

Information Systems Department  
University of Maryland Baltimore County  
Baltimore Maryland 21250

Departmental Office: room ITE 404 ph. 410-455-3206

IS 310 section 1 Software and Hardware Concepts  
Fall 2018

**Instructor:** Tate O. Redding  
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Course Delivery Site <http://blackboard.umbc.edu>  
Office Hours: ITE 414, see posted schedule on corkboard for appointments

**Meeting Times:** Section 1 M/W 8:30-9:45 am. Room: [per schedule of classes](#).

**Textbook:** Systems Architecture, Hardware and Software in Business Information Systems,  
Seventh Edition By Stephen D. Burd, *Cengage*, 2016

**Course Description:** (*per catalog*) “A survey of technical topics related to computer systems with emphasis on the relationships between hardware architecture, systems software, and applications software. The architecture of processors and storage systems are explored and the implications for systems software design on the development of application programs in a business environment.” 3 credits.

IS310 is part of the IS BS gateway and as such is a prerequisite for courses in Networking, Systems Analysis & Design, Decision Support, and Databases.

**Prerequisites:** Before attempting this course, students should have completed with grades of “C” or better; Math 155 and IS 147. IS 101 is also recommended.

**Instructional Methods:** Discussion, Lectures and Demonstrations

**Attendance and Participation:**

Regular and punctual attendance is expected of all students. In the case of absence due to emergency (illness, death in the family, accident), religious holiday, or participation in official College functions, it is the student's responsibility to confer with the instructor about the absence and missed course work.

**Class Preparation:** All of the reading assignments should be completed before the class in which the material is to be discussed.

|                                    |                              |         |
|------------------------------------|------------------------------|---------|
| <b><u>Course Requirements:</u></b> | Regular Punctual Attendance  | Reports |
|                                    | Class Assignments & Homework | Exams   |

## **Grading**

|                                    |                    |       |
|------------------------------------|--------------------|-------|
| <b><u>Grade Apportionment:</u></b> | Reports            | = 10% |
|                                    | Classwork/Homework | = 10% |
|                                    | Exams              | = 80% |

**There will be no extra credit assignments available.**

**Reports:** Communication is a vital part of business, school and personal life. This semester you will be required to write 2 reports.

An event report will be from your participation in an Information Systems related seminar, workshop, lecture, or research project outside of class. The report from your participation should chronicle the event, its relevance to the major and your reactions to it. Proof of attendance may be required. This will constitute 5% of your semester grade.

You will also be tracking a computer technology company or crypto currency this semester. In the beginning of the semester you will identify an appropriate company that is publicly traded on either the NYSE or NASDAQ stock exchanges; or you will pick a crypto currency to track. You will track the prices every week and report on the company periodically, you will also produce a semester summary report. Grading for the tracking project and report will be 5% of your semester grade.

**Classwork and Homework:** Throughout the semester you will be given classwork and homework assignments which will count for 10% of your overall grade. Most of your homework will require you to present your answers in class as part of the topics under discussion.

**Exams:** There will be 4 Exams. The exams will result in a total of 80% of your semester grade. Each exam is 20 points. You may not use calculators or computers for exams. You must bring picture ID. Exams may include any type of question or exercise covering any aspect of the course currently under discussion or assignment. There is no cumulative Final.

**Academic Integrity:** By enrolling in this course, each student assumes the responsibilities of an active participant in UMBC's scholarly community in which everyone's academic work and behavior are held to the highest standards of honesty. Cheating, fabricating, plagiarism, and helping others to commit these acts are all forms of academic dishonesty and they are wrong. Academic misconduct could result in disciplinary action that may include, but is not limited to, suspension or dismissal. Full policies on academic integrity should be available in the UMBC Student Handbook, Faculty Handbook, or the UMBC Directory.

**Due Dates:** All assignments are to be handed in by the due date. If an assignment is not in on time it may possibly be accepted the following class with an accompanying reduction of 50% of the earned grade. Due to some scheduling issues some late assignments may not be accepted at all with a result in a total loss of points.

**Make-up Policy:** Exams: No make-up exams except through arrangement with the instructor: and then for reasons deemed valid enough to warrant the making of a new, and potentially harder, test.

**Grading Standards:** IS instructors are expected to have exams and evaluations, which result in a reasonable distribution of grades. With respect to final letter grades, the University's Undergraduate Catalogue states that, "A, indicates superior achievement; B, good performance; C, adequate performance; D, minimal performance; F, failure" There is specifically no mention of any numerical scores associated with these letter grades. Final letter grades in this course conform to the University's officially published definitions of the respective letter grades. In accordance with the published University grading policy, it is important to understand that final letter grades reflect academic achievement and not effort. While mistakes in the arithmetic computation of grades and grade recording errors will always be corrected, it is important to understand that in all other situations final letter grades are not negotiable and challenges to final letter grades are not entertained. Historical data suggest an "A" may be in the 90-100 range, "B"'s may be from 80-89 and "C" grades range from 70-79. All points from assignments and exams are additive for the semester. Each student starts at zero points which is an "F", any other grade must be earned. ***There will be no extra credit assignments available.***

**Disability Statement:** Student Disability Services (SDS)

UMBC is committed to eliminating discriminatory obstacles that may disadvantage students based on disability. Services for students with disabilities are provided for all students qualified under the Americans with Disabilities Act (ADA) of 1990, the ADAAA of 2009, and Section 504 of the Rehabilitation Act who request and are eligible for accommodations. The Office of Student Disability Services (SDS) is the UMBC department designated to coordinate accommodations that would allow students to have equal access and inclusion in all courses, programs, and activities at the University.

If you have a documented disability and need to request academic accommodations, please refer to the SDS website at [sds.umbc.edu](https://sds.umbc.edu) for registration information and to begin the process, or alternatively you may visit the SDS office in the Math/Psychology Building, Room 212. For questions or concerns, you may contact us through email at [disAbility@umbc.edu](mailto:disAbility@umbc.edu) or phone (410) 455-2459.

If you require accommodations for this class, make an appointment to meet with me to discuss your SDS-approved accommodations.

## COURSE SCHEDULE

| Lecture Dates<br>(approximate and<br>subject to change) | Material Covered                                   | Work Due              |
|---------------------------------------------------------|----------------------------------------------------|-----------------------|
| <b>Unit I</b>                                           | <b>Introductions</b>                               |                       |
| Week 1- Aug 29                                          | Intro to Course and Syllabus                       |                       |
| Week 2-Sept 5                                           | Chapter 1 – Why IS310                              | Assignments 1 & 2     |
| Week 3- Sept 10                                         | Chapter 2 – Introduction to Systems Architecture   | Assignment 3          |
| Week 3                                                  | Chapter 3- Data representation                     | Assignment 4          |
| <b>Week 4</b>                                           | <b>Exam 1 - bring picture ID</b>                   |                       |
|                                                         |                                                    |                       |
| <b>Unit 2</b>                                           | <b>Processor Design</b>                            |                       |
| Week 5                                                  | Boolean Logic and Circuit Design                   | Assignment 5          |
| Week 6                                                  | Chapter 4 Processor Technology                     |                       |
| <b>Week 7</b>                                           | <b>Exam 2</b>                                      |                       |
|                                                         |                                                    |                       |
|                                                         |                                                    |                       |
| <b>Unit 3</b>                                           | <b>Storage and Transport</b>                       |                       |
| Week 8                                                  | Chapter 5 – Data Storage                           | Assignment 6          |
| Week 9                                                  | Chapter 6 – Systems Integration                    |                       |
| Week 10                                                 | Chapter 7 – I/O                                    | Assignment 7          |
| Week 10                                                 | Chapter 8- Data Communications                     |                       |
| Week 11                                                 | Chapter 9 - Networks                               | Assignment 8          |
| <b>Week 12</b>                                          | <b>Exam 3</b>                                      |                       |
|                                                         |                                                    |                       |
| <b>Unit 4</b>                                           | <b>Software and System Management</b>              |                       |
| Week 13                                                 | Chapter 10-Application development                 | Assignment 9          |
| Week 13                                                 | Chapter 11 – Operating Systems                     | Event Report Nov 19   |
| Week 14                                                 | Chapter 12 –Secondary Storage and File Management  | Assignment 10         |
| Week 14                                                 | Chapter 13 – Internet and Distributed Architecture |                       |
| Week 15                                                 | Chapter 14 – System Administration                 | Dec 3-Company Summary |
| <b>Week 16 Dec 10</b>                                   | <b>Exam 4</b>                                      |                       |
|                                                         |                                                    |                       |
| Dec 13-20                                               | FINAL EXAMS Period used at instructor's discretion |                       |

**Inclement Weather:** Any work or test due on a class date that has been canceled due to inclement weather will be due the next class meeting. (If the semester's last exam is postponed, it will be given during the time period assigned during the University's official Final Exam week.)