

UML AND DESIGN PATTERNS (WITH C++ CODE EXAMPLES) (1 WEEK)

COURSE CONTENT

Basic Principles of Object Oriented Programming Language

- Data hiding
- Class and object
- Methods and messages
- Polymorphism
- Interface creating
- Inheritance and polymorphism
- Access control
- LSP (Liskov Substitution Principle)
- OCP (Open-Closed Principle)
- DIP (Dependency Inversion Principle)
- ISP (The Interface Segregation Principle)
- REP (The Release Reuse Equivalency Principle)
- CCP (The Common Closure Principle)
- CRP (The Common Reuse Principle)
- (ADP) (The Acyclic Dependencies Principle)
- SAP (The Stable Abstractions Principle)
- (SDP) (The Stable Dependencies Principle)

UML 2.0 Notation

- Object oriented modeling
- Basic UML diagrams and usages
- Usage of UML 2.0 notation
- Basic model management units
- Packages
- Subsystems
- Models
- Structural modeling
- Use case diagrams
- Class diagrams
- Object diagrams
- Dynamic modeling
- State machines
- Activity diagrams
- Interaction diagrams
- Sequence diagrams
- Communication diagrams
- Interaction Overview diagrams
- Timing diagrams

Gof Design Patterns

- Main idea of design patterns
- Creational patterns
- Structural patterns
- Behavioral Patterns
- Non-Gof design patterns