

SOUTHERN MAINE COMMUNITY COLLEGE
South Portland, Maine 04106
Course Syllabus
Spring 2015

Course Title: World of Computing
Catalog Number: CSCI 105
Credit Hours: 3
Total Contact Hours: 45

Instructor: Steven Moore
Email : smoore@smccme.edu
Office Hours: before and after class

Course Description

This course is a broad overview of the Computing discipline. It introduces students to number systems, hardware concepts, data representation, algorithms, low-level and high-level programming, and various information systems. Most of these topics are designed to provide students with the tools that are useful when encountering computers in today's workplace. Furthermore, they are designed to enhance students' problem-solving and logical reasoning abilities.

Prerequisite: Successful completion of MATH 050 or higher or placement into a math course at or above MATH 145

Course Objectives:

Upon successful completion of this course, the student will be able to:

- Describe various layers of a computer system
- Notate and perform calculations with numbers in bases 2, 10, and 16
- Identify and describe various ways of representing digital data
- Combine basic logic gates into circuits
- Identify logic gates on a schematic
- Understand the components and behavior of a von Neumann machine
- Be familiar with machine- and assembly-level language concepts
- Recognize and explain several data structures and algorithms
- Apply algorithms to solve problems
- Describe the general behavior of an operating system and its file system
- Describe and apply concepts involving data and databases

Text & Supporting Materials:

Required:

[Computer Science Illuminated, 5th Edition](#) (4th edition is also fine)

Authors: Nell Dale, John Lewis

Publisher: Jones & Bartlett Learning

ISBN: 978-1-449-67284-3

You do **not** need the online access code that comes with the new version of the textbook, so if you can pick up a used copy of the 5th edition on Amazon and get next-day shipping for less than \$65, go ahead.

Spring 2014: the Bookstore does not have our abridged version. Please buy a used copy of the 4th or 5th edition on Amazon. If you sign up for a free month of Amazon Prime, you will get fast shipping for free. Just put a note on your calendar to cancel before the first month of your subscription ends!

You should have a notebook for taking notes and a writing instrument. It is strongly recommended that the student have a USB drive to store backup copies of all assignments.

Learning Outcomes

This course seeks to develop the following core abilities:

Global Awareness / Diversity

- Identify resources and strategies needed to problem solve and/or achieve goals inclusive of diverse perspectives and experiences.
- Demonstrate the ability to work collaboratively with people from diverse backgrounds in pursuit of a common objective or goal utilizing interpersonal skills that are essential to team building, conflict resolution and cross-cultural communication.

Critical Thinking

- A student can interpret information logically by selecting and organizing relevant facts and opinions and identifying the relationships among them.
- A student can analyze an issue or problem by separating it into its component parts and investigating the relationship of the parts to the whole.
- A student can synthesize information by combining ideas from multiple sources to come to an independent conclusion.
- A student can evaluate information by making informed judgments as to whether the information is accurate, reliable or useful.
- A student can apply theory to practice.

Communications

- Demonstrate a command of the English language
- Identify and extract relevant data from written and oral presentations

Quantitative Methods

- Recognize problems that can be solved with quantitative methods
- Identify the quantitative components of a problem
- Select and appropriate mathematical method to solve a problem
- Demonstrate accurate computational and/or algebraic skills to solve a problem
- Estimate the reasonableness of answers to problems

Course Requirements

Students will complete 4 projects, a mid-term and a comprehensive final examination. Additional homework, labs and quizzes will be assigned as deemed necessary by the instructor. You can find them in the Weekly Outline in Blackboard.

Projects	35%
Quizzes and Labs	35%
Mid-term Exam	15%
Final Exam (comprehensive)	15%

Grading Scale

93 - 100	A
90 - 92.99	A-
87 - 89.99	B+
83 - 86.99	B
80 - 82.99	B-
77 - 79.99	C+
73 - 76.99	C
70 - 72.99	C-
67 - 69.99	D+
63 - 66.99	D
0 - 62.99	F

End-of-Course Evaluation

In order to gain access to final course grades, students must complete evaluations for each course attended at SMCC. Evaluations are submitted online and can be accessed through the student portal site. Students can access the course evaluation report beginning two weeks before the end of classes. The deadline for submission of evaluations occurs 24 hours after the last day of classes each semester. Instructors will announce when the online course evaluation is available.

Academic Dishonesty

Plagiarism and cheating are serious offenses and may be punished by failure on exam, paper or project; failure in course; and or expulsion from the University. Plagiarism will be reported as a violation of the Student Code of Conduct. For more information refer to the "Academic Dishonesty" policy in the University Undergraduate Catalog.

Attendance & Missed/Late Work Policy

You are required, as stated in the college handbook, to attend all classes. Excused absences must be documented with doctor's notes or other official form of notification. Three consecutive unexcused absences will result in a reporting of your "Last Date of Attendance" which will show up as an AF (automatic failure).

Late assignments may be accepted at the discretion of the instructor. If accepted, a scoring penalty

may be incurred.

ADA Syllabus Statement

Southern Maine Community College does not discriminate in its education and employment programs on the basis of age, race, color, gender, sexual orientation, national origin, disability, or religion. The College complies with Title VI of the Civil Rights Act of 1964, Title IX Education Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, and the Americans with Disabilities Act (ADA) of 1990.

Inquiries regarding Title VI and Title IX may be made to the Affirmative Action Officer.
Telephone (207) 741-5798

If you have a disabling condition and wish to request accommodations in order to have reasonable access to programs and services offered by SMCC, you must register with the ADA Services Coordinator: Telephone (207) 741-5629, TTY (207) 741-5667

SMCC Pay-for-Print Policy

Students can print 150 pages per semester free of charge. If you print over 150 pages, you will be charged 10 cents per page to your student billing account for tuition and fees. Leftover pages from each semester will not be rolled over to the following semester. The College's pay-for-print system monitors printing on all public printers (i.e. those in general access labs, library printers, the Academic Achievement Center, Noisy Lounge and technology labs). Each time you log-in to the system, the print station displays the remaining print quota. Once the printing quota has been exceeded, users will be charged \$ 0.10 per page or \$.05 per side if the printer prints on both sides on their student accounts on a monthly basis. Color printouts will be charged at 11 page units. This means each color printout will count as 11 pages toward the quota and will cost \$1.10.

Add-Drop Policy

Students who drop a course during the one-week "add/drop" period in the fall and spring semesters and the first three days of summer sessions receive a 100% refund of the tuition and associated fees for that course. Please note any course that meets for less than the traditional semester length, i.e., 15 weeks, has a pro-rated add/drop period. There is no refund for non-attendance.

Withdrawal Policy

A student may withdraw from a course only during the semester in which s/he is registered for that course. The withdrawal period is the second through twelfth week of the fall and spring semesters and the second through ninth week of twelve-week summer courses. This period is pro-rated for shorter-length courses. To withdraw from a course, a student must complete and submit the appropriate course withdrawal form, available at the Enrollment Service Center (no phone calls, please). The designation "W" will appear on the transcript after a student has officially withdrawn. A course withdrawal is an uncompleted course and may adversely affect financial aid eligibility. Failure to attend or ceasing to attend class does not constitute withdrawal from the course. There is no refund associated with a withdrawal.

Plagiarism Statement

Adherence to ethical academic standards is obligatory. Cheating is a serious offense, whether it consists of taking credit for work done by another person or doing work for which another person will receive credit. Taking and using the ideas or writings of another person without clearly and fully

crediting the source is plagiarism and violates the academic code as well as the Student Code of Conduct. If it is suspected that a student in any course in which s/he is enrolled has knowingly committed such a violation, the faculty member should refer the matter to the College's Disciplinary Officer and appropriate action will be taken under the Student Code of Conduct. Sanctions may include suspension from the course and a failing grade in the course. Students have the right to appeal these actions to the Disciplinary Committee under the terms outlined in the Student Code of Conduct.