Course Syllabus

Jump to Today



COM S 352 Introduction to Operating Systems

Fall 2021

Lecture

Monday, Wednesday and Friday, 12:05 - 12:55 PM, MOL-BIO 1414.

Recitation

Section Timing	Location	ТА
Section 1: Thursday 2:10 - 3:00 PM	BEYER 1310	Yuechuan Xue
Section 2: Thursday 4:10 - 5:00 PM	CURTISS 0105	Yuechuan Xue

Instructor

Mathew Tan Creti

- Office Hours: Tuesday and Thursday 12:00 1:00 PM, Friday 2:30 3:30 PM
- · Office: B21
- Webex (by request): https://iastate.webex.com/meet/tancreti
 (https://iastate.webex.com/meet/tancreti
- Email: tancreti@iastate.edu (mailto:tancreti@iastate.edu)

Teaching Assistants

Wei Qian

- Office Hours: Tuesday 3:00 5:00 PM
- Office: Pearson 0145 (Basement)
- Webex (by request):

https://iastate.webex.com/meet/wqi

Waqwoya Abebe

- Office Hours: Friday 5:00 6:00 PM
- Office: Pearson 0145 (Basement)
- Webex (by request):

https://iastate.webex.com/meet/wmabebe

(https://iastate.webex.com/meet/wqi)

 Email: <u>wqi@iastate.edu</u> (mailto:wqi@iastate.edu) (https://iastate.webex.com/meet/wmabebe)

 Email: <u>wmabebe@iastate.edu</u> (mailto:wmabebe@iastate.edu)

Yuechuan Xue

Office Hours: Thursday 3:00 - 4:00 PM

Office: Pearson TBDWebex (by request):

https://iastate.webex.com/meet/yuechuan

(https://iastate.webex.com/meet/yuechuan)

 Email: <u>yuechuan@iastate.edu</u> (<u>mailto:yuechuan@iastate.edu</u>)

Prerequisites

COM S 321 or CPR E 381, COM S 327 or CPR E 288, ENGL 250

(The completed Prereq Waiver Form must be sent to csadvising@iastate.edu no later than Wednesday August 26, 2021 by 5 pm). Contact the instructor of the section you are registered to if you have questions.

Textbook

Operating Systems: Three Easy Pieces. Remzi H. Arpaci-Dusseau and Andrea C. Arpaci-Dusseau. https://pages.cs.wisc.edu/~remzi/OSTEP/ (https://pages.cs.wisc.edu/~remzi/OSTEP/)

Course Description

This course introduces the internal operation of operating systems. In particular, the course covers the role of operating systems, processes, CPU scheduling, threads, synchronization, deadlocks, memory management and file systems. It also covers the relation of operating systems to security, protection, networking and distributed systems.

Recitations

Recitations will be used to clarify lectures, discuss topics relevant to assignments, solve problems, and discuss homework solutions. Attendance to recitations are encouraged but not required.

Homework

There will be several homeworks, typically due 1 to 2 weeks from their date of posting. Homework must be typed and submitted on canvas.

Programming Projects

There will be two programming projects using the C programming language. The following policies will be applied to both projects:

- Source code must include proper documentation to receive full credit.
- All projects require the use of makefiles, such that the TAs will be able to build your executable programs by simply typing "make" command.
- Source code must compile and run on the Linux server pyrite.cs.iastate.edu, which will be used for grading. Programs that do not compile and run on pyrite will receive zero points.
- Project statements will provide specifications. However, implementation details may not be specified.
 It will be your responsibility to figure out the implementation approaches.
- You are responsible for thoroughly testing and debugging your code. Samples given in the project
 descriptions are for illustration purposes only. The graders may try to break your code by subjecting it
 to bizarre test cases.

Exams

There will be one midterm exam and one final exam. The final exam will be given in the final exam week according to the university's final exam schedule. The final exam will cover the entire course, but is weighted more heavily toward the material covered after the second midterm exam.

Grading

Letter grades in the course will be based on homework, programming projects, and exams.

Homework	30%
Programming projects	35%
Midterm exams	15%
Final exam	20%

Letter grades are assigned following the standard ISU scale, relative to overall class performance, with borderline cases influenced by participation in class.

Late policy

You have 5 late credits that can extend an assignment by one day. If you like, you can use all 5 credits on a single assignment. The credits cannot be used fractionally, any lateness burns one full credit. The intension of the credits is to cover for unexpected life events such as illness, not poor time management. However, the credits are automatically applied to any late work, no need to make a request and no questions asked. After all late credits have been used, late homework is penalized 10%, with an additional 10% for every full day late.

Credits cannot be applied to projects. Late projects are penalized 2%, with an additional 2% for every full day late.

Late penalties will only be waived in exceptional circumstances with documentation.

Grade Appeal Policy

You may appeal a grade within **ONE WEEK** of grade announcement. Appeals for exam grades will be handled by the instructor. Appeals for homework and programming projects grades will be handled by the TA who graded your work. If you disagree with TA's decision, you may appeal to the instructor within **ONE WEEK** of receiving TA's decision.

Academic Honesty

Homework and programming projects are individual efforts, not group efforts. While discussion of homework and programming projects with other students is encouraged, a level of discussion that produces identical work is prohibited.

For programming projects, you may not

- write code with another student
- give code to another student (via email, printouts, etc.)
- post code in a publicly accessible location

A student found responsible for academic dishonesty will receive zero points for the work in which the dishonesty occurred. In addition, the student is subject to sanctions according to the university policy on academic dishonesty, which can be found here

(http://catalog.iastate.edu/academic_conduct/#academicdishonestytext)_.

Face Masks Encouraged

Because of the continuing COVID-19 pandemic, all students are encouraged—but not required—to wear face masks, consistent with current recommendations from the Centers for Disease Control and Prevention. Further information on the proper use of face masks is available at: https://www.cdc.gov/coronavirus/2019-ncov/your-health/effective-masks.html (https://www.cdc.gov/coronavirus/2019-ncov/your-health/effective-masks.html)

Vaccinations Encouraged

All students are encouraged to receive a vaccination against COVID-19. Multiple locations are available on campus for free, convenient vaccination. Further information is available at: https://web.iastate.edu/safety/updates/covid19/vaccinations
(https://web.iastate.edu/safety/updates/covid19/vaccinations)
Vaccinations may also be obtained from health care providers and pharmacies.

Physical Distancing Encouraged for Unvaccinated Individuals

Classrooms and other campus spaces are operating at normal capacities, and physical distancing by faculty, staff, students, and visitors to campus is not required. However, unvaccinated individuals are encouraged to continue to physically distance themselves from others when possible.

Fras Fynrassian

lowa State University supports and upholds the First Amendment protection of <u>freedom of speech</u> (<a href="https://www.studentconduct.dso.iastate.edu/know-the-code-resources/resources-for-students/harassment-and-free-speech/free-speech) and the principle of <u>academic freedom</u>

(https://www.iowaregents.edu/plans-and-policies/board-policy-manual/39-academic-freedom) in order to foster a learning environment where open inquiry and the vigorous debate of a diversity of ideas are encouraged. Students will not be penalized for the content or viewpoints of their speech as long as student expression in a class context is germane to the subject matter of the class and conveyed in an appropriate manner.

Accessibility Statement

lowa State University is committed to assuring that all educational activities are free from discrimination and harassment based on disability status. Students requesting accommodations for a documented disability are required to work directly with staff in Student Accessibility Services (SAS) to establish eligibility and learn about related processes before accommodations will be identified. After eligibility is established, SAS staff will create and issue a Notification Letter for each course listing approved reasonable accommodations. This document will be made available to the student and instructor either electronically or in hard-copy every semester. Students and instructors are encouraged to review contents of the Notification Letters as early in the semester as possible to identify a specific, timely plan to deliver/receive the indicated accommodations. Reasonable accommodations are not retroactive in nature and are not intended to be an unfair advantage. Additional information or assistance is available online at www.sas.dso.iastate.edu (http://www.sas.dso.iastate.edu), by contacting SAS staff by email at accessibility@iastate.edu (http://www.sas.dso.iastate.edu), or by calling 515-294-7220. Student Accessibility Services is a unit in the Dean of Students Office located at 1076 Student Services Building.

Discrimination and Harassment

lowa State University does not discriminate on the basis of race, color, age, ethnicity, religion, national origin, pregnancy, sexual orientation, gender identity, genetic information, sex, marital status, disability, or status as a U.S. Veteran. Inquiries regarding non-discrimination policies may be directed to Office of Equal Opportunity, 3410 Beardshear Hall, 515 Morrill Road, Ames, Iowa 50011, Tel. 515-294-7612, Hotline 515-294-1222, email eooffice@iastate.edu (mailto:eooffice@mail.iastate.edu)

Prep Week

This class follows the Iowa State University Prep Week policy as noted in section 10.6.4 of the <u>Faculty</u> <u>Handbook</u> <u>(http://www.provost.iastate.edu/resources/faculty-handbook)</u>.

Religious Accommodation

lowa State University welcomes diversity of religious beliefs and practices, recognizing the contributions differing experiences and viewpoints can bring to the community. There may be times when an academic requirement conflicts with religious observances and practices. If that happens, students may request the reasonable accommodation for religious practices. In all cases, you must put your request in

writing. The instructor will review the situation in an effort to provide a reasonable accommodation when possible to do so without fundamentally altering a course. For students, you should first discuss the conflict and your requested accommodation with your professor at the earliest possible time. You or your instructor may also seek assistance from the Dean of Students Office (http://www.dso.iastate.edu/sa/) at 515-294-1020 or the Office of Equal Opportunity (http://www.eoc.iastate.edu/) at 515-294-7612.

Contact Information for Academic Issues (mailto:academicissues@iastate.edu)

If you are experiencing, or have experienced, a problem with any of the above statements, email academicissues@iastate.edu (mailto:academicissues@iastate.edu)

(Important note to faculty: The email address for contact information is monitored and answered through the Office of the Senior Vice President and Provost)

Tentative Class Schedule

Week (Dates)	Textbook readings	Main Topics	Homework/Programming Project/Exam deadlines
Week 01	Ch. 2, 4, 5 and 6	Introduction	
Aug 23 - 27	On. 2, 4, 5 and 6	Processes	
Week 02 Aug 30 - Sep 3	Ch. 7, 8 and 9	Scheduling	HW 1
No class Sep 6		Labor Day	
Week 03 Sep 6 - 10	Ch. 13 and 14	Memory Virtualization	HW 2
Week 04 Sep 13 - 17	Ch. 15, 16 and 18	Paged Virtual Memory	
Week 05 Sep 20 - 24	Ch. 19, 21 and 22	Swapping	HW 3
•		Introduction to Concurrency	
Week N6		Threads	

Sep 27 - Oct 1	Ch. 26, 27 and 28	Locks	Project 1
Week 07 Oct 4 - 8	Ch. 29, 30 and 31	Conditional Variables Semaphores	HW 4
Week 08 Oct 11 - 15	Ch. 32	I/O Devices Review	Midterm Exam
Week 09 Oct 18 - 22	Ch. 36, 37 and 39	Disks Files and Directories	
Week 10 Oct 25 - 29	Ch. 40 and 41	File System Implementation	HW 5
Week 11 Nov 1 - 2	Ch. 44 [Thompson84]	SSD Introduction to Security	
Week 12 Nov 8 - 12	[Pfleeger15]	Operating Systems Security	HW 6
Week 13 Nov 15 - 19	[Peterson15] Ch. 48	Networking Distributed Systems	
No class Nov 22 - 26		Thanksgiving break	
Week 14 Nov 29 - Dec 3	Ch. 49	NFS	HW 7 Project 2
Week 15 Dec 6 - 10	Review		
Dec 13 - 16			Final Exam

Course Summary:

Date	Details	Due
	Lecture Session: COM S 352 Section B (https://canvas.iastate.edu/calendar? event_id=451601&include_contexts=course_82079)	12:05pm to 12:55pm
Mon Aug 23, 2021	COM S 352 Lecture (https://canvas.iastate.edu/calendar? event_id=472178&include_contexts=course_82079)	12:05pm to 12:55pm
	Reading 1: Ch. 2, 4, 5 and 6 (https://canvas.iastate.edu/courses/82079/assignments	due by 11:59pm
Wed Aug 25, 2021	Lecture Session: COM S 352 Section B (https://canvas.iastate.edu/calendar? event_id=451604&include_contexts=course_82079)	12:05pm to 12:55pm
1100 / ldg 20, 202	COM S 352 Lecture (https://canvas.iastate.edu/calendar? event_id=472177&include_contexts=course_82079)	12:05pm to 12:55pm
	Lecture Discussion (COM S 352 Section B) (https://canvas.iastate.edu/calendar? event_id=451594&include_contexts=course_82079)	12:05pm to 12:55pm
Fri Aug 27, 2021	Lecture Session: COM S 352 Section B (https://canvas.iastate.edu/calendar? event_id=451605&include_contexts=course_82079)	12:05pm to 12:55pm
	COM S 352 Lecture (https://canvas.iastate.edu/calendar? event_id=472179&include_contexts=course_82079)	12:05pm to 12:55pm
Sun Aug 29, 2021	Reading 2: Ch. 7, 8 and 9 (https://canvas.iastate.edu/courses/82079/assignments	due by 12:59pm /1422282)

Date	Details	Due
Mon Aug 30, 2021	Lecture Session: COM S 352 Section B (https://canvas.iastate.edu/calendar? event_id=451607&include_contexts=course_82079)	12:05pm to 12:55pm
	COM S 352 Lecture (https://canvas.iastate.edu/calendar? event_id=472175&include_contexts=course_82079)	12:05pm to 12:55pm
Wed Sep 1, 2021	Lecture Session: COM S 352 Section B (https://canvas.iastate.edu/calendar? event_id=451606&include_contexts=course_82079)	12:05pm to 12:55pm
	COM S 352 Lecture (https://canvas.iastate.edu/calendar? event_id=472176&include_contexts=course_82079)	12:05pm to 12:55pm
Fri Sep 3, 2021	Lecture Discussion (COM S 352 Section B) (https://canvas.iastate.edu/calendar? event_id=451591&include_contexts=course_82079)	12:05pm to 12:55pm
	Lecture Session: COM S 352 Section B (https://canvas.iastate.edu/calendar? event_id=451603&include_contexts=course_82079)	12:05pm to 12:55pm
	COM S 352 Lecture (https://canvas.iastate.edu/calendar? event_id=472174&include_contexts=course_82079)	12:05pm to 12:55pm
	Homework 1: Processes (https://canvas.iastate.edu/courses/82079/assignments	due by 11:59pm
Sun Sep 5, 2021	Reading 3: Ch. 13 and 14 (https://canvas.iastate.edu/courses/82079/assignments/1422283)	
Mon Sep 6, 2021	Lecture Session: COM S 352 Section B (https://canvas.iastate.edu/calendar? event_id=451599&include_contexts=course_82079)	12:05pm to 12:55pm

Date	Details	Due
	COM S 352 Lecture (https://canvas.iastate.edu/calendar? event_id=472172&include_contexts=course_82079)	12:05pm to 12:55pm
Wed Sep 8, 2021	Lecture Session: COM S 352 Section B (https://canvas.iastate.edu/calendar? event_id=451600&include_contexts=course_82079)	12:05pm to 12:55pm
	COM S 352 Lecture (https://canvas.iastate.edu/calendar? event_id=472171&include_contexts=course_82079)	12:05pm to 12:55pm
	Lecture Discussion (COM S 352 Section B) (https://canvas.iastate.edu/calendar? event_id=451593&include_contexts=course_82079)	12:05pm to 12:55pm
Fri Sep 10, 2021	Lecture Session: COM S 352 Section B (https://canvas.iastate.edu/calendar? event_id=451602&include_contexts=course_82079)	12:05pm to 12:55pm
	COM S 352 Lecture (https://canvas.iastate.edu/calendar? event_id=472173&include_contexts=course_82079)	12:05pm to 12:55pm
Sun Sep 12, 2021	Reading 4: Ch. 15, 16 and 18 (https://canvas.iastate.edu/courses/82079/assignments	due by 12:59pm
Mon Sep 13, 2021	Lecture Session: COM S 352 Section B (https://canvas.iastate.edu/calendar? event_id=451598&include_contexts=course_82079)	12:05pm to 12:55pm
	COM S 352 Lecture (https://canvas.iastate.edu/calendar? event_id=472169&include_contexts=course_82079)	12:05pm to 12:55pm
Wed Sep 15, 2021	COM S 352 Lecture (https://canvas.iastate.edu/calendar? event_id=472167&include_contexts=course_82079)	12:05pm to 12:55pm

Date	Details	Due
Fri Sep 17, 2021	Lecture Discussion (COM S 352 Section B) (https://canvas.iastate.edu/calendar? event_id=451592&include_contexts=course_82079)	12:05pm to 12:55pm
	COM S 352 Lecture (https://canvas.iastate.edu/calendar? event_id=472170&include_contexts=course_82079)	12:05pm to 12:55pm
Sun Sep 19, 2021	Reading 5: Ch. 19, 21 and 22 (https://canvas.iastate.edu/courses/82079/assignments	due by 12:59pm
Mon Sep 20, 2021	COM S 352 Lecture (https://canvas.iastate.edu/calendar? event_id=472164&include_contexts=course_82079)	12:05pm to 12:55pm
Wed Sep 22, 2021	COM S 352 Lecture (https://canvas.iastate.edu/calendar? event_id=472168&include_contexts=course_82079)	12:05pm to 12:55pm
Fri Sep 24, 2021	COM S 352 Lecture (https://canvas.iastate.edu/calendar? event_id=472165&include_contexts=course_82079)	12:05pm to 12:55pm
Sun Sep 26, 2021	Reading 6: Ch. 26, 27 and 28 (https://canvas.iastate.edu/courses/82079/assignments	due by 11:59pm
Mon Sep 27, 2021	COM S 352 Lecture (https://canvas.iastate.edu/calendar? event_id=472161&include_contexts=course_82079)	12:05pm to 12:55pm
Wed Sep 29, 2021	COM S 352 Lecture (https://canvas.iastate.edu/calendar? event_id=472163&include_contexts=course_82079)	12:05pm to 12:55pm
Fri Oct 1, 2021	Lecture Discussion (COM S 352 Section B) (https://canvas.iastate.edu/calendar? event_id=451595&include_contexts=course_82079)	12:05pm to 12:55pm
	COM S 352 Lecture (https://canvas.iastate.edu/calendar? event_id=472160&include_contexts=course_82079)	12:05pm to 12:55pm

Date	Details	Due
Sun Oct 3, 2021	Reading 7: Ch. 29, 30 and 31 due by 11:59pm (https://canvas.iastate.edu/courses/82079/assignments/1422288)	
Mon Oct 4, 2021	COM S 352 Lecture (https://canvas.iastate.edu/calendar? event_id=472166&include_contexts=course_82079)	12:05pm to 12:55pm
Wed Oct 6, 2021	COM S 352 Lecture (https://canvas.iastate.edu/calendar? event_id=472162&include_contexts=course_82079)	12:05pm to 12:55pm
Fri Oct 8, 2021	COM S 352 Lecture (https://canvas.iastate.edu/calendar? event_id=472156&include_contexts=course_82079)	12:05pm to 12:55pm
Mon Oct 11, 2021	COM S 352 Lecture (https://canvas.iastate.edu/calendar? event_id=472159&include_contexts=course_82079)	12:05pm to 12:55pm
Wed Oct 13, 2021	COM S 352 Lecture (https://canvas.iastate.edu/calendar? event_id=472153&include_contexts=course_82079)	12:05pm to 12:55pm
Fri Oct 15, 2021	Lecture Discussion (COM S 352 Section B) (https://canvas.iastate.edu/calendar? event_id=451597&include_contexts=course_82079)	12:05pm to 12:55pm
	COM S 352 Lecture (https://canvas.iastate.edu/calendar? event_id=472155&include_contexts=course_82079)	12:05pm to 12:55pm
Sun Oct 17, 2021	Reading 8: Ch. 32 (https://canvas.iastate.edu/courses/82079/assignments/1422289)	
Mon Oct 18, 2021	COM S 352 Lecture (https://canvas.iastate.edu/calendar? event_id=472152&include_contexts=course_82079)	12:05pm to 12:55pm
Wed Oct 20, 2021	COM S 352 Lecture (https://canvas.iastate.edu/calendar? event_id=472157&include_contexts=course_82079)	12:05pm to 12:55pm

Date	Details	Due
Fri Oct 22, 2021	Lecture Discussion (COM S 352 Section B) (https://canvas.iastate.edu/calendar? event_id=451596&include_contexts=course_82079)	12:05pm to 12:55pm
	COM S 352 Lecture (https://canvas.iastate.edu/calendar? event_id=472158&include_contexts=course_82079)	12:05pm to 12:55pm
Sun Oct 24, 2021	Reading 9: Ch. 36, 37 and 39 (https://canvas.iastate.edu/courses/82079/assignments	due by 11:59pm
Mon Oct 25, 2021	COM S 352 Lecture (https://canvas.iastate.edu/calendar? event_id=472154&include_contexts=course_82079)	12:05pm to 12:55pm
Wed Oct 27, 2021	COM S 352 Lecture (https://canvas.iastate.edu/calendar? event_id=472149&include_contexts=course_82079)	12:05pm to 12:55pm
Fri Oct 29, 2021	COM S 352 Lecture (https://canvas.iastate.edu/calendar? event_id=472151&include_contexts=course_82079)	12:05pm to 12:55pm
Sun Oct 31, 2021	Reading 10: Ch. 40 and 41 (https://canvas.iastate.edu/courses/82079/assignments	due by 11:59pm
Mon Nov 1, 2021	COM S 352 Lecture (https://canvas.iastate.edu/calendar? event_id=472150&include_contexts=course_82079)	12:05pm to 12:55pm
Wed Nov 3, 2021	COM S 352 Lecture (https://canvas.iastate.edu/calendar? event_id=472148&include_contexts=course_82079)	12:05pm to 12:55pm
Fri Nov 5, 2021	Lecture Discussion (COM S 352 Section B) (https://canvas.iastate.edu/calendar? event_id=451609&include_contexts=course_82079)	12:05pm to 12:55pm
	COM S 352 Lecture (https://canvas.iastate.edu/calendar? event_id=472147&include_contexts=course_82079)	12:05pm to 12:55pm

Date	Details	Due
Sun Nov 7, 2021	Read 11: Ch. 44 and Thompson (https://canvas.iastate.edu/courses/82079/assignments	due by 11:59pm <u>s/1422277)</u>
Mon Nov 8, 2021	COM S 352 Lecture (https://canvas.iastate.edu/calendar? event_id=472145&include_contexts=course_82079)	12:05pm to 12:55pm
Wed Nov 10, 2021	COM S 352 Lecture (https://canvas.iastate.edu/calendar? event_id=472144&include_contexts=course_82079)	12:05pm to 12:55pm
Fri Nov 12, 2021	Lecture Discussion (COM S 352 Section B) (https://canvas.iastate.edu/calendar? event_id=451610&include_contexts=course_82079)	12:05pm to 12:55pm
, -	COM S 352 Lecture (https://canvas.iastate.edu/calendar? event_id=472146&include_contexts=course_82079)	12:05pm to 12:55pm
Sun Nov 14, 2021	Reading 12: Security (https://canvas.iastate.edu/courses/82079/assignments	due by 11:59pm
Mon Nov 15, 2021	COM S 352 Lecture (https://canvas.iastate.edu/calendar? event_id=472143&include_contexts=course_82079)	12:05pm to 12:55pm
Wed Nov 17, 2021	COM S 352 Lecture (https://canvas.iastate.edu/calendar? event_id=472142&include_contexts=course_82079)	12:05pm to 12:55pm
Fri Nov 19, 2021	COM S 352 Lecture (https://canvas.iastate.edu/calendar? event_id=472140&include_contexts=course_82079)	12:05pm to 12:55pm
Man Nay 20, 2004	Reading 13: Networks and Ch. 48 due b (https://canvas.iastate.edu/courses/82079/assignments/1422279)	
Mon Nov 22, 2021	COM S 352 Lecture (https://canvas.iastate.edu/calendar? event_id=472141&include_contexts=course_82079)	12:05pm to 12:55pm

Details	Due
COM S 352 Lecture (https://canvas.iastate.edu/calendar? event_id=472139&include_contexts=course_82079)	12:05pm to 12:55pm
COM S 352 Lecture (https://canvas.iastate.edu/calendar? event_id=472136&include_contexts=course_82079)	12:05pm to 12:55pm
COM S 352 Lecture (https://canvas.iastate.edu/calendar? event_id=472138&include_contexts=course_82079)	12:05pm to 12:55pm
COM S 352 Lecture (https://canvas.iastate.edu/calendar? event_id=472133&include_contexts=course_82079)	12:05pm to 12:55pm
Lecture Discussion (COM S 352 Section B) (https://canvas.iastate.edu/calendar? event_id=451608&include_contexts=course_82079)	12:05pm to 12:55pm
COM S 352 Lecture (https://canvas.iastate.edu/calendar? event_id=472135&include_contexts=course_82079)	12:05pm to 12:55pm
Reading 14: Ch. 49 (https://canvas.iastate.edu/courses/82079/assignments	due by 11:59pm
COM S 352 Lecture (https://canvas.iastate.edu/calendar? event_id=472134&include_contexts=course_82079)	12:05pm to 12:55pm
COM S 352 Lecture (https://canvas.iastate.edu/calendar? event_id=472137&include_contexts=course_82079)	12:05pm to 12:55pm
Final Exam Review Session (COMS 352 All Sections) (https://canvas.iastate.edu/calendar? event_id=451611&include_contexts=course_82079)	12:05pm to 12:55pm
	COM S 352 Lecture (https://canvas.iastate.edu/calendar? event.id=472139&include_contexts=course_82079) COM S 352 Lecture (https://canvas.iastate.edu/calendar? event.id=472136&include_contexts=course_82079) COM S 352 Lecture (https://canvas.iastate.edu/calendar? event.id=472138&include_contexts=course_82079) COM S 352 Lecture (https://canvas.iastate.edu/calendar? event.id=472133&include_contexts=course_82079) COM S 352 Lecture (https://canvas.iastate.edu/calendar? event.id=472133&include_contexts=course_82079) COM S 352 Lecture (https://canvas.iastate.edu/calendar? event.id=451608&include_contexts=course_82079) COM S 352 Lecture (https://canvas.iastate.edu/calendar? event_id=472135&include_contexts=course_82079) Reading 14: Ch. 49 (https://canvas.iastate.edu/calendar? event_id=472134&include_contexts=course_82079) COM S 352 Lecture (https://canvas.iastate.edu/calendar? event_id=472134&include_contexts=course_82079) COM S 352 Lecture (https://canvas.iastate.edu/calendar? event_id=472137&include_contexts=course_82079) COM S 352 Lecture (https://canvas.iastate.edu/calendar? event_id=472137&include_contexts=course_82079) COM S 352 Lecture (https://canvas.iastate.edu/calendar? event_id=472137&include_contexts=course_82079)

Date	Details	Due
	COM S 352 Lecture (https://canvas.iastate.edu/calendar? event_id=472132&include_contexts=course_82079)	12:05pm to 12:55pm
Late Credits (https://canvas.iastate.edu/courses/82079/assignments/		rs/1434094 <u>)</u>