

# CSC 457/557 Syllabus

## Software Quality & Reliability Spring 2007 term

Class meets Monday and Wednesday nights from 6:30 to 8:20 at Carnegie 13. Our first class meeting is March 26, 2007.

## Description

CSC 457 will explore both the theoretical and practical aspects of software quality.

The theory of software quality includes: verification, complexity measurement, quality metrics, and testing techniques.

The practical application of these concepts include: software tools, quality software design and good coding practices.

We will apply our theoretic and practical knowledge toward a term-long software project.

The prerequisites for this course are CSC 306 and a course in statistics.

## Textbook

The required textbook for CSC 457 is:

“Metrics and Models in Software Quality Engineering (Second Edition)” by Stephen Kan

I’ll also reference the following optional books:

“Design Patterns – Elements of Reusable Object-oriented software” by Gamma, et al.

“Code Complete” by Steve McConnell

## Instructor

My name is Bill Krieger. I am a professor in the Computer Science department here at North Central College in beautiful Naperville, Illinois.

My email is [wtkrieger@noctrl.edu](mailto:wtkrieger@noctrl.edu) and my North Central site is [william.krieger.faculty.noctrl.edu](http://william.krieger.faculty.noctrl.edu).

My office is located at 310D Carnegie. With my small class load this term, office hours will be by appointment... email me!

## Grades

Your final grade will be comprised of:

- Homework/lab – 10%
- Software project – 20%
- Midterm exam – 30%
- Final exam – 40%

CSC 557 graduate students will have extra responsibilities. We’ll determine this in the initial weeks of class.

Late work will generally not be accepted without prior approval.

The college rules on academic integrity will be strictly enforced... **plagiarism is a severe offense and will not be tolerated.** It is considered plagiarism if any part of the work you submit has been written by another person. The North Central College’s policy regarding plagiarism is: <http://www.noctrl.edu/x8303.xml>

The standard North Central grading scale is:

A 93-100%	B+ 87-89%	C+ 77-79%	D 60-69%
A- 90-92%	B 83-86%	C 73-76%	F 0-59%
	B- 80-82%	C- 70-72%	

## The Plan

We’ll cover the following material from the Kan book:

- Ch 1-3 Introduction
- Ch 11-12 Code metrics
- Ch 4 Quality metrics overview
- Ch 5 Seven basic quality tools
- /\* Midterm! \*/
- Ch 6-10 Quality models and metrics
- Ch 15-16 Quality assessments

This additional material, will also be covered:

- Introduction to design patterns and OO design practices (from “Design Patterns”)
- Practical techniques to creating quality code (from “Code Complete”)
- Tools available to measure and improve software quality