Course: Object-Oriented Programming
物件導向程式設計(課程代碼：5905003)

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2. Design Patterns, by E. Gamma, etc.

Prerequisite: C++ Language and Data Structures

Course Description:
This course investigates the principles, languages and environments, and elementary design methods for object-oriented programming. Students will be required to complete a term programming project. Course contents: Class and object, message passing, inheritance, composition, virtual methods and polymorphism, templates, object-oriented languages and environments, term project.

Scope:
- C++ Primer
- Procedural-based programming
- Object-based programming
- Object-oriented programming
- STL
- Generic programming
- Design patterns
- Creational patterns
- Structural patterns
- Behavioral patterns
- UML class diagrams
- Unit testing
- CppUnit

Grading:
There will be two exams (a midterm and a final exam). Homework assignments will be given every two weeks. All homework turned in should be work done by you alone. You may not work on homework with other people.

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<tbody>
<tr>
<td>Homework</td>
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<td>45%</td>
</tr>
<tr>
<td>Midterm exam</td>
<td>Nov. 11</td>
<td>25%</td>
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<tr>
<td>Final exam</td>
<td>Jan. 13</td>
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