



WELCOME TO SPRING 2018

CS202 PROGRAMMING SYSTEMS

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T/TH 2:30-3:20 IN FAB 120-19



HOW IS THIS CLASS DIFFERENT THAN CS163?

CS202 IS A PREP CLASS FOR THE UPPER DIVISION.

IT IS WHERE WE STOP LEARNING ABOUT THE BASICS AND DIG INTO THE DEEP CONCEPTS OF C++ AND DYNAMIC MEMORY:

- COPY CONSTRUCTORS
- INHERITANCE
- DYNAMIC BINDING
- USER DEFINED TYPE CONVERSIONS
- OPERATOR OVERLOADING
- TEMPLATES

WE WILL SPEND THE FIRST PART OF CS202 ON ADVANCED C++

WE WILL EXPERIENCE USING DATA STRUCTURES IN ADVANCED SITUATIONS

THEN THIS IS FOLLOWED BY GETTING FAMILIAR WITH THE PROCESS OF LEARNING OTHER PROGRAMMING LANGUAGES

- JAVA

EVERYONE SHOULD ALREADY KNOW C++ AND BE FLUENT PROGRAMMING DATA STRUCTURES USING RECURSION

WHAT YOU NEED TO KNOW?

1. ***READ THE SYLLABUS!!
2. PRE-REQ'S TO START
3. HOW TO BE SUCCESSFUL?
4. EXPECTATIONS
 - COME TO CLASS/LAB PREPARED!
 - ATTENDANCE!
 - CLASS PARTICIPATION
 - EXTRA LAB SESSIONS
5. ASSIGNMENTS
 - INDIVIDUAL WORK
 - NO IDE'S WHEN WORKING WITH C++
REMOVE THEM FROM YOUR SYSTEM!
6. PROFICIENCY DEMOS
 - LIVE PROGRAMMING
 - TWICE A TERM!
7. SEEKING ASSISTANCE
 - IMPORTANT NOT TO WAIT TO GET HELP!



COULD THIS BE YOURS?



FIRST WE NEED TO LEARN HOW TO INDEPENDENTLY SOLVE PROBLEMS
AND APPLY CRITICAL THINKING TO REAL WORLD PROBLEMS!

SO - SORRY, NO FILL IN THE BLANK PROGRAMMING HERE.....

PRE-REQUISITE KNOWLEDGE

1. 10+ WEEKS OF DATA STRUCTURES
2. FLUENT PROGRAMMING DATA STRUCTURE ALGORITHMS
 - APPLYING RECURSION
 - IMPLEMENTING LLL, DLL, CLL
 - ARRAYS OF LINKED LISTS
 - BINARY SEARCH TREES
 - APPLYING POINTER ARITHMETIC
3. YOU SHOULD BE COMFORTABLE CREATING COMPLETE ABSTRACT DATA TYPES USING CLASSES
4. WORKING WITH DYNAMIC MEMORY
 - USING NEW, DELETE
 - DYNAMICALLY ALLOCATED ARRAYS



If you are not fluent with these concepts,
this is not the right class for you!!!!

HOW TO BE SUCCESSFUL

1. PROGRAM EVERY SINGLE DAY!
2. SPEND TIME READING THE LECTURE MATERIALS
3. SPEND TIME READING THE LAB BACKGROUND INFO
4. USE THE SELF-CHECK QUIZZES IN THE LAB MANUAL
5. PRACTICE WITH THE EXTRA QUESTIONS PROVIDED IN THE LAB MANUAL
6. WORK HARD IN LABS AND ASK QUESTIONS
7. LABS ARE SPECIFICALLY DESIGNED TO BE FOR YOU
TO BRIDGE THE GAP BETWEEN LECTURE AND THE
INDIVIDUAL PROGRAMMING ASSIGNMENTS
8. SEEK ASSISTANCE!



SEEKING ASSISTANCE

USE THESE TO GET HELP

1. HOMEWORK RECITATION

- FAB 130
- STARTS WEEK #2
- MON-THR 2-5:50
- FRIDAY 12-3:50

2. TUTORS IN FAB 88

3. MY OFFICE HOURS

- T/TH 2:30-3:20
- FAB 120-19

4. EMAIL KARLAF@PDX.EDU

5. DO NOT LET ANYONE PROGRAM FOR YOU!

6. BE CAREFUL OF THE INTERNET...



ATTENDANCE

IMPORTANT POLICY!

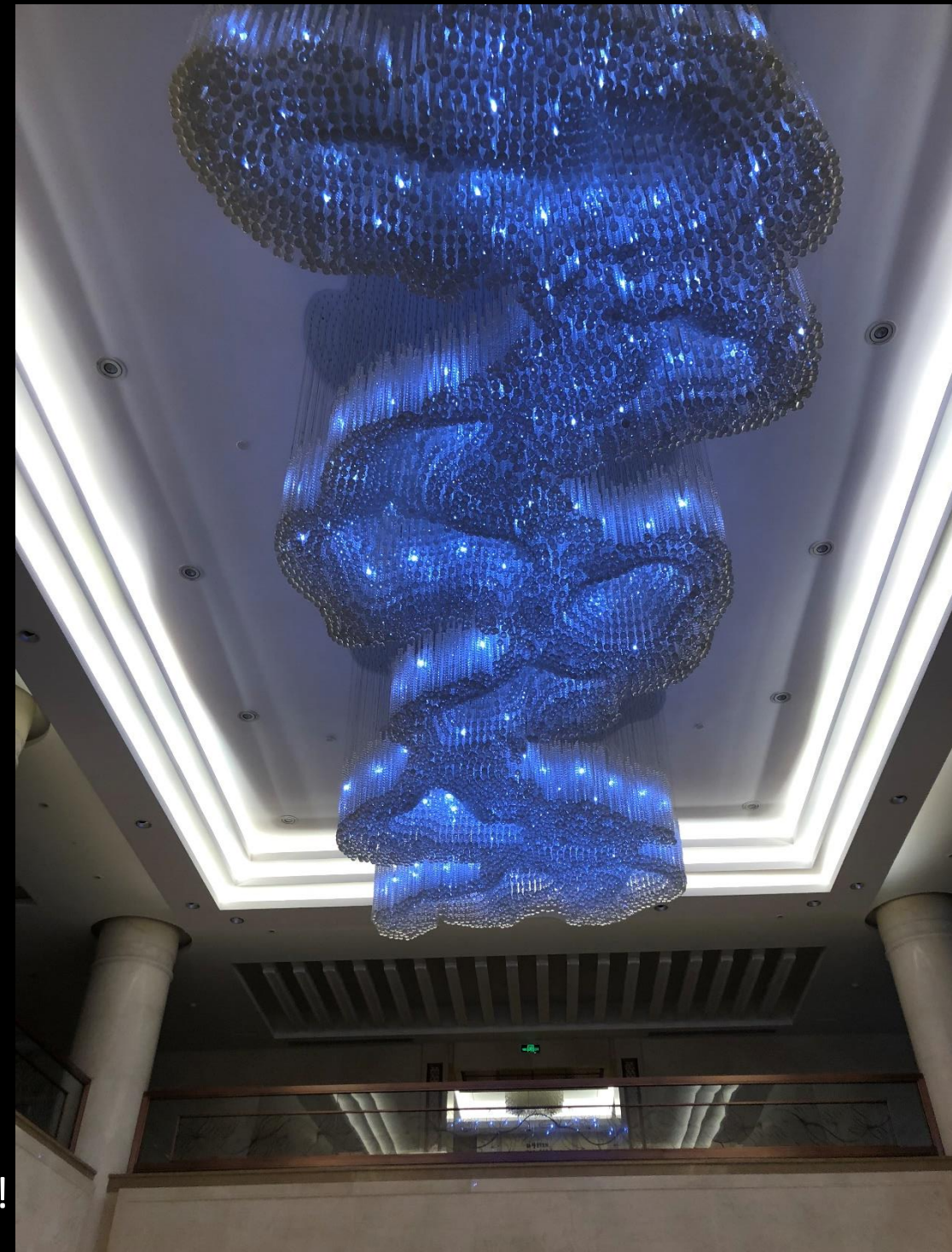
1. ARRIVE WITHIN FIRST 5 MINUTES!
2. SCAN IN EACH CLASS PERIOD
3. SCAN OUT AT THE END OF CLASS
3. STAY FOR THE ENTIRE CLASS
4. ATTENDANCE IS REQUIRED
 - TWO LECTURES MAY BE MISSED
 - THEN A 1% GRADE DEDUCTION
5. ATTENDANCE MEANS THAT YOU ARE READY TO PARTICIPATE WITH THE CLASS!



CLASS PARTICIPATION

IMPORTANT POLICY!!!!

1. WE LEARN SOME AMAZING MATERIAL!
2. LOCAL INDUSTRY EXPECTS YOU TO KNOW HOW TO PROGRAM
3. THEY ARE THRILLED WITH OUR GRADUATES..
4. BUT, IT ISN'T EASY AND WILL TAKE SOME HARD WORK!
5. THIS STARTS WITH PARTICIPATION
6. COME READY TO LEARN
 - HAVE READ THE TEXTBOOK
 - REVIEW THE POWER POINT SLIDES
 - COME READY WITH QUESTIONS
 - BE PREPARED TO ASK OR ANSWER QUESTIONS!
7. AND, REMEMBER WE EXPECT STUDENTS IN CLASS TO BE ACTIVE LEARNERS
 - THIS IS NOT THE TIME TO BE PLAYING GAMES!
 - AND, IT IS NOT THE TIME TO WORK ON YOUR PROGRAMS.



LAB PARTICIPATION

LABS REALLY MAKE THE DIFFERENCE!

1. MAKE THE MOST OF THE LABS!
2. WE HAVE SOME AMAZING TECHNICAL ASSISTANTS READY TO HELP IN A HANDS-ON ENVIRONMENT
3. BUT, YOU NEED TO COME PREPARED FOR THE LABS TO BE USEFUL!
 - PERFORM THE READINGS PRIOR TO LAB
 - COME PREPARED WITH THE PRELAB COMPLETED (OTHERWISE, THE LAB DOESN'T COUNT)
4. USE THE TIME TO WORK THROUGH THE LAB MANUAL AND PROGRAM!
 - IF YOU AREN'T READY, IT WON'T HELP!
 - IF YOU ARE ON YOUR PHONE, IT WON'T HELP!
 - IF YOU LET SOMEONE ELSE PROGRAM, IT WON'T HELP!
 - IF YOU DON'T COMPLETE A LAB, IT WON'T HELP!
5. YOU MAY MISS ONE LAB WITHOUT MAKING IT UP
6. EXTRA CREDIT FOR ATTENDING MAKEUP LABS!



PROFICIENCY DEMONSTRATIONS

DEMONSTRATING FLUENCY IN PROGRAMMING DATA STRUCTURES

1. TWICE A TERM (MIDTERM, FINAL)
2. PROGRAM LIVE IN FRONT OF A PROCTOR
3. A RANDOM ASSIGNED QUESTION
4. WE ARE SCORING ON THE PROCESS OF PROBLEM SOLVING AND APPLYING SYNTAX TO A RECURSIVE DATA STRUCTURES PROBLEM.
5. THESE ARE NOT EASY!
6. FOR THE CS202 MIDTERM, THIS WILL COVER:
 - RECURSIVE SOLUTIONS
 - LLL, DLL, CLL, AND ARRAY OF LLL
7. THIS MEANS IT IS IMPORTANT TO STAY UP WITH THE MATERIAL AND BEGIN PRACTICING NOW!
8. THE MIDTERM PROFICIENCY DEMO CAN BE RETAKEN ONCE; THE FINAL PROFICIENCY DEMO CANNOT!



EXPECTATIONS!

PROGRAMMING ASSIGNMENTS

1. FIVE PROGRAMMING ASSIGNMENTS
2. THREE HAVE AN OO DESIGN WRITEUP (600 WORDS) AND UML DIAGRAM.
3. WITH EACH PROGRAM YOU ALSO TURN IN AN EFFICIENCY WRITEUP UP (400 WORDS) AND A GDB WRITEUP (200 WORDS)
4. USE THE LAB MANUAL TO LEARN ABOUT
- UML DIAGRAMS
5. ALL PROGRAMS MUST BE SUBMITTED
6. ALL MUST RECEIVE AT LEAST 65%
7. THERE IS AN OOP TERM PAPER DUE AT THE END OF TERM (4-7 PAGES IN LENGTH)
8. THESE ARE INDIVIDUAL ASSIGNMENTS!



THIS IS a programming Class!
All Programs must be submitted and
receive a passing score!

EXPECTATIONS!

PROGRAMMING ASSIGNMENTS

1. THERE IS AN “ONTIME” DATE, THAT IS WHEN YOUR ASSIGNMENT IS ACTUALLY DUE!
2. THEY ARE DUE AT **6PM**!
2. THERE IS A “LATE” DATE FOR EMERGENCY SITUATIONS!
 - THERE IS A 5% DEDUCTION TO USE THIS
3. THERE ARE NO EXCEPTIONS TO THESE DATES!
 - DO NOT EMAIL ME ASKING FOR MORE TIME!
 - THE LATE DATE IS THE LATE DATE
4. ALSO 5% DEDUCTION FOR INCORRECT SUBMISSIONS, SUCH AS
 - INCORRECT D2L FOLDER
 - INCORRECT TAR/ZIP ARCHIVE



THIS IS a programming Class!
Keep on top of this!!!!

EXPECTATIONS!

EXAMINATIONS!

1. TWO QUIZZES
2. ONE WRITTEN MIDTERM EXAM
3. ONE WRITTEN FINAL EXAM
4. THE QUIZZES ARE USED TO PREPARE YOU FOR THE LARGER EXAMS
5. THE WRITTEN EXAMS ARE BASED ON...
 - THE LAB MANUAL!
 - PRELABS, SELF-CHECK, GROUP ACTIVITIES
 - TEXTBOOK READING ASSIGNMENTS
 - LECTURE MATERIALS
 - PROGRAMMING ASSIGNMENTS!
6. MUST RECEIVED A 65% (OR GREATER) ON THE MIDTERM AND FINAL EXAM TO PASS

The lab manuals are a great resource!!!



HOW TO CALCULATE YOUR GRADE...

Demonstrate Proficiency in C++ <ul style="list-style-type: none"> - Midterm Demo - Final Demo 	Pass/No Pass	At PSU or by Proctor (must pass both demos)
Lab Participation <ul style="list-style-type: none"> - Prelabs - Lab Code Submitted 	Pass/No Pass	Pre-labs and Lab code (Attendance to all but 1 lab required)
Graded Lab Manuals <ul style="list-style-type: none"> - Student will submit a rubric with the manual 	5%	Lab manuals are graded twice (Manuals are graded for completeness, relevance, and readability)
Individual Assignments <ul style="list-style-type: none"> - Term Paper - 3 Written Designs/UML - 5 Programming Projects 	5% 5% 20%	Submit to D2L Dropbox (All designs, UML diagrams, programs, and papers must be submitted and each receive a passing score of 65% or greater)
Quizzes and Midterm Exam <ul style="list-style-type: none"> - 2 Quizzes - Midterm Exam 	5% 25%	At PSU or by Proctor (The midterm score must be 65% or greater to pass CS202)
Comprehensive Final Exam	35%	At PSU or by Proctor *** Must receive a Passing score of 65% to pass the class ***

INDEPENDENT PROGRAMMING

WE EXPECT STUDENTS TO CREATE THEIR WORK INDEPENDENTLY

THIS MEANS...

1. DO NOT COPY FROM SOMEONE ELSE'S SCREEN
2. YOUR CODE SHOULD BE UNIQUELY YOUR OWN
3. DO NOT COPY FROM THE WEB
4. DO NOT GIVE YOUR CODE TO OTHERS
5. THIS IS NOT GROUP PROGRAMMING!

PERFORMING ANY OF THESE WILL
RESULT IN A ZERO ON AN ASSIGNMENT

EXCEED MY EXPECTATIONS!!!

1. PROGRAM EVERY SINGLE DAY!
2. MAKE SURE TO BE PROFICIENT WITH RECURSION AND DATA STRUCTURES – PRACTICE!!!!!!
3. BE PREPARED FOR CLASS LECTURES – READ THE MATERIALS
4. BE PREPARED FOR CLASS LABS – READ THE BACKGROUND INFO!
5. ATTEND MAKEUP SESSIONS TO COMPLETE LABS
6. ATTEND HOMEWORK RECITATION SESSIONS TO GET ASSISTANCE

AVOID...

1. AVOID SHARING CODE
2. AVOID IDE'S FOR C++
3. AVOID COPYING CODE
(FROM THE INTERNET OR OTHERS)
4. DON'T RECEIVE SO MUCH HELP THAT
YOU CANNOT SOLVE THE PROBLEMS
YOURSELF

