

COSC 2030 Data Structures
Instructor: James Ward
Office: Engineering 4065

Spring 2024
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Office Hours: TBA and by Appointment

Grading: Grades will be based on the percentage listed below.

There will be no extra credit.	
Homework	25%
Lab	25%
In Class Exams	30%
Final Exam	20%

Lecture Course Web page: <http://www.eecs.uwyo.edu/~seker/>

Texts:

Optional: Algorithms, 4th, Sedgewick and Wayne

Prerequisites: COSC 1030

Homework and Labs:

Programming or homework assigned in lecture will be due 5pm on the date specified for each assignment. Labs will have the due date and time listed. Late submissions will receive a 10% late penalty per day. The deduction will not incur a late penalty with a university excused absence. Anything handed in after 3 days or after solutions have been discussed will not be accepted. **DO NOT TURN HOMEWORK INTO THE EECS OFFICE. There WILL be homework due for credit during the last week of class.**

Getting Help:

There is lots of help available. The TA will have office hours online via discord. Engineering Honors TBP may be able to help. There is also the STEP program, which is a drop in. Visit the STEP Tutor Schedule for days and times: www.uwyo.edu/step

Please see the Syllabus addendum for additional information.

Topics:

- Primer, brief review of C++
- Classes and Abstract Data types
- Pointers and Recursion (again)
- Standard Container and template classes (including vectors and dequeues)
- Link lists
- Stacks
- Queues
- Trees
- Sets, Maps, Hashes
- Search and Sorting (heap sort)
- Self-Balancing Search Trees

Strings and pattern matching

Basic Algorithm analysis

Ones we write algorithms and STL algorithms.