**Towson University**  
Department of Computer and Information Sciences

**Spring 2023  
COSC 236.102 — Introduction to Computer Science I**

**Lectures**: Monday and Wednesday 5 – 6:15 PM; Room: YR 205  
**Lab**: Thursday 7 – 8:50 PM; Room YR 304

|  |
| --- |
| **Instructor**: Professor Eyer, [reyer@towson.edu](mailto:reyer@towson.edu) **Course Site**: <http://blackboard.towson.edu>  **Office**: YK-437 **Phone**: (410) 704-2428  **Office Hours**: **(by appointment only) Mon/Wed 4 – 5 PM and Thurs 2 – 3 PM** |

**Course Description**

|  |
| --- |
| This course serves as an introduction to structured problem solving, algorithm development and computer programming with a modern, high-level, structured programming language, (JAVA). There will be 3 lecture hours weekly, plus 2 laboratory hours to practice and support the lectures. |

**Prerequisites**

|  |
| --- |
| Arriving students are expected to possess some elementary programming knowledge and experience prior to entry into COSC 236. An Assessment test will be administered on the first day of classes. Students scoring very low on this exam will be afforded an opportunity to withdraw without penalty.  Additionally, each student is expected to have completed MATH 119 or equivalent which assumes 2 years of algebra, geometry, trig, and an understanding of functions, logarithms, vectors, and systems of equations. |

**Required Textbooks**

|  |
| --- |
| *Building Java Programs: A Back to Basics Approach* ***4e***, Reges and Stepp, Addison-Wesley, 2016  **ISBN-13**: 978-0135862353 **ISBN-10**: 0135862353 [Direct Access available] |

**Grading**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | | **Assigned Weights:** |  | **Grading Scale (in %)** | | | | HW/Lab/Quiz 40% |  | A ≥ 95 |  | C+ 75 – 79.9 F Below 60 | | Exam 1 20% |  | A- 90 – 94.9 |  | C 70 – 74.9 | | Exam 2 20% |  | B+ 87 – 89.9 |  | D+ 67 – 69.9 | | Final Exam 20% |  | B 83 – 86.9 |  | D 63 – 66.9 | |  |  | B- 80 – 82.9 |  | D- 60 – 62.9 | |

**Course Objectives**

|  |
| --- |
| * To develop problem solving skills as they are related to computers and computer programming. * To understand fundamental programming concepts and develop basic programming skills. * To apply “Functional Decomposition” techniques to problem solving and program organization. * To develop proficiency in the fundamentals of the Java programming language. * Learn software debugging techniques and the usage of software development tools. |

**Schedule   
Note**: Weekly reading assignments should be completed before class on Monday. Labs on Thursday will cover the topics discussed in lecture presentations.

|  |  |  |  |
| --- | --- | --- | --- |
| **Lectures \*\*** | | **Week** | **Laboratory** |
| **Date** | **Assignments** |  | **Assignments** |
| Jan 30 Feb 1, 2 | Course intro and assessment | 1 | Dr. Java intro., program compilation & errors   **HW 1 out** |
| **Chapter 1**: Intro to Java, Data Types & Expressions |  |
| Feb 6, 8, 9 | **Chapter 2**: Structures, Repetition, Definite loops | 2 | for-loops, JAVA expressions & precedence  **HW 2 out / HW 1 due** |
|  |  |
| Feb 13, 15, 16 | **Chapter 3**: Introduction to Packages and I/O | 3 | I/O, methods & parameters  **HW 3 out / HW 2 due** |
| Java Methods, Parameters |  |
| Feb 20, 22, 23 | **Chapter 4**: Control Structures, Selection | 4 | if/else, switch, and (?:)  **HW 4 out / HW 3 due** |
| Logical Operators |  |
| Feb 27  Mar 1, 2 | **Chapter 5**: Control Structures, indefinite loops | 5 | For-loops  **HW 5 out / HW 4 due** |
|  |  |
| Mar 6, 8, 9 | **Exam 1 review / Mock Exam 1** | 6 | **EXAM 1, Chapters 1 – 5**  **HW 5 due** |
| **MOCK Exam Review** |  |
| Mar 13, 15, 16 | **Chapter 6**: File I/O | 7 | File I/O  **HW 6 out** |
|  |  |
| Mar 20, 22, 23 | **Spring Break** (No classes) | 8 |  |
|  |  |
| Mar 27, 29, 30 | **Chapter 7**: 1-dim Arrays | 9 | 1-dim Arrays  **HW 7 out / HW 6 due** |
|  |  |
| Apr 3, 5, 6 | **Chapter 7**: 2-dim Arrays | 10 |  |
|  |  |
| Apr 10, 12, 13 | **Exam 2 Review / Mock Exam 2** | 11 | **EXAM 2, Chapters 6 – 7**  **HW 7 due** |
|  |  |
| Apr 17, 19, 20 | **Chapter 8**: Classes | 12 | Introduction to user defined classes, **HW 8 out** |
|  |  |
| Apr 24, 26, 27 | **Chapter 10** ArrayLists | 13 | ArrayLists, Recursion  **HW 9 out / HW 8 due** |
| **Chapter 12**: Recursion |  |
| May 1, 3, 4 | **Chapter 13**: Searching and Sorting | 14 | Searching and Sorting  **HW 10 out / HW 9 due** |
|  |  |
| May 8, 10, 11 | **Final Exam Review / MOCK Final Exam** | 15 | **HW 10 due** |
|  |  |
| Dec 15 | Study day | 16 |  |
| Dec 17 | **FINAL EXAM from 5:15 – 7:15 PM in YR-223** | | |

**Attendance**

|  |
| --- |
| Students are expected to attend each class meeting and attendance is mandatory. The Attendance Policy was developed by the CIS Department for COSC 175, COSC 236 and COSC 237 courses.   1. Students are expected to come to class on time and prepared. 2. Attendance will be recorded at every class session lecture and lab 3. Your 3rd and each subsequent unexcused absence will lower your grade by 5%. 4. 2 weeks’ worth of unexcused absences/tardiness will result in an automatic F. **No exceptions**.   In accordance with University policy, student absences will be excused under the following circumstances:   * 1. Cases of illness or injury that prevent attendance in class (written documentation required)   2. Religious observance that prevents attendance in class (two weeks advanced written notice required)   3. Participation in authorized university activities during class time (two weeks written notice from authorized university personnel)   4. Compelling verifiable circumstances beyond the control of the student.   Students are expected to be on-time for (and remain for the duration of) all class sessions and make every attempt to avoid disrupting the class. Students are required to notify the instructor via e-mail if they are unable to attend a class meeting. Written documentation of the reason for the absence will be requested by the instructor and must be submitted for the absence to be excused. If a student is absent from an exam during the scheduled time for that exam, the student will automatically receive a grade of 0 for the exam unless: (a) the student notifies the instructor of the absence at least 24 hours BEFORE the exam and supplies a written doctor's excuse explaining the absence or (b) there is an extraordinary situation which the instructor allows as an acceptable excuse. If (a) or (b) apply, a make-up exam will be allowed. |

**Academic Integrity**

|  |
| --- |
| Instructors are obliged to report incidents of academic dishonesty to the office of Academic Affairs. Occurrences of cheating or plagiarism, (including submission of source code copied from the Internet), may result in a grade of zero for an assignment, an exam, or the entire course, and are subject to established university policy. |

**Exam Policies**

|  |
| --- |
| Missed exams may **NOT**be made up without prior approval from the instructor, or satisfactory documentation of an emergency situation as outlined in the undergraduate catalog.  Students will not be permitted to retain (or copy) exams. Any student wishing to review the exam in greater detail should make an office appointment and I'll be happy to go over it with you in person. |

**Homework Submission**

|  |
| --- |
| Late assignments **WILL NOT** be accepted for credit without **PRIOR APPROVAL**or a documented, university approved absence.  If you are having difficulty completing an assignment on time (and require additional assistance), you should contact the instructor **BEFORE** the due date. Submitting incomplete assignments that demonstrate significant progress towards a solution will generally be awarded partial credit. |

**TU Repeat Policy – Third Attempts**

|  |
| --- |
| **Please note**: Only under exceptional circumstances will the department accept a third attempt of this course. It is the policy of the Department of Computer and Information Sciences to deny any third attempts that is not in the best interest of the student. If this is your third attempt of this course, you must fill out a Third Attempt Petition and have it approved before continuing in this course. Third Attempt Petitions are available online at <http://www.towson.edu/registrar/forms.html>. or can be picked up in the CIS department front office: |

**Software Downloads**

|  |
| --- |
| For novice programmers, DrJava is the recommended programming environment. All lecture & laboratory demonstrations will use DrJava. You should download the latest stable version for use at home.   * DrJava <http://www.drjava.org/> * **CIS TechHub** <https://www.towson.edu/cistechhub> |