

CIS3680: Programming Software Solutions

Fall 2024

Syllabus

# Instructor Information

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| Dr. Shane Sharpe  2101A Peacock Hall  [sharpers1@appstate.edu](mailto:sharpers1@appstate.edu)  (828) 262-8904  *Email is the preferred & best mode of communication**. Please expect a response within 12 hrs. When you email: please include* ***CIS3680*** *in the subject line.* | **Office Hours**  Tues/Thur 9:00 – 11:30 am & 1:00 – 2:30 pm  or by scheduled appointment.  *I can also meet virtually with an appointment as I will send a Zoom link for our meeting.* |

# About This Course

## Schedule & Location

* Section 101: Mon/Wed, 11:00 pm – 2:15 pm, PH 2011
* Section 103: Mon/Wed, 3:30 pm – 4:45 pm, PH 2011

## Course Description

This course focuses on structuring, designing, and developing data driven business applications. Emphasis is on problem solving and algorithm development, the use of structured techniques, using application libraries for data retrieval, and logic development.

## Course Outcomes

At the end of this class, you will be able to:

1. Decompose a problem and identify a solution algorithm.
2. Design and construct a software application to implement a solution algorithm.
3. Identify and implement third-party software libraries to assist in application construction.
4. Use software development tools to facilitate application construction.
5. Debug a basic software application.
6. Understand professional expectations of entry-level application developers.

## Prerequisite

45 earned hours.

## Course Website

The course website can be found on AsULearn (<https://asulearn.appstate.edu/>).

## Course Materials

### Recommended – Not Required for Course (Available via Library)

* *Learning Python* by Mark Lutz, ISBN: 978-1-449-35573-9
* *Python Pocket Reference* by Mark Lutz, ISBN: 978-1-449-35701-6

# Course Structure

The course will begin with basic procedural programming focused on flow-control and familiarization with python syntax. We will then work toward object-oriented programming and the use of classes and modules/libraries. We will conclude with the practical application of these skills in the development of a team project.

Each module consists of a lecture and reference materials followed by a quiz and practice assignment. For class meetings, students are expected to have reviewed any initial reading of the assigned materials. Class meetings will focus on the application of the material and provide an opportunity to clarify concepts.

# Tasks

## Programming Assignments

A series of individual problem-solving exercises involving application software will be assigned. These exercises will provide students with hands-on experiences. The programming assignment exercises are mandatory. Programming assignments will be graded on a traditional 0-100 basis. Assignments scored as 70 or above are considered passing.

Note, it is possible that some of the assignments may be given in class and due that same class.

***Computer and Problem-Solving Skills:*** Students should plan to spend a great deal of time (this means several hours) working on the assignments. Allow time for multiple iterations to produce the desired results. Students should be prepared to ask questions about the assignments having worked on them.

## Team Project: Cancelled (Task will be waived)

The final project for this class will be done in groups of three or four. Every member of the group must participate in developing the software application to receive credit. Any proposed changes for the application must be pre-approved by the instructor. Guidelines for the team project will be provided during the semester. Projects will be graded on a traditional 0-100 basis. Projects scored as 70 or above are considered passing.

## Quizzes

A series of quizzes covering course topics will be assigned. These quizzes provide students the opportunity to demonstrate masterly of base knowledge and reinforce concepts. Quizzes will be graded on a traditional 0-100% basis. Quizzes scored as 70 or greater are considered passing. Makeup quizzes will not be given unless a student can provide an official university accepted excuse that can be validated / verified. Additionally, makeup quizzes may vary in content from the in-class quiz. Please make prior arrangements with your instructor if you know you will miss class due to an official university accepted absence.

## Exams

There will be three programming exams during the semester. Exams will be graded as pass or fail. An exam may cover material from a previous exam. The format of the exams will be discussed during class. Makeup exams will not be given unless a student can provide an official university accepted excuse that can be validated / verified. Additionally, makeup exams may vary in content from the regularly scheduled in-class exam. Please make prior arrangements with your instructor if you know you will miss class due to an official university accepted absence.

## Attendance

Students are expected to attend all course meetings.

Class discussions and in-class activities are important components of this course and are essential for successfully preparing for exams and assignments.

## Professional Development

Students will participate in professional development activities to gain a broader understanding of becoming an entry-level professional. Students unable to attend due to a conflicting class, work schedule, etc., or choosing not to participate will have the option to write a short paper about the company or event to learn about the company and topic covered at the meeting. Dates for guest speaker presentations / deadlines and guidelines for short papers will be provided in class and posted on AsULearn.

**AppITP Fall 2024 Activity Schedule**

*All meetings are on* ***Wednesdays from 5:00 PM to 5:55 PM***  *in the Grandfather Mountain Ballroom on the 1st floor of the Student Union.* **You must bring your APPSTATE ID to the meeting to be counted present.** We will also provide an alternative assignment so that students who are unable to attend can learn about the company and topic covered at the meeting.

|  |  |
| --- | --- |
| Sept. 4 – Kickoff Meeting | Oct. 16 – Guest Speaker #3: Cancelled |
| Sept. 11 – Guest Speaker #1 | Oct. 30 – Guest Speaker #4: Cancelled |
| Sept. 25 – Guest Speaker #2 |  |

**Other WCOB Activities:**

**Women in Technology Dinner** – October 17, 2024 (Rescheduled for Spring 2025)

**Cyber Summit** – October 18, 2024 (Rescheduled for Spring 2025)

**WALKER COLLEGE OF BUSINESS SIGNATURE EVENTS**

More information can be found at the following links:

**Walker Business Connect** - Thursday, October 3rd, 2024 (Holmes Convocation Center)

For more information or to register to attend the event, please visit the [event website](https://businesscareers.appstate.edu/career-fair).

For a more complete list of activities, please visit [business.appstate.edu](http://business.appstate.edu/).

Other WCOB activities not listed may also count toward participation points with instructor approval.

# Task Evaluation

A task is considered complete when it is evaluated as passing. Tasks submitted for evaluation but not meeting the criteria for passing are marked as incomplete. Tasks not submitted by the due date/time are recorded as follows:

* ***Late:*** The task was submitted after the due date/time, but within 24 hours and is passing.
* ***Missed:*** The task was submitted beyond the late window and is passing.
* ***Ignored:*** The task was not submitted for evaluation.

# Final Grades

This course uses the Appalachian State University standard letter grading:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Percent | Grade |  | Percent | Grade | |
| 93 – 100 | A |  | 73 – 76 | | C |
| 90 – 92 | A- |  | 70 – 72 | | C- |
| 87 – 89 | B+ |  | 67 – 69 | | D+ |
| 83 – 86 | B |  | 63 – 66 | | D |
| 80 – 82 | B- |  | 60 – 62 | | D- |
| 77 – 79 | C+ |  | Below 600 | | F |

Your final grade for the class is based on the amount and quality of work you put forth over the semester.

If you successfully complete all assigned tasks, without any deductions, you will receive a ‘B’ (85%) for the course.

Work not completed by the due date/time will result in the following adjustments to your final grade:

* For each late task, 1% will be deducted from the final grade.
* For each missed task, 2% will be deducted from the final grade.
* For each incomplete task, 3% will be deducted from the final grade.
* For each ignored task, 5% will be deducted from the final grade.

You are permitted 2 unexcused absences for the semester. Each additional unexcused absence will result in a 1% reduction in your final grade.

You are required to complete 3 (Revised from 5) Professional Development activities during the semester. For grading purposes, the 5 activities are considered 1 task.

If you wish to receive a grade higher than a ‘B’, You must meet the criteria for a ‘B’ and complete optional assignments that will be made available. If you first meet the criteria for a ‘B’, successful completion of an optional assignment will result in a 3% increase in your grade.

***Gimme:*** Each student will receive one gimme for use in the semester. A gimme may be used without question to reduce the impact of an event that resulted in a deduction from your grade. For example:

* A late task becomes on-time.
* A missed task becomes a late task.
* An unexcused absence becomes excused.

A Gimme does not allow you to simply ignore required work. It should be used for unusual circumstances that are beyond your control.

***Exemplary Effort:*** If, by the end of the course, you have no unexcused absences, no late/missed/ignored assignments, and do not use a gimme, then you will earn an extra 3% on your final course grade. This rule is meant to reward those students who engage in all the activities of the course in the fullest spirit asked of them and demonstrate themselves to be exemplary students.

# Course Schedule

The following is a tentative schedule and is subject to change. Please consult the course AsULearn site for the most current schedule.

|  |  |  |  |
| --- | --- | --- | --- |
| **Week** | **Date** | **Day** | **Course Material** |
| 1 | 19-Aug | Mon | Course Intro |
| 21-Aug | Wed | Algorithms, Information Processing, Structure of a Computer System |
| 2 | 26-Aug | Mon | Getting Started with Python Programming |
| 28-Aug | Wed | The Software Development Process, Data Types |
| 3 | 2-Sep | Mon | **State Holiday - No Classes; University Closed** |
| 4-Sep | Wed | Data Types, Using Functions and Modules |
| 4 | 9-Sep | Mon | Boolean Logic & Selection |
| 11-Sep | Wed | Conditional Iteration |
| 5 | 16-Sep | Mon | Definite Iteration |
| 18-Sep | Wed | **Exam #1** |
| 6 | 23-Sep | Mon | Defining Simple Functions |
| 25-Sep | Wed | Advanced Functions |
| 7 | 30-Sep | Mon | School Closed |
| 2-Oct | Wed | School Closed |
| 8 | 7-Oct | Mon | School Closed |
| 9-Oct | Wed | School Closed |
| 9 | 14-Oct | Mon | **Fall Break - No Classes** |
| 15-Oct | Tue |
| 16-Oct | Wed | Defining Functions |
| 10 | 21-Oct | Mon | Strings |
| 23-Oct | Wed | Text Files |
| 11 | 28-Oct | Mon | Lists, Tuples, Dictionaries |
| 30-Oct | Wed | **Exam #2** |
| 12 | 4-Nov | Mon | Simple Graphics |
| 6-Nov | Wed | Image Processing |
| 13 | 11-Nov | Mon | Design with Classes |
| 13-Nov | Wed | Design with Classes |
| 14 | 18-Nov | Mon | Graphical User Interfaces |
| 20-Nov | Wed | Graphical User Interfaces |
| 15 | 25-Nov | Mon | Regex |
| 27-Nov | Wed | **University Break for Students - No Classes** |
| 28-Nov | Thu | **State Holiday - No Classes; University Closed** |
| 29-Nov | Fri |
| 16 | 2-Dec | Mon | Review |
| 4-Dec | Wed | **Reading Day** |
| 17 | | 6-Dec | Fri | **Section 001 Exam 3: 11:00 am - 1:30 pm** |
| 9-Dec | Mon | **Section 003 Exam 3: 2:00 pm - 4:30 pm** |

## Final Exam Schedule

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| --- | --- |
| Section | Final Exam Period Will Be: |
| CIS 3680-101 | Fri, Dec 6, 11:00 AM – 1:30 PM |
| CIS 3680-103 | Mon, Dec 9, 2:00 AM – 4:30 PM |

# Course Policies

## Generative AI

I expect that all work students submit for this course will be their own. In instances when collaborative work is assigned, I expect all team members who participated to be listed on the assignment. I specifically forbid the use of ChatGPT or any other generative artificial intelligence (AI) tools at all stages of the work process, including preliminary ones. Violations of this policy will be considered academic misconduct.

# Institutional Policies

## Public Sharing of Course Materials

All course materials, including video, may be subject to intellectual property protections under applicable law and regulation and are for the sole use of students enrolled in this class. Students do not have permission to copy or record materials except for personal use in the context of this class and students do not have permission to share any class materials, including videos, in any manner on any platform without the prior express permission of the faculty member teaching this course.

## Academic Integrity Code

### I. Introduction

Appalachian State University's Academic Integrity Code is designed to create an atmosphere of trust, respect, fairness, honesty, and responsibility. The Academic Integrity Code outlines "user-friendly" procedures and mechanisms for resolving alleged violations of academic integrity. The Academic Integrity Code is the result of cooperation among Appalachian's faculty, students, and administrators, and promotes a campus dialogue about academic integrity. All members of the Appalachian State University community are responsible for promoting an ethical learning environment.

### II. The Academic Integrity Code

Students attending Appalachian State University agree to abide by the following Code:

* Students will not lie, cheat, or steal to gain academic advantage.
* Students will oppose every instance of academic dishonesty.

Students shall agree to abide by the Academic Integrity Code when submitting the admission application.

## Disability Resources

Appalachian State University is committed to providing an inclusive experience, accessible learning environments and equal opportunity to individuals with disabilities in accordance with the Americans with Disabilities Act and Section 504 of the Rehabilitation Act. Individuals needing reasonable accommodations should contact the Office of Disability Resources (828.262.3056 or odr.appstate.edu).

## Attendance Policy

### OP 2.3.5 Attendance and Absence Policies

OP 2.3.5.1 General Attendance Policy. Students are expected to attend every meeting of their classes and are responsible for any work missed in accordance with the instructor’s stated expectations on the course syllabus.

OP 2.3.5.2 Absences Due to Religious Observance. Instructors are required to make reasonable accommodations for students requesting to miss up to two (2) classes due to the observance of religious holidays. These absences will be excused, without penalty to the student, provided that the student has informed the instructor in the manner specified in the syllabus.

OP 2.3.5.3 Student Absences and Loss of Seat in a Course. A department may drop a student from a course if that student does not attend one of the first two (2) meetings of a class (or, the first meeting of any class that meets only one time per week). Further, if a student does not regularly attend a course, the instructor may request an administrative withdrawal grade to be assigned through the Registrar's Office.

OP 2.3.5.4 Class Attendance and Final Grades. Instructors may include class attendance as a criterion in determining a student's final grade in the course if students are informed of the class attendance policy and the impact of attendance on the final grade in the class syllabus.

OP 2.3.5.5 Student Health Services & Absences. Students will receive an automatic notification that they were seen in the M.S. Shook Student Health Service. Privacy regulations prohibit release of any information without the student's permission. The student, however, may share their health information including that they were seen, along with the automatic notification. The Student Health Service works with the Office of the Dean of Students for longer term medical absences (see OP 2.3.3.7).

OP 2.3.5.6 University-Sponsored Activity Absences. A student who expects to miss one or more class meetings because of participation in a University-sponsored activity must: 1. notify the instructor in advance of any absence and provide any official documentation requested by the instructor; 2. complete all work missed in advance or complete any compensatory assignment that may be required by the instructor; 3. maintain satisfactory progress in the course, including satisfactory attendance in the class if so required. In the event that a student anticipates that participation in a university sponsored activity will require missing more classes than the course policies permit, the student is required to discuss this matter with the instructor at the beginning of the term to determine if all required assignments can be completed successfully. If the above responsibilities are met, it is expected that the instructor will work with the student, when possible, to complete course work in whatever manner the instructor deems appropriate.

OP 2.3.5.7 Emergency Absences. When a student is unable to attend class due to hospitalization, death in the family, or other extenuating circumstances, the student or the student's parents may contact the Dean of Students Office to request that instructors be notified. This notification does not serve as an official excuse for class absence as only the instructor can make this determination.

## Statement on Student Engagement with Courses

In its mission statement, Appalachian State University aims at "providing undergraduate students a rigorous liberal education that emphasizes transferable skills and preparation for professional careers" as well as "maintaining a faculty whose members serve as excellent teachers and scholarly mentors for their students." Such rigor means that the foremost activity of Appalachian students is an intense engagement with their courses. In practical terms, students should expect to spend two to three hours of studying for every hour of class time. Hence, a fifteen-hour academic load might reasonably require between 30 and 45 hours per week of out-of-class work.

## Academic Freedom

Per the Academic Affairs Standard Operating Procedures, it is the policy of Appalachian State University to support and encourage within the law full freedom of inquiry, discourse, teaching, research, and publication for all members of the academic staff of this institution. Appalachian State University will not penalize or discipline members of the faculty because of the exercise of academic freedom in the lawful pursuit of their respective areas of scholarly and professional interest and responsibility.

## Food Insecurity

Any student who has difficulty accessing sufficient food to eat every day, or who lacks a safe and stable place to live, is urged to contact the [Dean of Students](https://deanofstudents.appstate.edu/), for a list of resources and support. The [Mountaineer Food Hub and Free Store](https://sustain.appstate.edu/initiatives/food-pantry/) is a free resource with pantry and personal care items, located in the Office of Sustainability on the bottom floor of East Hall. There are also other campus pantries in the following locations: [Belk Library](https://library.appstate.edu/services-search/food-pantry), [College of Education](https://jamescenter.appstate.edu/current-students/grant-dean-food-pantry), Garwood Hall, Leon Levine, and College Access and Success in DD Dougherty. Furthermore, please notify an instructor if you are comfortable in doing so. This will enable your instructor to assist you with finding the resources you may need. For more information, [Click Here](https://sustain.appstate.edu/initiatives/food-pantry/).

## Academic Success

Appalachian provides opportunities for students to develop, enhance and implement strategies that promote academic success. The [Student Learning Center](https://studentlearningcenter.appstate.edu/) provides free tutoring for a range of academic subjects and academic skill building through [Academic Success Courses](https://studentlearningcenter.appstate.edu/students/academic-success-courses) and [Academic Success Coaching](https://studentlearningcenter.appstate.edu/students/academic-success-coaching). Academic skill building areas include time management, organization, study strategies, and note-taking. The [University Writing Center](https://writingcenter.appstate.edu/) is a free resource available to all App State students to assist with any stage of writing assignments.

***\*\*\* Please Note that your instructor has the right to change/amend this syllabus as needed.  
Should a change/amendment be made you will be notified promptly. \*\*\****