

CSC 253/453 Fall 2019 Schedule (8/19)

week	lecture	date	topics	reading	assign. (pts)
1	1	Wed, Aug 28	Essence of modern software. Think like a computer. Modularity.	Brooks:1986, Parnas:CACM85 (3-4)	W1(20): Parnas/complexity. P0: gitlab/bitbucket/github, Ruby Enumerable.
2	2	Wed, Sep 4	Iterators each/map/inject. Ruby module/mix-in. Unit testing.	Ruby Enumerable: all?/chunk/collect/each_with_index/find/max/minmax/select/slice_after/zip	P1a(50): Ruby iterators: Implement 10 iterators, using map/inject instead of each, and 20+ tests.
3	3	Mon, Sep 9	In-class work, P1b.	G3, classroom/labs/WH/Carlson	P1b(30): testing / reporting / final iterators.
	4	Wed, Sep 11	Haskell basics, map, fold	Lipovaca 3, 6	
4	5	Mon, Sep 16	Information hiding	SF 7	P1c(10): Using iterators
	6	Wed, Sep 18	Module basics	Ruby Module / Haskell typeclass	
5	7	Mon, Sep 23	Types, soundness, typing control/data	PLAI-e1 24, 25, 27, 28	W2(20): Module/type concepts.
	8	Wed, Sep 25	Explicit polymorphism	PLAI-e1 29	
6	9	Mon, Sep 30	Review		
	10	Wed, Oct 2	(away MEMSYS) Exam1 (~80) iterators, module/type concepts		
7	11	Mon, Oct 7	Haskell parametric typeclasses	Lipovaca 8, 9	P2a(50): Haskell parametric types
	12	Wed, Oct 9	Applicative functors and monoids	Lipovaca 11	
8	13	Mon, Oct 14	Fall break	Dept colloquium: Putting CS in CS education	
		Wed, Oct 16	DVCS revlog and merge	Mercurial v0.1	P2b(50): testing/reporting
9	14	Mon, Oct 21	Modular structure of complex systems	SF 16	
	15	Wed, Oct 23	(away LCPC) Exam2 (~80) advanced static typing		
10	16	Mon, Oct 28	Hierarchy and transparency	SF 8, 9	G1(50): Revlog/repo/manifest design: Types and traits.
	17	Wed, Oct 30	Program families / extension/contraction	SF 10, 14	
11	18	Mon, Nov 4	Teams. Conscious Purpose vs. Nature	Schach 4. Bateson	G2(50): Group design
	19	Wed, Nov 6	Unified software process	Schach 3, 10-13	
12	20	Mon, Nov 11	Object class vs Class object	Kay, HOPL93 (opt)	P3(50): Meta programming
	21	Wed, Nov 13	Singleton, meta-class/meta-programming	Olsen Ch. 12, 17	
13	22	Mon, Nov 18	(away SC/PPOPP) Ruby extension	Ruby 1.8 README.TXT	P4(50): Ruby extension
	23	Wed, Nov 20	continuation passing and actor model	Steele/Gabriel, HOPL93, 2.8 (req), 4	G3(100): Development / testing
14		Mon, Nov 25	Thanksgiving break		
	24	Wed, Nov 27	interpreter, DSL	Olsen Ch. 15,16	P5(50): Continuation
15	25	Mon, Dec 2	builder, adaptor, configuration	Olsen Ch. 9,14,18	
	26	Wed, Dec 4	intro to program locality	Manuscript/slides	
16	27	Mon, Dec 9	locality (cont'd)	Manuscript/slides	W3(50): Locality
	28	Wed, Dec 11	(slack)		
		Mon, Dec 16	final exam, 9am to 11am (~140) concepts, meta programming, locality		