

Introduction to Computing

STM-106

3 Semester Credit Hours

Contact the advising team at DSU with any questions:
602.648.5750 or info@dunlap-stone.edu

Course description

This course explores the essential concepts of information technology. Students explore hardware, software, applications, Internet technologies, as well as privacy concerns, systems administration and information technology careers. This course is perfect for those who would like to learn more about the technology they utilize every day.

Course outcomes

By the end of this course, students will be able to:

- Define and describe the major terminology used in computing technology.
- Frame technological issues in the context of personal and professional situations.

Pre Requirements

There are no prerequisites for this course.

Materials Needed

O'Leary, T.J., O'Leary, L.I, and O'Leary, D.A. "Computing Essentials: Complete." Current Edition

Additional materials, articles and videos, will be posted in the classroom.

Grading Scale

92-100	A	72-74	C
89-91	A-	69-71	C-
85-88	B+	65-68	D+
82-84	B	62-64	D
79-81	B-	<62	F
75-78	C+		

Learning Resources

Students should utilize library resources provided at the main level of the classroom to support their learning and to master the course learning objectives.

Instructor Expectations

Faculty members may post additional materials, requirements or make changes to this syllabus. Please contact your instructor with questions about specific criteria.

The Learning Environment

This course is delivered fully online using distance education best practices. Students are expected to actively engage with their peers and instructor at least five (5) days each week. All courses are offered in English to students who meet the minimum entrance requirements and meet any published prerequisite requirements or program admission.

The classroom is accessed through the Moodle platform. Technical support is available during business hours by calling 602.648.5750.

Discussion Boards

The DSU learning model is built on a foundation of discussion. Students should actively participate in the discussion questions each week. At the end of the week, students will affirm that they have met the posting requirements. Students are expected to post four direct answers to discussion questions, one per day, for at least four days during the week. Students must also post substantive responses to their peers, at least one per day, for at least five days of the week. This should be a total of nine posts over five days. Points are assigned for discussion questions based on their completeness. Students should cite learning materials, outside articles or other materials whenever possible to demonstrate their mastery of course outcomes within the discussion questions.

Grading Criteria

Grades are determined by grading rubrics and grading guides throughout the course materials. Generally, students who meet or exceed the stated expectations for an assignment will receive the total number of points possible for that assignment. Deductions from the total number of points possible occur because of a lack of content or clarity, errors, failure to integrate course materials into the assignment or failure to complete the assignment.

Academic Integrity, Privacy and Identity

By signing into the electronic classroom with your unique username and password, you affirm that you are the

individual who registered for the course and that the work you submit is your original work. Students are expected to maintain standards of academic integrity. Plagiarism is a serious offense. Presenting another's work as your own could jeopardize your enrollment at the university. Please refer to the catalog for more information.

Intellectual Property

Unless otherwise noted, materials within the classroom belong to the noted copyright holder. There is no expectation of privacy or ownership of the posting of the students or faculty members. Please use good judgement when posting within the classroom. In some courses, you may wish to carefully consider what information you choose to disclose about your organization or your organization's activities. Contact your organization's legal representation for more information about your company's intellectual property and disclosure rules. Refer to the catalog for more information about the expectations of student behavior.

Study Suggestions and Estimated Time to Complete Work

Depending on the level of this course and the number of credit hours assigned for this course, the estimated time to complete work varies. Each credit hour assigned in this course has been designed to represent 15 hours of direct engagement with course materials and 30 hours of preparation. *This course is three credit hours in length and therefore represents 45 hours of engagement and 90 hours of preparation. In a six week course, you should spend about 7.5 hours working in the classroom and about 15 hours in preparation.* You may need more or less time to complete this course.

Preparation can be classified in a number of ways. Reading assignments are based on the number of pages you are expected to read each week and the level of complexity of those reading materials (whether they contain a large number of technical terms or difficult concepts). Written assignments are generally based upon the number of pages you are expected to produce as noted in the assignment description. Studying for exams is estimated by the number of hours you would be expected to spend reviewing materials.

Direct engagement includes reviewing website, posting and participating in discussion forums, reading materials, listening to audio content, and taking exams.

The following page's recommendations may help you develop a plan to successfully complete this course.

Institutional Outcomes

This course supports the following general education outcomes:

Critical Analysis and Reasoning: Competency in critical analysis and reasoning includes the ability to arrive at reasoned and supportable conclusions using sound research techniques, including inference, analysis and interpretation.

Technological Competency: Technological competency includes the ability to use computer technology and appropriate software applications to produce documentation, quantitative data presentations and functional graphical presentations appropriate to various academic and professional settings.

Program Outcomes

This course supports the following program outcomes:

[Associate of Arts: Business Administration]

- Demonstrate general knowledge and understanding of key business concepts, skills, and systems used in contemporary business organizations.
- Make connections between the different business functions necessary for success in today's dynamic enterprises.
- Apply quantitative and qualitative tools and problem-solving skills to critically assess modern business situations.

[Bachelor of Arts: Health Care Administration]

- Be prepared to work in hospitals, private practice, and a wide range of other health care settings in administration and management roles.

[Bachelor of Science: International Trade Management]

- Assess business processes
- Organize and implement a business plan to obtain strategic objectives.

Student Success Strategies

Week 1	Review the syllabus thoroughly and make sure you understand the course expectations and how to navigate the classroom. Accessing Moodle, familiarizing yourself with the layout of the classroom, accessing materials and printing them if you choose, and posting a brief introduction and biographical information in the classroom are tasks you should complete prior to or on the first day of class. Review your peers' posts and any from your instructor. If you feel uncomfortable navigating, please contact DSU and schedule a time to have a staff member walk you through the classroom. These tasks should take about an hour.
Weekly	Review your Lecture and Assignments document and plan your activities for the week. Carefully note assignments and their due dates and expectations for the week. Note any questions you may have for your instructor. Confirm that you have all of the assigned readings and can access any supplemental materials noted. You may wish to review your personal and professional obligations each week and designate what times you can schedule to complete the week's coursework. This step should take about one hour each week.
Weekly	Reading the lecture, textbook, and supplemental materials. Depending on the length of the lectures within the weekly assignment document, reading, reviewing and understanding the lecture for the week may take half an hour to an hour. Generally, the lecture highlights areas within your other assigned readings that are most critical. Many classes may also require you to read textbooks, watch video presentations, review websites, legal documents, or other supplemental materials. The average student spends about an hour reading 30 pages of a textbook designated at their degree level. More complex materials or legal documents may reduce this to 20 to 25 pages per hour. You may wish to allocate more time to make notes or review important points.
Weekly	Participation in discussion forums. Online classroom discussions should take about five hours per week. To meet the discussion question and participation requirements for this course, you should answer the designated number of questions completely, referencing your reading whenever possible. Be sure to read each of your classmates' posts, commenting meaningfully whenever possible and review your instructor's posts within the discussion questions as well. This is an opportunity to bring in your experiences and demonstrate your understanding of the course materials.
Weekly	Submitting assignments. Assignment submissions should take about a half an hour each week, depending on the number of assignments. Assignments are submitted through the Moodle assignment description. Before submitting your assignment, carefully review the assignment and any rubrics that are included for grading. Read through your submission carefully, checking for errors in grammar or spelling and to ensure that the content fully addresses the assignment. Give yourself extra time for a thorough review.
Other Actions	Research in preparation for a written assignment. Typically, students take about three hours to research the materials for one page of a research paper. Preparing for an article review. Typically, students spend about an hour and a half to research and summarize materials for an article review. Preparing a case study. Typically, students spend about an hour to two hours preparing to complete a case study. Completing other assignments. The time required to complete other assignments may vary depending on the assignment type. You may wish to ask your instructor how much time to plan to spend on an assignment. Studying for quizzes or exams. Depending on the course, the amount of time you spend preparing for an exam will vary. If you spend time each week reviewing the material as suggested above, the time spent preparing for a midterm or final exam may be lower, between two and four hours. Taking quizzes or exams. Depending on the course, the typical open-book exam should take about an hour for each 20-30 questions.* Group work or peer interaction. Depending on the assignment, collaborative or group assignments may vary greatly. Students should expect to spend about an hour collaborating with their peers for every page of a group assignment. Faculty interaction. Receiving and incorporating faculty feedback from your assignments, asking questions, and clarifying concepts are critical elements of interaction with your instructor.

*When a final project is used in lieu of an exam, the steps that you take to complete a final project may include research, identifying appropriate sources, brainstorming, outlining, creating a first draft, editing, incorporating feedback, and formatting a final draft for submission.

Course Assignment and Topic Matrix

Week 1	Information Technology, The Internet and You ● Discuss the parts of an information system. ● Differentiate between types of software ● Describe hardware types The Internet, the Web and Electronic Commerce ● Describe the origins of the Internet ● Describe tactics to access and utilize the Internet ● Identify means of electronic commerce	Post your bio Read lecture and assigned readings Participation (5 points) Discussion Questions (4 points) Assignment 1 (8 points)	17 points possible
Week 2	Application Software ● Identify general purpose and specialized applications. ● Discuss how applications are used. System Software ● Describe the difference between system software and application software ● Discuss the four types of system software ● Discuss the basic functions, features and categories of operating systems	Read lecture and assigned readings Participation (5 points) Discussion Questions (4 points) Assignment 1 (8 points)	17 points possible
Week 3	The System Unit ● Describe the four basic types of system units ● Discuss how a computer uses binary codes to represent data in electronic form ● Describe each of the major system unit components Input and Output ● Define input and output ● List types of input and output devices.	Read lecture and assigned readings Participation (5 points) Discussion Questions (4 points) Assignment 1 (8 points)	17 points possible
Week 4	Secondary Storage ● Distinguish between primary and secondary storage ● Discussion different storage options. Communications and Networks ● Discuss connectivity, the wireless revolution, and communication systems ● Describe data transmission factors, including bandwidths and protocols. ● Discuss networks and key network terminologies ● Describe different types of networks, including local area, metropolitan area, and wide area networks ● Describe organizational uses of Internet technologies, including intranets, extranets, and firewalls. Privacy, Security, and Ethics ● Discuss privacy and security issues ● Discuss ways that individuals and organizations can protect their security.	Read lecture and assigned readings Participation (5 points) Discussion Questions (4 points) Assignment 1 (8 points)	17 points possible
Week 5	Information Systems ● Explain how organizations can be structured according to functions and management levels. ● Describe how information flows in an organization. ● Explain the difference between data workers and knowledge workers. Databases ● Distinguish between the physical and logical views of data.	Read lecture and assigned readings Participation (5 points) Discussion Questions (4 points) Assignment 1 (8 points)	17 points possible

	● Describe how data is organized ● Describe the types and uses of databases Systems Analysis and Design ● Describe the six phases of the systems life cycle. ● Identify information needs and formulate possible solutions.		
Week 6	Programming and Languages ● Describe the six steps of programming ● Discuss design tools including top-down design, pseudocode, flowcharts, and logic structures. Synthesizing Topics ● Summarize the impact of technology in modern life and business.	Read lecture and assigned readings Participation (5 points) Discussion Questions (4 points) Final Paper (15 points)	24 points possible