University of North Georgia
Mike Cottrell College of Business
Department of Computer Science & Information Systems
Spring 2019, Dahlonega Campus
Data Structures and Analysis of Algorithms – CSCI3200
TR 08:00am-09:15am, NOC X208

GENERAL INFORMATION:

Instructor: Dr. Mingyuan Yan
Office: Barnes Hall 103
E-mail Address: myan@ung.edu **or** mingyuan.yan@ung.edu
Office Phone: 706-867-4579
Office Hours: TR 9:30am-10:45am and Wednesday 9:00am-11:30 and 1:00pm -03:30pm or by appointment

TEXT AND OTHER MATERIALS

Textbook:

- ***Data Structures & Algorithm Analysis (Third Edition), Mark Allen Weiss***, ISBN-13: 978-0132576277
- Other data structure textbooks cover the required topics might be used. However, the students must aware that the implementation, illustration or emphasis of different textbook may be different.

Resources: Course assignments and materials are on e-learning (D2L) site
Software: Any IDE (Integrated Development Environment) for JAVA programming development (Eclipse will be used in class if there is a need for programming demonstration)

COURSE DESCRIPTION

1. An introductory course to Data Structures and Algorithm Analysis
2. Topics include fundamental data structures (array-based, linked list – based), Linear ADT and their implementations (Queue & Stacks), non-Linear ADT and their implementations (Tree, Hashing, Priority Queue and Graphs), and introduction to design and complexity analysis for algorithms
3. 3 semester hours
4. Prerequisite: CSCI 1302 and MATH 2510 with a grade of C or higher

METHODS OF INSTRUCTION

Lecture, discussion, demonstration and development of programming on related topics

EVALUATION METHODS

Assignments, lab projects and exams.

COURSE OBJECTIVES

On completion of the course, students should have a clear idea of data structures, abstract data types, algorithm design and analysis as a designer or programmer. You will study algorithms that let you manipulate data types. Finally, we will analyze these algorithms, and try to categorize them with regard to their performance (time complexity).

COURSE GRADING

Category	**Weight**		**Grading scale**	**Letter Grade**
EXAM I	21%		90 and above	A
EXAM II	25%		80 and above	B
LABs	24%		70 and above	C
Homework	30%		60 and above	D
Participation	3% (Bonus)		Below 60	F

COURSE CALENDAR

Date	Topic Covered	Homework/Notes
Jan 08	Introduction	
Jan 10	**Ch 1&2:** Java Review & Algorithm Complexity Analysis	
Jan 15		
Jan 17		
Jan 22		
Jan 24	**Ch 3:** Fundamental Data Structures	
Jan 29		Homework 1 Due
Jan 31	**Ch 3:** Lists, Stacks and Queues	
Feb 05		LAB1 Due
Feb 07		

Feb 12	**Ch 4**: Trees	Homework 2 Due
Feb 14		
Feb 19		LAB2 Due
Feb 21		
Feb 26	Review – Exam I	Homework 3 Due
Feb 28	**EXAM I**	**Be on time!**
March 05	**Ch 4**: Trees	**☺Withdrawal Deadline☺**
March 07		
March 12	**Spring Break**	**NO CLASS!!!**
March 14		
March 19	**Ch 4**: Trees	
March 21	**Reserved: LAB 3 Q &A**	
March 26	**Ch 6:** Priority Queues	Homework 4 &LAB3 Due
March 28		
April 02		
April 04	**Ch 9:** Graph Algorithms	Homework 5 Due
April 09		
April 11		
April 16	**Reserved: LAB 4 Q&A**	LAB 4 Due
April 18	**Ch 7**: Sorting	Homework 6 Due
April 23		
April 25	Review – Exam II	Homework 7 Due
April 30	**Exam II**	**8:00am – 10:00am**

POLICIES AND EXPECTATIONS

- **Missed Work**
  There are **NO make-up exams** without proper documentation of a legitimate extenuating circumstance. With proper documentation of a legitimate extenuating circumstance in advance, you may arrange to take the final exam **BEFORE** it is administered to the rest of the class. The re-scheduled exams are recommended to be taken in the test center. Please check the requirement of the test center before head if there is a need. If such arrangements are not made, you will receive a zero on any missed exam. **All exam will be taken in the classroom during the class time only**.
- **Late Submission**
  Assignments turned in late will be penalized 10% per calendar day; No late submission will be accepted after three days. For example, if an assignment is due on Jan. 23rd, no late submission will be accepted after Jan. 26th. All missed submission will receive a grade of zero. There may be a rare exception to this rule if you can document legitimate unforeseen extenuating circumstances. In these cases, you must request an extension **before** the submission deadline. All extensions should be requested by e-mail and are granted solely at the instructor's discretion. Please note that if you have to miss a class, you do so at your own risk; extensions or exceptions will not be granted simply because you were not present when the material was covered in class.
- **Disagreement on Grading**
  If you have any disagreement or concern on a grade that you receive in this class, you have 7 days to contact me after the grade is released on D2L.
- **Attendance**
  Attendance is strongly recommended; it is essential to complete all assignments and keep up with topics as they are covered. You are responsible for all material presented, all announcements made, and all assignments given in every class, whether or not you are present. Keeping up with these items is your responsibility. (There are contents that covered in this class not from the textbook.)
- **No-meet in Class Event**
  Due to inclement weather or special arrangement, we may not meet in class. Online lecture or other study tasks will be uploaded to D2L. Please make sure you follow the instruction of the instructor to finish the study tasks. There will be no class cancelation without study instruction is provided.

REMARKS

1. *This syllabus represents a general plan and it is subject to change if deemed necessary by the instructor*. Due date may be changed according to the process of class. All changes will be declared in class and updated on **D2L** accordingly. It is the student's responsibility to check all those updates.
2. The students are expected to spend 3- 6 hours every week. More hours on course assignments are expected if you did not have strong Java Programming skills.
3. All assignments will be posted at least a week prior to its due date, please make sure you check D2L in a timely manner and start to work on it early. This time is given is because several students may need that much time to finish the assignment. All assignments are due before the class starts on the due date.
4. Please refer to **Student Handbook for more details.** "a grade of W may be assigned when students fail to attend 10% of any class meetings prior to the midpoint of the term; a grade of WF will be assigned when students stop attending after the midpoint".
5. Tardiness and/or early departures: Students are expected not to disrupt class when arriving or leaving. Arriving late is disruptive to the instructor and to your fellow students. Please be on time. If a late arrival or early departure is unavoidable, please be as discreet and inconspicuous as possible (i.e., INVISIBLE).
6. There is no extra credits or projects available at the end of semester. Emails or conversation regarding "is there anything you can do to get a better grade" will simply be ignored at the end of the semester or after the due date of an assignment. No emails will be replied after the final exam except you want to check your final exam. So make sure you work hard and work closely with me during the semester if you want to a good grade. Spent as much effort as you need to get the grade you want. The final letter grade will be assigned strictly based on the grading rule.

SUPPLEMENTAL SYLLABUS

Students are expected to refer to the supplemental syllabus for the following information:

1. Academic Exchange
2. Academic Integrity Policy
3. Academic Success Plan Program
4. Class Evaluations
5. Course Grades and Withdrawal Process
6. Disability Services
7. Disruptive Behavior Policy
8. Campus Carry
9. Inclement Weather
10. UNG Alert