**WAYLAND BAPTIST UNIVERSITY**

**SAN ANTONIO CAMPUS**

**SCHOOL OF MATHEMATICS AND SCIENCES**

**Wayland Mission Statement:** Wayland Baptist University exists to educate students in an academically challenging, learning-focused, and distinctively Christian environment for professional success and service to God and humankind.

**Course Title and Number:** CSCI 2313 Data Structures

**Term:** Spring II 2024, start 03/25/24 and end on 05/18/24

**Name of Instructor:** Mark Munoz

**Office Phone Number and WBU Email Address:** Mark.Munoz@wayland.wbu.edu

**Office Hours, Building, and Location:** make an appointment, online

**Class Meeting Time and Location:** online

**Catalog Description:** Comparative study of the interaction of data and procedural abstractions. Data structures, lists, stacks, queues, trees, graphs, sorting and searching, hashing, and graph traversals.

Prerequisites: CSCI 2365 or approval of instructor.

**Required Textbook and Resources:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **BOOK** | **AUTHOR** | **ED** | **YEAR** | **PUBLISHER** | **ISBN#** | **REVIEW** |
| Data Structures Essentials | Roman Lysecky |  | 2023 | zyBooks | 979-8-203-24032-3 |  |

**Optional Materials:** none

**Course Outcome Competencies:** Upon completion of this course the student should be able to:

* Basic understanding of measuring runtime with big O notation
* Understand stacks and queues and know when to use which
* Basic understanding of linked lists and operations on them
* Understand operation of multiple sorts, including quick sort
* Basic understanding of using data structures available in Java library

**Attendance Requirements:** All students are expected to attend all class sessions and are responsible for knowing the material covered.  No quizzes or exams can be made up unless arrangements prior to the absence have been made.  Any student missing more than 25% of the class will fail the class.

**Statement on Plagiarism and Academic Dishonesty**: Wayland Baptist University observes a zero tolerance policy regarding academic dishonesty. Per university policy as described in the academic catalog, all cases of academic dishonesty will be reported and second offenses will result in suspension from the university.

**Disability Statement:** In compliance with the Americans with Disabilities Act of 1990 (ADA), it is the policy of Wayland Baptist University that no otherwise qualified person with a disability be excluded from participation in, be denied the benefits of, or be subject to discrimination under any educational program or activity in the university. The Coordinator of Counseling Services serves as the coordinator of students with a disability and should be contacted concerning accommodation requests at (806) 291-3765. Documentation of a disability must accompany any request for accommodations.

**When Assignments Due:** All assignments are due at end of week (Sunday) before midnight Central Standard time.

**Late Policy:** Ensure you submit your assignments per due date schedule in BlackBoard. If not, you will be deducted 20% of your grade each week late. Please talk with your instructor to make prior arrangements and get approval for an excuse if this can become an issue.

**Course Requirements and Grading Criteria:**

**Zybook Work:** You will supplement your learning using Zybooks Participation and Challenge Activites. This is worth 30% of your grade.

**Discussions and Participation:** This course requires you to participate in weekly module discussions. The purpose of this community space is to interact with your peers and your instructor. The purpose of the discussion questions is to explore the content in the module as a class, present new questions to expand the discussions, and to make comments elaborating on the topic relating to computer science.

Base your discussion responses on information presented in the module as well as personal

knowledge and experience. Post your initial response by the 4th day of each module's week.

Read your peers' posts and reply to one of them before last day of the week. The responses or comments to your peers should contribute any additional insights pertaining to the topic. In order to encourage interaction in the discussions, you are required to try to find opposing responses, post your perspective, and give substantial rationale for agreeing or disagreeing with the responses you chose. Last, you must follow APA standard and this is worth 20% of your grade.

**Midterm and Final Examinations**: The mid-term and final examinations are cumulative and worth 50% of your grade. The midtern/final exam will be administered on week 4 and 8. For these tests, I will primarily focus on whether you understand the processes and concepts taught in the course. Always make your logic and reasoning clear and show all work for partial credit.

**Grading**:

20% **Discussions**

30% **Zybook**

50% **Exams**

A: 90 – 100 B:  80 – 89 C:  70 – 79 D:  60 – 69 F: Below 60

Students shall have protection through orderly procedures against prejudices or capricious academic evaluation. A student who believes that he or she has not been held to realistic academic standards, just evaluation procedures, or appropriate grading, may appeal the final grade given in the course by using the student grade appeal process described in the Academic Catalog. Appeals may not be made for advanced placement examinations or course bypass examinations. Appeals are limited to the final course grade, which may be upheld, raised, or lowered at any stage of the appeal process. Any recommendation to lower a course grade must be submitted through the Executive Vice President/Provost to the Faculty Assembly Grade Appeals Committee for review and approval. The Faculty Assembly Grade Appeals Committee may instruct that the course grade be upheld, raised, or lowered to a more proper evaluation.

**Tentative Schedule**:

| **Week** | **Topics** |
| --- | --- |
| 1  03/25-03/31 | Data Structures Essentials textbook - Intro  Zybook  Discussions/Participation |
| 2  04/01-04/07 | DATA STRUCTURES ESSENTIALS textbook – Searching and Algorithm Analysis Zybook  Discussions/Participation |
| 3  04/08-04/14 | DATA STRUCTURES ESSENTIALS textbook – Sorting Algorithms Zybook  Discussions/Participation |
| 4  04/15-04/21 | MIDTERM EXAM |
| 5  04/22-04/28 | DATA STRUCTURES ESSENTIALS textbook – Lists  Zybook  Discussions/Participation |
| 6  04/29-05/05 | DATA STRUCTURES ESSENTIALS textbook – Stacks and Queues Zybook  Discussions/Participation |
| 7  05/06-05/12 | DATA STRUCTURES ESSENTIALS textbook – Hash Tables  Zybook  Discussions/Participation |
| 8  05/13-05/18 | FINAL EXAM |

**Academic Honesty:** Disciplinary action for academic misconduct is the responsibility of the faculty member assigned to this course. The faculty member is charged with assessing the gravity of any case of academic dishonesty, and with giving sanctions to any student involved.

**Important Dates:** Last day to drop without record

Last day to withdraw with “W”

Last day to withdraw with a “WP/WF”

Last Class

This syllabus is only a plan.  The teacher may modify the plan during the course.  The requirements and grading criteria may be changed during the course if necessary.

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