Nashville State Community College
STEM Division
Computer Information Technology

2018 Master Course Syllabus

CITC 1301-Progamming Logic & Design

Course Information:

Course Title: Introduction to Programming Logic & Design
Credits: 3
Class Hours: 2 Class/2 Lab

Course Description:

An introduction to the logic necessary for application programming. Topics include logic analysis, techniques of structured design, process flow, and object oriented concepts. A programming language is used to teach data types, variables, control structures, methods/functions and arrays. Prerequisite(s): Level 2 placement in Reading and Math.

Instructor Information:

Name:
Email:
Office Phone:
Office Location:
Office Hours:

Required Textbook(s) & Other Materials:

Textbook(s): *Fundamentals of Python: First Programs*, Kenneth A, Lambert, Cengage,
ISBN: 978-1-337-56009-2 (Softbound), 978-1-337-69934-1 (Loose Leaf)
Access Code:
Reference Materials: Lynda.com – Python Essential Training
Supplies:

Once enrolled, all students should verify that they have the correct textbook and materials information by consulting the D2L/NS Online shell for the course. If you are registered with the Access Center and require an alternate format for the textbook and other course materials, please contact the Access Center at 615-353-3721, 615-353-3741, or accesscenter@nscc.edu.

Course Outcomes:

Upon successful completion of this course, students should be able to:

- Work within the framework of the Program Development Cycle, analyze and design computer software solutions for typical business problems using standard structure techniques.
- Document and illustrate solutions using appropriate planning tools.
- Using their plan, students can design a computer program that is structurally correct and successfully accomplishes the assigned goal.
- Read a flowchart or pseudocode solution and give an accurate description of the problem being solved, correctly outline the variables being used, and the steps being followed.

Course Competencies:

The following are detailed course competencies intended to support the course outcomes:

- Basic computer skills to include opening and closing applications; mouse/keyboard skills; and, correct use of external storage devices.
- File/folder management skills to include: creating, opening, saving, renaming, copying, moving, deleting, printing and compressing files.
- Describe how a program works and the role of a compiler/interpreter.
- Name and use constants and variables to store data items in a program.
- Use pseudocode/flowcharts to write/illustrate generic program statements that perform input, processing and output.
- Incorporate each of the programming constructs into a program solution: sequential processing, counted, pre-test and post-test loops and simple and complex decision structures.
- Use mathematical operators, relational operators and Boolean operators in building expressions
- Create programs using module and function calls in the solution of a problem.

The following are general education competencies intended to support the course outcomes:

- Strong reading comprehension skills accompanied by questioning skills for any material not understood on reading.
- Ability to form correct mathematical expressions when solving problems.

Topics to Be Covered:

Module 1 - Introduction to Computers, Programming and Input/Process/Output

Module 2 – Software Development, Data Types and Expressions

Module 3 – Loops and Selection Statements

Module 4 – Strings and Text Files

Module 5 – Lists, Dictionaries and Defining Simple Functions

Module 6 – Design with Functions/Problem Solving with Top-Down Design

Module 7 – Simple Graphics and Image Processing

Module 8 – Graphical User Interfaces

Module 9 – Design with Classes

Module 10 – Multithreading, Networks and Client/Server Programming

Module 11 – Searching, Sorting and Complexity Analysis

Course Assessments:

The following performance assessments will be used to demonstrate students' understanding, knowledge, and skills:

- Chapter Quizzes: 290 Points/29%
- Programs 180 Points/18%
- Design/Debug Problems 427 Points/43%
- Final Exam 100 Points/10%

Grading Policy:

Points Earned/Total Points

Late Work Policy & Make-up Procedures for Missed Assignments and Work:

There is a grace period of 2-3 days after the due date where late works is accepted for a letter grade deduction. Makeup procedures are negotiated with each student. Every alternative for accepting late work is afforded the student with the belief that it is more beneficial to actually do the work regardless of the timing.

Attendance Policy

Students are expected to attend all scheduled classes and laboratories. Absences in a course may affect a student's final grade. The student is responsible for all assigned work in the course regardless of excused or unexcused absences. Tardiness may also affect a student's final grade.

In online courses, attendance is signaled by logging on to the D2L/NS Online shell, participating as prompted (e.g., responding to an instructor's email, posting to a discussion board) and/or completing and submitting assignments. Campus closures do not affect attendance and assignment completion in online courses.

Grading Scale:

Letter Grade	Percentage Range
A	90-100
B	80-89
C	70-79

D	60-69
F	< 60

FA
According to NSCC policy, if a student fails a course, but has not officially withdrawn from the course, and her/his last date of attendance is before the last date to withdraw (*use date appropriate to your section*), the student will receive a grade of FA (i.e., "Failure for Attendance Reasons").

FN
An FN is awarded to students who never attended class.

Technology Statement

Nashville State's classes are considered to be web-enhanced. Faculty have an expectation that students will use a computer and the Internet to complete assignments, engage in online discussions, and access various course materials through D2L/NS Online course shells. Computers are available for student use at each campus during campus open hours.

D2L/NS Online and myNSCC

It is students' responsibility to check D2L/NS Online course shells for all enrolled courses and myNSCC, including student email, on a regular basis. These are the official communication channels between the college and students, who are responsible for the information communicated through those channels. D2L/NS Online contains specific course information and myNSCC contains information important for other purposes.

ADA Compliance Statement

Nashville State complies with the Americans with Disabilities Act (ADA). If you require accommodations for any courses in which you are enrolled, contact the Access Center at 615.353.3741 or 615.353.3721, or e-mail accesscenter@nscc.edu. If you are registered with the Access Center and require an alternate format for the textbook and other course materials, please contact the Access Center.

Classroom Misconduct

Nashville State Community College has a zero-tolerance policy for disruptive conduct in the classroom. Students whose behavior disrupts the classroom will be subject to disciplinary measures. Please review the Nashville State Student Code of Conduct policy. Please be aware that children are not allowed in class or to be left unattended on campus.

Academic Misconduct

Any form of academic dishonesty, cheating, plagiarizing, or other academic misconduct is prohibited. Students are responsible for understanding and abiding by the Academic Misconduct Policy in the Nashville State Student Code of Conduct. In addition to other possible disciplinary measures that may be applied through regular college procedures as a result of academic dishonesty, the instructor has the authority to assign an "F" or a "zero" for the exercise, paper, or examination, or to assign an "F" for the course. Students may appeal through the appropriate college grade appeal procedures.

Academic Early Alert System

Nashville State Community College uses an Early Alert System to let students know of a faculty member's concern in one or more of these academic areas: lack of attendance, lack of classroom participation, late or missing assignments, and/or poor performance on assignments/tests. *Please note that Early Alerts do not affect a student's academic standing. If you receive an Early Alert email, please see your instructor and your academic advisor as soon as possible.

RAVE Emergency Alert System

Emergency events can happen at any time and Nashville State Community College wants to be able notify students if and when they occur. For this reason, all students have been enrolled in the free RAVE alert system. If you have not already done so, please log in at https://www.getrave.com/login/nscc to confirm and update your contact information and notification preferences. It is critical that your information be correct so that you will receive any emergency notifications. Your RAVE Username is your NSCC email address. If you've never received an email from RAVE with your password, or if you need to reset your password, select "Forgot your password?" and a new password will be emailed to you. Should the RAVE system indicate "user not found", select Register and create your own RAVE account.

Inclement Weather & Campus Closings

Nashville State will use the RAVE alert system to send a text message to students, staff, and faculty about adjusted hours of operation and/or closings at individual campuses. All students should check the Nashville State web site home page at www.nscc.edu for announcements on campus closures, which may vary from campus to campus. Campus closures will also be announced on local television stations. Students should use their own best judgment in determining whether to report to campus during inclement weather when classes are not cancelled.

Even when campuses are closed, students are still responsible for completing all assigned work. When classes are cancelled, faculty will post online assignments and any additional instructions in the D2L/NS Online course shell. Check D2L/NS Online for a message from your instructor regarding your online assignment requirements. Faculty have discretion over adjusting deadlines or due date for assignments, but students are responsible for completing all assigned work by the due date established by the instructor**.**

Class Cancellation Policy

If the class is cancelled, the instructor will notify all students by posting in the D2L/NS Online course, e-mailing through D2L/NS Online, and/or by posting a sign on the classroom door. In the event of class cancellation, students must access D2L/NS Online to complete classwork and the assignment that will be posted in the course D2L site.