Syllabus 

# codeU 09282015

## Introduction

This guide provides the contents and timing of the 16-week codeU Java course.

## Weekly Breakdown

### Week 1

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| MON | Pre-work | . |  |
| Peer/Mentoring |  |  |
| Classroom | Kick off and Introductions  OO Whiteboard Talk  Section 1 – The Java Environment |  |
| Anchor Time | Review key terms (45 mins) | Code  Check Eclipse install. |
| TUE | Pre-work | JCR pgs 17-31  Key pages 17-22: Write out and be prepared to share your explanation of inheritance | Code: (using Eclipse)   1. A First Simple Program (pg 23) 2. A Second Simple Program (pg 26) 3. Write a Count class that uses a for Loop to print numbers from 1-100. 4. Modify the Count program with an if statement so that it only prints even numbers. |
| Peer/Mentoring | Pre-work check/review  If time allows, review key terms |  |
| Classroom | Section 2 - Eclipse |  |
|  | Anchor Time | Review classroom labs (< 30 mins)  Review key terms (15 mins) | Code:  Pair Programming 1 |
| WED | Pre-work | JCR pgs 32-50  Write definitions for the following:  -Strongly Typed  -Conversion  -Casting | Code:   1. Rewrite the class “Area” example on page 38 to calculate the area of a triangle. 2. Rewrite the class CharDemo on page 39 to spell out your name ONLY use numbers to assign the char value. 3. (Optional) Type in the Conversion class on page 49, make sure you understand the concepts of conversion and casting. |
| Peer/Mentoring | Pre-work check/review  If time allows, review key terms |  |
| Classroom | Section 3 Language Fundamentals – Part 1 |  |
| Anchor Time | Review classroom labs  Write out primitive chart from memory  Write out main method from memory  Review key terms | Code:  Pair Programming 2 |
| THUR | Pre-work | JCR pgs 61-80 | Code:   1. Write a program that has an int variable named “oranges” and a value of 10. 2. Use the modulus operator to show how many oranges would remain if we divided them evenly among 4 people (the fruit remains whole, everyone gets the same amount). 3. Starting with your original oranges variable, add code that divides all the fruit among 4 people with none remaining (you may divide the fruit into parts in this step. Answer should be in decimal format) |
| Peer/Mentoring | Pre-work check/review  If time allows, review key terms |  |
| Classroom | Finish, Section 3 – Language Fundamentals – Part 1 | Half day in classroom |
| Anchor Time | Review classroom labs  RevieWw key terms | Pair Programming 3 |
| FRI | Pre-work | JCR 109-121 and 51-59 | Code:   1. Code the Box class and BoxDemo5 classes on pgs 120-121. Be prepared to identify object references, methods and instance variables. 2. Create a program that contains a String array that holds the first names of 5 people you admire. Have it print those names to the console. 3. Challenge: (optional). For #2 can you sort the names programmatically in alphabetical order? |
| Peer/Mentoring | Pre-work check/review  If time allows, review key terms |  |
| Classroom | Section 4 – Language Fundamentals – Part 2 |  |
|  | Anchor Time | Classroom lab review  Review key terms | Code:  Pair Programming 4 |

### Week 2 -

#### Suggested efactoravoid analysis-paralysis and predicting the future. Pick a path and go with it, and it can always be fixed lateBreakdown

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| --- | --- | --- | --- |
| MON | Pre-work | JCR 81-108 | 1. Create a graph: write an application that reads 5 numbers between 1 and 20. Read all numbers in FIRST. For each of the numbers you have read in, have your program print the same number of asterisks on a separate line e.g. for 2, print \*\* 2. Convert the IfElse class on pg 83 to use a switch statement instead of if/else. 3. Create any example you like to demonstrate how a break and continue work. |
| Peer/Mentoring | Pre-work check/review  If time allows, review key terms |  |
| Classroom | Section 5 – Flow Control |  |
| Anchor Time | Review Classroom labs  NO key word review (it’s pre-work for tomorrow there is no reading assignment) | Pair Programming 5 |
| TUE | Pre-work | Review key words and phrases | Code: Write a program to demonstrate as many concepts as you can from the curriculum we have covered so far. Be prepared to share your program. |
| Peer/Mentoring | Review  Spend at least 30 minutes coding | Code: your “weakest link” |
| Classroom | Section 6 - Start Junit |  |
| Anchor Time | Review Classroom Labs  Review key words and phrases  Spend at least 1 hour coding | Code:  Pair Programming 6 |
| WED | Pre-work | JCR pgs 121-128  Review your key words and phrases – a test is coming soon. | Code:   1. Code “Parameterized Constructors” on pgs 123-124 2. Modify BoxDemo7 to create the Box class with a default constructor. 3. Why didn’t it compile after that? 4. Correct the error and be ready to explain your findings. |
|  | Peer/Mentoring | Pre-work check/review | Code:  OPTIONAL: IF you have all pre-work completed. Code Stack example found on pgs 127-128 in JCR |
|  | Classroom | Finish Junit  “RODNEY TIME” |  |
|  | Anchor Time | Review Classroom Labs  Review key words and phrases | Pair Programming 7 |
| THU | Pre-Work | JCR pgs 129-139 | Code:   1. Use any code out of the book to help you write a class that shows the difference between pass by value and pass by reference 2. Make sure your code can *demonstrate both!* 3. You do have test to prove it right? |
| Peer/Mentoring | Pre-work check/review |  |
| Classroom | Start Section 7 OO Software |  |
| Anchor Time | Review Classroom Labs  Review as much as time allows, graded lab and quiz tomorrow | Code:  Compare your class lab with at least TWO other students. Refactor until you feel like it’s very solid. |
| FRI | Pre-Work | JCR pgs 139-144  Study for graded lab and quiz | Code: None |
| Classroom | Finish Section 7 OO Software | Code:  Graded Lab #1 |
| Anchor Time | Quiz | Pair Programming 8 |
|  |  |  |
|  | FINISH WEEK 2 - | *Congrats…2 of 16 weeks done!* |  |