

See also: [attachments from those emails.](#)

Sent Feb. 21, 2018:

Most of the credit in 474 is for the exams. I want you to be able to plan your term, so I am setting the in-class exam dates now.

It seems natural to have exams on days 10, 20 and 30. But day 20 is the day before spring break, so exam 2 will be day 19. We will have class on Day 20.

In-class exam dates: March 20, April 5, May 1. If you have conflicts with any of those dates, please let me know by the end of week 1. If you don't have conflicts now, please don't let any conflicts push their way into your schedule.

Final exam: during Exam week, whenever the Registrar schedules it.

Graduating seniors: A short exam just over the last part of the course, near the end of 10th week: Probably on Friday.

Sent Feb 15, 2018:

1. Reminder of things to do before the course starts, based on the previous message (below):
 - a. Get the textbook very soon if you have not done so already.
 - b. Skim Appendix A to get an idea of how much time you need to spend reading it before the course begins. If you are still up on everything from MA 275 and 375, that should only be a couple of hours. If you do not remember much from those courses, it could be 10-15 hours or more. The critical thing is that you be really up to speed on the things in that appendix before the term begins, so you should do what it takes!
 - c. Do that reading.
 - d. Complete quiz 1, which is due at the beginning of the first day's class. I did not change the quiz from what I sent you before.
 - e. Bring a hard copy of the completed quiz to class. (you may not use a late day for this assignment). You can
 - i. Complete the quiz electronically and print it, or
 - ii. Print it and legibly complete it by hand.
2. There is a second reading/prep quiz, mainly reviewing the basics of strings and sets of strings, and concatenation of strings and sets of strings. It will be due in class on Tuesday, or you can bring a hard copy to my office or to my box in the CSSE workroom.
3. I will not be able to do much with the spring term syllabus, schedule page, or stuff on Moodle until after final exams are graded. But all of those will be similar to the last time I taught the course face-to-face. You can find the schedule and syllabus for that term at <https://www.rose-hulman.edu/class/cs/csse474/201620/Schedule/Schedule.htm>.
4. As you are reading and doing the quiz problems, feel free to post questions on the course's [Piazza](#) page.

Feel free to come to my office or to send me email if you have questions about this email or the previous one.

Claude Anderson

Sent Jan 25, 2018:

Welcome in advance to Theory of Computation. I love to teach this course and I want all of you to succeed. Based on course evaluations from the last time I taught this as a face-to-face course in 2015-16, almost all students find the course to be very enlightening and enjoyable (and also a lot of work!)

474 is all about “how do we mathematically model computation, and what can we prove based on those models?” It is a very abstract course, and many of the results that you will prove are counter-intuitive. I believe that the intellectual level of this material is as high as any CSSE course, and probably as high as any course on campus, with the possible exception of Functions of a Real Variable.

I usually send the first email to students during 9th week of the term before the course starts. And I will send a detailed email 9th week this term as well. This week 7 message is partly prompted by the fact that all of the 474 sections are full and there are 8 students on the waitlists. Every time I teach the course there are a few students who quickly discover that their background from the Discrete Math courses is not strong enough to handle the material from this course. My hope is that if you are in that position, you will discover it right away. Then you can either develop a plan to fix that before the course begins or you can drop the course and let a student on the waiting list take it. I hope you will do the former, and the rest of this message is designed to help you with that.

We can only spend a little bit of class time reviewing the mathematical background for this course. So in 2013-14 and 2015-16 I had students make sure that they were up-to-speed on the background material before the course began. This reduced significantly the drop-out rate and also improved the average grades of students who finished the course. So I will be doing the same thing this year.

The course textbook is [Automata, Computability and Complexity: Theory and Applications 1st Edition by Elaine A. Rich](#). A student who received **the much cheaper international edition** yesterday compared its content with my copy of the US edition, and it seems to be identical. Amazon lists 48 copies for \$30 or less. At one time CourseSmart offered an electronic version of the book; when Vital Source bought CourseSmart, they unfortunately did not continue to offer it. Don't be alarmed by the size of the book. We will only cover Appendix A and about 20 of the chapters.

Appendix A is one of the best things about this textbook. It contains a concise review of the needed mathematical background. It also gets you accustomed to the kind of mathematical notation that will be used throughout the book. **You should read pages 745-792 and 798-800 before the course begins**, and complete a “reading quiz” over the material. That quiz will be due at the beginning of the first day of class. Think of completing this quiz as your “admission ticket” to the course.

I have attached Appendix A, the author's PowerPoint slides for that appendix, and the reading quiz from 2015-16 so you can preview them and see what is expected. I will send the 2017-18 versions of the quiz before the end of winter term; I do not expect it to be very different than the one that I attached here. I recognize that sending you Appendix A may be a copyright violation, but I think I am within the “spirit of the law” since all students in the course will need to obtain a copy of the entire book.

To do right away: Take a quick (15 minute) look through the Appendix A pages listed above to see what is there and to get an idea of how much work you will have to do in order to get a thorough understanding of at least 75-80% of that material before the course begins. Plan your time accordingly. Some of you will look through it and say, “I remember almost all of this stuff; I do not need to spend much time on it.” Others may say, “I never understood some of this stuff, and I have forgotten a lot of what I used to know. I'd better plan to spend a lot of time on this so I will be ready for the 474 course.”

What you should not say: “I have a lot of learning/re-learning to do, but I am sure it will be all right if I wait until after the course begins.” Some students who start this course with background deficiencies are never able to catch up; they are the ones who end up dropping the course.

I may have painted a bleak picture here. Fortunately, that picture does not apply to most students. Students who got an A in MA275 and remember most of the material should find that with only a small amount of “memory refresh” they are ready to jump into the 474 material, do well, and enjoy it. Students with lower grades or a lot of elapsed time since your DISCO course, will have more to do to be ready, but the 51 assigned pages from the textbook appendix has everything you need to know, so there is a simple way to remedy any background deficit if you'll take the time to do it.

Finally, I know that it is very unusual to require work from students before the course begins. I only do it for this course. I do not require students to learn new material before the course begins; they only need to review material that they should already know, and see it in the perspective of the notation that will be used in this course.

If you have questions about this process, you can email me. If you have questions about the material from appendix A< you can also email me, but it may be better to post them on [Piazza](#), where other students can possibly answer your questions, and all students can see both your question and the answers from students and instructor.

Claude Anderson
