**Object-Oriented Programming (2014 Spring)**

**When:** 2014 Spring (Starts Feb 17th) Wednesday 9am~12.00pm

**Where:** 管3019 , 電腦教室 管3051

**Instructor:** Jennifer, Yi-Ling Lin

TA:

**Course Web:**

**Contacts:** yllin@mis.nsysu.edu.tw **Important**!! (subject: **OOP**)

**Office:** 管4050

**Office Hour**: **by appointment**

**Text:** Big Java 4th ed., Horstmann

(http://www.mauriziocozzetto.org/pdf/Big\_Java\_Compatible\_with\_Java\_5\_6\_7\_4th\_Edition.pdf)

**Description:** First programming course for IS majors, designed for students with little or no programming experience. Emphasizes basic principles and concepts of object-oriented programming using JAVA. Topics include classes, interfaces, operators, program control, arrays, testing, debugging, inheritance, and polymorphism; Techniques for simplifying the programming process and improving code quality; Features activity-based learning with ample opportunities to implement interesting programs.

**Keys To Success:** Success is much more dependent on personal discipline than programming experience or raw intellect. There is high probabilities of earning a B or higher if you do the following: Approach the course with the attitude and work ethic of an IT professional; Prepare for and attend every class; Start assignments early and fulfill all requirements. You should allocate **10 hrs/week** for this course!

**Objectives:** Upon successful completion, the student will be able to do the following:

* Employ a ‘divide and conquer’ problem-solving strategy to breakdown a complex programming assignment into a series of simpler tasks.
* Understand and make proper use of core programming concepts such as data types, operators, and control structrues in Java
* Effectively use Eclipse IDE (Integrated Development Environment) to develop and manage Java software projects
* Write human-readable code that complies with generally-accepted coding style guidelines, including generation of HTML-based documentation.
* Develop programs that appropriately utilize object-oriented concepts such as abstract classes, inheritance, interfaces and polymorphism
* Write effective in-code comments and generate documentation using JavaDoc tools

**Evaluation / Grading Scale: The final grade cannot exceed average exam grade by more than 12 points!**

30% Checkpoints (Exam) 60% Assignments + a small project

10% Lab / Class Participation

98 <= A+ 88 <= B+ < 90         78 <= C+ < 80 60 <= D < 70

92 <= A < 98         82 <= B < 88         72 <= C < 78 F < 60

90 <= A- < 92       80 <= B- < 82        70 <= C- < 72

**Grade Policy**: All exams heavily reflect the labs and assignments. Therefore, you cannot rely on a teammate to do your work. No exam grades are dropped. A request to reschedule a missed exam will only be granted under clearly extraordinary circumstances, which must be supported by appropriate documentation specified by the Instructor*.*  Otherwise, a missed exam receives a grade of zero. All graded work must be submitted as directed. For assignments 1-4, the lowest grade will be dropped subject to academic dishonesty policy. You are expected to attend all classes and work diligently in lab.

**Exemptions/Waivers/Extra Credit**: All students are subject to the same course requirements and eligible for the same extra credit opportunities. It is each student's responsibility to make whatever academic, personal and professional arrangements are needed to succeed in the course.

**Development Environment**: The course will standardize on Java 1.6 JDK and Eclipse 3.2 IDE, both running on the Windows XP/Vista operating system. They are available on the course website and the SIS Computer Lab on the 8th floor has these tools installed. Instructional support is only provided for student PCs that conform to these specifications.

**Academic Dishonesty**: All graded work that you do for this course must be the sole result of your own efforts unless directed otherwise. You may not do work for another student nor may any student copy or plagiarize someone else’s work. You may not assist, facilitate or enable another student's academic dishonesty, even if unintentional. Severe penalties will be imposed on all parties involved, and any grade assigned due to academic dishonesty will not be dropped! If you have any questions on this matter, contact the Instructor.

**Incompletes**: The Instructor does not grant incompletes. Any exception is at the Instructor’s sole discretion and must be due to extraordinary circumstances supported by verifiable documentation.

**Website:** The course website is maintained for your convenience. It contains the pacing schedule, lectures, reference material and other useful information. You are responsible for any information disseminated in class regardless of whether it is posted on the website.

**Classroom Conduct**: Courteous, professional conduct is expected at all times. Food and beverages are not permitted.

**Electronic Devices**: Unless otherwise approved for use in class, all electronic devices must be turned off and kept out of sight during class. No recording devices may be used without Instructor's permission.

**Email**: All email from the Instructor will be sent to your NSYSU email address. You should check it regularly. *Email to the Instructor is for routine, brief messages (e.g., requesting an appointment). It is not for tutorials; help with an assignment, request for a grade or discussion about a grade. If you need substantive assistance, contact the Instructor*.

**Disability**: The Instructor strongly endorses the University’s policy on disabilities: If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact the Instructor and Disability at the university.

**Tentative Schedule:**

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| **Lecture** | **Topic**  | **Reading** | **Assignment** |
| Week1 – Feb 19 | Introduction to the courseOverview of JavaPretest QuestionnairesUsing Eclipse | Chapter 1 |  |
| Week2 – Feb 26 | Types, Variables, Constants, Operators, Strings, Objects | Chapter 2Lab 1 | Assignment 1 |
| Week3 – March 5 | Methods, return values | Chapter 2Lab 2 |  |
| Week4 – March 12 | Instance variables, encapsulation, commenting, local variables | Chapter 3Lab 3 | Assignment 2 |
| Week5 – March 19 | Data types | Chapter 4Lab 4 |  |
| Week6 – March 26  | Checkpoint 1 |  |  |
| Week7 – April 2 |  |  |  |
| Week8 – April 9 | Boolean, Expressions, control structures: if, switch | Chapter 5Lab 5 |  |
| Week9 – April 16 | Loops, Nested Loops | Chapter 6Lab 6 | Assignment 3 |
| Week10 – April 23 | Arrays, Two dimensional arrays, Array lists | Chapter 7 |  |
| Week11 – April 30 | Checkpoint 2 |  | Assignment 4 |
| Week12 – May 7 | Classes | Chapter 8 |  |
| Week13 – May 14 | Interfaces and Polymorphism | Chapter 9Lab 7 | Assignment 5 |
| Week14 – May 21 | Inheritance | Chapter 10Lab 8 |  |
| Week15 – May 28 | Checkpoint 3 |  | **Assignment 6 (optional)** |
| Week16 – June 4  | Android |  |  |
| Week17– June 11 | Android |  |  |
| Week18 – June 18 | Android |  | Project |