

COLLEGE OF ENGINEERING, TECHNOLOGY, AND PHYSICAL SCIENCES
DEPARTMENT OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCE
ALABAMA A&M UNIVERSITY
NORMAL, AL 35762
COURSE SYLLABUS
FALL 2022

Course Number	CS 104
Course Title	Introduction to Computers and Ethics (Python)
Course Number/Section	70516/70517/72061/72062/75067/72234
Class Days & Time	Monday/Wednesday/Friday 9:00-9:50 AM, 11:00-11:50 AM Tuesday/Thursday 8:00-9:20 AM, 9:30-10:50 AM
Class Location	AJB 102/253 and via Blackboard Collaborate
Prerequisites	Working knowledge of the computer
Course Website	cs104.org
Textbook (Optional)	Think Python, 2nd Edition (FREE) (ISBN 978-1491939369) by Allen B. Downey http://greenteapress.com/wp/think-python-2e/
Supplemental Textbook (Optional)	Fundamentals of Python: First Programs, 2nd Edition (ISBN 978-1337560122) by Kenneth A. Lambert Softbound ISBN: 978-1-337-56009-2
Instructor	Ms. Terry Miller
Virtual Office/Phone	https://aamu.zoom.us/j/6590143225 256-372-8208
Office Hours	MW 10:00-11:00 AM, 1:00-4:00 PM, Tues 1:00-3:00 PM All others by appointment only
E-mail address	terry.miller@aamu.edu

Instructor	Ms. Sonam Benakatti
Virtual Office	Join via the Google meet link
Office Hours	See https://cs104.org/schedule/ Available by appointment
E-mail address	sonam.benakatti@aamu.edu

COURSE DESCRIPTION

This course is designed to introduce students to the fundamentals of computer science using the Python programming language. Programming topics include features such as variables, input & output, control flow, functions, and data structures. Topics also covered include: the impacts of computers on the individual and society, as well as introducing the application of computers in different areas.

STUDENT LEARNING OUTCOMES

Students completing this course will possess the following skills and competencies:

1. Understand and learn the concepts of algorithm, computer program, and high level programming language.
2. Be able to enter, edit, run and troubleshoot Python programs.
3. Understand the structure of a Python program and how to use different types of variables and constants.
4. Understand different types of arithmetic operators, and be able to evaluate and write statements for arithmetic expressions.
5. Understand and be able to use Input/Output and standard library functions.
6. Understand relational and logical operators and how to evaluate and write logical expressions.
7. Understand and be able to use basic control structures (selection and looping) in Python programs
8. Understand and be able to use standard data structures such as lists and dictionaries.
9. Understand the ethical and legal basis for privacy protection and security issues on the internet and computer systems

CLASS FORMAT

Student Responsibility:

You are responsible for all materials covered in class. Attend class on time and be well prepared, ready to make full use of the class. Provide adequate notice of anticipated absences and take full responsibility for finding out missed work, announcements, and assignments. ***Submit assignment materials on time and submit only your own work. All acts of dishonesty in any work constitute academic misconduct that could result in a failing grade for this course. Academic dishonesty includes but is not limited to cheating, plagiarism, and fabrication of information. Read the AAMU student handbook*** “Life on the Hill”: A Guide to Student Life for policies relating to student’s rights, responsibilities, and academic behavior. Homework is due by the established due date when it is posted. ***Homework submitted late will receive a 10% penalty for each day it is late, up to 3 days late. There are no make-up tests or exams WITHOUT AN OFFICIAL UNIVERSITY EXCUSE.***

ASSIGNMENTS AND ACADEMIC INTEGRITY

Work submitted in both homework assignments and in-class examinations must be the result of the student’s own effort and must never be a result of shared or copied answers. In the preparation of homework, students are invited to discuss homework problems with the instructor and with peers, but the work submitted for grading must be solely done by the student and not a copy of others’ work. **SUBMITTED ASSIGNMENT WORK MUST BE YOUR OWN. TWO IDENTICAL HOMEWORK SUBMISSIONS WILL RESULT IN ZERO POINTS FOR BOTH. ALL WORK MUST BE SUBMITTED ONLINE.** The instructor will take violations very seriously. Failure to have an assignment prepared on time will result in points deducted and a lowered grade.

If you have difficulties or complaints related to this course, you should (1) ***first discuss them with your instructor.*** If such a discussion would be uncomfortable for you or fail to resolve your difficulties, you should (2) contact Dr. Yujian Fu, Interim Coordinator of the Computer Science Department ETB 333 yujian.fu@email.com. If you are still unsatisfied, you should (3) contact Dr. Jian Fu, Interim Chair of the Electrical Engineering and Computer Science Department ETB 301 jian.fu@aamu.edu. If you are still unsatisfied, you should (4) discuss the matter with Dr. Zhengtao Deng, Interim Dean of the College of Engineering, Technology and Physical Sciences in ETB 226 zhengtao.deng@aamu.edu.

SERVICES FOR PERSONS WITH DISABILITIES

The University provides environmental and programmatic access for persons with documented disabilities as defined in Section 504 of the Rehabilitation Act of 1973 and the Americans with Disability Act of 1990. Any student who desires information or assistance in arranging needed services for a disabling condition should contact Special Students Services located in Carver Complex South, Room 106, (256) 372-4263.

ATTENDANCE POLICY

Students are required to attend every class as scheduled. Students are expected to be in class on time and remain until the end of the session. A student is permitted three (3) unexcused absences. Students’ attendance will be checked and recorded for each class and reported to the University. Excused absences can be obtained from the *Office of Special Student Services*. Arrangements for make-up work due to excused absences must be initiated by the student.

TUTORIAL ASSISTANCE

Tutoring for undergraduate courses can be obtained from the Tutorial Assistance Network (TAN), a subsidiary of the Office of Retention and Persistence. TAN is located in Room 276 Council Hall. The telephone number is 256-372-5487.

GRADING RUBRIC

Course Requirements	Total Points Awarded
Homework/Classwork	60%
Participation/attendance/quiz	10%
Midterm	10%
Final Exam	20%
Grading Scale-Percent of Points	Grade
≥ 90%	A
≥ 80%	B
≥ 70%	C
≥ 60%	D
<60%	F

WEEK	TOPICS	
1	Introduction 1.1 What is Computer Science 1.2 What can you do with Computer Science	
2	1.3 Programming Languages Syntax 2.1 Types 2.2 Variables 2.3 Operators	
3	3.1 Input/Output 3.2 Booleans/Logical Operators Control Structures 3.3 Conditionals	
4	4.1 Functions	
5	5.1 Functions - Modules & Imports	
6	6.1 Strings 6.2 Loops	
7	7.1 Loops	
8	Data Structures 8.1 Lists	
9	9.1 Lists	
10	Mid-term review and exam	
11	11.1 2D Lists	
12	12.1 Nested Loops	
13	13.1 Dictionaries 13.2 Sets	
14	14.1 Ethics	
15	Thanksgiving Week	
16	Final Exam Review/Prep	

TBD	<i>Comprehensive</i>	FINAL EXAM
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Program Outcomes	
1	Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions. CS 102
2	Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
3	Communicate effectively in a variety of professional contexts.
4	Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
5	Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.
6	Apply computer science theory and software development fundamentals to produce computing-based solutions.

<i>Course Outcomes</i>	1	2	3	4	5	6
1. Understand and learn the concepts of algorithms, computer programs, high-level programming languages.						
2. Be able to enter, edit, run and troubleshoot Python programs						
3. Understand the structure of a Python program and how to use different types of variables and constants.		X	X	X	X	
4. Understand different types of arithmetic operators and be able to evaluate and write statements for arithmetic expressions.		X	X	X	X	
5. Understand and be able to use Input/Output, File Input/Output and standard library functions.		X	X	X	X	
6. Understand relational and logical operators and how to evaluate and write logical expressions.		X	X	X	X	
7. Understand and be able to use basic control structures (selection and looping) in Python programs		X	X	X	X	
8. Understand and be able to use standard data structures such as tuples, lists, and dictionaries.		X	X	X	X	
9. Understand the basics of data encapsulation and object oriented programming.		X	X	X	X	
10. Understand the responsibilities of computing professions, social implications of computing, the ACM code of conduct and acceptable use policies of the university.						
11. Understand the legal, ethical, and security concepts of computer software and Internet, privacy protection, and failures and risks in computer systems.						
12. Understand the basic concepts of intellectual property, the current copyright laws, and software piracy.						

Assessment Plan for the Course

Assessments consist of quizzes, tests, homework assignments, and projects.
All the tests are Closed-book Closed-notes, and **in-class tests**.

How Data in the Course is used to Assess Program Outcomes (unless adequately covered already in the assessment discussion under Criterion 4)

Student performance Data as Processed by Performance Assessment Tool and student survey data are used to look into the improvement of possible topic areas and their delivery.

For a computer science program

Area	Core	Advanced	Area	Core	Advanced
<i>Algorithms</i>	0.5		<i>Software design/Tools</i>		
<i>Data structures</i>			<i>Concepts of programming languages</i>	1.5	
<i>Computer organization and architecture/OS/Network</i>			<i>Ethics</i>	1	

Estimate Curriculum Category Content (Semester hours)

CLASSROOM CODE OF CONDUCT

As a means of becoming successful and prepared for the professional world, including internships, graduate or professional school and positions of employment, students are expected and required to abide by the following codes.

Individual breaches of codes of conduct or dress codes will be dealt with by the instructor, on a case-by-case basis, based on the severity of the infraction. Punishment can range from being marked "absent for that day to being dismissed from the class. Severe or repeat infractions may be turned over to the judiciary.

GENERAL DECORUM

1. Students must be able to present their ID cards for inspection. It is recommended that the card be visibly displayed, whether clipped to a waistband or breast pocket or worn on a lanyard.

2. Students must attend class regularly, missing no more than the allowed number of absences:

- a. Absent 1 hour of class for a 1 credit hour course
- b. Absent 2 hours of class for a 2 credit hour course
- c. Absent 3 hours of class for a 3 credit hour course
- d. Absent 4 hours of class for a 4 credit hour course

***Students whose absences exceed the above scale will receive a reduction in their final course averages** as determined by the faculty member. Exceptions to this policy on point reduction may be granted by the faculty upon presentation of documentation from the Vice President of Academic Affairs that an official excuse has been granted for the student's absence. Conditions warranting such an approval include cases involving death in the family, illness of the student or his/her immediate family members or for military duty. It is the student's responsibility to provide legitimate, official documentation of excused absences to the instructor(s) of the courses involved. Other reasons for absences not covered here must be cleared with the appropriate College Dean.

- Undergraduate Catalog, p. 57

3. Students must be on time to class and must remain until dismissed.

4. Students must prepare for each class meeting by reading assignments and completing any required written work. It is thus imperative that students purchase their books in a timely manner (i.e., within the first two weeks of the semester).

5. Students must meet all deadlines, including those established by the instructor and those set by the University.

6. Students must never have electronic devices such as cell phones, PDA's, iPods, or similar items in use during class time.

7. Students are expected to act with courtesy and respect to instructors, guests, staff members, and fellow classmates and **may not disrupt a classroom or a faculty member's conduct of a class**. For example, students should refrain from talking during class while the instructor or another student "has the floor." Failure to behave with proper courtesy and respect could result in disciplinary action. **A student who disrupts a classroom may be removed or ejected from the class or classroom.**

8. Students must not come to class under the influence of drugs or alcohol.

9. Food and drinks are not allowed in the classroom, lecture hall, or lab.

STUDENT DRESS CODE

1. Pajamas, sleep wear and inappropriate exercising clothes (i.e. P.E. uniforms, bicycle shorts, under armor, uncovered spandex) are not allowed in the classroom. Shirts/tops must be worn at all times. Sweat pants are allowed when worn with appropriate undergarments.
2. All students must wear shoes, boots, or other types of footwear made for outside wear: bedroom shoes/slippers, shower shoes, or similar footwear are not allowed in the classroom.
3. Dress and grooming will not disrupt the teaching/learning process or cause undue attention to an individual student; for example, no sunglasses are allowed in the classroom; excessive body piercings, tattoos, and “grillz” are not recommended.
4. Hats, hoods, caps, stocking caps, wave caps, do-rags, and other head coverings are not to be worn in the classroom; no hair curlers whether covered or uncovered are allowed in classrooms. Head coverings designed for religious, cultural, or medical/illness purposes are allowed.
5. Attire must not display language and/or images which are derogatory, profane, or sexually explicit, or abusive, or which “advertise” drugs or alcohol.
6. Dress must be modest and appropriate for a professional or serious setting; no midriff tops, halter tops, sports bras, strapless tops or dresses, camisole tops with spaghetti straps, see-through blouses or shirts, or extremely short or revealing shorts or skirts will be allowed in the classroom. If a student chooses to wear a midriff top, halter top, sports bra, camisole with spaghetti straps, or a tank top or sundress with straps less than 2 inches wide (male or female), the student must wear a shirt or jacket over it.
7. Clothing which allows undergarments to be visually observed is not permitted: NO SAGGING PANTS will be allowed. No undergarments should be visible at any time.
8. It is assumed that students will practice personal cleanliness. Additionally, clothing should not carry excessive odors, i.e., tobacco, body sprays, or colognes.