Data Structures Lab

Fall Semester 2019 Syllabus

Lectures:

<u>Section A:</u> M 12:00pm - 1:50pm. McNutt - 234

Website:

http://web.mst.edu/~ricardom/cs1510/19.3

Instructor:

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Office Hours:

TBA. CS Rm-212 (Computer Lab)

Course Objective and Topics:

The primary goal of this course is to provide you broad familiarity with methods commonly employed both in many real-world applications, and also those which are used for more advanced methods. The secondary goal of the class is to practice actually implementing these methods, both to assist understanding, and also to increase retention.

Prerequisites:

Preceded or accompanied by Comp.Sci. 1575

Textbook:

Free as in freedom
"Tools for Computer Scientists"
The book will be updated as we progress through the semester, so make sure to re-download it regularly, i.e., the week of your current assignment.

Attendance

This is a lab; missing classes will very greatly diminish your chances for getting a good grade in this class.
- If you miss a lab, you get a 0 for that lab.
- If you miss 2 or more labs without a valid excuse, we may drop you from the course.

You must submit pre-labs in person, in lab, the day and time they are due, printed, and typed (not handwritten); submitting someone else's work for them without their full attendance that day will be considered academic dishonesty for both parties involved.

Lab Assignments (pre-lab and post-lab)

There will be ~14 labs. Each lab is worth a total of 100 points. Each lab assignment (except the first day) has an associated pre-lab which is part of the free lab book. The pre-lab MUST be typed. You must submit the pre-lab at the beginning of the associated lab (the minute class starts); otherwise your entire lab assignment will not be graded, and you will receive a 0 for the whole day, though it is recommended you still participate. Each lab assignment and pre-lab will be worth a combined 100 points 30 points for the pre-lab and 70 for the post-lab. Each week's post-lab assignments are due 24 hours after the start of lab. The first day has no pre-lab assignment, so the post-lab assignment itself is worth 100 points (no pre-lab component).

Projects

Two 100 point projects will be assigned. One will be due about halfway through the semester and one will be due at the end of the semester. The

purpose of these projects is to encourage you to study some topics in class in additional depth. I will give you a list of topics you can choose to do a project on, or you may choose a topic of your own with my approval. To encourage you to experiment on your own, these projects will be fairly open-ended, but I will do my best to be clear about what I expect from you for them.

Grading

You will be graded based on assignments, projects, homework, and other miscellaneous activities. We reserve the right to factor in points for attendance related performance, participation, or efforts demonstrated during office hours.

Please read, or re-read the department's C++ coding standards:
http://web.mst.edu/~cpp/cpp_coding_standard_v1_1.pdf

Assignment grading

Lab assignments will be graded (on a scale from 0 to 100) primarily on their correctness. Complete and correct output for every test input case is necessary for a full score.

If a program compiles and runs, then points will be deducted for each incorrect test case output. Points may also be deducted for:
- Missing name
- Incorrectly formatted output. (Presentation Error)
- Memory Leaks
- Specific types of inefficiency
- File format issues
- Pre-lab not typed (-15 points for the pre-lab component)

It is expected that all of your work runs correctly in the specified Linux environment we are working with in class, in the exact manner we specify in the assignment description. If you were contracted to write code for a job, and it ran on your computer, but not your employer's as they needed, your work would be considered a failure. In that light, you are also responsible for submitting all text and source files encoded UTF-8, Unix delimited.

After grading any given assignment, if the assignment appeared to be too difficult for the class, we may normalize to the top student's performance (the student with the highest point rank will get a 100% / A). This can, by definition, only help your grade.

Overall grading

We grade using the following procedure (percentages for each category may change slightly):

- Your grade = Sum of all points you earned / Sum of all points available
- Your letter grade = standard S&T letter-percentile mapping:

A : [90.00 - 100] %
B : [80.00 - 90) %
C : [70.00 - 80) %
D : [60.00 - 70) %
F : < 60 %

Grades will not be rounded; for example, if you have a 79.9, that is a C.

Makeup and late work

No lab, pre-lab, or project re-submission is allowed.
Pre-lab assignments are due the minute class starts, if they are not turned in complete by that time, then you get a 0 for the day.
Late submissions will not be accepted. It would be wise to account for something unexpected popping up last minute, so try to finish early.
If you have an S&T-acceptable documented reason (i.e., illness, death in the family, etc) for missing in-class events only (the lab itself, not the pre-lab under most circumstances), please see the professor to discuss potential re-scheduling or accommodation.

The Burns & McDonnell Student Success Center

The Student Success Center is a centralized location designed for students to visit and feel comfortable about utilizing the campus resources available. The Student Success Center provides peer mentors, caring staff, and approachable faculty and administrators who are student centered and supportive of student success. Visit the B&MSSC at 198 Toomey Hall; 573-341-7596; success@mst.edu; facebook: www.facebook.com/mstssc; web: www.studentsuccess.com

S&T Early Alert System:

All faculty are encouraged to utilize the online Early Alert System. The purpose of the Early Alert System is to improve the overall academic success of students by improving communication among students, instructors and advisors; reducing the time required for students to be informed of their academic status; and informing students of actions necessary by them in order to meet the academic requirements in their courses.

Academic Dishonesty:

http://registrar.mst.edu/academicregs/index.html
Page 30 of the Student Academic Regulations handbook describes the student standard of conduct relative to the System's Collected Rules and Regulations section 200.010, and offers descriptions of academic dishonesty including cheating, plagiarism or sabotage. Additional guidance for faculty, including the University's Academic Dishonesty Procedures, is available online at http://ugs.mst.edu.

Classroom Egress Maps:

http://designconstruction.mst.edu/floorplan/
Please familiarize yourselves with the classroom egress maps.

Disability Support Services:

Any student inquiring about academic accommodations because of a disability should be referred to Disability Support Services so that appropriate and reasonable accommodative services can be determined and recommended. Disability Support Services is located in 204 Norwood Hall. Their phone number is 341-4211 and their email is dss@mst.edu. Instructors may consider including the following statement on their course syllabus as a means of informing students about the services offered:

"If you have a documented disability and anticipate needing accommodations in this course, you are strongly encouraged to meet with me early in the semester. You will need to request that the Disability Services staff send a letter to me verifying your disability and specifying the accommodation you will need before I can arrange your accommodation."

If you have any questions about the information listed above, please contact the Office of Undergraduate Studies at 573-341-7276.

Title IX:

Missouri University of Science and Technology is committed to the safety and well-being of all members of its community. US Federal Law Title IX states that no member of the university community shall, on the basis of sex, be excluded from participation in, or be denied benefits of, or be subjected to discrimination under any education program or activity. Furthermore, in accordance with Title IX guidelines from the US Office of Civil Rights, Missouri S&T requires that all faculty and staff members report, to the Missouri S&T Title IX Coordinator, any notice of sexual harassment, abuse, and/or violence (including personal relational abuse, relational/domestic violence, and stalking) disclosed through communication including but not limited to direct conversation, email, social media, classroom papers and homework exercises.

Missouri S&T's Title IX Coordinator is Vice Chancellor Shenethia Manuel. Contact her directly (manuels@mst.edu; (573) 341-4920; 113 Centennial Hall) to report Title IX violations. To learn more about Title IX resources

and reporting options (confidential and non-confidential) available to Missouri S&T students, staff, and faculty, please visit http://titleix.mst.edu.