Critical Path

CPAN131: **Object-Oriented Programming using Java**

The Critical Path is the calendar, timeline or weekly course schedule. It is an important document that lays out weekly objectives that you, the student, are responsible for to ensure academic success. You are strongly advised to print out a copy of the Critical Path and to refer to it regularly.

**Reference Book :**

Kjell, B. Introduction To Computer Science Using Java, Central Connecticut State University, available free online at: http://programmedlessons,org/java5index.html

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| Weeks | Topics, Readings, and Activities | Due Dates | Weight |
| Week 1  (Sep-3 and Sep 5) | * Introduction * Install NetBeans |  |  |
| Week 2  (Sep 10 and Sep-12) |     Describe how Java compiles and interprets code.       Explain how the use of bytecodes lets Java achieve platform independence.       Describe the benefits of using a Java IDE like NetBeans.   * Explain why you don’t need to compile the source code for an application before you use NetBeans to run the application   **Variables and Basic Data Types**       Distinguish between the int and double data types. |  |  |
| Week 3  (Sep 17 and Sep-19) | **Variables and Basic Data Types**       Distinguish between the int and double data types.       Describe the eight primitive types.       Distinguish between a variable and a constant. | Lab -1 | 3% |
| Week 4  (Sep -24 and Sep-26) | **Classes and Methods**      Describe how to create an object from a class.      Distinguish between a static method and a regular method.       Describe how to pass one or more arguments to a method.  **Assignment 1 will be published** | Lab -2  Quiz-1 | 3%  8% |
| Week 5  (Oct 1 and Oct-3) |      Describe how to store the value that’s returned by a method.       Explain what it means for a variable to have block scope. | Lab -3 | 3% |
| Week 6  (Oct -8 and Oct-10) |      Differentiate between an object’s identity and its state.       Explain what a default constructor is and when the Java compiler automatically creates one.       Explain what an access modifier is and how it affects the methods of a class.  **Assignment 2 will be published** | Lab -4  Quiz-2  Assignment-1 Due | 3%  8%  5% |
| Week 7  (Oct -15 and Oct-17) | * Differentiate between a static method and a regular method.        Differentiate between primitive types and reference types.       List four ways you can use the “this” keyword within a class. | Lab -5 | 3% |
| (Oct 22 and Oct-24) | **Reading week no classes** |  |  |
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| Week 8  (Oct 29 and Oct-31) | Name and describe the relational operators.      Characters and Strings  Decision Structures   * Name and describe the logical operators.        Compare the if/else and switch statements.       Explain what it means for execution to fall through a label in a switch statement.  Flow of Control - For Loops       Differentiate between while and for loops.       Explain what an exception is in Java.       Describe the Exception hierarchy and name two of its subclasses.  **Assignment 3 will be published** | Lab -6  Assignment-2 Due | 3%  5% |
| Week 9  (Nov -05 and Nov-07) | **Arrays**           Differentiate between a one-dimensional and a two-dimensional array.       Differentiate between a rectangular array and a jagged array.       Describe what happens when two variables refer to the same array and you use one variable to change an element of the array | Quiz-3  Lab -7 | 8%  3% |
| Week 10  (Nov -12 and Nov-14) | **Inheritance**           Explain what it means for a subclass to extend a superclass.       Explain why the toString method and the equals method are available to all objects and when you might override these methods.       **Assignment 4 will be published** | Assignment-3 due | 5% |
| Week 11  (Nov -19 and Nov-21) | **Inheritance**   * Describe the access modifiers that you can use for the members of a class. * Describe what the @Override annotation does. * Explain what polymorphism is and how it works. | Lab -8 | 3% |
| Week 12  (Nov 26 and Nov-28) | **Inheritance**   * Name the operator that you can use to check whether an object is an instance of a specified class * Explain when it’s necessary to use explicit casting when working with objects created from derived classes. | Quiz -4  Lab-9 | 8%  3% |
| Week 13  (Dec 03 and Dec-5) | **Abstract Class**       Explain how abstract classes and methods work.       Explain how final classes, methods, and parameters work. | Lab-10  Assignment-4Due | 3%  5% |
| Week 14  (Dec 10 and Dec-12) | Final submissions and presentations for projects | Group Project Due  Quiz-5 | 10%  8% |

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| **Summary** | **Total** |
| Quizzes (Total 5) | 40 % |
| Labs(Total 10) | 30% |
| Assignments (Total 4) | 20 % |
| Group Project (Total 1) | 10 % |

**Late assignment/project/lab submission**:

**Late assignment/project penalty:** Work submitted after the deadline will lose 5% off of the total final grade each day for up to 5 business days (maximum penalty of 25%). Work submitted after 5 business days will be graded as 0. In exceptional scenario like illness, you need to contact  professor as soon as possible. If you have proper documentation then extension will be given to you .

* **Late Lab penalty:** Moreover Labs and in-class activities designed to be undertaken and submitted in class must be completed within the class period as assigned. Extensions are not given for this type of assessment. If a student is absent, the grade for this work is “0”. There is no makeup option.
  + In rare cases, when a student is absent with a documented reason, student may receive a “null” for this work at the discretion of the professor.