CS143 Syllabus

This handout contains the tentative syllabus for CS143. Depending on how quickly we're able to cover various topics, we may proceed more quickly or more slowly than the syllabus indicates.

For the recommended readings, **C** represents *Compilers: Principles, Techniques, and Tools*, while **PT** represents *Parsing Techniques: A Practical Guide*.

Date	Topics	Readings	Assignments
M June 25	Overview of Compilers The Decaf Language	**C**, Ch. 1 – 2	
W June 27	Scanning	**C**, Ch. 3.1 – 3.4, 3.6	**PA1 Out**
F June 29	**flex** Parsing	**C**, Ch. 3.5, 4.1 – 4.4	**WA1 Out**
M July 2	Top-Down Parsing I LL(1) Parsing	**C**, Ch. 4.4 – 4.5 **PT**, Ch. 8.1, 8.2	
W July 4	**Independence Day No Class**		
F July 6	Top-Down Parsing II Bottom-Up Parsing I	**C**, Ch. 4.5 **PT**, Ch. 9.4, 9.5	**WA1 Due**
M July 9	Bottom-Up Parsing II LR(0), LR(1)	**C**, Ch. 4.5 – 4.7 **PT**, Ch. 9.5, 9.6	**PA1 Due PA2 Out**
W July 11	Bottom-Up Parsing III SLR(1), LALR(1)	**C**, Ch. 4.7 **PT**, Ch. 9.7, 9.8	**WA2 Out**
F July 13	Bottom-Up Parsing IV Advanced Parsing Techniques	**C**, Ch. 4.8 **PT**, Ch. 9.9	
M July 16	Introduction to Semantic Analysis Scoping		
W July 18	Type-Checking I	**C**, Ch. 6.5	**WA2 Due**
F July 20	Type-Checking II		**PA2 Due PA3 Out**
M July 23	Midterm Review		
W July 25	**Midterm Exam 11:00AM – 1:00PM**		
F July 27	Runtime Environments I	**C**, Ch. 7.1 – 7.3	
M July 30	Runtime Environments II		**PA3 Checkpoint Due**

W August 1	Three-Address Code (TAC) IR		
F August 3	Local Optimization	**C**, Ch. 9.1	
M August 6	Global Optimization I	**C**, Ch. 9.2	**PA3 Due** **PA4 Out**
W August 8	Global Optimization II	**C**, Ch. 9.3 – 9.5	
F August 10	Register Allocation	**C**, Ch. 8.8	
M August 13	Garbage Collection	**C**, Ch. 7.5 – 7.8	
W August 15	Code Optimization	**C**, Ch. 10	
Sat August 18	**PA4 Due** **No Late Submissions**		