CMPT 202 Introduction to Data Structures
Syllabus Spring 2019

Course Website

Materials for this course are available at:

`http://people.westminstercollege.edu/faculty/dsalinasduron/202`

We do not use Canvas for delivering course materials. We only use it for submitting assignments as well as recording scores.

Instructor

Daniel Salinas Duron – Malouf 214 – `dsalinasduron@westminstercollege.edu`

Day	Time
Monday	4:00 - 6:00 PM
Thursday	1:00 - 4:00 PM

Course Description

This course employs an object-oriented approach to problem solving. Fundamental data structures, algorithmic complexity, and recursion will be examined using the Java programming language. An emphasis will be placed on proper program design. Students will also be introduced to analysis of algorithmic complexity.

Course Objectives

On successful completion of this course you will have better problem solving skills, be able to design and implement algorithms and analyze algorithmic complexity for solving a problem, and be comfortable programming with several data structures. This course should prepare you to continue with more advanced computer studies and write substantial programs.

Prerequisites

CMPT 201 and MATH 101 or 105. You need to be familiar with Java syntax and basic programming skills. Basic algebra skills are also expected.

Recommended Text
Zybooks: Data Structures in Java. This is an online, interactive textbook and a semester-long subscription can be purchased at `learn.zybooks.com` - We will provide further details on how to obtain this text.

This book is <u>recommended</u>, but not required. We will provide a substantial number of online notes on our course web page.

If you have not programmed in Java recently, you may want to find a Java reference. There are numerous online sites that are helpful, and we also have a small number of Java references available for loan.

Labs
We will have one lab each week. Because the labs may involve pair programming, attendance during labs is mandatory. Labs will be graded credit / no credit for each step of the lab. If you do not finish your program during the lab period, the following late policies will be in place:

Date	Credit
1 week	Full credit
2 weeks	90% credit
1 month	50% credit

Homework
There will be several homework assignments, for which you will have one to three weeks to complete. Homework assignments will be appropriately weighted based upon the amount of work required.

The following late policies will be in place.
NOTE: One homework assignment will not accept any late work.

Date	Credit
1 week	Full credit
2 weeks	90% credit
1 month	50% credit

You will turn in your labs and homework assignments online using Canvas. Late allowances will be made for serious illnesses and emergencies. If you must turn in an assignment late, make arrangements in advance or notify me as soon as possible.

Programming assignments will be graded using the following criteria:

- **Readability** - Do you use good variable names and have well formatted code with comments and documentation?

- **Completeness** - Does your solution meet the stated requirements?

- **Testing and Debugging** - Is your code properly tested and debugged? This last step is often the difference between a A and a B grade in this class.

Quizzes

Quizzes will be given in class as we finish topics. Their purpose is to encourage regular study. They will be given once every two weeks if possible.

Final Quiz

A cumulative final quiz will be held the last week of classes.

Grading

Your course grade will be determined according to the following policy:

Topic	Weight
Labs	30%
Homework	20%
Quizzes	40%
Final Quiz	10%
Total	100%

Your grade will be determined using the following scale.

$> 93 \Rightarrow A$
$90..93 \Rightarrow A-$
$88..89 \Rightarrow B+$
$83..87 \Rightarrow B$
$80..82 \Rightarrow B-$
$78..79 \Rightarrow C+$
$73..77 \Rightarrow C$
$70..72 \Rightarrow C-$
$65..69 \Rightarrow D+$
$60..64 \Rightarrow D$
$55..59 \Rightarrow D-$
$< 55 \Rightarrow Fail$

*** The instructor reserves the right to alter the above grading scheme. Any modifications will be announced to the class.

Group Work
You are encouraged to work together in designing a solution to a homework or lab problem, but all answers and programming code should be your own work. Please list in the README all students you worked with on each assignment. Cheating is not tolerated. A first cheating offense will earn a zero on the assignment, quiz, or exam, and a second offense will receive a failing grade for the course and a letter to the Dean of Students. Please refer to the Academic Catalog or the Student Handbook for the College's statement on academic honesty.

College-Wide Learning Goals

This course satisfies the following college-wide learning goals:

- *Critical, analytical and integrative thinking.* A large focus of this class is developing critical and analytical skills for solving a variety of problems.

- *Creative and reflective capacities.* You will have to seek creative solutions to several problems you will encounter this semester. In other instances, you will be asked to reflect (in writing) on some of the solutions you have developed.

- *Leadership, collaboration, and teamwork.* You will work closely with a programming partner when pair programming in labs.

- *Writing and other communication skills.* You will have to submit several written homework assignments this semester.

Program-Specific Learning Goals

- *To understand the concepts and techniques of software design.* A large focus of this class is software design.

- *To develop effective problem solving skills.* During the course of the semester you will encounter several programming challenges which you will have to apply problem solving skills to overcome.

Pronouns, Correct Names, and Inclusion

It is your right to be identified by your correct name and pronouns. I support people of all gender expressions and gender identities and welcome students to use whichever pronouns or names that best reflect who they are. In this spirit, I expect all students to also use the correct pronouns and names of classmates. Please inform me if my documentation reflects a name different than what you use and if you have any questions or concerns please contact me after class, by email, or during office hours.

Your Rights Under Federal Laws

Section 504 of Rehabilitation Act of 1973/ADA. Westminster College seeks to provide equal access in higher education to academically qualified students with physical, learning, and psychiatric disabilities. If you need disability-related accommodations in this class, have emergency medical information you wish to share with me, or need special arrangements in case the building must be evacuated, please inform me immediately. Please see me privately after class or in my office. Disability Services authorizes disability-related academic accommodations in cooperation with the students themselves and their instructors. Students who need academic accommodations or have questions about their eligibility should contact Karen Hicks, Director of Disability Services & Testing Center, in the basement of Giovale Library (801-832-2272) or email

`disabilityservices@westminstercollege.edu.`

Title IX. Title IX of the Education Amendments of 1972 prohibits sex discrimination against any participant in an educational program or activity that receives federal funds. Westminster is committed to providing a safe and non-discriminatory learning, living, and working environment to all members of the Westminster community and does not discriminate on the basis of sex. This includes on the basis of gender, gender identity, gender expression, nonconformity with gender stereotypes, or sexual orientation. The College's Title IX policy strictly prohibits sexual assault, sexual harassment, gender-based harassment, gender-based discrimination, sexual exploitation, interpersonal violence (dating violence, domestic violence, stalking), and retaliation for making a good faith report of prohibited conduct or participating in any proceeding under the policy. The policy and accompanying procedures are available at

`www.westminstercollege.edu/about/resources/title-ix`

and discuss prohibited conduct, resources, reporting, supportive measures, rights, investigations, and sanctions for violations of the policy. If you want to make a report of prohibited conduct, you may contact Westminster's Title IX Coordinator, Katherine Thomas, or report an incident online. Katherine can be reached at

`kthomas@westminstercollege.edu,`

801-832-2262, or in Malouf 107. You can also contact Deputy Coordinator Traci Siriprathane at

`tsiriprathane@westminstercollege.edu`

or 801-832-2862 or in HWAC 215. Please note that to the extent permitted by law, the College aims to protect the privacy of all parties involved in the investigation and resolution of reported violations of the policy. However, the College has a duty to look into and take actions in response to reports and cannot guarantee confidentiality or that an investigation will not be pursued. The Counseling Center is a confidential resource, and by law the counselors who work there cannot reveal confidential information to any third party without express permission unless there is an imminent threat of harm to self or others. **As an instructor I am a responsible employee and am required to report any information I obtain regarding conduct that may violate the policy to the Title IX Coordinator so that students can receive supportive measures and referrals to resources, they are aware of their options, and the safety of the campus community can be ensured.** If you begin to disclose an incident of prohibited conduct, I may interrupt you because I want to make sure that you have had the opportunity to discuss the incident with confidential resources on and off campus first. If you need supportive measures inside or outside the classroom because of an incident of prohibited conduct, please reach out to the Title IX Coordinator for assistance.

Equal Opportunity. Title VI of the Civil Rights Act of 1964 prohibits discrimination based on race, color, or national origin in any program or activity receiving federal financial assistance. In addition to these, Westminster's Equal Opportunity policy prohibits discrimination or harassment based on ethnicity, age, religion, military status, or genetic information in any of its programs or activities. If you encounter this type of discrimination or harassment, or feel that you have been retaliated

against for reporting prohibited conduct or participating in any related proceeding, you can contact the Equal Opportunity Officer, Katherine Tomas. She can be reached at

`kthomas@westminstercollege.edu,`

801-832-2262, or in Malouf 107. You can also contact Julie Freestone, Executive Director, at

`jfreestone@westminstercollege.edu,`

801-832-2573, or in Bamberger 106. The equal opportunity policy and procedures can be accessed from the Student Life webpage. **As an instructor, just as with Title IX, I am a responsible employee and am required to report any information I obtain regarding discrimination or harassment to the Equal Opportunity Officer for further review.**