**Computer Programming 2 Syllabus**

579

**Contact Information**

**Instructor: Mrs. Candice Henley**

**Email Address: chenley@berwicksd.org**

**Web Address: mrshenley.wikispaces.com**

**Planning Period: 1st period**

**Text and Resource Materials**

**Required Text: *Fundamentals of Java*, Lambert/Osborne, (Thomson, 2007)**

**Course Description** This course is designed to give students more programming experience. You will take what you learned in Computer Programming I with C++ and apply those skills using the Java language. Java is rapidly becoming the programming standard for computer science programs in colleges around the nation.

**Prerequisites:** Computer Programming

**PA Academic Standards**

2.2.11 A Develop and use computation concepts, operations and procedures with

real numbers in problem-solving situations

2.2.11 B Use estimation to solve problems for which an exact answer is not needed.

2.2.11 E Recognize that the degree of precision needed in calculating a number

depends on how the results will be used and the instruments used to

generate the measure.

2.4.11 A Use direct proofs, indirect proofs or proof by contradiction to

validate conjectures.

2.4.11 B Construct valid arguments from stated facts.

2.4.11 C Determine the validity of an argument.

2.4.11 D Use truth tables to reveal the logic of mathematical statements.

3.6.12 C Analyze physical technologies of structural design, analysis and

engineering, personnel relations, financial affairs, structural production,

marketing, research and design to real world problems.

3.7.12 C Evaluate computer operations and concepts as to their effectiveness to

solve specific problems.

3.7.12 D Evaluate the effectiveness of computer software to solve specific

problems.

**Learning Objectives Upon completion of the course, the student will be able to:**

1. **Create a GUI program**
2. **Construct and use numeric and string literals**
3. **Understand the difference between Cartesian coordinates and screen coordinates**
4. **Detect and correct common errors involving loops**
5. **Organize a program in terms of a view class and a model class**
6. **Understand how parameters transmit data to methods**
7. **Test if statements in a comprehensive manner**
8. **Construct nested loop**
9. **Construct a query-driven terminal interface**
10. **Construct a Graphical User Interface**

**Course Outline**

**Marking Period One:**

* Brief history of computers
* Brief history of programming languages
* Java Virtual Machine
* Edit, compile and execute a program
* Basic GUI’s

**Marking Period Two:**

* If and if-else statements
* The while statement
* Nested control statements
* Errors in loops
* Internal structure of classes and objects

**Marking Period Three:**

* Nested loops
* Testing loops
* Design, Testing, and Debugging
* A menu-driven conversion program
* Multimedia

**Marking Period Four:**

* Arrays
* Parallel Arrays
* Java Interfaces perspectives
* Error Handling with classes
* Analysis and Design

**Classroom Procedures**

* Have all assignments completed on or before the due date
* Be courteous and respectful to the equipment.
* Ask me for help if you need it.
* Take this class seriously.
* Treat your fellow students with respect.
* Ask me what you missed, after you have been absent.
* Make up any and all work if you are absent.
* Absolutely NO Food or Drinks in the classroom
* Always save your work in your folder, if you do not have a copy of it in your folder I will assume that you did not complete the work by yourself.

**Late Policy**

* ***You will lose 10% of the project’s point value the first time you turn in a late project!***
* ***You will lose 25% of the project’s point value the second time you turn in a late project!***
* ***Your project will NOT be accepted after you turn in a late project three or more times!***

***You will have 5 school days to turn in a late project after the due date. If it is not handed in within 5 days it will automatically be a zero***

**Assessments**

**Weekly Journal Pages**

You will be expected to stay up to date with the weekly journal pages. They will be handed out on Monday and handed in at the end of class on Friday. This is an easy grade for you to get and it will make a difference in your grade if they are not completed. The journal pages are composed of objectives and vocabulary terms for the chapter. They must be hand written I will not accept typed journal pages.

**Tests**

You will be given a test at the end of each chapter. Test dates will be announced two days before the test. You are expected to take the test on the day given. If you need to make up a test due to an absence you will do so one your first day back into the classroom, unless other arrangements have been made.

**Programming Projects**

You will have projects that will be assigned throughout the entire school year. Unless you are working with a partner you will be expected to turn in your own work. If you copy anyone’s project, ***all of the people involved*** ***will receive a zero*** for that assignment.

**Grading Policy** Every attempt will be made to grade and return your test and projects in a timely manner. All assignments will have two numbers on them: the number of points that you earned and the total number of points that the assignment was worth.

I will use a total points system to calculate your grade. This means that all of your points will be divided by the total number of points for each assignment. Your final marking period grade will be calculated by taking the total amount of points earned divided by the total amount of points offered