Course Syllabus

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Instructor Information

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Office hours: TTh 11-11:50pm, MWF 9-9:50am,or by appointment

Public Class website: **(http://penguin.ewu.edu/cscd349) http://penguin.ewu.edu/cscd349 (http://penguin.ewu.edu/cscd349)**

Course Pre-requisite

CSCD 300 (Data Structures)

APE clearance

Required Text

- Head First Design Patterns, by Eric Freeman and Elisabeth Freeman, ISBN 978-0-596-00712-6

Recommended Texts

- (Seminal Design Patterns text) Design Patterns: Elements of Reusable Object-Oriented Software, by Gamma, Helm, Johnson, and Vlissides, ISBN 0-201-63361-2
- Design Patterns Explained, by Shalloway and Trott, ISBN 978-0-321-24714-8

Course Objectives

Students will learn to **apply** a fundamental set of design patterns utilizing object oriented principles to solve real world software design problems. Students will be become better object oriented programmers, as well as become better at object oriented analysis and design. Students will work individually on fundamentals of design patterns. Students will also work using Java or C# where multiple design patterns will be applied.

Additional topics include Code Smells, Refactoring, and basic Software Engineering Principles. These items serve to support our discussion of OO design principles as well as patterns.

Design Patterns we will likely

- Strategy
- Observer
- Decorator
- Factory

- Singleton
- Command
- Adapter and Facade
- Template Method
- Iterator and Composite
- State
- Proxy
- Model View Controller (MVC)
- Visitor
- Prototype
- Chain of Responsibility
- Flyweight

Grading

- Homework: 40%
- Quizzes (2): 20%
- Midterm Exam: 20%
- Final Exam (Wednesday, March 20 10:30am-12:30pm, room 107): 20%

Grading Scale

A ≥ 93%

A- ≥ 90%

B+ ≥ 87%

B ≥ 84%

B- ≥ 81%

C+ ≥ 78%

C ≥ 75%

C- ≥ 72%

D+ ≥ 68%

D ≥ 64%

D- ≥ 60%

F < 60%

Late homework: 20% penalty per day, up to two days late, after which homework will not earn points. All homework must be turned in and be in completed form to earn a passing grade (C+) for the class.

Policies

- **ADA**: Americans with Disabilities Act: If there is any student in this class who has special needs for accommodation, please feel free to discuss the matter with the instructor. Students requiring accommodations need to contact Kevin Hills, Director of Disability Support Services (DSS). He can be reached at (509) 359-6871. The DSS Office is located in 124 TAW.
- **Preparation.** You are expected to read material from the chapter in the book that is being discussed in class AHEAD of time (see the syllabus for a list of topics and chapters). Examples given in class and by the authors should be confirmed by the student at home to guarantee complete understanding of the subject.

- **Professional Behavior**. All students are expected to act in accordance with the _ACM Standards for Professional Behavior (http://access.ewu.edu/Computer-Science/Code-of-Ethics.xml)_ available through this link (http://access.ewu.edu/Computer-Science/Code-of-Ethics.xml) . While I expect, and encourage, students to work together in an appropriate manner, taking credit for someone else's work is forbidden and is grounds for receiving a 0.0 in the class. Appropriate activities include discussing program ideas, helping with code debugging, and offering suggestions based on a running program. Inappropriate behavior includes jointly developing a program and submitting it separately, putting your name on a copy of someone else's code, and using an algorithm or code copied from any source without crediting the source. Should you have any questions about appropriate behavior, please talk with me before submitting your work. Instances of cheating will be dealt with SEVERELY. You may be expelled from the university, expelled from the degree program, or given a 0.0 in the class.
- **Incompletes**. Incompletes will NOT be granted except under extreme circumstances. They will not be granted in cases where you were simply unable to keep up with the workload. Requests for an incomplete must be submitted prior to finals week and is subject to the following catalog restriction: "PASSING work/progress (2.0 or above) must be demonstrated through three weeks prior to the end of the term."
- **Disclaimer.** The instructor reserves the right to make changes to these policies as necessary. You will ALWAYS be informed of these changes in class.

Course Summary:

Date	Details	Due
Thu Jan 17, 2019	📝 **Strategy Pattern** (https://canvas.ewu.edu/courses/1251509/assignments/4567133)	due by 11:59
Thu Jan 24, 2019	📝 **Observer** (https://canvas.ewu.edu/courses/1251509/assignments/4567125)	due by 11:59pm
Fri Feb 1, 2019	📝 **Decorator** (https://canvas.ewu.edu/courses/1251509/assignments/4567120)	due by 11:59pm
Fri Feb 8, 2019	📝 **Refactor to Factory** (https://canvas.ewu.edu/courses/1251509/assignments/4567132)	due by 11:59pm
Mon Feb 18, 2019	📝 **Midterm Exam** (https://canvas.ewu.edu/courses/1251509/assignments/4567124)	due by 11:59pm
Mon Feb 25, 2019	📝 **Iterator** (https://canvas.ewu.edu/courses/1251509/assignments/4567123)	due by 11:59pm
Fri Mar 8, 2019	📝 **Putting it all together: Part 1** (https://canvas.ewu.edu/courses/1251509/assignments/4567127)	due by 11:59pm
Wed Mar 20, 2019	📝 **Putting it all together: Part 2** (https://canvas.ewu.edu/courses/1251509/assignments/4567128)	due by 11:59pm
	📝 **Final Exam** (https://canvas.ewu.edu/courses/1251509/assignments/4567121)	

Date	Details	Due
	📝 **Programming Contest Extra Credit** (https://canvas.ewu.edu/courses/1251509/assignments/4567126)	
	📝 **quiz 2** (https://canvas.ewu.edu/courses/1251509/assignments/4567130)	
	📝 **Quiz1** (https://canvas.ewu.edu/courses/1251509/assignments/4567129)	