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Chatham University
Course Syllabus

GENERAL INFORMATION

Course Title: Introduction to Programming
Course Number: CMP120
Semester/Year: Fall 2018
Classroom: Falk 117
Instructor and Contact:
> Dr. Stephanie Rosenthal: s.rosenthal@chatham.edu
> Dr. David Lu: d.lu@chatham.edu

Office Hours: TBD

COURSE INFORMATION

Course Description:
An introduction to the theory and practice of computer programming with an emphasis on problem solving. No previous programming experience is required.

Student Learning Outcomes:
Program Level Student Learning Outcomes
Graduates of bachelor's-level programs in business will be able to demonstrate that they possess academic skills, professional attributes and broad-based and in-depth knowledge of business concepts and functions. This course fulfills the following Student Learning Outcome(s) for undergraduate business majors:
• Analyze situations and solve problems in business settings and make appropriate business decisions.
• Advanced knowledge in the major field of Management Information Systems

This course fulfills the following Program Level Student Learning Outcomes for undergraduate applied data science majors:
• Create effective solutions to computing challenges in analytical projects.
• Critically analyze problems and identify analytical solutions.

Specific learning outcomes for this course include:
• Create algorithms and corresponding computer code given desired specifications
• Assess and predict the outcome of running code segments
• Analyze tradeoffs between different algorithms or code segments
• Debug code segments to improve their outcomes

Required Texts and Materials:
"Learning Python, 5th Edition: Powerful Object-Oriented Programming" By Mark Lutz. O'Reilly Media, June 2013. ISBN-10: 1449355730
Lab fee: $30 for a CodeCombat student license

Optional Texts and Materials:
Links to other free texts are available on the course website.

Course Requirements: (tests, assignments, etc.)

This course includes daily programming challenges available on CodeCombat, 4 programming assignments of increasing difficulty, and a midterm.

Daily Programming Challenges
Learning a programming language is like learning a human language. You must practice every day to reinforce the skills you are learning. This semester we will be using CodeCombat as a fun way to practice your coding skills and keep track of your progress. Programming challenges must be completed **before class on the day they are due**. Students should be prepared for in-class discussions and writing assignments to think critically about the concepts they are learning.

Programming Assignments
In addition to CodeCombat, students should learn how to write programs from scratch on their own. Assignments will reinforce these skills. All programs must be the students' own work (See Course Policies), and must be submitted on time with the student's id and assignment number as the file name. For example, if Stephanie Rosenthal's id is 123456, her assignments will be 123456-1.py, 123456-2.py, etc. If multiple files are required, they should be zipped (archived) as 123456-1.zip. Note that assignments MUST be submitted with ids only in order to preserve anonymity. Any deviation from this naming scheme will result in a 0 for the assignment. **Moodle will have instructions for submitting assignments.**

All code must also be commented and include readable variable names for easy evaluation by the instructor. Because we will be going over the answers to the assignments in class, **all assignments should be submitted on their due date by 11:59PM**. A 0 will be given for any assignment not submitted by this deadline.

The grades will be based on the assignments and midterm as follows:
• Daily Programming Challenges: 35%   • Assignment 4 Midpoint Check: 5%
• Assignment 0: 5%   • Assignment 4: 10%
• Assignment 1: 10%   • Midterm Exam: 10%
• Assignment 2: 10%   • Class Participation: 5%
• Assignment 3: 10%

Course Policies:

Attendance Policy
Every student enrolled at Chatham accepts the responsibility to attend all required class meetings. To obtain the fullest benefit from their courses, students must participate fully. This implies attending regularly, engaging in course activity, completing work on time, and making up work missed because of an emergency absence. **It is the student's responsibility to let the course instructor know within the drop-add period if he or she will have to miss class for religious reasons, athletics, or other.**

Attendance will be recorded on a sign-in sheet available at the room entrance. You are not permitted to sign-in for other students. Leaving early constitutes an absence unless the professor is advised of this necessity at least 24 hours in advance. If you miss a class, it is up to you to get the notes for that day from a classmate. **Six unexcused absences will result in a failure in the course.**

Code Help, and Collaboration Requirements
Unless otherwise specified, all assignments should be completed individually. **It is encouraged for students to collaborate in studying the course material, to seek help from the SI and instructors, but the "writing on the page" or the "code in the file", as examples, should be your own thought**

product. We strongly discourage using the Internet to look for answers. Similarly, help from classmates is encouraged but the helper should not show their code or answers when helping someone else (only the help requester should show their code to their classmate(s)). Paper and pencil and/or whiteboards are the recommended collaborative study and help tools to prevent any possibility of copying working code.

If portions of your individual assignments have been significantly influenced by someone else, you should prominently give them credit for their contribution. Proper attribution is critically important -- and is an absolute defense against charges of Academic Dishonesty, Cheating, or Plagiarism.

Grades will be assigned as follows

        94-100% = A
        90-93% = A-
        87-89% = B+
        83-86% = B
        80-82% = B-
        77-79% = C+
        73-76% = C
        70-72% = C-
        67-69% = D+
        63-66% = D
        60-62% = D-
        Below 60% = F

Midterm Grades
As a check on progress, mid-term grades will be posted after completion of the Mid-Term Exam. Mid-term grades will be based principally on performance on the Mid-Term Exam as well as on completion of assignments and class participation and attendance to that point in the course. **The last date to withdraw from the course is Wednesday, November 7th.**

Missed Exams/Assignments
Only absences that are excused by an appropriate authority qualify as excused. If you must miss a class, please obtain the notes for that day from a classmate and check the class website for updates. Exams must be taken on the scheduled day. There is no provision for makeup tests other than for extreme emergency situations that must be documented by an appropriate authority.

Laptops and cell/smart phones
Use of electronics for note taking or other functions directly related to class activities is permitted when appropriate. **Note: some days, laptops will be required for in-class programming assignments.** Unrelated online/electronic activity that interferes with your and/or others' ability to pay attention in class is not permitted. Failure to abide by this policy will result in dismissal from the class and an unexcused absence.

Behavior
Common courtesy is expected. Every student is expected to come to class prepared to learn and participate in a meaningful way. Under no circumstances is a student's behavior to detract from the learning environment of others in the class. (Disruptive behavior may result in the student's dismissal from the course.)

Course Calendar/Schedule:

CC: CodeCombat

	Day	Date	Topic	Work Due
1	8/27	M	Introduction and Binary	
2	8/29	W	Computational Thinking	
3	8/31	F	Computational Thinking	**Assignment 0 due at 11:59pm**
4	9/3	M	**No Class.** Add/drop deadline is 9/4	
5	9/5	W	What is Python?	
6	9/7	F	Basic Algorithms and Code	
7	9/10	M	While-true Loops	**CC: Intro CS Levels 1-6 due before class**
8	9/12	W	Variables	**CC: Intro CS Levels 7-14 due before class**
9	9/14	F	Python Basics: Review	**CC: Intro CS Levels 15-20 due before class**
10	9/17	M	Conditionals if	**CC: CS2 Levels 1-4 due before class**
11	9/19	W	Conditionals if-else	**CC: CS2 Levels 5-10 due before class**
12	9/21	F	Conditionals (nested)	**CC: CS2 Levels 11-19 due before class**
13	9/24	M	Practice: Putting it together	**CC: CS2 Levels 20-22 due before class**
14	9/26	W	Practice: Debugging	
15	9/28	F	Strings	**Assignment 1 due at 11:59 pm**
16	10/1	M	Arithmetic	
17	10/3	W	Review	**Bring Questions to Class**
18	10/5	F	Midterm	
19	10/8	M	**No Class (Long Weekend)**	
20	10/10	W	Review Exam and Functions	**Assignment 2 due at 11:59 pm**
21	10/12	F	Events (Midterm Grades Due)	
22	10/15	M	Review Strings and Arithmetic	**CC: CS2 Levels 23-36 due before class**
23	10/17	W	Classes and Properties	**CC: CS2 Levels 37-46 due before class**
24	10/19	F	Properties, Variables, and Functions	**CC: CS 3 Levels 1-9 due before class**
25	10/22	M	More Classes and Functions	**CC: CS 3 Levels 10-18 due before class**
26	10/24	W	Practice: Putting it Together	**CC: CS 3 Levels 19-25 due before class**
27	10/26	F	Practice: Putting it together	
28	10/29	M	Boolean Logic (Not, And, Or)	**CC: CS 3 Levels 26-40 due before class**
29	10/31	W	Debugging Boolean Logic	
30	11/2	F	More Loops **(Last day to Withdraw)**	**Assignment 3 due at 11:59 pm**
31	11/5	M	Arrays	
32	11/7	W	For Loops	
33	11/9	F	More Classes and Properties	**CC: CS 3 Levels 41-63 due before class**
34	11/12	M	Using Python Packages	
35	11/14	W	FileIO	**CC: CS 4 Levels 1-10 due before class**
36	11/16	F	Optimization Algorithms	
37	11/19	M	Assignment 4 Work in Class	**CC: CS 4 Levels 11-20 due before class**
38	11/21	W	**No Class (Thanksgiving)**	
39	11/23	F	**No Class (Thanksgiving)**	
40	11/26	M	Stacks and Queues	**Assignment 4 Midpoint Check**
41	11/28	W	Dictionaries	**CC: CS 4 Levels 21-30 due before class**
42	11/30	F	Search	
43	12/3	M	Sorting	**CC: CS 4 Levels 31-40 due before class**
44	12/5	W	Sorting	
45	12/7	F	Final Review/Wrap-up	**Assignment 4 due at 11:59pm**

Other important dates:
- Add/Drop Ends Tuesday Sept. 4th
- Last Day to Withdraw Wednesday Nov. 7th

- Rosh Hashanah Sept. 10th
- Yom Kippur Sept. 19th

Plan to attend some of the Business & Entrepreneurship networking events:

- Tuesday September 18th B&E Dept. presents the Institute for Supply Management (ISM) Pittsburgh Chapter meeting. RSVP
- Wednesday Accounting Career Day at IUP. RSVP for transportation to IUP.
- Tuesday September 25th "Accounting and Information Systems" Networking Mixer. RSVP
- *More to come!*

POLICY STATEMENTS

Chatham University Honor Code:

Chatham University students pledge to maintain the Honor Code, which states in part: "Honor is that principle by which we at Chatham form our code of living, working, and studying together. The standards of honor at Chatham require that all students act with intellectual independence, personal integrity, honesty in all relationships, and consideration for the rights and well being of others."

Information about the Honor Code is available in the Student Handbook.

Cheating and Plagiarism:

Cheating is defined as the attempt, successful or not, to give or obtain aid and/or information by illicit means in meeting any academic requirements, including examinations. Plagiarism is defined as the use, without proper acknowledgement, of the ideas, phrases, sentences, or larger units of discourse from another writer or speaker.

Turnitin.com and FERPA

In all classes, faculty must notify students if the Turnitin service may be used. Student papers are protected by the Family Educational Rights and Privacy Act as they are educational records that contain personally identifiable information. If faculty submits a paper or an excerpt from a paper on behalf of a student for evaluation by Turnitin, an alias must be used instead of the student's name and faculty will ensure that any identifiable personal information is removed before submission.

Disability Statement:

Chatham University is committed to providing an environment that ensures that no individual is discriminated against on the basis of her/his disability. Students with disabilities, as defined under the Americans with Disabilities Act of 1990 (ADA) and who need special academic accommodations, should notify the assistant dean of the PACE Center as soon as possible. The PACE Center will work with students and the course instructor to coordinate and monitor the provision of reasonable academic accommodations.

Non-Registered Students Policy:

In accordance with University policy, only officially registered students may attend this class and all other classes offered at the University after the drop/add period. Please confer with your academic advisor if you need assistance with the registration process or you need additional information.

Minimum Grade Requirements:

Graduate students must earn a grade of B- or above in all courses. Undergraduates must earn a grade of C- or above in all courses completed after spring 2011 used to fulfill major or minor requirements. Please refer to the University catalog or individual program manuals for additional information.

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MINIMUM TECHNOLOGY REQUIREMENTS:

Internet Access	Broadband cable or DSL with a minimum connection speed of 768kbit is recommended; slower connections may not provide optimal course experience and performance
Operating System	Microsoft Windows 7 or higher (PC) Mac OS X 10.6 or higher (MAC) Current students may purchase Operating System upgrades from the Chatham Helpdesk
Processor Type	2.0 GHz or higher
System Memory	4GB RAM or higher
Monitor	1024x768 or higher screen resolution
Software	Microsoft Office 2013 or higher (PC) Microsoft Office 2011 or higher (MAC) All students will be provided with Microsoft Office 365 Current students may purchase Microsoft Office from the Chatham Helpdesk
Web Browser	Mozilla Firefox (Recommended for Moodle), or Google Chrome Incognito (Recommended for myPortal); other browsers such as Internet Explorer, Opera and Apple Safari are not recommended
Storage	500GB of hard drive or greater
Audio	Computer speakers and headphones
Visual	Web Camera
E-mail	Chatham University e-mail account (Microsoft Office 365)
Web Conferencing	Courses using web conferencing for online meetings require the following: • For audio: headphones and microphone • For video: web camera
Plug-ins	Course content may include file types that require special plug-in software, which are typically available as free downloads (ex: Real Player, Java, QuickTime, Silverlight, Adobe Reader and Adobe Flash)
Mobile Devices	Some resources are available via smartphones and tablets. Please note: Mobile devices will not be able to complete all course requirements. Students will still need regular access to a computer.
On Campus Resources	Current students have access to the following resources: 24 Hour Computer Lab – JKM Library 106 Computer Lab – JKM Library 101 Computer Lab – Buhl 236 (no printer) Computer Lab – Coolidge 42 Computer/CAD Lab – Eastside 209 Chatham IT Helpdesk – Woodland 100, Eastside 219, Eden Hall Lodge Library
Off Campus Resources	Current students have access to the following resources: Atomic Learning (http://www.atomiclearning.com/) Chatham IT (http://www.chatham.edu/its) Chatham IT Helpdesk (http://services.chatham.edu)
Current Technologies	For the most up-to-date technology, please visit Chatham IT (http://www.chatham.edu/its)