NDSU Computer Science

# CSci 413 Principles of Software Engineering

## Syllabus

---

**Instructor and Contact Information**

Dr. Dianxiang Xu
Office: 258 A25 IACC
E-mail: dianxiang.xu@ndsu.edu
Phone: 1-8185

**Credits: 3**

**Course Objectives**

This course is intended to acquaint the students with the fundamental principles and techniques of software development, important phases of any software project, and basic concepts of evaluation, and improvement of software development process.

At the end of the semester, the students will be able to understand the important activities of software development, apply software engineering techniques and tools to software development, and plan and manage software projects.

**Prerequisite**

CSci 160 or programming experience

**Evaluation Procedures and Criteria**

- Team Project 30%
- Individual Assignments (20%)
- Quizzes 10%
- Midterm 15%
- Final 25%

Final grades will be assigned by the following rule: A for 90% or above of the total points, B for 80 to 89%, C for 70 to 79%, D for 60 to 69%, and F for less than 60%.

All assignments will be announced in class and posted on the course web page. If you miss class for any reason, it is *your* responsibility to find out what assignments you missed. *No*

*late assignments* will be accepted and there are *no make-up exams*. Discuss unusual circumstances *in advance* with the instructor.

All assignments must be completed in a manner consistent with NDSU University Senate Policy, Section 335: Code of Academic Responsibility and Conduct. Cheating on an exam or plagiarizing others' work will result in a grade of zero, and possibly further disciplinary action.

**Tentative Topics**

- Why software engineering?
- Software development process and life cycle
- Planning and managing the project
- Requirements engineering
- Software design
- Object-oriented development
- Implementation
- Software testing
- Software maintenance
- Evaluating and improving products, processes and resources

**Textbook**

Shari Lawrence Pfleeger and Joanne M. Atlee, *Software Engineering: Theory and Practice*, 3rd Edition, ISBN 0-13-146913-4, Prentice-Hall, 2006.

**Special Needs**

Any students with disabilities or other special needs, who need special accommodations in this course, are invited to share these concerns or requests with the instructor as soon as possible.