Programming Fundamentals II Syllabus

Instructor Information

Instructor	Mark Usnick	**E-Mail**	mcusnick@actx.edu
Phone	(806) 371-5239	**Office Location**	R. E. Byrd Business Building 332
Office Hours			

Course Information

Catalog Year/Term	2015-2016 Summer Semester
Disability Statement	Any student who, because of a disabling condition, may require some special arrangements in order to meet course requirements should contact disAbility Services (Student Service Center room 119, phone 371-5436) as soon as possible.
Administrative Drop Policy	N/A
Student Withdrawal Procedures	N/A
Course	**COSC-1337-001 Programming Fundamentals II**
Prerequisites	Prerequisite: COSC 1336 - minimum grade of C
Course Description	This course focuses on the object-oriented programming paradigm, emphasizing the definition and use of classes along with fundamentals of object-oriented design. The course includes basic analysis of algorithms, searching and sorting techniques, and an introduction to software engineering processes. Students will apply techniques for testing and debugging software.
Student Resources	Student Resources Website
Department Expectations	
Hours	(3 sem hrs; 2 lec, 4 lab)
Class Type	On Campus Course

Syllabus Information

Textbooks

NO TEXTBOOK IS REQUIRED FOR THIS CLASS

Supplies

You will need access to the Internet and a Windows PC.

Student Performance

Course Description: This course focuses on the object-oriented programming paradigm, emphasizing the definition and use of classes along with fundamentals of object-oriented design. The course includes basic analysis of algorithms, searching and sorting techniques, and an introduction to software engineering processes. Students will apply techniques for testing and debugging software. This course is included in the Field of Study Curriculum for Computer Science.

Learning Outcomes:
Upon successful completion of this course, students will:
1. Identify and explain a programming development lifecycle, including planning, analysis,design, development, and maintenance.
2. Demonstrate a basic understanding of object-oriented programming by using structsand classes in software projects.
3. Use object-oriented programming techniques to develop executable programs that include elements such as inheritance and polymorphism.
4. Document and format code in a consistent manner.
5. Apply basic searching and sorting algorithms in software design.
6. Apply single- and multi- dimensional arrays in software.
7. Use a symbolic debugger to find and fix runtime and logical errors in software.
8. Demonstrate a basic understanding of programming methodologies, including object-oriented, structured, and procedural programming.
9. Describe the phases of program translation from source code to executable code.

Students Rights and Responsibilities

Student Rights and Responsibilities

Log in using the AC Connect Portal

In order to receive your AC Connect Email, you must log in through AC Connect at https://acconnect.actx.edu .

If you are an active staff or faculty member according to Human Resources, use "Exchange". All other students, use "AC Connect (Google) Email".

Expected Student Behavior

Students are expected to maintain a high standard of individual honor in their scholastic work. Students who are guilty of cheating, plagiarism, copying, or dishonesty may be excluded from class with a grade of F; or, in flagrant cases, may be suspended from the College. The faculty of the CIS Department reserves the right to ask a student to verify any portion of a test by reproducing any specific section or all of the test in question.

CS/CIS computers and servers should be used only for completion of academic requirements of the CS and CIS departments at Amarillo College.

Any action that compromises the computer systems at Amarillo College can result in a grade of "F" in this course and possible further disciplinary action.

Grading Criteria

Your semester grade (90-100 A, 80-89 B, 70-79 C, 60-69 D, Below 60 F) will be determined as follows:

"lab0"	1%
lab average	33%
midterm exam	33%
final exam	33%

No grades will be recorded (and late penalties will apply) until students complete the contract/contract form ("lab0") which will be distributed by the instructor.

Attendance, Homework, Late Work, Testing and Computer Lab Policies can be found at:

http://cs.actx.edu/~usnick/

Attendance

Students are expected to attend every class.

Students must "scan in" at the bar code reader at the front of the classrooms/labs. This must be done between 15 minutes before and 30 minutes after class starts.

If a student comes to class but does not scan in, they must notify the instructor by email to request that the attendance record be corrected.

Makeup exams will not be given.

Note that this class will require a considerable amount of time outside of class to complete all of the course work!

If you stop working on the class and your average drops below a 60 due to missed assignments and you do not officially drop the course by the deadline, you will receive an F for the course. The deadline for dropping a class at AC is published in the official Amarillo College Schedule of Classes.

Withdraw Policy: If you need to withdraw from the course, you must notify your instructor **via email** no later than 24 hours before the deadline established by the college.

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Calendar

Week 1: Course intro, application of one dimensional arrays
Week 2: Applications to find prime numbers and/or sort lists of numbers
Week 3: Extending the number crunching capability of the hardware with software
Week 4: More in depth coverage of the String class, application of Strings
Week 5: Parsing strings, midterm exam
Week 6: Parsing strings continued, creating a virtual computer
Week 7: Creating a virtual computer, continued
Week 8: Two dimensional arrays
Week 9: Digital Signal Processing
Week 10: Comprehensive final exam

Additional Information