



## COURSE OUTLINE

**Instructor:** Kenneth Lee Moore

**Semester/Session:** Fall 2020

**Course Number:** CIT145

**Course Title:** Programming in C

**Course Credits:** 3

Lecture hours: 3

Lab hours:

Other hours:

**Pre-requisite(s):** None

**Co-requisite(s):** None

### Course Description:

This is a course to develop a working knowledge of C. Topics include: program structure, data types and variables, bit operators, control structures, input and output, arrays, pointers and an introduction to data structures. This is not an introduction to programming using C, it is C programming for programmers.

### Learning Outcomes:

Upon the completion of the activities in this course, the student should be able to:

1. Create programs using C input/output functions.
  2. Create programs using C control structures.
  3. Develop programs using functions available in the C standard library.
  4. Design programs using user defined C functions.
  5. Formulate data structures in C.
  6. Demonstrate a mastery of C pointers.
  7. Program C bit manipulator operators.
  8. Use C to create algorithmic solutions to coding problems.
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**Section**

**Dates**

**Days Time Room**

**Class Section(s) Time & Location:** Z04B 8/31/2020 - 12/7/2020

iNet

<b>Instructor:</b>	Kenneth Lee Moore	<b>Office Hours:</b>	M/W 1:10-1:40
<b>Telephone:</b>	724-325-6778	<b>Office Location:</b>	N427
<b>E-Mail Address:</b>	<a href="mailto:kmoore@ccac.edu">kmoore@ccac.edu</a>		
<b>Web site</b>	<a href="http://mooreccac.com/">http://mooreccac.com/</a>		

**Materials and Resources:**

Required Text(s):	C How to Program 6 <sup>th</sup> Edition Dietel (5 <sup>th</sup> and 4 <sup>th</sup> edition will work, too; but chapter numbers vary)
Required Materials:	NA
Recommended Text(s):	NA
Audio-Visual Materials:	NA
Directed Study:	NA
Open Lab, Tutoring, etc.	NA

**Teaching Methods:**

This is an online course. Use this outline to determine the weekly work such as reading, quizzes and homework. This outline also includes the exam dates. Homework submitted over 2 weeks late will not be graded.

**Evaluation Plan:**

Homework 50%

Quizzes 50%

A &gt; 90%, B &gt; 80%, C &gt; 70%, D &gt; 60%

**Other Policies and Procedures:**

Students are responsible for reading all announcements and are fully responsible for all materials contained on the site.

Students found cheating will receive an F.

**Course Outline Corrections:**

During the semester/session, reasonable changes to the course outline may be academically appropriate. Students will be notified of these adjustments by the instructor in a timely manner.

### **Accommodations for Individuals with Disabilities:**

The college recognizes its responsibility to provide academic and nonacademic services and programs equally to individuals with and without disabilities. To this end, the college provides reasonable accommodations for qualified students and employees with documented disabilities consistent with the requirements of the Americans with Disabilities Act, sections 503 & 504 of the Rehabilitation Act and other federal, state and local laws and regulations. The college maintains an Office of Supportive Services at each campus location to receive, review and evaluate requests from students who require an accommodation with respect to their educational program. Students' requesting reasonable accommodations due to a documented disability must first register with their campus' Supportive Services Office and obtain an official letter identifying approved accommodations to be distributed to their faculty members.

### **Attendance Procedure for Pregnancy & Pregnancy Related Conditions:**

In accordance with Title IX of the Education Amendments of 1972, absences due to pregnancy or related conditions, including recovery from childbirth, shall be excused for as long as the absences are determined to be medically necessary. Students will be provided with the opportunity to make up any work missed as a result of such absences, if possible. For more information or requests for accommodations, students should inform their instructor(s) and/or contact the Civil Rights Compliance Officer/Title IX Coordinator, at 412.237.4535 or [smisra@ccac.edu](mailto:smisra@ccac.edu).

### **Attendance Procedure for Religious Observance**

The college will make reasonable efforts to accommodate students who must be absent from classes or miss scheduled exams in order to observe a religious holiday or participate in some other form of religious observance. Students shall be provided, whenever possible, reasonable opportunity to make up academic assignments missed due to such absences, unless doing so would create or impose an undue burden on other students or the College. It shall be the students' responsibility to provide written notice via the *Request for Accommodation for Religious Observances Form* (accessible at <https://www.ccac.edu/nondiscrimination/>) to every instructor for each course in which an accommodation is being requested. For more information contact the Civil Rights Compliance Officer/Title IX Coordinator, at 412.237.4535 or [smisra@ccac.edu](mailto:smisra@ccac.edu).

### **Chosen First Name Procedure for Students**

Many individuals use names other than their legal first name to identify themselves for a variety of personal and/or cultural reasons. The college seeks to provide an inclusive and non-discriminatory environment by making it possible for students to use a chosen first name on college records when a legal name is not required. Chosen first names may not be applicable in certain programs due to the requirements of accreditation organizations and clinical sites. For more information, please see the Student Handbook (accessible at <https://www.ccac.edu/Academics/Academic-Rules-and-Regulations/CCAC-Student-Handbook/>).

**Course Plan:**

<b>Class Week</b>	<b>Lesson or Topic</b>	<b>Learning Activities</b>	<b>Assignments</b>	<b>Evaluation</b>
Week 1 31-Aug	Intro to C programming	Read Chapters 1, 2	Install a compiler. Become familiar with Black Board Programming Assignment From BB	HW Quiz
Week 2 6-Sep	Intro to C programming	Read Chapter 3	Programming Assignment From BB	HW Quiz
Week 3 13-Sep	Structured programming algorithms pseudo code if while for switch do break logic operators == vs. =	Read Chapter 4	Programming Assignment From BB	HW Quiz
Week 4 20-Sep	Functions	Read Chapter 5	Programming Assignment From BB	HW Quiz
Week 5 27-Sep	Arrays	Read Chapter 6	Programming Assignment From BB	HW Quiz
Week 6 4-Oct	Pointers	Read Chapter 7	Programming Assignment From BB	HW Quiz
Week 7 11-Oct	C Strings	Read Chapter 8	Programming Assignment From BB	HW Quiz
Week 8 18-Oct	Formatted I/O	Read Chapter 9	Programming Assignment From BB	HW Quiz
Week 9 25-Oct	Structures and Data Structures – Linked Lists	Read Chapter <b>10,12</b>	Linked list 2 weeks to finish. Programming Assignment From BB	HW Quiz
Week 10 1-Nov	Structures and Data Structures – Linked Lists	Read Chapter <b>10,12</b>	Linked list 2 weeks to finish. Programming Assignment From BB	HW Quiz
Week 11 8-Nov	File Processing	Read Chapter 11	Programming Assignment From BB	HW Quiz
Week 12 15-Nov	Octothorpal (#) directives	Read Chapter 13	Programming Assignment From BB	HW Quiz
Week 13 29-Nov	Macros	Read Chapter 14	Programming Assignment From BB	HW Quiz
Week 14 6-Nov Finals Week 8-14 Dec	No final exam	Finish quizzes and homework.		