

Software Engineering is principles, practices, processes, tools to

- improve software quality, reliability, safety
- improving developer productivity
- improving scalability
- improving evolvability of software

CS 247: Software Engineering Principles

Introduction

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Objectives of OOD/OOP

- abstraction
 - interface
 - data abstraction/ADT
- Reuse
 - inheritance
 - composition
 - as is (in client code)
- modularity/separation of concern
- immutability (keep developers from changing your code)
- information hiding/encapsulation
 - encapsulate design decision that may change
- polymorphism
 - code that works with a lot of datatypes
 - templates
 - functions
 - type hierarchy

Course Outline

- ADT Design
- Modules and Interfaces
- Exceptions
- Interface Specifications
- OO Design Principles
- Design Patterns
- UML Modelling
- Generic Programming (templates, STL)
- Testing and Debugging

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Attendance

CS 247 2011

