



NORTHWEST
MISSOURI STATE UNIVERSITY

CSIS 44-101 Foundations of Computing
Spring 2017

Instructor: Dr. Michael Oudshoorn
Office Hours: MWF: 8-8:50am, M: 10- 11:40am; T: 1-2 pm; W: 11-11:50 a.m.
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Instructor: Dr. Carol Spradling
Office Hours: M: 8-10; TTh 9:30- 11; W 4-5; F 8-9 or by appointment
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Description:

Computers and Information Technology, provides an introduction to computer science, computer hardware, software, and related concepts.

Textbook:

Snyder, Lawrence. Fluency 6. Pearson, 2016.

Instructional Objectives:

After successfully completing this course students will be able to:

- describe the complexity, creativity and, dare we say it, artistry, that underlies Computer Science
- describe fundamental algorithms that underlie computing and how they apply in the real world (e.g., searching (Google), data compression (internet/voice communication), pattern recognition (Siri, OCR), and data management (everywhere!))
- develop algorithms (i.e., problem solve) and implement them as programs in Snap!, AgentSheets, Processing, etc.
- demonstrate an understanding of basic programming concepts — variables, sequential statements, loops, decision constructs, and procedures
- explain how abstraction is used to enable the storage of digital data -- numbers, text, sound, images, video, etc.
- discuss how computer models and simulations are used to generate new understanding and knowledge
- demonstrate proficiency with search engines and web authoring tools
- analyze the global impact of computing, in particular the social, ethical, legal, and moral issues involved in computing

Instructor Responsibilities:

Your instructor will help you attain those objectives by:

- explaining** the material in as clear a manner as possible
- guiding** your reading
- maintaining** numerous office hours, both during the day and (virtually) during the evening
- monitoring** your progress via periodic assignments, quizzes and exams
- soliciting** feedback

Expectations:

- Attend all classes
- Ask questions during class.** If you are confused, chances are your neighbors are, too, and will appreciate your inquiry.
- Explore and experiment! Try new things and learn from both your successes and failures. Computer Science is a **science**.
- Keep up with assigned reading/research
- Keep up with assigned group and individual tasks
- Do group assignments in groups; do individual assignments individually.

Assessments:

Category	%
Projects/Tasks/Assignments (10-15)	60
Assessments/Quizzes (~10, 15 points apiece)	25
Attendance	5
Final Evaluation	10
Total	100

A: [90.0,100]; B: [80.0,90.0); C: [70.0,80.0); D: [60.0,70.0); F: [0.0,60.0)

Academic Honesty: The academic honesty policy stated in the Northwest Missouri State University Undergraduate Academic Catalog will be followed. In addition, the document entitled Academic Integrity in CSIS Classes, posted on the course website, clearly explains those types of behavior that would be considered academic dishonesty. You are responsible for reading both, and abiding by the guidelines described therein.

Note that plagiarism includes, but is not limited to, failure to give credit for help received on a homework assignment. Also note that all assignments are to be done individually, unless specified otherwise. You may talk to classmates and other students about an assignment, but you must do all the work yourself from beginning to end. Two or more students may sit down together and discuss an assignment as they are working on it, but each student must do his/her own work in completing the assignment. You cannot copy another person's code or written work. You cannot copy database objects or any portion of a database from another student's files.

Failure to follow these guidelines and the remaining guidelines described in the *CSIS Academic Integrity Policy* will be subject to the penalties described in the catalog.

Disability Accommodations: Students in this course who need disability accommodations/modifications should present a copy of their official Northwest accommodation letter from the LAP/S Committee to the instructor during private office hours as early in the term as possible. Additional information can be found online at www.nwmissouri.edu/swd.

Grading Policy: Grades are posted in the online grade book. You are responsible for checking the grade book at least once a week to ensure that your grades are properly posted. Any concerns about any grade must be raised within 7 days of their posting.

Class Attendance: Attendance is taken daily, and each unexcused absence will have a detrimental effect on your grade. An "excused" absence is one in which you have a note from a teacher, coach, judge, police officer or medical professional explaining why you are absent.

Assessments: Quizzes and the final exam must be taken at the scheduled time. If you miss a quiz or the final exam, it is your responsibility to notify the instructor in advance and to provide the instructor with written verification of the reason for your absence. Failure to follow these instructions will result in a deduction of points or possibly a grade of zero on the quiz or final exam. Instructor reserves the right to administer un-announced quizzes.

Assignments: All assignments are due at the designated time. Assignments are individual projects. You may talk freely with your classmates, instructor, and class/lab assistants regarding the assignments, but any help received must be fully credited. Failure to credit a source constitutes plagiarism and is subject to the university rules regarding cheating. It is never permissible to copy another person's work. Read the section in this syllabus on academic honesty for details. Unless otherwise stated, all assignments must be uploaded by the start of class on the day that they are due. *Submissions by email will not be accepted.*

Cellphones: Please silence all cellphones, etc., before class.

Have fun!: You are about to embark upon a lifelong endeavor which will provide you with the tools you need to *change the world!!*

Getting Help: Help is available from your instructor. I have copious office hours, please use them. We also have teaching assistant (TB); their office hours are TBA.

Syllabus Revisions (based on CITE Office recommendations): This syllabus is not a contract and is subject to change at the discretion of the instructor to accommodate instructional and/or student needs. Changes to the syllabus will be announced in class, but it is the sole responsibility of the student to maintain an updated course syllabus.

Tentative Topics:

Week	
1	Introduction, role of algorithms, history of computing
2	CS ideas and computational thinking
3	The power of programming
4	Data representation
5	Data representation
6	How computers work
7	Operating systems and networks - communication
8	How search engines & the internet work
9	Building web pages
10	Computer security and privacy
11	Spreadsheets and Excel
12	Databases
13	Social issues & professional service
14	Limits of computing
15	Final exam week