

Fayetteville State University
College of Arts and Sciences
Department of Mathematics and Computer Science
CSC 120.01: Introduction to Programming Methodology
Fall 2011

I. Locator Information:

Instructor: Dr. Michael Almeida

Office Location: SBE 340

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Office hours: MW: 10:00 am – 12:00 pm & 2:00 pm – 4:00 pm & by appointment

Course # and Name: CSC 120, Section 01, Introduction to Programming Methodology

Day and Time Class Meets: MWF 12:00 – 12:50 pm

Class Location: SBE 218

Semester Credit Hours: 3.00

Total Contact Hours for Class: 45

FSU Policy on Electronic Mail: Fayetteville State University provides to each student, free of charge, an electronic mail account (username@uncfsu.edu) that is easily accessible via the Internet. The university has established FSU email as the primary mode of correspondence between university officials and enrolled students. Inquiries and requests from students pertaining to academic records, grades, bills, financial aid, and other matters of a confidential nature must be submitted via FSU email. Inquiries or requests from personal email accounts are not assured a response. The university maintains open-use computer laboratories throughout the campus that can be used to access electronic mail.

Rules and regulations governing the use of FSU email may be found at <http://www.uncfsu.edu/PDFs/EmailPolicyFinal.pdf>

Note: In case FSU must close for an emergency during the semester, instruction will continue using Blackboard.

II. Course Description: This course is the first course of a two-semester sequence that provides an overview of programming methodology and program writing skills. Topics include basic concepts of computer systems, problem solving and algorithm development, program structures, data types, program development, method and style, coding, debugging, testing, and documentation. *Prerequisite: CSC 105; MATH 129 or MATH 131 or higher.*

III. Disabled Student Services: In accordance with Section 504 of the 1973 Rehabilitation Act and the Americans with Disabilities Act (ACA) of 1990, if you have a disability or think you have a disability to please contact the Center for Personal Development in the Spaulding Building, Room 155 (1st Floor); 910-672-1203.

IV. Textbook and Programming Language Implementations

1. Required textbook: *Python Programming: An Introduction to Computer Science, 2nd Edition* by John Zelle, Franklin Beedle & Associates, 2010. ISBN 978-1-59028-241-0. (The first edition is also ok.)
2. Python Version 3.2 plus IDLE, available at <http://www.python.org/>

V. Student Learning Outcomes

Upon completion of this course, students will be able to:

1. use an IDE to develop and execute a program
2. use control structures including sequence, selection, repetition, and functions
3. implement simple algorithms
4. use arrays / lists
5. look up documentation about programming libraries
6. understand program design techniques (e.g. documentation, top-down design, pseudocode, flowchart)
7. construct and use objects
8. describe the differences among objects, classes, and methods
9. specify the public interface of classes
10. implement classes containing fields, constructors and methods
11. implement simple graphical programs with user interfaces

VI. Course Requirements and Evaluation Criteria

a. Grading Scale -

Grade	Total point range	Credit Hours	Quality Points	Meaning
A	90% – 100%	Hours attempted and earned	4 per credit hour;	Exceptionally high
B	80% – 89.99%	Hours attempted and earned	3 per credit hour	Good
C	70% – 79.99%	Hours attempted and earned	2 per credit hour	Satisfactory
D	60% – 69.99%	Hours attempted and earned	1 per credit hour	Marginally passing
F	below 60%	Hours attempted – Not earned	0 per credit hour	Failing
FN		Hours attempted – Not earned	0 per credit hour	Failing due to non-attendance. (Student registered, but <u>never</u> attended.)

b. Attendance Requirements – Students are expected to attend all class meetings, laboratories, and other instructional sessions for this course. Students are also expected to arrive to class on time and remain in class for the entire scheduled period. During the first half of the semester/term, faculty will assign an interim grade of EA, Excessive Absences, for students whose class absences exceed 20% of the total contact hours for the class. Students who receive EA interim grades must either withdraw from the class or resume attendance. The EA is not a final grade, so students who are assigned an interim grade of EA, but do not withdraw from the class, will receive a final grade based on the evaluation criteria for the class.

c. Graded Assignments and Value of Each Assignment -

- i. Midterm Exam worth 15%
- ii. Final exam worth 15%
- iii. Six programming projects worth a total of 60%.

- iv. In class exercises worth 10%.
- d. Policy on Missed or Late Assignments - tests and quizzes missed due to an unavoidable reason can be made up only with the instructor's permission. In order to receive this permission the student has to provide convincing evidence (e.g. doctor's note) that the absence was due to an unavoidable reason. There is a penalty of 10 points for each day a project is overdue. Project submissions that are more than a week overdue will not be accepted for grading.
- e. Dishonesty in academic affairs – Acts of dishonesty in any work constitute academic misconduct. Such acts include cheating, plagiarism, misrepresentation, fabrication of information, and abetting any of the above. Plagiarism in particular presents pitfalls to be avoided: failure to document any words, ideas, or other contributions that do not originate with the author constitutes plagiarism. Widespread use of the World Wide Web (Internet) requires particular attention to proper documentation practices. Individual course syllabi offer additional clarification about requirements for proper documentation. Actions outlined in the Fayetteville State University Student Handbook under Disciplinary System and Procedures will be followed for incidents of academic misconduct. The handbook may be obtained from the Office of Student Affairs located in the Collins Administration Building. Non-disclosure or misrepresentation on applications and other university records will make students liable for disciplinary action, including possible expulsion from the university.

Please note: If these evaluation criteria must be revised because of extraordinary circumstances, the instructor will distribute a written amendment to the syllabus.

VII. Academic Support Resources: This course uses FSU Blackboard for online dissemination. Students will find most materials online within the Blackboard module for this course. Project submissions and most tests will be implemented through Blackboard so students are required to check the Blackboard course website and their email at least once a day.

VIII. Course Outline and Assignment Schedule*

WEEK	LECTURE TOPICS & ACTIVITIES	ADDITIONAL COMMENTS
FIRST DATES: 08/18 – 08/19	FIRST DAY OF CLASS. COURSE OVERVIEW	LATE REGISTRATION BEGINS 08/18 CLASSES BEGIN 08/18
SECOND DATES: 08/22 – 08/26	CHS. 1 & 2 PROJECT 1 ASSIGNED IN-CLASS #1	
THIRD DATES: 08/29 – 09/02	CH. 3 COMPUTING WITH NUMBERS IN-CLASS #2	
FOURTH DATES: 09/05 – 09/09	CH. 4 OBJECTS AND GRAPHICS	LABOR DAY HOLIDAY 09/05
FIFTH DATES: 09/12 – 09/16	CH. 4 OBJECTS AND GRAPHICS PROJECT 2 ASSIGNED IN-CLASS #3	FALL CONVOCATION 09/15 2:00 PM
SIXTH DATES: 09/19 – 09/23	CH. 5 SEQUENCES	

SEVENTH DATES: 09/26 – 09/30	CH. 6 DEFINING FUNCTIONS PROJECT 3 ASSIGNED	
EIGHTH DATES: 10/03 – 10/07	MIDTERM EXAM	MID TERM EXAMINATIONS BEGIN ON 10/06
NINTH DATES: 10/10 – 10/14	CH. 7 DECISION STRUCTURES BREAK	
TENTH DATES: 10/17 – 10/21	CH. 7 DECISION STRUCTURES CH. 8 LOOP STRUCTURES AND BOOLEANS PROJECT 4 ASSIGNED	MID TERM BREAK 10/17-18
ELEVENTH DATES: 10/24 – 10/28	CH. 8 LOOP STRUCTURES AND BOOLEANS	
TWELFTH DATES: 10/31 – 11/04	CH. 9 SIMULATION AND DESIGN PROJECT 5 ASSIGNED	
THIRTEENTH DATES: 11/07 – 11/11	CH. 9 SIMULATION AND DESIGN	VETERAN'S DAY HOLIDAY 11/11
FOURTEENTH DATES: 11/14 – 11/18	CH. 10 DEFINING CLASSES PROJECT 6 ASSIGNED	
FIFTEENTH DATES: 11/21 – 11/25	CH. 10 DEFINING CLASSES	THANKSGIVING HOLIDAY 11/24-25
SIXTEENTH DATES: 11/28 – 12/02	REVIEW	LAST DAY OF CLASSES IS 12/02
SEVENTEENTH DATES: 12/05 – 12/9	FINAL EXAM	

* This schedule is subject to change for the optimum benefit of the class as a whole. Therefore it is important to attend class, stay alert and read your email regularly.

IX. Teaching Strategies: This course has both lecture and lab sessions that will be held in the same class room. Lab sessions are mostly discussion oriented, interactive problem solving sessions. Lectures, while also discussion oriented, will provide theoretical knowledge that supports the lab sessions and project work.

X. Bibliography

1. "Think Python: An Introduction to Software Design" Allen B. Downey. Free book available online as PDF file at: <http://www.greenteapress.com/thinkpython/>
2. "Object-Oriented Programming in Python" Michael Goldwasser, David Letscher. ISBN: 0136150314. Prentice Hall Publishing. (October 2007)
3. "Introduction to Computing and Programming Using Python: A Multimedia Approach" Mark Guzdial. ISBN: 0131176552
4. "Core Python Programming" Wesley J. Chun. ISBN: 0132269937 (2nd ed.); 0130260363 (1st ed.). Prentice Hall PTR / Pearson Education
5. "Dive Into Python: Python for Experienced Programmers" Mark Pilgrim. ISBN: 1590593561, Apress.

6. "Learning Python" Mark Lutz. ISBN: 0596513984, O'Reilly & Associates, 701 pages (October 2007)
7. "The Quick Python Book" Daryl Harms, Kenneth McDonald. ISBN: 1884777740, Manning Publications, (October 1999)
8. "Learn to Program Using Python" Alan Gauld. ISBN: 0201709384, Addison-Wesley, (December, 2000)
9. "Programming Python (Third Edition)" Mark Lutz. ISBN: 0596009259, O'Reilly & Associates, (August, 2006)
10. "Python Standard Library" Fredrik Lundh. ISBN: 0596000960, O'Reilly & Associates, (February 2001)
11. "Web Programming in Python: Techniques for Integrating Linux, Apache, and MySQL" George K. Thiruvathukal, John Shafae and Thomas Christopher. ISBN: 0130410659, Prentice Hall, (October 2001)
12. "Programming With Python" Tim Altom with Mitch Chapman. ISBN: 0761523340, Prima Publishing, (October 1999)
13. "Python Developer's Handbook" Andre Lessa. ISBN: 0672319942, Sams, (December 2000)
14. "Python How to Program" Harvey M Deitel, Paul J Deitel, Jonathan Liperi, Ben Wiedermann. ISBN: 0130923613, Prentice Hall, (2002)
15. "Text Processing in Python" David Mertz. The free text is available at:
<http://gnosis.cx/TPiP/>
16. "Python Programming Patterns" Thomas Christopher. ISBN: 0130409561. Prentice-Hall, 2001
17. "Python Programming for the absolute beginner" Michael Dawson. ISBN: 1592000738. Premier Press,(2003)
18. "A Byte of Python" Swaroop C H. This book can be read online or downloaded from
<http://www.byteofpython.info/>
19. "Practical Python" Magnus Lie Hetland. ISBN: 1590590066, APress (August 2002)
20. "Beginning Python: From Novice to Professional" Magnus Lie Hetland. ISBN: 1-59059-519-x, APress (September 2005)