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## Course 316: Code Complete

### Course Description...

Introduced by Steve McConnell with the Eponymous 1997 Jolt Award winning book, Code Complete, presents a new approach to programming. The techniques and approach are applicable to any language. This course provides an introduction to the concepts and ideas behind the method.

### Learning Objectives...

- Understand the concepts and techniques of the Code Complete approach
- Provide insights into effective programming practices
- Apply checklists to enhance code construction processes
- Create high quality, fully documented code

### Who should attend...

For entry-level programmers, this course provides a primer on the fundamentals of the software industry. For experienced programmers, this course provides a review of development strategies and best practices. For project managers, the course serves as a great source of ideas for process improvement.

### Prerequisites...

This course is aimed at those who are programming or managers of programmers.



## Course Outline...

### Unit 1: Introduction

What is Code Complete?

- Concepts
- Code construction and software development
- Upstream prerequisites
- What is high-quality code?
- What is the code craftsman?
- Managing code development

### Unit 2: Creating High Quality Code

- Putting design into the code
- Routines and subs
- Defensive programming
- Variables
  - What to call them
  - Data types
  - Other issues
- Statements
  - Straight-line code
  - Speaking conditionally
  - Going loopy
  - Drive by tables
  - Control issues

### Unit 3: The Solution Orientation

- Pair programming
- Testing first
- Refactoring
- YAGNI
- Tuning
- Sizing

### Unit 4: Managing the Code Process

- Feature milestones
- Declaring Code Complete
- The endgame
- Code management
- Code integration
- Tools

### Unit 5: Programmer as Craftsman

- Style of coding
- Code documentation
- Where code construction fits in
- The future of code construction