San José State University
College of Science/Computer Science Department
CS 251A, Object-Oriented Analysis, Section 1, Fall Semester, 2016

Course and Contact Information

Instructor:	Pearce
Office Location:	416 MacQuarrie Hall
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Email:	jon.pearce@sjsu.edu
Office Hours:	Tuesday & Thursday, 1400 - 1500
Class Days/Time:	Tuesday & Thursday, 1200 - 1315
Classroom:	233 MacQuarrie Hall
Prerequisites:	CS 160 or instructor consent

Course Format

Technology Intensive, Hybrid, and Online Courses

Laptops with required software and Internet connectivity are required for all students in this course.

Faculty Web Page

http://www.cs.sjsu.edu/faculty/pearce/pearce.html

Course Description

Catalog description

Emphasizes the important concepts, activities, and artifacts of the analysis phase of object-oriented software development. CASE tools and UML are used to model application domain date, workflows, system requirements, deployment, and life cycles.

Section description

The emphasis of this course is building requirements and domain models for planned software systems. Models are created in UML using CASE tools and design patterns. The course is organized around the principles and patterns of Domain-Driven Design (DDD), which holds that the domain model should also be the implementation model. In other words, the domain model serves two purposes: it faithfully represents the application domain and it can be implemented without awkward hacks.

Course Learning Outcomes

Upon successful completion of this course, students will be able to:

1. Create UML models using a CASE tool.
2. Create use case models for planned software systems
3. Create faithful models of moderately complex application domains.
4. Distill domain models into implementation models

Required Texts/Readings

Textbook

There is no text for this course. Lecture notes will be posted at:

http://www.cs.sjsu.edu/faculty/pearce/modules/lectures/ooa2/index.htm

Other Readings

My lectures draw substantially from the following books:

Domain-Driven Design, Tackling Complexity in the Heart of Software; Eric Evans; Addison-Wesley; 2004.

Patterns, Principles, and Practices of Domain-Driven Design; Scott Millett with Nick Tune; Wrox; 2013.

Analysis Patterns: Reusable Object Models; Martin Fowler; Addison-Wesley; 1997.

Other technology requirements / equipment / material

Star UML 2; http://staruml.io/
Eclipse IDE for Java Developers; http://www.eclipse.org/downloads/

Course Requirements and Assignments (subject to change with fair notice)

Assignments

There will be three types of assignments: labs, exercises, and projects. Labs are begun in class and completed at home. Exercises usually consist of multiple problems and are done outside of class. Projects are single problems requiring detailed solutions.

Final Examination or Evaluation

There will be a comprehensive final exam on Monday, December 19, from 945 – 1200. The exam will be posted and submitted through Canvas. Students will use their

laptops to create UML diagrams and write code. Access to notes and Internet is permitted, but all forms of communication are forbidden (except with the proctor).

Grading Information

Assignments will be submitted through Canvas. Rubrics will be used to grade the assignments. Models will typically be judged on accuracy, completeness, and implementability.
There will also be a team project, which will be assigned after the midterm.

Determination of Grades

- Final Exam: 30%
- Midterm: 20%
- Team Project: 25%
- Weekly Assignments: 25%

Late assignments are accepted by prior arrangement with the instructor and only for compelling reasons.

Assuming a standard distribution of point totals I will use the following scale for assigning final grades:

A	85% - 100%
B	70% - 84%
C	55% - 69%
D	40% - 54%
F	0% - 39%

Classroom Protocol

Students are expected to bring their laptops to class.

University Policies

Per University Policy S16-9, university-wide policy information relevant to all courses, such as academic integrity, accommodations, etc. will be available on Office of Graduate and Undergraduate Programs' Syllabus Information web page at http://www.sjsu.edu/gup/syllabusinfo/

Final Exam

Monday, December 19, 9:45 – 12:00

Course Schedule

The tentative course schedule below is subject to change. Notification of changes will be made in class.

Week	Tuesday	Topics	Thursday	Topics
1			25-Aug	Syllabus overview
2	30-Aug	SE review	1-Sep	OOD review
3	6-Sep	OOP review	8-Sep	OOA overview
4	13-Sep	Use-case models	15-Sep	Use-case models
5	20-Sep	Use-case models	22-Sep	DDD overview
6	27-Sep	building domain models	29-Sep	building domain models
7	4-Oct	building domain models	6-Oct	building domain models
8	11-Oct	Midterm Review	13-Oct	Midterm
9	18-Oct	ERP overview	20-Oct	ERP overview
10	25-Oct	distilling domain models	27-Oct	distilling domain models
11	1-Nov	Project presentations	3-Nov	Project presentations
12	8-Nov	Project presentations	10-Nov	distilling domain models
13	15-Nov	advanced topics	17-Nov	advanced topics
14	22-Nov	advanced topics	24-Nov	Thanksgiving
15	29-Nov	Project presentations	1-Dec	Project presentations
16	6-Dec	Project presentations	8-Dec	Final Review