Software Development

What is Software Development?

As computer systems become increasingly central to our lives in ways large and small, the quality of the software – the computer code that runs on them also becomes increasingly critical. It is not enough to merely have proficiency in one of the modern computer languages. The design of anything but the most trivial of software systems is just as much an engineering project as the creation of something in mechanical or civil engineering. And with the critical role that software takes in aircraft, medical systems, the financial markets, etc., the same standards of quality are necessary.

Don’t comment bad code—rewrite it.
– Brian W. Kernighan, The Elements of Programming Style

What kind of jobs will the Software Development concentration lead to?

Potential career options for Software Development are:
Applications Programmer, Systems Engineer, Software Architect, Web Developer, Software Design Analyst

What classes make up the Software Development concentration?

All students in the Software Development concentration MUST take the following classes:

I CSI 201 Introduction to Computer Science
Computer algorithms and their representation. The principle of information hiding and its relation to program block structure. File structure and access methods. The efficient use of computational resources. Program development and style.

I CSI 310 Data Structures (3)
Commonly used abstract data structures and their implementation. The use of pointers and recursive programming. Stacks, queues, lists, and trees, and their application to such problems as sorting and searching. Analysis of algorithms for using these structures. Prerequisite(s): I CSI 201.

I CSI 418Y Software Engineering (3)
Software engineering principles, the role of abstraction in programming, abstract data types, modularization and module interfaces, specifications, and teamwork. Project work in contemporary concurrent and object-oriented languages. Prerequisite(s): I CSI 405. Normally offered spring semester only.

Then you will pick 1 class from this list:

I INF 455 Prevention and Protection Strategies in Cyber-security

I CSI 405 Object Oriented Programming Principles and Practice

http://www.goodreads.com/quotes/tag/software-engineering