CS502 Fall 2014 Schedule by Week (Tentative)

Topics	Dates
Introduction	Week 1
Lexical analysis	Week 1-2
(Homework 1)	Week 2-3
Context free grammars	Week 2
Bottom-up parsing	Week 3
Semantic actions during bottom-up parsing	Week 4
(Homework 2, with lex/yacc programming)	Week 4-5
AST, symbol table	Week 4
Basic type checking, memory allocation, runtime environment	Week 5
(Project 1 part 1)	Week 5 - 7
Top-down parsing	Week 6
(Homework 3)	Week 6-7
Generation of intermediate code and machine code	Week 7
Review for the midterm	Week 7
(Project 1 part 2)	Week 8 - 9
(Fall Break)	Week 8
(Midterm: covering homework 1-3)	Week 8
Performance issues (parallelism, memory, register)	Week 9
Register allocation, vector registers	Week 9
data flow analysis (live variables)	Week 10
(Project 2)	Week 10 --
Data dependences and parallelism	Week 10
data flow analysis (def-use)	Week 11
(Homework 4)	Week 11-12
Interprocedural dataflow analysis	Week 11
Software engineering issues (record-replay, error diagnostics, test coverage)	Week 12
Program slicing (static and dynamic)	Week 12
data flow analysis concerning arrays and pointers	Week 12
Loop transformations and parallelization	Week 13
Conventional compiler optimizations (constant folding, redundancy removal)	Week 13
Selected compiler topics (garbage collection, object-oriented programming languages)	
(Homework 5)	