

Lincoln University
Department of Computer Science
CSC152 - Introduction to Computer Programming
Master Syllabus

COURSE TITLE:	Introduction to Computer Programming	COURSE NUMBER:	CSC152
CREDIT HOURS	3	PREREQUISITE (S):	CSC151
TERM:		CO-REQUISITE (S)	None
COURSE METHOD	Standard	MEETING DAY AND TIME:	
INSTRUCTOR:		CLASSROOM/LAB/STUDIO LOCATION:	
OFFICE LOCATION:		E-MAIL:	
OFFICE HOURS:		PHONE EXTENSION:	

COURSE DESCRIPTION:

This introductory programming course is designed for non-computer science majors. This course introduces students to principles of computer programming and problem solving. Students design, write and debug computer programs. They solve programming problems using procedural programming constructs such as loops, branching structures, and functions. No prior knowledge of programming is assumed but students are expected to have a working knowledge of personal computers and their applications. **Prerequisite: CSC-151.**

COURSE PURPOSE:

This course is used for fulfilling a part of the core curriculum requirements, for the option of Languages/ Computer Science as prescribed by each department. In addition, as an elective course, students can also increase their skills and know-how in computer programming and problem solving.

REQUIRED TEXT:

- Introduction to Programming Using Python, Edition 1 by Y. Daniel Liang, Pearson Publishers, ISBN-13:9780132747189
- Reference: Python Programming for the Absolute Beginner, 3rd Edition by Michael Dawson, ISBN-13: 978-1435455009

REQUIRED MATERIALS:

- None (flash drives are recommended)

ASSESSMENT CRITERIA & ALIGNMENT

CSLOs	PSLOs	ILOs	Direct and Indirect Assessment Methods
CSLO 1	N/A	ILO_2	<ul style="list-style-type: none"> • <i>Class work</i> on use of IDE, and Writing and compiling simple and error free computer codes assessed based on classwork rubric. • Embedded written <i>test</i> questions on debugging (fixing errors) of computer programs assessed based on test scoring system rubric.
CSLO 2	N/A	ILO_2	<ul style="list-style-type: none"> • Embedded written <i>test</i> questions on programming assessed based on test scoring system rubric. • Target programming <i>assignment</i> assessed using programming rubric.
CSLO 3	N/A	ILO_5	<ul style="list-style-type: none"> • Embedded written <i>test</i> questions on algorithm design and implementation assessed based on test scoring system rubric • Target problem solving and programming <i>project</i> assessed using project evaluation rubric.

COURSE STUDENT LEARNING OUTCOMES (CSLO):

Upon successful completion of this course the student will:

- CSLO_1 Demonstrate fundamental skills in utilizing the tools in IDE of a programming language, in terms of the set of available keyword and commands.
- CSLO_2 Demonstrate fundamental knowledge of syntax and grammar rules of a programming language including all control statements, functions and expressions.
- CSLO_3 Implement algorithms using computer coding to solve problems from various disciplines.

PROGRAM STUDENT LEARNING OUTCOMES (PSLO):N/A

INSTITUTIONAL LEARNING OUTCOMES (ILO):

ILO_2. Technology & Information Literacy

The ability to responsibly, appropriately and effectively access, manage, integrate, evaluate, create and use general or discipline specific technologies and/or library and media sources.

Outcome, students will:

- Access, manage and integrate information effectively and efficiently
- Critically evaluate sources and content of information for authority and accuracy
- Create, produce and/or use general or discipline specific technologies and/or library and media sources
- Demonstrate an understanding of the economic, legal, ethical, and social issues surrounding the use of communication and information technology

ILO_5. Critical Thinking

Critical thinking is a comprehensive and systematic exploration of issues, ideas, artifacts, and events before accepting or formulating an opinion or conclusion and making inferences between concepts. Integrative learning is an understanding and a disposition that a student builds across the curriculum and co-curriculum, from making simple connections among ideas and experiences to synthesizing and transferring learning to new, complex situations within and beyond the campus.

Outcome, students will:

- Reason abstractly and think critically to make connections between ideas and experiences and to solve novel problems.

CALCULATION OF FINAL GRADES:

The final score will be calculated based on the points earned on tests and assignments (including in-class work) using a weighted average formula shown.

Written Tests #1, #2, #3	60%
Assignments and Regular Projects	30%
In class technical assessment *	10%

Note: Points will be deducted for late assignments and projects as well as lack of effort in class work. Although instructor of the course will provide some help on assignments and class activities, excessive, repetitive technical questions (from the same students) could be indicative of problems in students' learning or lack of focus. This means, there is an expectation that after some help, the students be able to practice and remember some technical aspects of using the software and the syntax of the language we use in this course. No test or quiz can be considered for make up without documentation and verified excuses. Due dates will be announced on regular basis for specific assignments (drop boxes on Moodle will be provided). Also, students **must show patience** during in-class assignments since instructors may not be able to help every student quickly.

*(In-class technical assessment) The students who miss many classes, but have valid excuses such as athletics situation, may need to arrange with the instructor to be evaluated based on a practical test in place or in-class work assessment.

Final Score= (Tests-quizzes Points Earned) / (Total Test-quizzes Points) * 60 + (Assignments and Projects Points Earned)/ (Total Assignments and Projects Points) * 30 + In-class work points received (out of 10)

GRADING SCALE:

Grade	A	A-	B+	B	B-	C+	C	C-	D+	D	F
GPA Points	4.0	3.7	3.3	3.0	2.7	2.3	2.0	1.7	1.3	1.0	0.0
%	100-93	92.9-90	89.9-88	87.9-82	81.9-80	79.9-78	77.9-72	71.9-70	69.9-67	66.9-60.1	60 and under

SCHEDULE OF LEARNING TOPICS COVERED

<p>CLASS MEETS: •ASSIGNMENT SELECTION & SCHEDULE MAY BE SUBJECT TO CHANGE• (Check with current “Academic Calendar” for Midterm and Final Exam periods.)</p>	
WEEK 01: WEEK 02:	<p><u>Programming basics</u></p> <ul style="list-style-type: none"> • Computers, Problem Solving and Algorithms • IDEs and Python Programming Environment • Expressions, Input/output Statements • Variables, Data Types, Assignment Statements • Numeric and String Operations • Built-in Functions
WEEK 03: WEEK 04:	<p><u>Python Data Structures</u></p> <ul style="list-style-type: none"> • Strings, Lists, Tuples, Sets and Dictionaries
WEEK 05: WEEK 06:	<p><u>Decision Making</u></p> <ul style="list-style-type: none"> • <i>if</i> Statement • <i>if ... else</i> and <i>if ... elif.. else</i> Statements • Nested If Statements
WEEK 07: WEEK 08:	<p><u>Repeating Statements</u></p> <ul style="list-style-type: none"> • <i>while</i> Loops • <i>for</i> Loops • Nested Loops
WEEK 09: WEEK 10:	<p><u>Introduction to Python Graphics</u></p> <ul style="list-style-type: none"> • Turtle graphics
WEEK 11: WEEK 12:	<p><u>Functions and Files</u></p> <ul style="list-style-type: none"> • Functions, Files and Exception Handling
WEEK 13: WEEK 14:	<p><u>Introduction to Python GUI Programming</u></p> <ul style="list-style-type: none"> • Using tkinter Module
WEEK 15:	<ul style="list-style-type: none"> • Revision on Solving Programming Problems/Projects

UNIVERSITY ACADEMIC INTEGRITY STATEMENT:

Students are responsible for proper conduct and integrity in all of their scholastic work. They must follow a professor's instructions when completing tests, homework, and laboratory reports, and must ask for clarification if the instructions are not clear. In general, students should not give or receive aid when taking exams, or exceed the time limitations specified by the professor. In seeking the truth, in learning to think critically, and in preparing for a life of constructive service, honesty is imperative. Honesty in the classroom and in the preparation of papers is therefore expected of all students. Each student has the responsibility to submit work that is uniquely his or her own. All of this work must be done in accordance with established principles of academic integrity.

UNIVERSITY ATTENDANCE POLICY:

Lincoln University uses the class method of teaching, which assumes that each student has something to contribute and something to gain by attending class. It further assumes that there is much more instruction absorbed in the classroom than can be tested on examinations. Therefore, students are expected to attend all regularly scheduled class meetings and should exhibit good faith in this regard.

More information concerning the Academic Integrity Statement and the Attendance Policy may be found in the current Academic Catalog found on the Registrar's webpage:

<http://www.lincoln.edu/departments/registrar>

STUDENTS WITH DISABILITIES STATEMENT:

Lincoln University is committed to non-discrimination of students with disabilities and therefore ensures that they have equal access to higher education, programs, activities, and services in order to achieve full participation and integration into the University. In keeping with the philosophies of the mission and vision of the University, the Office of Student Support Services, through the Services for Students with Disabilities (SSD) Program, provides an array of support services and reasonable accommodations for students with special needs and/or disabilities as defined by Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990. The Services for Students with Disabilities Program seeks to promote awareness and a campus environment in which accommodating students with special needs and/or disabilities is natural extension of the University's goal.

Any student with a documented disability should contact the Office of Equity and Inclusion:

<http://www.lincoln.edu/departments/office-institutional-equity/ada-accommodation/services-students-disabilites-ssd>

TITLE IX STATEMENT:

The following person has been designated to handle inquiries regarding the non-discrimination policies: Gerard Garlic, Title IX Coordinator/Director of the Health and Wellness Center, room 126B, Lincoln University, 1570 Baltimore Pike, Lincoln University, PA 19352 (p) 484-746-0000 or Office of Civil Rights, U.S. Department of Education, The Wanamaker Building, 100 Penn Square East, Suite 515, Philadelphia, PA 19107-3323, phone 215-656-8541, fax 215-656-8605, email: ocr.philadelphia@ed.gov

POLICY ON ELECTRONIC DEVICES IN CLASSROOM:

Excessive use of electronic devices (particularly cell phones) in class can be disruptive to class and are in particular prohibited during exams. However, in some extenuating circumstances, students may be excused to leave the class to make phone calls outside the classroom.