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Office Hours: see web

Text: Starting out with C++, Gaddis, 6th Edition. Required.C++ Standard Library Tutorial+Reference, Josuttis OPTIONAL**Grade:** Your grade in this course will be determined from the percentage of total points you earn from exams, quizzes, homework and assignments weighted as follows.**Assessments**

| <i>Item</i> | <i>Weights</i> |
|-------------------------------------|----------------|
| Exams | 45% |
| Programming Assignments | 40% |
| Homework/Quizzes/In-class Exercises | 15% |

Grading Scale

| <i>Range</i> | <i>Grade</i> |
|--------------|--------------|
| 93% - 100% | A |
| 84% - 92% | B |
| 74% - 83% | C |
| 65% - 73% | D |
| Below 65% | F |

Exams: There will be two regular exams (12.5% each) and one comprehensive final exam (20%)**Programming Assignments:** 5-9 regular programming assignments will be given during the term. You will be given (about) 1.5 weeks to complete each assignment. Some programs may be collected electronically from your CS335 directory on BGUNIX. The modification timestamp will be used to determine the timeliness of your submission. All programs will be graded using BGUNIX; it is your responsibility to ensure your program runs correctly on that platform. A group project is possible. Late programming assignments will lose 1/3 of their value for each calendar day they are late.

The purpose of the programming assignments is to practice programming skills and to gain understanding of the underlying data structures and associated algorithms. These skills will be tested on the in-class exams and you are responsible for understanding any program that you submit for credit.

Homework/In-class exercises/Quizzes: Homework assignments, in-class exercises and quizzes will be given semi-frequently through the term. Late homework will not be accepted and in-class exercises/quizzes may not be made up; however the lowest percentage score from this category will be dropped. Attendance and class participation will contribute to your grade principally in borderline cases.**Email:** Students are expected to check their email on a daily basis. You are encouraged to make use of the email system to communicate with the instructor.**Policies:** Details about university & departmental policies regarding Academic Honesty, Disability, Religious Holidays, etc. may be found at <http://www.bgsu.edu/departments/compsci/policies/index.html> Use of electronic devices during class is not permitted – repeated infractions will result in a deduction of 1 course % point per infraction.**Handouts:** Leftover class handouts are placed in the folder on my office door with a half life of about a week. Class assignments/handouts are not guaranteed to be available electronically.*You are strongly encouraged to use class time to your best advantage. This includes asking questions and coming to class prepared.*

Course Syllabus (abridged from: <http://www.bgsu.edu/departments/compsci/courses/3350.html>)

1. Review (1 week)
2. Recursive functions * (2)
3. Advanced C++ * (3)
 - a. Pointers versus references
 - b. Copy and conversion constructors
 - c. Public, private and protected
 - d. Overloading functions, cin and cout
 - e. Abstract classes, base classes, derived classes and friends
4. Exception handling with throw and catch * (1)
5. Templates * (2)
 - a. Function templates
 - b. Class templates
6. Adaptation and use of STL data structures (4)
 - a. Iterators
 - b. Vectors
 - c. Strings
 - d. Deques
 - e. Heap Trees (AKA priority queue in the STL)
 - f. Hash Tables (AKA hash_map in the STL)
7. Use of STL Generic Algorithms (2)
 - a. Sorting, shuffling, permuting on strings and vectors
 - b. Big-O
8. Exams (1)
 - Intent is to cover the parts of C++ not covered in CS 2010 and CS 2020, but necessary for the understanding, adaptation and use of STL data structures and generic algorithms.

Important Dates (tentative)

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|-------|------------------|---------------------------|
| 9/3 | Thursday | Quiz |
| 9/17 | Thursday | Quiz |
| 10/1 | Thursday | Exam 1 |
| 10/15 | Thursday | Quiz |
| 10/29 | Thursday | Exam 2 |
| 12/14 | Monday, 8:30 AM | Final Exam (8 AM section) |
| 12/15 | Tuesday, 3:30 PM | Final Exam (4 PM section) |

Additional quizzes may be added during the semester.