Columbus State Community College
Integrated Media & Technology Department
Computer Science

COURSE: CSCI 1511 Python Programming

CREDITS: 3 CLASS HOURS PER WEEK: 3.5 (Lecture: 1.5; Lab: 2) PREREQUISITES: CSCI 1103

DESCRIPTION OF COURSE: CSCI 1511 introduces basic concepts of game design and programming. Students learn the Python programming language constructs to write programs that integrate classes, class methods, and class instances, built upon basic structures such as: input method handling, 2D sprite manipulation and animation, collision detection, game physics and basic artificial intelligence.

STUDENT LEARNING OUTCOMES

- **Create solutions to stated problems**
- **Create Python programs**
- **Solve and correct errors in the Python code**

GENERAL EDUCATION OUTCOMES

Columbus State Community College's general education outcomes are an integral part of the curriculum and central to the mission of the college. The faculty at Columbus State has determined that these outcomes include the following competencies:

- Critical Thinking
- Scientific and Technological Effectiveness
- Information Literacy

COURSE MATERIALS REQUIRED

Flash drive, minimum of 2GB.

TEXTBOOK, MANUALS, REFERENCES, AND OTHER READINGS

Dawson, Michael, **Python Programming, Third Edition,** Course Technology, 2007, ISBN-13: 978-1-4354-5500-9, ISBN-10: 1-4354-5500-2 (required)

GENERAL INSTRUCTIONAL METHODS

Lecture
Demonstration
Video
Group Discussion

ASSESSMENT

Columbus State Community College is committed to assessment (measurement) of student achievement of academic outcomes. This process addresses the issues of what you need to learn in your program of study and if you are learning what you need to learn. The assessment program at Columbus State has four specific and interrelated purposes: (1) to improve student academic achievements; (2) to improve teaching strategies; (3) to document successes and

identify opportunities for program improvement; (4) to provide evidence for institutional effectiveness. In class you are assessed and graded on your achievement of the outcomes for this course. You may also be required to participate in broader assessment activities.

STANDARDS AND METHODS FOR EVALUATION

Assignment	Points
Short Answer Labs (10 @ 5 points each)	50
Lab Assignments (11 @ 10 points each	110
Quizzes (4 @ 35 points)	140
Project (1 @ 70 points)	70
Total	**370**

GRADING SCALE

334 - 370 points	(A = Excellent)
297 – 333 points	(B = Good)
260 – 296 points	(C = Average)
223 – 259 points	(D =Below Average)
0 – 222 points	(E = Failing)

SPECIAL COURSE REQUIREMENTS

None

ATTENDANCE POLICY

Students will attend all classes. If there is an issue, it is up to the student to contact the Instructor before the class.

Students will be in class on time. Those who show up late will lose points.

STUDENT CODE OF CONDUCT

As an enrolled student at Columbus State Community College, you have agreed to abide by the Student Code of Conduct as outlined in the Student Handbook. You should familiarize yourself with the student code. The Columbus State Community College expects you to exhibit high standards of academic integrity, respect and responsibility. Any confirmed incidence of misconduct, including plagiarism and other forms of cheating, will be treated seriously and in accordance with College Policy and Procedure 7-10.

AMERICANS WITH DISABILITIES ACT (ADA) POLICY

It is Columbus State policy to provide reasonable accommodations to students with documented disabilities. If you would like to request such accommodations because of physical, mental or learning disability, please contact the Department of Disability Services, 101 Eibling Hall, 614.287.2570 (V/TTY). Delaware Campus students may also contact an advisor in the Student Services Center, first floor Moeller Hall, 740.203.8000. Ask for Delaware Campus advising, or www.cscc.edu/delaware, for assistance.

INCLEMENT WEATHER OR OTHER EMERGENCIES
In the event of severe weather or other emergencies that could force the college to close or to cancel classes, such information will be broadcast on radio stations and television stations. Students who reside in areas that fall under a Level III emergency should not attempt to drive to the college even if the college remains open.

Assignments due on a day the college is closed will be due the next scheduled class period. If an examination is scheduled for a day the campus is closed, the examination will be given on the next class day. If a laboratory is scheduled on the day the campus is closed, it will be made up at the next scheduled laboratory class. If necessary, laboratory make-up may be held on a Saturday.

Students who miss a class because of weather-related problems with the class is held as scheduled are responsible for reading and other assignments as indicated in the syllabus. If a laboratory or examination is missed, contact me as soon as possible to determine how to make up the missed exam or lab. Remember! It is the student's responsibility to keep up with reading and other assignments when a scheduled class does not meet, whatever the reason.

In the event the college is forced to close during Final Examination Week, exams scheduled for the first missed date will be rescheduled for (date), in the same location at the same time scheduled. Exams scheduled for a second missed date will be rescheduled for _____. Thus, our final exam is scheduled for (date) at _____ o'clock. If the college is closed that day, the exam will be held on (date) at _____ o'clock. If our exam is the second day the college has been closed, the exam will be held on (date) at _____ o'clock.

FINANCIAL AID ATTENDANCE REPORTING
Columbus State is required by federal law to verify the enrollment of students who participate in Federal Title IV student aid programs and/or who receive educational benefits through the Department of Veterans Affairs. It is the responsibility of the College to identify students who do not commence attendance or who stop attendance in any course for which they are registered and paid. Non-attendance is reported quarterly by each instructor, and results in a student being administratively withdrawn from the class section. Please contact the Financial Aid Office for information regarding the impact of course withdrawals on financial aid eligibility.

Campus Closing Dates
See the information in BB: Course Information -> Closing Dates.

UNITS OF INSTRUCTION

WEEK	UNIT OF INSTRUCTION	LEARNING OBJECTIVES/GOALS	ASSESSMENT METHODS	ASSIGNMENTS	ASSIGNMENT DUE DATE
Week 1: 01/21	Introduction to Python Programming: Chapters 1 & 2; Introduction to course resources and requirements, introduction to editing, running and saving Python scripts, basic input and output.	Creates Python programs with a specified IDE, i.e. IDLE. Demonstrates execution of Python program.	Short Answer Labs; Lab Assignments;	Reading Assignment: Chapter 1 & 2; Lab 2: Short Answer Labs; Lab 2: Program Assignments	
Week 2: 01/28	Guess My Number Game: Chapter 3; Branching, While Loops and Programming Planning	Analyze solution to prescribed problems. Create and compile a Python script	Short Answer Labs; Lab Assignments;	Reading Assignment: Chapter 3; Lab 3 - SA; Lab 3 - Program Assignments	
	The Word Jumble Game: Chapter 4; for Loops, Strings and Tuples	Analyze solution to prescribed problems. Create and compile a Python script	Short Answer Labs; Lab Assignments; Quizzes	Reading Assignment: Chapter 4; Lab 4 - SA; Lab 4 - Program Assignments;	
Week 3: 02/04	The Hangman Game: Chapter 5; Lists and Dictionaries	Analyze solution to prescribed problems. Create and compile a Python script	Short Answer Labs; Lab Assignments; Quizzes	Reading Assignment: Chapter 5; Lab 5 - SA; Lab 5 - Program Assignments;	

Week 4: **02/11**	The Tic-Tac-Toe Game: Chapter 6; Functions	Analyze solution to prescribed problems. Create and compile a Python script	Short Answer Labs; Lab Assignments;	Reading Assignment: Chapter 6; Lab 6 -SA; Lab 6 - Program Assignments; Quiz 1	**Quiz 1: Chapters 1, 2, & 3, In Class,** **09/24**
Week 5: **02/18**	The Trivia Challenge Game: Chapter 7; Files and Exceptions	Analyze solution to prescribed problems. Create and compile a Python script	Short Answer Labs; Lab Assignments;	Reading Assignment: Chapter 7; Lab 7 - SA; Lab 7 - Program Assignments	
Week 6: **02/25**	The Critter Caretaker Game: Chapter 8; Software Objects	Analyze solution to prescribed problems. Create and compile a Python script	Short Answer Labs; Lab Assignments; Quizzes	Reading Assignment: Chapter 8; Lab 8 - SA; Lab 8 - Program Assignments;	
Week 7: **03/03**	The Blackjack Game: Chapter 9; Object-oriented Programming	Analyze solution to prescribed problems. Create and compile a Python script	Short Answer Labs; Lab Assignments;	Reading Assignment: Chapter 9; Lab 9 - SA; Lab 9 - Program Assignments;	**Quiz 2: Chapters 4, 5 & 6, In Class,** **10/15**
Week 8: **03/10**	The Madlab Program: Chapter 10; GUI Development	Analyze solution to prescribed problems. Create and compile a Python script	Short Answer Labs; Lab Assignments;	Reading Assignment: Chapter 10; Lab 10 - SA; Lab 10 - Program Assignments; Quiz 2	
SPRING BREAK – NO CLASSES					
Week 9: **03/24**	The Pizza Panic Game: Chapter 11; Game Graphics	Analyze solution to prescribed problems. Create and compile a Python script	Short Answer Labs; Lab Assignments;	Reading Assignment: Chapter 11; Lab 11 - SA; Lab 11 - Program Assignments;	

Week 10: **03/31**	Astrocrash: Chapter 12; Sound, Animation and Game Development	Analyze solution to prescribed problems. Create and compile a Python script	Short Answer Labs; Lab Assignments;	Reading Assignment: Chapter 12; Lab 12 - SA; Lab 12 - Program Assignments;	
Week 11: **04/07**	Astrocrash: Chapter 12; Sound, Animation and Game Development	Analyze solution to prescribed problems. Create and compile a Python script	Short Answer Labs; Lab Assignments; Quizzes	Reading Assignment: Chapter 12; Lab 12 - SA; Lab 12 - Program Assignments; Quiz 3	
Week 12: **04/14**	Astrocrash: Chapter 12; Sound, Animation and Game Development	Analyze solution to prescribed problems. Create and compile a Python script	Short Answer Labs; Lab Assignments; Quizzes	Reading Assignment: Chapter 12; Lab 12 - SA; Lab 12 - Program Assignments; Quiz 3	
Week 13: **04/21**	Special Python Projects: Relating Python to special topics involving advanced game topics, Web applications, database uses	Analyze solution to prescribed problems. Create and compile a Python script		Project Assignment	**Quiz 3: Chapters 7, 8 & 9, In Class, 12/03**
Week 14: **04/28**	Special Python Projects (cont'd):	Analyze solution to prescribed problems. Create and compile a Python script		Project Assignment	
Week 15: **05/05**	Special Python Projects (cont'd):	Analyze solution to prescribed problems. Create and compile a Python script		Project Assignment	
Week 16: **05/12**	**Finals Week**				**Quiz 4: Chapters 10, 11 & 12, In Class, see Final Schedule**