CSCI 151
Fundamentals of Computer Science 1
Fall 2020 Syllabus

As mentioned in the required textbook, the "primary goal is to empower students by supplying the experience and basic tools necessary to use computation effectively. Our approach is to teach students that composing a program is a natural, satisfying, and creative experience."

This class will progressively introduce essential programming concepts while keeping the above goal in mind. Only a portion of the text book will be covered in the course. The entire text book will be covered in the CSCI 100, CSCI 151, CSCI 152 sequence. Upon conclusion of the sequence, students should have the knowledge and experience necessary to adapt to new computational environments and to effectively utilize computers in diverse applications.

Administrative

Instructor: Trish Duce | ducepa@mso.umt.edu | Social Science 412 | 406-370-9432

Class:

B00	75111	T, Th	11am-11:50am	SS362
B01	75112			
B02	75113			
B10	75114	M,W	2pm-2:50am	SS362
B11	75115	T	1pm-1:50pm	Zoom: https://umontana.zoom.us/j/98282064616
B12	75116	T	2pm-2:50pm	Zoom: https://umontana.zoom.us/j/96334339323

Office hours: By appt or Monday, 1pm-1:50pm on Zoom: https://umontana.zoom.us/j/92969246502

Prerequisites: CSCI 100 or 100% on CS Placement Test

Required Online Learning Subscription:

- Sign in or create an account at https://learn.zybooks.com
- Enter zyBooks code: **UMTCSCI151DuceFall2020**
- Subscribe (A subscription is $48. Students may begin subscribing on Aug 10, 2020 and the cutoff to subscribe is Dec 03, 2020. Subscriptions will last until Jan 01, 2021.)

Required Textbook: Introduction to Programming in Python – An Interdisciplinary Approach by Sedgewick, Wayne, Dondero

The Bookstore **strongly recommends** students place textbook orders online at montanabookstore.com. Students can choose "in-store pickup" or have the books shipped to them. Orders over $49 ship free.

Required Software: Python https://www.python.org

Website: Moodle http://umonline.umt.edu

Where to find the latest information on UM's response to coronavirus

The UM Coronavirus website and UM's email newsletter, UMToday, should be your main sources for updates and information related to UM's response to coronavirus throughout the fall semester.

UM's Health Advisory Group Academic Safety sub-committee shared this guidance for instructors.

- If the class is being recorded, instructors must notify students of the recording.
- Mask use is required within the classroom. View UM's face covering policy.
- Each student is provided with a Healthy Griz kit. We expect students to clean their personal work space when they arrive for class, and before they leave the classroom.
- Refill stations for cleaning supplies/hand sanitizer will be set up around campus - please learn where they are and use them.
- Classrooms may have one-way entrances / exits to minimize crowding.
- Students are discouraged from congregating outside the classroom before and after class. In the case of 3 hour-long classes, instructors should stagger breaks for small groups of students.
- Instructors should assign seating to ensure social distancing and take attendance to support contact tracing efforts.
- Instructors should not allow more students in their classrooms at any time, for any reason, than the maximum approved capacity.
- Additional seating should not be added to classrooms.
- Drinking liquids and eating food (which requires mask removal) is strongly discouraged within the classroom.

- There is high demand for spaces on campus to accommodate students with inadequate WiFi in their homes or quick turnarounds between face-to-face and remote classes. A list of remote learning spaces with the days and times available for student use will be posted on the Keep on Learning website. There will be signs posted outside of these buildings and rooms to indicate their availability.
- Stay home and contact the Curry Health Center at (406) 243-4330 if you feel sick and/or if exhibiting COVID-19 symptoms.
- If you are diagnosed with COVID-19, follow instructions for quarantine and contact your advisor so they can help you stay on track academically.
- Students, please remain vigilant outside the classroom and help mitigate the spread of COVID-19.

Learning Outcomes

Upon successful completion of this class, students will be able to:

1. Use/define functions: arguments, scope, side effects, return values
2. Create a client that uses libraries, APIs and Implementations
3. Problem solve using recursion, mathematical induction and dynamic programming
4. Create and use novel data types: classes, access modifiers, instance variables, constructors, instance methods, mutability
5. Develop software to optimize performance: scientific method, log-log plots, mathematical notation, order of growth classifications
6. Implement search and sort: binary search, insertion sort, merge sort, analysis of performance

Grading

zyBooks: (10%)

zyBooks material is due before class starts.

Attendance: (10%)

Attendance is mandatory however I realize there are times when you must be absent. Please give me advance notice of any absences, and I will provide you with the same courtesy.

Homework: (35%)

Quizzes: (10%)

Midterm: (15%)

Final Exam: (20%)

Grading Scale

- 100-90 A, A-
- 89-80 B+, B, B-
- 79-70 C+, C, C-
- 69-60 D+, D, D-
- 59-and beyond F

P/NP – pass/no pass, 70 or greater is passing determined by Computer Science Department policy, which is a C or better.

Late Work Policy - Late work will **NOT** be accepted.

Class Recording – Classes will be recorded with Zoom.

Academic Dishonesty

All students must practice academic honesty. Academic misconduct is subject to an academic penalty by the course instructor and/or a disciplinary sanction by the University. All students need to be familiar with the Student Conduct Code. The Code is available for review online at http://www.umt.edu/student-affairs/community-standards/default.php

Additional class policies and information:

- If you miss a class, you and you alone are responsible for the material covered. This includes handouts, schedule changes, and lecture notes.
- For important dates and deadlines related to classes, visit: http://catalog.umt.edu/academics/policies-procedures
- Also in the University catalog, review the policy on **incompletes**. In particular, note that incompletes can only be assigned when the student has "been in attendance and doing passing work up to three weeks before the end of the semester." Incompletes will not be issued simply to prevent a failing grade.
- Students with disabilities will receive reasonable modifications in this course. Your responsibilities are to request them from me with sufficient advance notice, and to be prepared to provide verification of disability and its impact from Disability Services for Students. Please speak with me after class or during my office hours to discuss the details. For more information, visit the Disability Services for Students website at http://www.umt.edu/disability.