# MiraCosta College

**CS 112 - INTRODUCTION TO COMPUTER SCIENCE II**
**SYLLABUS FOR SPRING 2016**

**INSTRUCTOR: JUNE PORTO**
**OFFICE: Oceanside Campus, Room 4813** **Messages: (760) 757-2121 ext. 6555**
**Office Hours: Thurs. 11:00 - 1:00 p.m. Room OCN 4813** **email: jporto@ miracosta.edu**

## COURSE DESCRIPTION

This course is a continuation of CS 111 - beginning Java. Students will explore advanced Computer Science concepts such as linked lists, vectors, exception handling, basic recursion and input/output (I/O) objects using the Java language. The student will learn the difference between a java application and a Java Applet, and the relationship between an applet and HTML (HypertextMarkupLanguage). Applets will be designed for the web using Java swing components, graphics objects, layout managers, and menu components.

Students will continue to apply the basic concepts of object-oriented programming, namely, encapsulation, inheritance and polymorphism in designing user-defined classes and coding programs incorporating control structures, graphical elements and more complex data structures such as linked lists.

**COURSE LEARNING OUTCOMES:** At the conclusion of this course, students will be able to demonstrate the following outcomes:

1. **Analysis** - The student will be able to analyze designs incorporating more complex control structures and object-oriented design techniques which will result in appropriate solutions to specified problems.

2. **Problem Solving** - The student will be able to implement efficient, effective solutions to more complex programming problems. These solutions will incorporate the principles of inheritance and polymorphism, fault-tolerance through exception and error handling, utilize data files and implement more advanced data structures and associated algorithms.

3. **Communication** - The student will be able to convey more advanced concepts of the object-oriented paradigm, describe more complex syntactic and program control structures, write more sophisticated programs as well as explain program designs verbally and in writing.

4. **Teamwork** - The student will be able to work in a team, agree upon an organizational model, establish roles,
and delegate tasks to develop object-oriented software designs and complete programming projects on time in a cooperative and collective manner.

## TEXT AND MATERIALS

Absolute Java, 5th edition, Savitch, 2013; ISBN: 0-13-283031-0
1 2 GB USB MEMORY or FLASH STICK - for student assignments
Printing (**first week of classes** - set up an account with $5 in it at the Library Hub)

## EVALUATION

This course will include up to fourteen weekly programming assignments. These assignments are intended to provide practice in the competencies students are expected to achieve for each week of class. These assignments will be completed in the computer lab or on your home computer. Assignments will be worth 20 points each. In addition, there will generally be a weekly quiz. The quiz can be an actual quiz on the material recently covered in class or be an individual or group project covering the same material. Each quiz will be worth 10 - 20 points. Note: you will **not be allowed** to **makeup** any missed **quizzes**, so weekly attendance is important to your overall grade. There will also be a project worth 60 points and two exams worth 50 points each. **Make up or early exams will be given only under extraordinary circumstances**. If

you miss either the midterm or the final exam, you will receive a score of 0 for that exam. Grading for the course is based upon the percentage of total points earned as follows:

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|---|---|---|
| Fourteen (14) ASSIGNMENTS (20 points each) | 280 pts. | 47% |
| Twelve (12) QUIZZES (10 - 20 points each) | 160 pts | 27% |
| One (1) PROJECT | 60 pts. | 10% |
| MIDTERM | 50 pts | 8% |
| FINAL EXAM | 50 pts | 8% |
| TOTAL POSSIBLE POINTS (Approximate) | 600 pts. | 100% |

Assignments: Homework will consist of fourteen (14) assignments worth 20 points each and a project worth 60 points. It is important to complete and submit class exercises on a timely basis.
**Reading** assignments are to be completed **before** each class meeting. You will benefit much more from the class if you are prepared and can answer your instructor's and/or your fellow students' questions.
**Homework** assignments are due **before** class on the date indicated on the Schedule of Readings and Assignments. Submit homework to the "in-basket" in front of the classroom. **Late homework** will **only** be **accepted up to one week after the due date** and will receive up to **50%** of the total possible points. **Homework that is entered as zero (0) points on Blackboard will no longer be accepted**. If you have an extenuating circumstance, contact your instructor as early as possible to see if an exception applies.

Ethics**:** **Assignments** are to be **completed by the individual student** (unless otherwise specified) and not contain any plagiarized content. While meaningful dialogue over homework is acceptable, turning in work that someone else has completed is considered **cheating**. All parties involved will receive **no points** for that assignment. Also, any student caught cheating on a quiz or exam will receive a **failing grade**. Quotes from research materials must be explicitly referenced.

**In class:** Students need to arrive on time. Wearing of headphones, use of electronic devices not explicitly approved (cell phones, music/video players, etc.) and emailing/text messaging are not allowed.

Attendance: Regular attendance is important since each class lecture and lesson builds upon the previous lessons. Students who are absent are responsible for keeping up with the rest of the class. If you need to **drop** the course, it is **your responsibility** to do so, **not** the responsibility of the instructor. To drop the course you must file a drop card with the Office of Admissions and Records or the grade you have earned up to that point will be recorded on your permanent record. Note: If you are absent three or more times, you will be automatically dropped from the course.

**OPEN LAB HOURS** - Computers are available in the Hub on the Oceanside campus or in room SEC 106 on the San Elijo campus for practicing and completing course assignments. Open lab hours are posted. A lab instructor or aide will be available for help in the Oceanside Hub computer Lab. You should have read the relevant course material before asking for help. Otherwise, the lab instructor may choose not to assist you.

**TUTORING** - If you need extra help outside of class, contact Tutorial Services at 757-2121 ext. 7748 and/or your instructor. The tutoring office provides trained tutors who have taken the class and are familiar with the material. In a typical tutoring session, a tutor will work with you for an hour in the open computer lab. Tutoring is primarily to help you understand the course material, not to complete your homework for you. If the tutor ascertains that a student has come to the session unprepared (e.g. has not read the supporting chapter material), the tutor may be unable or refuse to provide the student with assistance.

**DISABLED STUDENTS** - A student with a verified disability may be entitled to appropriate academic accommodations. Please contact your instructor and/or the Disabled Students Program and Services Office (757-2121 ext. 6658) for further information. Their office is located in Building 3000, 309.

**IMPORTANT DATES**:
**February 5:** Last day to **DROP** class with **no grade** placed on permanent record and receive a refund
**February 26:** Last day to **petition** for **Pass/No Pass grade AND** Last day to **petition** for **degree/certificate**
**April 28:** Last day to **DROP** class with option of "**W**" (Withdrew) on permanent record
**May 27: Graduation!!**