AUGUSTA UNIVERSITY
SCHOOL OF COMPUTER AND CYBER SCIENCES

Augusta University
School of Computer and Cyber Sciences
Fall 2022

AIST 2120: PRINCIPLES OF SCRIPTING AND AUTOMATION

Instructor: Jacob Cox, Ph.D.
Office: Classroom, UH 124
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Office Hours: MON/WED from 6:45 – 7:30 p.m. (immediately after class in Room 124) by appointment
Other times may be available by appointment.

Course Dates: August 17, 2022 – Dec 7, 2022
Last day of classes (Dec. 1)

Final Exam Date: Tentatively, DEC 9, Friday, 5:00-7:00 p.m.
(Finals Week Dec. 9-15)

Location: Summerville Campus, University Hall, Room 124

Lecture/Class Time: Section C: MON/WED, 5:30 – 6:45 p.m.

Learning Outcomes

By the end of this course, students will:

- Understand and be able to apply scripting and automation techniques to solve computing challenges using correct, well-structured programs written in the Python programming language.
- Build on their basic knowledge of programming in order to automate computing tasks including regular expressions, input validation, file operations, and web scraping working with Word and PDF documents, and scheduling.
- Further develop computational thinking skills and practices.

Course Description

AIST 2120 – An *intermediate programming* course focused on solving and automating commonInformation Technology challenges using a contemporary scripting language. Topics include command line interfaces, scripted control structures, arrays and dictionaries, object-oriented design concepts, and text processing. (Source: Augusta University 2020 - 2021 Catalog)

Format and Procedures

This course consists of lectures, lab assignments, programming assignments, quizzes, exams, and assignments.

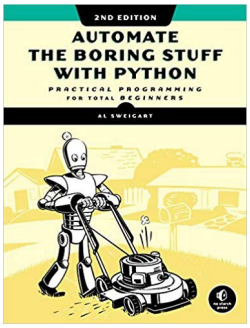
Teaching Philosophy

AIST 2120 is a three (3) credit hour course designed to introduce students to scripting and automation using the Python programming language. Previous programming experience is a requirement and familiarity with the Python programming language is desirable. Laboratory and programming assignments reinforce the lectures and allow students to practice programming skills and techniques at the keyboard. In lectures, labs, and programming assignments, understanding both 'why' and 'how' is important.

Course Requirements

- Class Attendance. Class attendance is a significant indicator of course success. Recognizing that unforeseen circumstances can impact attendance occasionally, I expect you to be in class.
- Class Participation. Another key indicator of course success is to pay attention and participate in class. Some indicators of your participation are class interaction and D2Lonline course interaction.
- Our required textbook is:

  Sweigert, ***Automate the Boring Stuff with Python: Practical Programming for Total Beginners***, 2nd Edition, © 2019; No Starch Press
  ISBN-10: 1-59327-992-2
  ISBN-13: 978-1-59327-992-9



Note: Automate the Boring Stuff is available at the JagStore, at major booksellers, and (for free) online. *As you decide which format to choose, remember to consider which one best supports your learning success.*

Grading

This course consists of the following graded items:

- Quizzes. Includes pre-lecture Chapter quizzes and may include other announced or pop quizzes, as well as ad hoc assignments (counted as quiz grades). The pre-lecture quizzes are short Brightspace/D2L online quizzes to measure your understanding of the chapter

material. Your first two quizes will include questions from this syllabus. You will complete these online quizzes during the first ten minutes of class, so arrive on time and prepared to pass your quiz for the applicable chapter(s).

- **Lab Exercises**. Lab exercises allow students the opportunity to explore the scripting and automation tools, techniques, and procedures covered in the book and the lecture portion of class. A portion of class time will be dedicated to lab completion. Labs will be checked off in class and uploaded to D2L at the time specified in the lab's instructions.

- **Programming Assignments.** Programming assignments afford each student the opportunity to further apply and practice the skills and techniques shared in the book, discussed in the lectures, and practiced in lab. Peer *discussion* of *concepts* is acceptable and encouraged. *However,* ***write your own code*** and ***do not share it with others***. (See *Academic Honesty* section below.)

Assignment submission requirements will be provided in the assignment instructions.

- **Exams.** Exams assess your understanding of the topics covered in the course. Exams may include multiple-choice, multiple-selection, True/False, matching, ordering, short-answer, and programming questions. Exams will be taken in class on Brightspace/D2L. Extenuating circumstances necessitating exam accommodation also may require use of Respondus Monitor. Accommodations will almost always still require the exam be taken at regular class time, the same time as every other student takes it.

- **Final Exam**. The Final Exam is cumulative and assesses your understanding of the topics covered in the course. The Final Exam may include multiple-choice, multiple-selection, True/False, matching, short-answer, and programming questions. The Final Exam will be taken in class on Brightspace/D2L. Circumstances necessitating accommodation may require use of Respondus Monitor.

- Grading Scheme

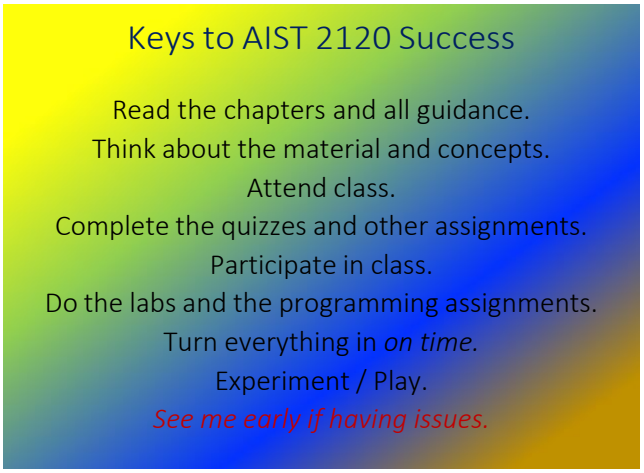
Pre-Lecture Chapter Quizzes	10%
Lab Assignments	15%
Programming Assignments	35%
Exams (4)	25%
Final Exam (1)	15%
Total	**100%**

- Letter Grade Scale

A – 90% and above
B – 80% - 89%
C – 70 – 79%
D – 60 – 69%
F – Below 60%

- Grading Notes

- Do not count on a grading curve nor rounding scores.
- Extra credit or bonus points, if any, will be offered to the entire class. These are your opportunities to give your grade a little push. Do them or don't: it's up to you. They will normally appear in your assignment instructions. The assignment must be turned in on time to receive bonus points.
- Laboratory assignments will be graded during class; going over them with you face-to-face is a requirement. Opportunities to do this outside of lab time must be arranged and are not guaranteed. See the lab assignment documents for detailed submission and late submission info.
- Programming assignments are submitted via Brightspace/**D2L**. See the programming assignment documents for detailed submission and late submission info.
- In general, late submissions will incur a one-point penalty per hour after the assignment is due for up to 48 hours (two days). Assignments submitted more than 48 hours past the submission date *will not beaccepted*. The resulting grade will be zero (0).
- If something is unclear or seems odd, get clarification; it is your responsibility.



Exam Absences

Exam absences must have strong justification and be coordinated with me **prior to the exam**. Unexcused missed exams will result in a grade of zero (0).

Though rare, there are circumstances that warrant missing a scheduled exam. I will grant permission to miss an exam in situations such as emergencies, sudden serious illnesses, *unavoidable* work- or family-related matters, and certain other events that preclude your ability to sit for the exam at the prescribed time. At my discretion, rarely, and under these conditions, approval may be given to take an exam at an alternate time. Expect to provide *documentation* of the circumstances that preclude your participation in a regularly scheduled exam. To reiterate, any exam accommodation not coordinated and approved ***in advance*** will earn a zero (0) on the exam; certain emergency-type situations, as described above, may qualify for other consideration, at my discretion.

Under certain circumstances and with prior permission, I may grant permission to replace a missed exam grade with the student's Final Exam grade. *Note: this option is available only with my prior permission*, is at my discretion, and is only available to replace *one* missed exam.

Withdrawals

Course withdrawals prior to midterm will result in a 'W'. Course withdrawals after midterm normally will result in a 'WF'. It is your responsibility to initiate a course withdrawal.

Academic Integrity

Consistent with Augusta University and School of Computer and Cyber Sciences policies, I expect students to maintain a high standard of academic honesty and integrity in this course.

Studying together and *discussing information and concepts* with other students is a time honored method of learning. This permissible cooperation does not extend to a student having possession of a copy of *all or part* of another student's work in any form. I may check your assignments via TurnItIn, a tool that compares text to Internet and other sources in its repository. TurnItIn produces an Originality Report that indicates the amount of original text in your work and identifies plagiarism. I also may utilize other techniques to determine that students have completed their own work … or not. I don't enjoy this nor do the students earning zeroes (0) or other penalties. The point is learning. Assignments demonstrate yours.

All code you turn in must be ***your original work*** unless the assignment instructions dictate otherwise. Any direct sharing or 'borrowing', in whole or in part, will be considered a violation of the Academic Integrity policy, including solutions you may find at online sources. Assignments are for you to apply the tools and techniques studied to your programming work; they are not to test your ability to conduct a Google search to find a solution that 'works'. **Do your own work**.

See Augusta University policy for potential repercussions of academic dishonesty. At a *minimum*:

***** Cheating on an exam, plagiarizing code, or plagiarizing other assignments will earn a score of zero (0) on the assignment.**

Among possible other repercussions which can and have been earned recently are a letter of reprimand and a forced WF for the course.

Academic Accommodations

- Augusta University will make reasonable academic accommodations for students with documented disabilities. Students should contact Testing and Disability Services (Galloway Hall; 706-737-1469; www.augusta.edu/tds/) as soon as possible for more information and/or to initiate the process for accessing academic accommodations.
- If you registered with Testing and Disability Services, please see me as soon as possible to discuss your accommodations.

Course Recommendations

- The use of a modern computer and availability of reliable Internet access is highly recommended. If you do not have one personally, plan enough time for accessing those on campus to complete your assignments.
- Access to a computer with a webcam is required. If circumstances necessitate an exam accommodation outside of the normal class time, Respondus Monitor may be required to record your actions during exams. You must have a webcam capable of interacting with Respondus.
- For transferring and storing files, a file hosting capability (Box, DropBox, iCloud, Google Drive, etc.) may be needed.

Software

- **Python 3** is required for this course. You can download and install Python **3** on your own machines (*at no cost*) at **https://www.python.org** . IDLE comes with Python.
- You may wish to install and use the **Mu** editor, a simple code editor. Mu can be downloaded on your own machines (also *at no cost*) from **https://codewith.mu**.

Undergraduate Course Assistants

Undergraduate Course Assistants (UCAs) assist with certain School of Computer and Cyber Sciences courses, including AIST 2120. Remember s/he is here to help.

Library Resources

Reese Library Cyber Resource Center (http://guides.augusta.edu/friendly.php?s=cyber). A great source for cyber resources available to the public and Augusta University students, faculty and staff. Available resources include subscription-based, on-line CD journals, books and other publications.

COVID-19 REQUIREMENTS

Augusta University has implemented specific requirements to minimize exposure to COVID-19 and support the safety of all. These requirements apply to every persons on campus (faculty, staff, students, and visitors). Identified requirements are subject to change. Visit https://jagwire.augusta.edu/coronavirus/ for the latest details.

Face Coverings and Vaccinations

As of July 28, 2021, University guidance is as follows: Those fully vaccinated are not required to wear face coverings. Those not fully vaccinated are encouraged to wear face coverings. Those not fully vaccinated are encouraged to get vaccinated. For specifics, visit https://jagwire.augusta.edu/coronavirus/ .

Proper Hygiene

As is true always for practicing proper hygiene, each person should wash hands thoroughly with soap and water or apply hand sanitizer (containing at least **60% ethanol or 70% isopropanol)**. Be careful when in contact with high-touch surfaces (doorknobs, light switches, campus equipment, devices, vending machines, etc.). Avoid sharing devices, books, pens, or other learning aids with others.

Personal Disinfection Supplies

Each person is responsible for disinfecting his/her own workspaces before use, including desktops, seats, and any shared equipment. Students, faculty, and staff are responsible for their own supplies for this purpose. Used supplies should be disposed of properly.

COVID-19 Reporting

Any student who is exhibiting symptoms of COVID-19 may be required to leave class and seek medical attention at Student Health Services (at **706-721-3448**) immediately. Stay off campus if you have any symptoms of COVID-19. For more information, please reference the Student FAQ's: https://my.augusta.edu/reopening/faq

Augusta University COVID-19 resources

COVID-19 resources on Jagwire https://jagwire.augusta.edu/coronavirus/
Frequently Asked Questions for students: https://my.augusta.edu/reopening/faq
COVID-19 Testing Information: https://www.augustahealth.org/covid-19#screening
AU Health System COVID-19 Hotline: **706-721-1852**
Student Health Clinic: 706-721-3448 or www.augusta.edu/shs/