Spring 2019

Ruth Anderson (rea@cs.uw.edu)

Welcome to CSE 351! We have put the most important links at the top, categorized by what they're for. Please check them out!

Info

Syllabus (syllabus#syllabus) | Policies (syllabus#policies)

VM Setup (https://www.cs.washington.edu/lab/software/linuxhomevm)

Linux Tips (linux) | GDB Tips (gdb) | Topic Videos (videos) | Exams (exams)

Tools

Discussion (msgboard.php) | Assignments (submit.php)

Gradebook (grades.php) | Polls (https://www.polleverywhere.com/)

Gradescope (https://www.gradescope.com/) | Feedback (feedback.php)

Sim

Cache Sim (../cachesim/) | Heap Sim (http://sarangjo.github.io/cse351-heap/)

Pre-Survey Due
Lab0 Due
HW1 Due
Lab1a Due
Lab1b Due
HW2 Due
Lab2 Due
Midterm Exam
HW3 Due
Mid-Survey Due
Lab3 Due
HW4 Due
Lab4 Due
HW5 Due
Lab5 Due
Final Exam

Events

Jun 16 – 18, 2019

Sun 6/16	Mon 6/17	Tue 6/18	Wed 6/19	Thu 6/20	Fri 6/21	Sat 6/22

Asking Questions, Getting Assistance, Giving Feedback

It is very important to us that you succeed in CSE 351! Outside of lectures and sections, there are different ways to ask questions or discuss course issues:

1. Visit office hours (see Events above)! In addition, if you need extra time or need to discuss something in private, *feel free to email and make an appointment*.
2. Make a *public* post about course content on the course discussion board (msgboard.php), where they benefit the whole class. If other students can answer your question, you may receive a response more quickly than you would by emailing the course staff. This is the best way of asking questions about homework, labs, and other class-related topics. Before posting, please search through the questions that have already been posted in case someone has already asked the same question.
3. Make a *private* post to just the course staff on the course discussion board (msgboard.php) with any questions or issues you would prefer to discuss privately. While you can email staff members individually when that makes sense, contacting the whole staff is generally preferred to get a faster response and to let the whole staff see what issues students are having. Alternatively, you

may also send email to the staff email list (mailto:cse351-staff@cs.washington.edu).

4. Send anonymous feedback (feedback.php) to the course staff. The instructor will try to address the issue and share it with others only as appropriate, but will not have a way to reply to you without addressing the whole class.

Pre-Survey Due
Lab0 Due
HW1 Due

Course Staff (click our faces to read our bios!)

Lab1a Due

Instructor

Ruth Anderson
(http://homes.cs.washington.edu/~rea/)

Lab1b Due
HW2 Due

Office: CSE 460
E-mail: rea@cs.uw.edu (mailto:rea@cs.washington.edu)

Lab2 Due

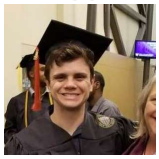
Teaching Assistants

Midterm Exam
HW3 Due
Mid-Survey Due

Gavin Cai

gcai47@uw (mailto:gcai47@uw.edu)
Section AD/CD

Jack Eggleston



jegg13@uw (mailto:jegg13@uw.edu)
Section AE, BD

John Feltrup

jfeltrup@uw (mailto:jfeltrup@uw.edu)
Section AB/CB, BB/DB

Lab3 Due
HW4 Due

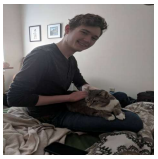
Britt Henderson

hendeb96@uw (mailto:hendeb96@uw.edu)
Section BA/DA, BC/DC

Richard Jiang

rjiang98@uw (mailto:rjiang98@uw.edu)
Section AB/CB

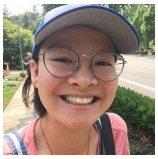
Jack Skalitzky



jskalitz@uw (mailto:jskalitz@uw.edu)
Section AE

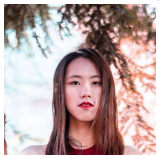
Lab4 Due
HW5 Due
Lab5 Due
Final Exam

Sophie Tian



shuxut@uw (mailto:shuxut@uw.edu)
Section BA/DA

Connie Wang

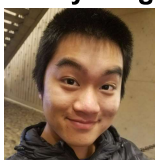


zhiyunw@uw (mailto:zhiyunw@uw.edu)
Section AD/CD

Sam Wolfson (http://samwolfson.com)

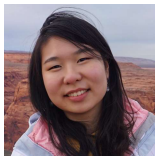
wolfson@uw (mailto:wolfson@uw.edu)
Section AA/CA

Casey Xing



cxing@uw (mailto:cxing@uw.edu)
Section AC/CC

Chin Yeoh



chinyeoh@uw (mailto:chinyeoh@uw.edu)
Section AC/CC

Pre-Survey Due
Lab0 Due
HW1 Due
Lab1a Due
Lab1b Due
HW2 Due
Lab2 Due
Midterm Exam
HW3 Due
Mid-Survey Due
Lab3 Due
HW4 Due
Lab4 Due
HW5 Due
Lab5 Due
Final Exam

Schedule

Binary **Memory & Data** **Integers** **Floating Point** **x86**
Programming **The Stack & Procedures** **Executables** **Arrays**
Structs **Buffer Overflows** **Caches** **Processes** **Virtual**
Memory **Memory Allocation** **Java and C**

#	Day	Topic	Labs	Homework
Week 1				
L01	Mon, Apr 01	Introduction, Binary ink (lectures/01/CSE351-L01-binary_19sp-ink.pdf), pptx (lectures/01/CSE351-L01-binary_19sp.pptx), pdf (lectures/01/CSE351-L01-binary_19sp.pdf) Reading: CSPP: § 1.0-1.10, 2.0-2.1.1 (p. 1-28, 31-39)		
L02	Wed, Apr 03	Memory & Data I ink (lectures/02/CSE351-L02-memory-I_19sp-ink.pdf), pptx (lectures/02/CSE351-L02-memory-I_19sp.pptx), pdf (lectures/02/CSE351-L02-memory-I_19sp.pdf) Reading: CSPP: § 2.1.2-2.1.3 (p.39-48)		**Pre-Survey Due** (hw/pre.php)

Week 2

S01 Thu, Apr 04 — Binary, Programming in C

solutions (sections/01/cse351_sec1_soln.pdf), worksheet (sections/01/cse351_sec1.pdf)

Code: HelloWorld.c (highlight/#https://courses.cs.washington.edu/courses/cse351/19sp/sections/01/code/HelloWorld.c), calculator.c (highlight/#https://courses.cs.washington.edu/courses/cse351/19sp/sections/01/code/calculator.c)

Pre-Survey Due

Lab0 Due

HW1 Due

L03 Fri, Apr 05 — Memory & Data II

ink (lectures/03/CSE351-L03-memory-II_19sp-ink.pdf), pptx (lectures/03/CSE351-L03-memory-II_19sp.pptx), pdf (lectures/03/CSE351-L03-memory-II_19sp.pdf)

Lab1a Due

Lab1b Due

HW2 Due

Code: show_bytes.c (highlight/#https://courses.cs.washington.edu/courses/cse351/19sp/lectures/03/code/show_bytes.c)

Reading: CSPP: § 2.1.4-2.1.9 (p. 49-59)

L04 Mon, Apr 08 — Data III & Integers I

Lab 0 Due (labs/lab0.php)

ink (lectures/04/CSE351-L04-integers-I_19sp-ink.pdf), pptx (lectures/04/CSE351-L04-integers-I_19sp.pptx), pdf (lectures/04/CSE351-L04-integers-I_19sp.pdf)

Lab2 Due

Midterm Exam

HW3 Due

Mid-Survey Due

Reading: CSPP: § 2.2-2.2.3 (p. 59-70)

Lab3 Due

L05 Wed, Apr 10 — Integers II

HW1 Due (hw/hw1.php)

ink (lectures/05/CSE351-L05-integers-II_19sp-ink.pdf), pptx (lectures/05/CSE351-L05-integers-II_19sp.pptx), pdf (lectures/05/CSE351-L05-integers-II_19sp.pdf)

HW4 Due

Lab4 Due

Code: shift.c (highlight/#https://courses.cs.washington.edu/courses/cse351/19sp/lectures/05/code/shift.c), shift2.c (highlight/#https://courses.cs.washington.edu/courses/cse351/19sp/lectures/05/code/shift2.c)

HW5 Due

Lab5 Due

Reading: CSPP: § 2.2.4-2.3 (p. 70-108)

Final Exam

S02 Thu, Apr 11

Pointers, Bitwise Operators

solutions (sections/02/cse351_sec2_soln.pdf), worksheet (sections/02/cse351_sec2.pdf), QuickCheck_Solutions (sections/02/QuickCheck_Solutions.pdf), QuickCheck (sections/02/QuickCheck.pdf)

Pre-Survey Due

Lab0 Due

HW1 Due

L06 Fri, Apr 12 — Floating Point I

ink (lectures/06/CSE351-L06-fp-I_19sp-ink.pdf), pptx (lectures/06/CSE351-L06-fp-I_19sp.pptx), pdf (lectures/06/CSE351-L06-fp-I_19sp.pdf)

Reading: CSPP: § 2.4-2.4.3 (p. 108-119)

Lab1a Due

Lab1b Due

HW2 Due

L07 Mon, Apr 15 — Floating Point II & x86-64 Intro

ink (lectures/07/CSE351-L07-fp-II_19sp-ink.pdf), pptx (lectures/07/CSE351-L07-fp-II_19sp.pptx), pdf (lectures/07/CSE351-L07-fp-II_19sp.pdf)

Code: float.c (highlight/#https://courses.cs.washington.edu/courses/cse351/19sp/lectures/07/code/float.c)

Reading: CSPP: § 2.4.4-2.5, 3.2-3.4 (p. 120-127, 169-191)

Lab1a Due (labs/lab1a.php)

Lab2 Due

Midterm Exam

HW3 Due

Mid-Survey Due

Lab3 Due

Week 3

L08 Wed, Apr 17 — x86 Programming I

ink (lectures/08/CSE351-L08-asm-I_19sp-ink.pdf), pptx (lectures/08/CSE351-L08-asm-I_19sp.pptx), pdf (lectures/08/CSE351-L08-asm-I_19sp.pdf)

Code: swap (web) (lectures/08/code/swap.php)

Reading: CSPP: § 3.5 (p. 191-199)

HW4 Due

Lab4 Due

HW5 Due

Lab5 Due

S03 Thu, Apr 18 — Integers, Floating Point

solutions (sections/03/cse351_sec3_soln.pdf), worksheet (sections/03/cse351_sec3.pdf)

Final Exam

L09 Fri, Apr 19

x86 Programming II

ink (lectures/09/CSE351-L09-asm-II_19sp-ink.pdf), pptx (lectures/09/CSE351-L09-asm-II_19sp.pptx), pdf (lectures/09/CSE351-L09-asm-II_19sp.pdf)

Reading: CSPP: § 3.6.0-3.6.5 (p. 200-213)

Pre-Survey Due

Lab0 Due

HW1 Due

Week 4

L10 Mon, Apr 22 — x86 Programming III

ink (lectures/10/CSE351-L10-asm-III_19sp-ink.pdf), pptx (lectures/10/CSE351-L10-asm-III_19sp.pptx), pdf (lectures/10/CSE351-L10-asm-III_19sp.pdf)

Lab 1b Due (labs/lab1b.php)

Lab1a Due

Lab1b Due

HW2 Due

Code: mov.s (highlight/#https://courses.cs.washington.edu/courses/cse351/19sp/lectures/10/code/mov.s), mov_demo.txt (lectures/10/code/mov_demo.txt), mov_tui_demo.txt (lectures/10/code/mov_tui_demo.txt), switch_ex (web) (lectures/10/code/switch_ex.php)

Reading: CSPP: § 3.6.7-3.6.8 (p. 220-238)

Lab2 Due

Midterm Exam

HW3 Due

Mid-Survey Due

L11 Wed, Apr 24 — The Stack & Procedures

ink (lectures/11/CSE351-L11-procedures-I_19sp-ink.pdf), pptx (lectures/11/CSE351-L11-procedures-I_19sp.pptx), pdf (lectures/11/CSE351-L11-procedures-I_19sp.pdf)

HW2 Due (hw/hw2.php)

Lab3 Due

HW4 Due

Lab4 Due

Reading: CSPP: § 3.7.0-3.7.3 (p. 238-248)

S04 Thu, Apr 25 — x86 Assembly, GDB

solutions (sections/04/cse351_sec4_soln.pdf), worksheet (sections/04/cse351_sec4.pdf)

HW5 Due

Lab5 Due

L12 Fri, Apr 26 — Procedures & Recursion

ink (lectures/12/CSE351-L12-procedures-II_19sp-ink.pdf), pptx (lectures/12/CSE351-L12-procedures-II_19sp.pptx), pdf (lectures/12/CSE351-L12-procedures-II_19sp.pdf)

Reading: CSPP: § 3.7.4-3.7.5, 3.2 (p. 248-255, 169-177)

Final Exam

Week 5

L13 Mon, Apr 29 — Executables & Arrays

ink (lectures/13/CSE351-L13-arrays_19sp-ink.pdf), pptx (lectures/13/CSE351-L13-arrays_19sp.pptx), pdf (lectures/13/CSE351-L13-arrays_19sp.pdf)

Reading: CSPP: § 3.8 (p. 255-265)

Pre-Survey Due

Lab0 Due

HW1 Due

L14 Wed, May 01 — Structs

ink (lectures/14/CSE351-L14-structs_19sp-ink.pdf), pptx (lectures/14/CSE351-L14-structs_19sp.pptx), pdf (lectures/14/CSE351-L14-structs_19sp.pdf)

Reading: CSPP: § 3.9 (p. 265-276)

Lab 2 Due (labs/lab2.php)

Lab1a Due

Lab1b Due

HW2 Due

S05 Thu, May 02 — Midterm Review

cse351-midReview-19sp (sections/05/cse351-midReview-19sp.pdf), cse351-midReview-soln-19sp (sections/05/cse351-midReview-soln-19sp.pdf)

Lab2 Due

Midterm Exam

HW3 Due

Mid-Survey Due

:O Fri, May 03 — **Midterm Exam**

Details

4:30pm – 5:30pm in KNE 130

Quick Links: Policies (exams/#midterm-policies), Topics (exams/#midterm-topics), Practice (exams/#midterm-practice)

Lab3 Due

HW4 Due

Lab4 Due

L15 Mon, May 06 — Buffer Overflow

pptx (lectures/15/CSE351-L15-buffoverflow_19sp.pptx), pdf (lectures/15/CSE351-L15-buffoverflow_19sp.pdf)

Code:

Reading: CSPP: § 3.10 (p. 276-293)

HW5 Due

Lab5 Due

Final Exam

Week 6

L16 Wed, May 08 — Memory & Caches I

HW3 Due (hw/hw3.php)

ink (lectures/16/CSE351-L16-caches-I_19sp-ink.pdf), pptx (lectures/16/CSE351-L16-caches-I_19sp.pptx), pdf (lectures/16/CSE351-L16-caches-I_19sp.pdf)

Reading: CSPP: § 6.0, 6.2 (p. 579-580, 604-609)

Pre-Survey Due

S06 Thu, May 09 — Array and Structs, Buffer Overflow

solutions (sections/06/cse351_sec6_soln.pdf), worksheet (sections/06/cse351_sec6.pdf), lab3_demo (sections/06/lab3_demo.pdf)

Lab0 Due

Mid-Survey Due (hw/mid.php)

HW1 Due

Lab1a Due

L17 Fri, May 10 — Memory & Caches II

ink (lectures/17/CSE351-L17-caches-II_19sp-ink.pdf), pptx (lectures/17/CSE351-L17-caches-II_19sp.pptx), pdf (lectures/17/CSE351-L17-caches-II_19sp.pdf)

Reading: CSPP: § 6.3-6.4.2 (p. 609-624)

Lab1b Due

HW2 Due

Lab2 Due

L18 Mon, May 13 — Memory & Caches III

ink (lectures/18/CSE351-L18-caches-III_19sp-ink.pdf), pptx (lectures/18/CSE351-L18-caches-III_19sp.pptx), pdf (lectures/18/CSE351-L18-caches-III_19sp.pdf)

Reading: CSPP: § 6.4.3-6.4.7 (p. 624-633)

Midterm Exam

HW3 Due

Mid-Survey Due

Lab3 Due

HW4 Due

Lab4 Due

Week 7

L19 Wed, May 15 — Memory & Caches IV

ink (lectures/19/CSE351-L19-caches-IV_19sp-ink.pdf), pptx (lectures/19/CSE351-L19-caches-IV_19sp.pptx), pdf (lectures/19/CSE351-L19-caches-IV_19sp.pdf)

Reading: CSPP: § 6.5-6.7 (p. 633-649)

Lab 3 Due (labs/lab3.php)

HW5 Due

Lab5 Due

Final Exam

S07 Thu, May 16 — Caches

caches_cheatsheet-CORRECTED (sections/07/caches_cheatsheet-CORRECTED.pdf), solutions (sections/07/cse351_sec7_soln.pdf), worksheet (sections/07/cse351_sec7.pdf)

Week 8

L20 Fri, May 17 — System Control Flow & Processes

ink (lectures/20/CSE351-L20-processes_19sp-ink.pdf), pptx (lectures/20/CSE351-L20-processes_19sp.pptx), pdf (lectures/20/CSE351-L20-processes_19sp.pdf)

Reading: CSPP: § 8.0-8.4 (p. 722-756)

Pre-Survey Due

Lab0 Due

HW1 Due

L21 Mon, May 20 — Processes & Virtual Memory I

ink (lectures/21/CSE351-L21-vm-I_19sp-ink.pdf), pptx (lectures/21/CSE351-L21-vm-I_19sp.pptx), pdf (lectures/21/CSE351-L21-vm-I_19sp.pdf)

Reading: CSPP: § 9.0-9.3 (p. 802-810)

Lab1a Due

Lab1b Due

HW2 Due

L22 Wed, May 22 — Virtual Memory II

ink (lectures/22/CSE351-L22-vm-II_19sp-ink.pdf), pptx (lectures/22/CSE351-L22-vm-II_19sp.pptx), pdf (lectures/22/CSE351-L22-vm-II_19sp.pdf)

Reading: CSPP: § 9.4-9.6 (p. 811-825)

HW4 Due (hw/hw4.php)

Lab2 Due

Midterm Exam

HW3 Due

Mid-Survey Due

S08 Thu, May 23 — Caches & Processes

solutions (sections/08/cse351_sec8_soln.pdf), worksheet (sections/08/cse351_sec8.pdf)

Lab3 Due

HW4 Due

Lab4 Due

L23 Fri, May 24 — Virtual Memory III

ink (lectures/23/CSE351-L23-vm-III_19sp-inked.pdf), pptx (lectures/23/CSE351-L23-vm-III_19sp.pptx), pdf (lectures/23/CSE351-L23-vm-III_19sp.pdf)

Code: cse351_extra_vm_practice.pdf (lectures/23/code/cse351_extra_vm_practice.pdf), cse351_extra_vm_practice_soln.pdf (lectures/23/code/cse351_extra_vm_practice_soln.pdf), vm_overview.pdf (lectures/23/code/vm_overview.pdf)

Reading: CSPP: § 9.7 (p. 825-833)

Lab 4 Due (labs/lab4.php)

HW5 Due

Lab5 Due

Final Exam

	:D	Mon, May 27	Memorial Day: No Class!	
Week 9	L24	Wed, May 29	Memory Allocation I ink (lectures/24/CSE351-L24-memalloc-I_19sp-ink.pdf), pptx (lectures/24/CSE351-L24-memalloc-I_19sp.pptx), pdf (lectures/24/CSE351-L24-memalloc-I_19sp.pdf) Reading: CSPP: § 9.9-9.9.11 (p. 839-853)	Pre-Survey Due Lab0 Due HW1 Due
	S09	Thu, May 30	Memory Allocation solutions (sections/09/cse351_sec9_soln.pdf), worksheet (sections/09/cse351_sec9.pdf), slides (sections/09/section_sec9_malloc_slides_cse351_9_aq.pptx)	Lab1a Due Lab1b Due HW2 Due
	L25	Fri, May 31	Memory Allocation II ink (lectures/25/CSE351-L25-memalloc-II_19sp-ink.pdf), pptx (lectures/25/CSE351-L25-memalloc-II_19sp.pptx), pdf (lectures/25/CSE351-L25-memalloc-II_19sp.pdf) Reading: CSPP: § 9.9.12-9.10 (p. 854-870)	HW5 Due (hw/hw5.php) Lab2 Due Midterm Exam HW3 Due Mid-Survey Due
	L26	Mon, Jun 03	Memory Allocation III ink (lectures/26/CSE351-L26-memalloc-III_19sp-ink-v1.pdf), pptx (lectures/26/CSE351-L26-memalloc-III_19sp.pptx), pdf (lectures/26/CSE351-L26-memalloc-III_19sp.pdf) Reading: CSPP: § 9.11-9.12 (p. 870-876)	Lab3 Due HW4 Due Lab4 Due
Week 10	L27	Wed, Jun 05	Java and C ink (lectures/27/CSE351-L27-java_19sp-ink-v2.pdf), pptx (lectures/27/CSE351-L27-java_19sp.pptx), pdf (lectures/27/CSE351-L27-java_19sp.pdf)	HW5 Due Lab5 Due Final Exam
	S10	Thu, Jun 06		

Final Review

worksheet (sections/10/cse351_sec10_19sp.pdf), solutions (sections/10/cse351_sec10_soln_19sp.pdf)

Pre-Survey Due

Lab0 Due

HW1 Due

L28 Fri, Jun 07 Java and C, Course Wrap-Up

pptx (lectures/28/CSE351-L28-wrapup_19sp.pptx), pdf (lectures/28/CSE351-L28-wrapup_19sp.pdf)

Lab 5 Due (labs/lab5.php)

Lab1a Due

:D Mon, Jun 10 Exam Studying: No Class!

Lab1b Due

HW2 Due

Week 11

:O Wed, Jun 12 **Final Exam**

Details

12:30pm – 2:20pm in KNE 130

Quick Links: Policies (exams/#final-policies), Topics (exams/#final-topics), Practice (exams/#final-practice)

Lab2 Due

Midterm Exam

HW3 Due

Mid-Survey Due

Lab3 Due

HW4 Due

Lab4 Due

HW5 Due

Lab5 Due

Final Exam