



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-Online	Instructor: Rebecca Test
Office Hours – Location: Online	Contact Information:
By Appointment – email	Email: rtest@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.acmccecc.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	40	Percent Correct
Project	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 in an online course is defined as completing weekly graded work such as a test, discussion board, or assignment. Weekly regular attendance is expected of all students. If you do not complete weekly work, then you have not attended class for that week. If you miss more than 3 weeks of class work, you will be dropped from the course with an AF.

Expectations:

Students are expected to engage in all discussion board/assignments. Readings/tasks should be done each week as assigned. Late work will receive a 30 percent penalty each day it is turned in beyond the due date. Please email me if you have any problems finishing the course work on time or if you need help. Tutors are also available. If you have difficulty with your password or accessing the SMCC network, you need to contact Matthew Allaire. His email is mallaire@smccme.edu. Note that if you wait until the end of the week to request assistance, late work will not be excused. Please start your assignments early. All assignments and correspondence should be done with your SMCC account.

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

Week	Lecture Topics	Readings
1	Introduction to Information Technology	Lecture – Chapter 1 Read - Chapter 1 Read – Chapter 7 Homework: Review Questions 1 – 12, Pages 18 - 19
2	History of Computers	Lecture - Chapter 7 Read – Chapter 2 Homework: Review Questions 1, 3, 7, 8, 10, 15 Page 212
3	Computer Organization and Hardware	Lecture - Chapter 2 Read – Chapter 3 LAB – Computer Hardware Homework: Study for Quiz 1
4	Binary Numbering System	Quiz Chap 1, 7, and 2 Lecture - Chapter 3 Read – Chapter 4 Homework: Review Questions 1, 2, 3, 4, 5, 12 Pages 89 -90
5	Introduction to Operating System Concepts	Lecture - Chapter 4 Read – Chapter 8 LAB – Install Windows 7 LAB – Install Linux Homework: Review Questions 4, 11, 14, 31, 33, 35 Pages 121-123
6	Operating System History	Lecture - Chapter 8

		<p>Read – Chapter 5</p> <p>LAB – Linux Distros LAB – Compare Windows Tools</p> <p>Homework: Review Questions 2, 3, 5 Pages 230-231</p>
7	Files, Directories, and the File System	<p>Quiz Chap 3, 4, and 8</p> <p>Lecture - Chapter 5 Read – Chapter 6</p> <p>LAB – Linux File System LAB – Windows File System</p> <p>Homework: Review Questions 1, 2, 12, 17, 18 Pages 153 – 154</p>
8	Users, Groups, and Permissions	<p>Lecture - Chapter 6 Read – Chapter 11</p> <p>LAB – Linux Users LAB – Windows Users LAB – Windows Permissions</p> <p>Homework: Review Questions 1, 2, 3, 6, 10 Page 179</p>
9	Processes and Services	<p>Lecture - Chapter 11 Read – Chapter 12</p> <p>LAB – Managing Processes LAB – Task Scheduler LAB – Windows Services LAB – Event Viewer</p> <p>Homework: Review Questions 11, 12, 14 Page 332</p>
10	Networks, Network Software, and the Internet	<p>Quiz Chap 5, 6, and 11</p> <p>Lecture - Chapter 12 Read – Chapter 13</p> <p>LAB – IP Address LAB – Wayback Machine</p> <p>Homework: Review Questions 1 – 7, 9, 29 – 31 Pages 373-374</p>

11	Software	Lecture - Chapter 13 Read – Chapter 14 LAB – Software Installation Demonstration – Apache Homework: Review Questions 1-6, 10, 11, 18 Pages 399-400
12	Programming	Lecture - Chapter 14 Read – Chapter 15 LAB – Shell Script Homework: Review Questions 1, 2, 3 Page 436
13	Information	Quiz Chap 12, 13, and 14 Lecture - Chapter 15 Read – Chapter 16 LAB – MS Access LAB – Certificates Homework: Review Questions 8, 9, 10, 12,21 Pages 475-476
14	Careers in Information Technology	Lecture - Chapter 16 LAB – Job Search Homework: Review Questions 2, 13, 14, 16, 18, 19 Page 501
15	Open Discussion / Final Review	Final Review
16	Final	Chapters 1 – 8, 11 – 16

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.