A. Course Description

Credits: 4  
ICS 240 Introduction to Data Structures AND  
MATH 215 Discrete Mathematics  
Prerequisites:  
ICS 240 Introduction to Data Structures AND  
MATH 215 Discrete Mathematics  
Lab Hours/ Weeks:  
Corequisites: None  
Lecture Hours/ Week:  
MnTC Goals: None


B. Course Effective Dates: 08/23/2014 - Present

C. Outline of Major Content Areas:

See Course Description for major content areas.

D. Learning Outcomes (General)

1. Perform use-case analysis and state analysis techniques to discover and specify the conceptual classes.
2. Use design principles such as the Liskov Substitution Principle and Stable Dependency Principle to translate conceptual class design into an appropriate set of abstract and concrete classes and interfaces
3. Efficiently develop systems using design patterns including Bridge, Visitor, Singleton, Adapter, Observer, Command, Composite, and State
4. Use principles of the agile methodology by following the Unified Process
5. Use the Unified Modeling Language to document work
6. Implement a design utilizing structures such as classes, interfaces, generics, and threads
7. Refactor an existing implementation
8. Work in small groups

E. Learning Outcomes (MN Transfer Curriculum)

This contains no goal areas.

G. Special Information

Note: Students are responsible to both be aware of and abide by prerequisites for ICS courses for which they enroll, and will be administratively dropped from a course if they have not met prerequisites.