or the withdraw process, contact the Registrar at (936) 468-2501 or E-mail: REGISTRAR@SFASU.EDU. The Registrar is located on the 2nd floor of the Rusk building.
Withheld Grades, Semester Grades Policy (A-54): Ordinarily, at the discretion of the instructor of record and with the approval of the academic chair/director, a grade of WH will be assigned only if the student cannot complete the course work because of unavoidable circumstances. Students must complete the work within one calendar year from the end of the semester in which they receive a WH, or the grade automatically becomes an F. If students register for the same course in future terms the WH will automatically become an F and will be counted as a repeated course for the purpose of computing the grade point average.

Special Accommodation Request: Students with special accommodation have the responsibility to immediately initiate a meeting with the instructor to discuss how the special accommodations will be provided. Students who are aware of these special needs at the beginning of the semester must inform the instructor in person about any event which requires special accommodations. To obtain disability related accommodations, alternate formats and/or auxiliary aids, students with disabilities must contact the Office of Disability Services (ODS), Human Services Building, and Room 325, 468-3004 / 468-1004 (TDD) as early as possible in the semester. Once verified, ODS will notify the course instructor and outline the accommodation and/or auxiliary aids to be provided. Failure to request services in a timely manner may delay your accommodations. For additional information, go to www.sfasu.edu/disabilityservices/.

Computer Account Policy: All assignments that require the use of the University Computer must be done under the computer account that is assigned to you in this class. You should NOT do other class assignments in this account, and you should NOT do assignments from this class in other accounts. Failure to abide by the above statements will mean that you will receive a grade of F in this course.

Software Policy: Disciplinary action will be taken against individuals who perform unauthorized duplication of computer software or who are involved in the unauthorized use of duplicated software. This action may make it impossible for you to complete this course.

Computing Laboratory Usage: Students who utilize equipment in university computing laboratories are expected to read and abide by all posted policies for the laboratories. Please note that no children are permitted in university computing laboratories.

Identification: Valid SFA student I.D. cards with CID (not SSN) must be presented on each exam day. (No I.D...No exam...Grade of zero)