



South Portland, Maine 04106

Information Technology

Title: Introduction to Information Technology

Catalog Number: CMIT100

Credit Hours: 3

Total Contact Hours: 45

Lecture (or Lab): Lecture

Instructor: Kayle R. Day

Office Hours – Location:

Contact Information:

By Appointment - CSEC

Email: kday@smccme.edu

Course Syllabus

Course Description

This course introduces a wide variety of concepts encountered in real-world IT work and provides an overview of computer organization and hardware, Windows and Linux operating systems, system administration duties, scripting, computer networks, and computer security. It also gives students insight on IT-related careers such as network and web administration, computer forensics, web development, and software engineering. The course addresses concepts essential to all IT professionals to include operating systems and hardware to information security and computer ethics.

Co-requisite(s), MATH050, ENGL 050, ENGL075

Course Objectives / ACM Learning Outcomes

The Association for Computing Machinery (ACM) Committee for Computing Education in Community Colleges (CCECC), at the direction of the ACM Board, convened a task force to produce curricular guidance for associate-degree programs in Information Technology (IT). In fulfilling its charge, the CCECC identified the body of knowledge as a set of fifty student learning outcomes that constitute core IT competencies for all IT-related associate degree programs. The full list of student outcomes is available for download at <http://www.acmcecc.org/>.

An ability to demonstrate core IT competency in digital media and immersive technology

19. Differentiate among data types, data transfer protocols and file characteristics specific to the targeted use.

An ability to demonstrate core IT competency in networking and convergence

24. Diagram the components of an integrated IT system.

An ability to demonstrate core IT competency in programming and application development

31. Discuss software development methodologies.
32. Summarize the differences among various programming languages.

An ability to read and interpret technical information, as well as listen effectively to, communicate orally with, and write clearly for a wide range of audiences

43. Describe the attitudes, knowledge and abilities associated with quality customer service.
44. Produce technical documentation responsive to an identified computing scenario.

An ability to engage in continuous learning as well as research and assess new ideas and information to provide the capabilities for lifelong learning

46. Discuss significant trends and emerging technologies and their impact on our global society.

An ability to exhibit professional, legal, and ethical behavior

48. Summarize the tenets of ethics and professional behavior promoted by international computing societies.

An ability to demonstrate business awareness and workplace effectiveness

50. Summarize the role of IT in supporting the mission and goals of an organization.

After successfully completing the course, the student will be able to:

1. Describe and differentiate between types of IT careers
2. Describe the skill sets required to succeed in IT
3. Identify the components of a computer and their roles
4. Illustrate the use of binary in a computer with a focus on IP addresses.
5. Describe the roles of the operating system
6. Describe the elements of the file system from both the logical and physical perspective
7. Describe the role of the user account and the group
8. Discuss password management
9. Discuss the changes in society since the 1950s with respect to computer usage and computer users.
10. Describe how operating systems have evolved
11. Discuss the role of the service in support of operating systems
12. Differentiate between types of network media
13. Compare network topologies and classifications
14. Present a brief history of the Internet
15. Discuss types of software and software classification
16. Describe the differences between high-level language and low-level programming
17. Discuss various forms and value of information
18. Discuss ethical conduct in IT fields

Student Evaluation and Grading

A	93 - 100	C+	77 - 79
A-	90 - 92	C	73 - 76
B+	87 - 89	C-	70 - 72
B	83 - 86	D+	67 - 69
B-	80 - 82	D	63 - 66
		F	0 - 62

Measure	% of total	Basis
Chapter Labs	25	Participation
Chapter Quiz	20	Percent Correct
Chapter Homework	20	Percent Correct
Presentation	15	Rubric
Final Exam	20	Percent Correct

Text, Tools and / or Supplies

Required Text:

Required - Information Technology: An Introduction for Today's Digital World. Richard Fox / CRC Press.
ISBN 978-1-4665-6828-0

Supplemental Materials:

White Papers and Hand-outs provided by instructor
It would benefit the student if they had Internet access for class communication purposes.

Attendance Policy

Attendance is expected. A three point deduction will be made off the final grade for each class missed. On the 4th missed class a student will receive an AF. Students will be responsible for all assignments and activities. In the case of a necessary absence, the instructor must be informed by Email (preferred) or by phone.

Expectations:

Students are expected to attend classes regularly and to engage in all classroom/lab activities. Exercises should be done during class time if possible, but extra time can be made available if a student needs it. Notebooks are necessary for notes. Please Email me if you have any problems being in attendance or if you need help or if you would like to arrange a conference.

Topical Outline of Instruction

The following schedule of lecture topics and reading/homework assignments is preliminary and may be changed as the semester progresses. Students are expected to have read the listed material before it is covered in class.

Course Outline

	Chapter	Class
Week 1	Introduction and Syllabus Overview	1/22 Lecture: Introduction to CMIT and SMCC <u>Homework</u> (<i>Due 1/29</i>): Chapter 1- Review Questions 1-12, Discussion Question 1 OR 3, Pages 18-19.
Week 2	Chapter 1 Introduction to Information Technology	1/29 Chapter 1 Homework Review Lecture: Introduction to Information Technology <u>Homework</u> (<i>Due 2/5</i>): Chapter 7- Review Questions 1-6, 11-15 Discussion Questions 1, 7, and 10 2 Page Historical Figure Research Paper
Week 3	Chapter 7 History of Computers	2/5 Chapter 7 Homework Review Historical Figure Discussion Lecture: History of Computers <u>Homework</u> (<i>Due 2/12</i>) Chapter 2- Review Questions 1-3, 16, 19-24, 30 Study for Quiz
Week 4	Chapter 2 Computer Organization and Hardware Quiz- Chapter 1,7, and 2	2/12 Chapter 2 Homework Review Lecture: Computer Organization and Hardware Lab: Computer Hardware QUIZ- Chapter 1,7, and 2 <u>Homework</u> (<i>Due 2/26</i>) Chapter 3- Sample Problems 1-5, 17-18, Discussion Question 1 and 9
Week 5	NO CLASS	2/19 President's Day; No Class Held
Week 6	Chapter 3 Binary Numbering System	2/26 Quiz Review Chapter 3 Homework Review Lecture: Binary Numbering System Lab: Binary Numbering System <u>Homework</u> (<i>Due 3/5</i>) Chapter 4, Review Questions 4, 11, 14, 31, 33, and 35

		Chapter 8, Review Questions 2, 3, and 5
Week 7	Chapter 4 and Chapter 8 Operating System Concepts Operating System History	3/5 Chapter 4 and 8 Homework Review Lecture: Operating System History Lecture: Operating System Concepts Lab: Installing Windows and Linux Quiz: Chapter 3, 4, and 8 ONLINE, Due 3/18 <u>Homework</u> (Due 3/19) Chapter 5, Review Questions 1, 2, 12, 17 and 18 Chapter 6, Review Questions
Week 8	NO CLASS Quiz Chapter 3,4, and 8 Due 3/18	3/12 Spring Break; No Class Held
Week 9	Chapter 5 and Chapter 6 Files, Directories, and the File System Users, Groups, and Permissions	3/19 Quiz Review Chapter 5 and 6 Homework Review Lecture: File Systems Lab: Windows and Linux File Systems Lecture: Users, Groups, and Permissions Lab: Windows and Linux Users, Groups, and Permissions <u>Homework</u> (Due 3/26) Chapter 11, Review Questions 11, 12, 14, Discussion Questions 1 and 2 Chapter 12, Review Questions 1-7, 9, 29
Week 10	Chapter 11 and Chapter 12 Processes and Services Networks and The Internet Quiz, Chapter 5, 6, 11, and 12	3/26 Chapter 11 and 12 Homework Review Lab: Processes and Services Lecture: Networks and The Internet Quiz: Chapter 5, 6, 11 and 12 <u>Homework</u> : (Due 4/2) Chapter 13- Review Questions 1-6, 10, 11, 18, Discussion Question 1 Chapter 14- Review Questions 1, 2, 3
Week 11	Chapter 13 and Chapter 14 Software Programming	4/2 Quiz Review Chapter 13 and 14 Homework Review Lecture: Software Lecture: Programming Lab: Software Installation <u>Homework</u> : (Due 4/9) Chapter 15- Review Questions 8, 9, 10, 12, 21, Discussion Question 8 Chapter 16- Review Questions 2, 13-19
Week 12	Chapter 15 and 16 Information	4/9 Chapter 15 and 16 Homework Review

	Careers and Ethics	Lecture: Information Lecture: Careers Lab: Job Search <u>Homework:</u> (Due 4/23) Presentation Topic Outline
Week 13	NO CLASS	4/16 Patriot's Day; No Class Held
Week 14	Presentation Prep and Final Prep- Class Optional	4/23 Optional Class. May be used for snow day if necessary.
Week 15	Presentations	4/30 10 Minute Jobs in IT Presentations
Week 16	Final	5/7 Final

End-of-Course Evaluation

Students complete evaluations for each course attended at SMCC. Evaluations are submitted online and can be accessed through the student portal. Students can access the course evaluations beginning one week before the end of classes. The deadline for submission of evaluations occurs Monday at 5 PM following the last day of the class. You will receive an email to your student email account when course evaluations are available.

ADA Syllabus Statement

Southern Maine Community College is an equal opportunity/affirmative action institution and employer. For more information, please call 207-741-5798. If you have a disabling condition and wish to request accommodations in order to have reasonable access to the programs and services offered by SMCC, you must register with the Disability Services Coordinator, Sandra Lynham, who can be reached at 741-5923. Further information about services for students with disabilities and the accommodation process is available upon request at this number. Course policies about online testing are modified to suit each individual's accommodations.

SMCC Pay-for-Print Policy

Per Page Costs

Each semester students receive a \$20 printing credit. The balance resets at the end of the semester and any remaining credits are removed. The cost varies depending upon page size and whether printing is done in black and white or color.

- a. There is a \$0.10 per page fee for standard 8.5" by 11" black and white documents.
 - b. The reverse sides of duplex (double-sided) documents are free.
 - c. There is a \$.50 per page fee for standard 8.5" by 11" color documents.
 - d. There is a \$.20 per page fee for 8.5" by 14" (legal) or 11" by 17" (tabloid) black and white documents.
 - e. There is a \$1.00 per page fee for 8.5" by 14" (legal) or 11" by 17" (tabloid) color documents.
- Duplex charges (printing on both sides of a page) work in the following fashion: One page is \$0.10, two pages are \$0.10, three pages are \$0.20, and four pages are \$0.20, etc. The flipsides are free, but another sheet of paper is \$0.10. Please be aware that a document with any color at all (when printed to a color printer) will by default be printed in color. You are responsible for setting the print job to print black and white if you do not need color. For directions, please go to the IT Help tab in My SMCC.

How does it work?

The College's pay-for-print system monitors printing on all printers (including those in general access labs, library printers, the Academic Achievement Center, Noisy Lounge and technology labs). Students can check the number of pages they have printed by using the Printing Balance tool available on SMCC computers (located in the lower right corner of the screen, near the clock). Departments with work study students who need to print documents for the department should contact the Help Desk at 741-5696 to have a special account set up.

Refunds

Print jobs are eligible for a refund in the event of mechanical or electronic error on the part of the printer, print server, or software used to submit the job. Jobs are not eligible for a refund in cases where the job was not set up correctly, was submitted multiple times, or the student is not satisfied with the result. To request a refund, please bring the offending print to the IT Department in the basement of the Ross Technology Center. Refunds will be granted in the form of a credit to the student's account.

Why is SMCC charging for printing?

The pay-for-print system is an effort to control escalating printing costs. Charging for printing helps offset the increasing cost of supplies and encourages students to conserve resources. To find ways to reduce your printing charges, please go to the IT Help tab on My SMCC. If you have questions about the pay-for-printing policy or your printing charges, please contact the Help Desk at 741-5696 or send an email to helpdesk@smccme.edu.

Be sure to log OUT of the system when you've finished your printing, to prevent unauthorized access to your account.

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.