

CS2720 Practical Software Development

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Introduction

Overview

- Large software development
- More than one programmer; Teams
- Communication
 - Who is doing what
 - Specifications
 - Delegation
 - Efficiency
 - Not stepping on each others toes

Useful Tools

- Reusable software
 - C++ streams, overloading operators, utility
 - Standard Template Library (STL)
 - Namespaces
- Convenience
 - Makefiles
 - archival (making your tools accessible)
 - scripting (automating processes)
- Documentation
 - User manuals
 - Code
 - Doxygen

- Version control
 - many programmers working on same project
 - SVN
- Testing
 - Unit Tests
 - Integration Tests
 - Regression Tests
 - CPPUNIT

- Debugging
 - gdb
 - ddd
- Tweaking
 - Memory Checker - Valgrind
 - Profilers - gprof, gcov
- Object Oriented Design
 - encapsulation
 - abstraction
 - coupling
 - design patterns