# Schedule of lectures in Constructing Software Systems

(Right to changes reserved)

(February 12) **Preliminaries I** (Chapter 1 and 2)
Primitive types, operators, statements, methods, reference types, exception handling, input and output.

(February 19) **Preliminaries II** (Chapter 3 and 4)
Classes, packages, inheritance, interfaces, generics, function objects.

(February 26) **Algorithms I** (Chapter 5 and 6)
Algorithm analysis, big-oh notation, Java Collections API.

(March 5) **Algorithms II** (Chapter 7)
Recursion, divide-and-conquer, dynamic programming, backtracking.

(March 12) **Algorithms III** (Chapter 8 and 9)
Sorting algorithms, randomization.

(March 19) **Implementations I** (Chapter 15, 16 and 17)
Inner classes, stacks, queues, linked lists.

(March 26) **Implementations II** (Chapter 18 and 19)
General trees, binary trees, tree traversal, binary search trees.

(April 9) **Implementations III** (Chapter 20 and 21)
**Thread Programming**
Hashing, binary heaps.
The thread concept, synchronization, cooperation among threads.

(April 16) **Applications I** (Chapter 10, 11 and 12)
Games, parsing, file compression.

(April 23) **Applications II** (Chapter 13 and 14)
Simulation, graphs and paths.