CSC 286/486: Computational Complexity
Course Information Handout/Syllabus

Version 1.3.0 (any substantially updated versions of this document will be announced as the course goes on via BB and made available on the course home page)

Fall 2017 Semester
2017/9/12 (last updated: 2017/9/26/545pm)

Location/Time: The course meets in Room CSB 632, M/W 2:00PM–3:15PM.

Instructor: Lane A. Hemaspaandra, WEG 2317, csc486staff “at” cs.rochester.edu. Office hours: Wednesdays 3:30PM–4:30PM (but from 3:45PM onward I’ll stay only if there are people at my office hours, so please do arrive safely earlier that 3:45PM for sure) in WEG 2317, (but please always feel free to stop by any time without an appointment or, easiest of all, grab me right before or after one of our class sessions), through and including December 11th (but not Oct. 9th).

TAs and Review Sessions:
Graduate TA: Ethan Johnson, WEG 3203, csc486staff “at” cs.rochester.edu. Office hours: Mondays 3:30PM–4:30PM in WEG 3203 and Wednesdays 4:30PM–5:30PM in WEG 3203. (Also, please always feel free to stop by his office any time without an appointment, and if he has time he’ll see you then, or otherwise will try to make a separate later appointment with you.)

Review Sessions: And on Thursdays (except not after classes end or during Thanksgiving recess) Ethan will conduct a weekly, optional (but very strongly recommended) Review Session at 4:50PM (lasting 50–100 minutes, most typically ending in around 75 minutes) in room CSB 632. Students typically find these review sessions to be very valuable in staying on top of this course’s (quite demanding) material. (FYI, the above info regarding office hours and review sessions may change later in the course, in which case it would be announced via BB and any major change will be included in an updated version of this document.)

Undergraduate TAs: Shir Maimon, csc486staff “at” cs.rochester.edu. Office hours: Fridays, 230PM–330PM in WEG 3017. If you wish to meet with Shir for help beyond that, please use the above email to get in contact with her.

Colin Pronovost, csc486staff “at” cs.rochester.edu. Office hours: Tuesdays, 11AM–noon in WEG 3017. If you wish to meet with Colin for help beyond that, please use the above email to get in contact with him.

Address for Course-Related Email: Please use csc486staff “at” cs.rochester.edu. (This address will be automatically forked by the system to go to both me and the TAs. Please make sure to always use it so that none of us are left out of the process of being on top of any questions and discussion. The only exception is if you are for example trying to set up a one-on-one appointment time with Colin, Ethan, or Shir, then you might want to write them directly at their individual email address of, respectively, cpronovo “at” u.rochester.edu, ejohns48 “at” cs.rochester.edu, and smaimon2 “at” u.rochester.edu.)

Overview: This course studies the difference between computable and uncomputable problems and between feasible and infeasible problems. Regarding the latter, what properties of a problem make it computationally simple? What properties of a problem may preclude its having efficient
algorithms? How computationally hard are problems? Topics often covered include: Complete sets and low information content; P=NP?; unambiguous computation and one-way functions; reductions relating the complexity of problems; complexity classes and hierarchies.

The course is discovery-driven. Rather than me just pushing theorems and proofs at you, we will—at a prefix of the course that indeed will be that—be having you work on discovering for yourself the proofs to many of the important results of the field (often in class or over a few class sessions, often starting individually and then working in increasingly large groups on the given problem, often until at the end the entire class as a group of the whole presents its approach to a problem). The goal of this approach is to help you improve your skills at discovering, formalizing, and proving, which are core skills for researchers.

**Prerequisites:** CSC 280 (prereq). You should also have taken (or know equivalently well) discrete mathematics (MTH 150), which is a prerequisite of CSC 280.

**Collaboration and Class Participation:** You may discuss and work with other (current) CSC286/486 students on the reading, studying, and problems; the goal of the course is not to compete with each other, and, indeed, in real research, collaborative work is very common. However, it is cheating to solicit help from anyone other than your classmates—this includes (as cheating) using electronic forums such as StackOverflow/wikis/Piazza-or-so-on/Facebook-or-Google/etc.-groups (or even mailing lists that function as electronic discussion forums) and also includes (as cheating) using solutions from previous years' CSC286/486. What in most courses would be called homework will in this course typically be framed as a take-home quiz(izes), and on those you may speak about the problems with your classmates within the framework and rules mentioned above and below. (We may have things called homework or home exercises, and unlike take-home quizzes, those will not be graded, and indeed, will typically be gone over or solved by the class at the Review Session.)

More broadly speaking, it is cheating to get or use, during this course, course quiz or homework or exam materials (quizzes or their answers, homework sets or their answers, exams or their answers, etc.) from any previous offering of CSC286/CSC486. Further, when doing take-home quizzes or home exercises, you indeed may use the library and the internet to search for information and examples on techniques and so on. But you should not attempt to find/look up a solution to a given in-progress home exercise or take-home quiz problem; doing so is cheating. If you by accident stumble on a web page that happens to solve an in-progress home exercise or take-home quiz problem, that in itself is not cheating. But you should, immediately the moment you realize that this has happened, not read or copy the solution. The experience and skills you'll build by working on solving problems are an important part of doing this course; this is not a course about web-searching for answers.

Also, your write-up of your take-home quiz answers must be your own work/words, even if you discussed the problems with others; you may in no case copy all or part of anyone else’s write-up. *(A very wise way to achieve this is as follows: Even if you have discussed the problem with others, as you do your final write-up have nothing in front of you but rather write just from the knowledge/images of the solution you have in your head.)*

I strongly encourage the undergrads and grad not to act as if they have no connections and cannot interact, but, rather, I'd encourage you to treat each other as what you are: fellow learners who are interested in complexity and may be able to help each other better learn this important, fun, difficult area.

Take-home quizzes must be submitted on time; late ones get no credit (and will not be graded or marked up with comments; although you always can stop by the TAs’ or my office hours to, after solutions have been gone over in class, make sure you understand those solutions or to discuss an alternate approach). *(No late turn-ins means no late turn-ins; even if one of my faculty colleagues—even if he or she is the chair—tells you that he or she thinks it will be ok to hand in late a quiz/etc. in*
this course, even for some very good reason such as there being a research paper deadline or there
being a fellowship deadline, you nonetheless must hand in your take-home quiz on time in this course
if you wish to get credit for it; similarly, none of my faculty colleagues can excuse you from this
course’s in-class quizzes, or other material.)

Also, you must write yourself your one-sheet notes allowed on in-class quizzes (see below). Note
that the quizzes make it counterproductive to ever be in the state of having relied so heavily on
classmates that you do not yourself fully understand everything. The TAs and I generally won’t
answer questions about take-home quiz questions that are currently in progress (my typical answer
to such questions is to point to this sentence itself (let us label this sentence “β1” as a convenient
reference string ), or “no comment,” or “understanding the question is part of solving the question”
or if it was asked by email simply not to reply); of course, if you have questions about the underlying
material (that a question might be related to), you can and should use the office hours or the review
sessions to ask questions about or better learn about that material (but not to ask for answers to
or explanations of in-progress take-home quiz questions).

You may bring to each class one sheet of handwritten notes (writing on both sides is allowed;
you may alternatively bring two sheets on which each has one side with handwritten notes and one
side that is totally blank), prepared yourself. You may use this sheet of notes on a surprise quiz that
class. (Separate from this is the issue of bringing in notes on any take-home quiz problems. If you
are called on to present some of the take-home quiz problems in class, you may bring with you to
the blackboard as many sheets as you like of your own handwritten notes on the problems.)

Regarding class participation, you are expected to attend class, to be prepared for class, and to
participate in class. For example, if you are called on to put up your answer to a for-home-thought
problem it should be clear that you have put in a serious amount of time and thought. Note that,
even if you do not know a perfect answer, if you clearly have put in careful thought (e.g., you have
partial results or a clear description of what issue is stumping you), that certainly will make a much
better impression than if you clearly have not thought at all about it. As another example, your of
course should always have done any assigned reading.

By the way, if you have a question in class about some of the course material, it usually is a
good idea to ask it. Probably other students have exactly the same question,1 and you will be doing
yourself, them, and the class a big favor by asking, so we all can explore whatever issue you raise!

(Some caveats: This is a course on certain material, not a course on how to design and teach a
course on that same material. Thus please do not ask course-design/course-logistics questions such as
“Why are there so many quizzes?” or “Why can’t I use my computer, my full notes, my supersmart
pet dog Fido, and our textbooks during quizzes?” I don’t answer questions about the “why”s of the
course’s design or its rules. (Most are designed to help teach a good course and to allow the TAs
and to spend as much of our time as possible on content and on providing you grading/feedback;
and also, some rules are related to CETL-accommodation issues.) Also, audio or video recording
of the class sessions is not permitted, except if you have a documented disability that would need
such recording, in which case please speak to me about this. More generally (again except in the
case of CETL accommodation on which I have received a letter about that on you from CETL),
no laptops/tablets/smartphones/etc. may be opened or out or in use in class—except any laptop
that is connected to the projector to give the day’s talk—nor may you Skype in—not even in silent
view-only mode—on days you can’t attend class, nor may you have a classmate electronically record

1Even professors sometimes—more often than they would like to admit—don’t understand talks/lectures, even in
their own areas! Here is a cute, relevant anecdote from Moshe Vardi’s introduction to the September 2011 issue of
CACM, where he mentions asking, at a top theoretical computer science conference, how many people understood
at least N% of at least N% of the papers—to get 50% of the people to say yes, he had to drop N down to 50.
Understanding lectures is a nontrivial challenge, and requires a lot of focus!
or transmit that class session for/to you. If you cannot attend, though, of course do get promptly from a classmate (in the dream case, one that you have warned to please take notes for you due to you having to miss the class session) a detailed account of what happened in class (including what was assigned and what take-home quiz if any was given out) and if some of our course slides were covered in class that day you’ll want to find out from your classmate which were, and read them, and also missing a class when something was handed back does not change your regrading window, so do pick up from the grad TA your handbacks at his next office hour or if that is beyond the regrading window or is too close to its end, try to arrange with him to get it back even earlier (perhaps you can ask him—ahead of the class you’ll miss—to give it at that class session, in a sealed envelope, to a friend in class to bring to you), as needed. Finally, regarding asking questions about the course material: Questions should not be asked by email, but rather please ask them in class, or use the fact that we have office hours or Review Session on four of the five weekdays to ask your question by showing up in person to ask at an office hour or a review session—and please also keep in mind that your 286/486 classmates are often a great resource with which to discuss the course material (let us label this sentence $\beta_2$, and if you do ask questions by email, we probably will either refer you to this sentence, or will simply not reply since we expect that you know that the expected thing to do is to come into an office hour or review session or to discuss with your classmates); a corollary is that if you have a question sometime after the Friday office hour, you likely won’t—unless you manage to schedule an extra in-person meeting with Ethan, Colin, or Shir on late Friday or early Monday, but there is no guarantee that you will be able to if you try to, esp. if it is at the last minute—get an answer to it before, for example, Monday’s class session; so don’t leave your questions until after the Thursday review session or the Friday office hour.)

**Grading:** The overall course grades (A, A-, etc.) will not be any fixed curve, but rather will reflect the instructor’s judgment about what grade is appropriate based on performance.

Everything in the course comes in 100-point chunks. All 100-point chunks are created equal, whatever they come from. Most or all of the chunks will be in-class or take-home quizzes. If late in the course students in groups present a unit (e.g., book chapter), that will count as 9 100-point chunks, superchunked. What I mean by that is if your score on it is 88, that will recorded in Blackboard as 9 100-point chunks each with a score of 88. It is not impossible that some other items in the course (you will in such cases be told this either on the item itself or beforehand) will be handled as superchunks.

*If you are taking the course as 486, at the end of the course we will average all your chunks, after dropping the lowest three. If you are taking the course as 286, at the end of the course we will average all your chunks, after dropping the lowest eight.*

Note that the grading scheme is very different from that of a course where there are major exams that count for a large part of the course grade and sometimes people try learning things the day before the exam (and forgetting them the day after perhaps). In contrast, our stress, since almost all the chunks are coming from your quiz grades week in and week out, is on having/gaining/sustaining day-after-day and week-after-week performance, competence, and with luck mastery, as reflected in your quizzes. It is a 14-week course, not a 150-minute course.

As to grades (and what is made public and what is not), each student gets his or her own grade on each item, (and of course I assume and expect that you will keep each given-back item/grade), and through Blackboard he or she will see some information about the overall class performance each of those items, and at the end of the course he or she will receive his or her course grade either from the registrar or from me. However, I in general do not give out grade or grade-distribution or grade-range-cutoffs info beyond that (or provide guesses of what letter grade a student is “headed toward”), though of course if a student wishes to share with some classmate his or her grades on some items or the course, that is up to him or her.
Note that, very informally put, the chunk dropping in some sense covers 286 students for eight chunks of misses, and 486 students for three chunks of misses. However, I would urge each of you to attend every class (except when sick) and do all items; you will learn far more and enjoy the course far more; and that will let the drops just end up dropping whichever chunks you happened not to do well on, rather than ones you skipped outright.

Beyond that, in grading the course, the 286 students will have their grades assigned with consideration of the fact that they are taking the course as 286. (Thus, 286 students should not view themselves as being in competition with the 486 students—though actually no one should view him- or herself as being in competition with anyone else in the course.) All undergraduates in the course (except those who did excellently in CSC280) should speak with me immediately after the first class, so we can get a handle on exactly what your background is as it relates to the current course, and whether you are ready for this course.

We will use Blackboard to store and to share with you the grades on each item. (If we enter your grade in Blackboard incorrectly as an overly low grade, you have the same time frames as in the regrading-request information to get to us your request that we correct that within Blackboard. Thus you’ll want to frequently check Blackboard. So, except for the last 10 days, you have a 48-hour window after something is handed back in class to let us know by email to “csc486staff” of any case where we simply entered the wrong number—for this case, we will not regrade your entire item, but rather let us know within the window by email, and include a scan of the cover page that shows the grade we wrote but didn’t correctly enter.)

This course is available for audit credit, but only with my permission, so if you want to audit this course, please do make sure to talk with me (by email or on the first day of class).

Class Attendance: Required.

Academic Honesty: On all aspects of the course, it is very important to follow appropriate norms of academic honesty and professional conduct, most importantly including those regarding plagiarism; do not plagiarize. Please see the link from the course’s main web page to the school’s site on academic honesty. And note carefully the rules about what you can and cannot do/discuss together with classmates (note the discussion at the start of the section “Collaboration and Class Participation” of this document) and the rules on what notes/etc. you can/cannot have during quizzes.

Quizzes: No makeups (not after the fact; not before the fact). No exceptions (except for religious holidays discussed long in advance2) As a bow to sicknesses, broken cars, varsity events, conferences, and other compelling excuses, each 486 student will have his or her three lowest chunks dropped (but no more, even with good excuses). As a bow to sicknesses, broken cars, varsity events, conferences, and other compelling excuses, each 286 student will have his or her eight lowest chunks dropped (but no more, even with good excuses). The only exceptions to the above will be with a letter from a convincing (i.e., one with the authority to mandate exceptions to course policies) Dean who has read the course’s policy regarding no makeups and that dropped quizzes are given to all students in the above way to account for all reasons) and who having seen that has determined that your case is so extraordinary that he or she is mandating an exception to the policy in your case.

2To be explicit: You should, no later than September 15, noon, send me an email if any of the class days fall on days where due to observance of a religious holiday you will not be able to attend; in that email, you should please let me know all such days for the entire term. If you have a religious conflict told to me by the above date, I’ll regarding the in-class quiz give you a makeup (perhaps oral or perhaps written) quiz or will simply try to avoid having a quiz on that day. If a take-home quiz/etc. falls due on a religious holiday, you should take that into account and make sure you nonetheless turn it in on or before the deadline; you may email your take-home quiz hand-in to “csc486staff,” no later than the deadline of course, as a pdf, if for some reason (religious holiday; illness; etc.) you cannot attend class on its due date to hand it in yourself.
By the way, regarding sickness or other times you’ll be missing a class session at which some item is being collected, let me mention that if you send in your (for example) take-home quiz to class, in a sealed envelope, with a friend who remembers to turn it in when the take-home quiz is collected today, then your item will be graded. Alternatively, you can do your item and mail it to us as a pdf (e.g., computer typeset, or as a scan of your handwritten take-home quiz), to the address csc486staff “at” cs.rochester.edu, and as long as it arrives in our email box before the 2:00 start of class (after sending it, keep looking for a few minutes to see if you get a “bounce” error message, e.g., because you misspelled the email address or you sent a file so large the mailer bounced it—the UR faculty email system as least used to bounce any message on which the total size of the message, including all attachments, was 20MB or more, although I am not sure if it still does), we will grade it as if you had turned it in at the class session.

The no-exceptions policy is so settled and broad that we expect you to understand it and not to ask for exceptions; and so if you email asking for an exception, we generally won’t reply to the email, but rather the answer is implicitly a “no.”

There will be no midterms and no finals. There will be many, many quizzes (very often or usually “surprise” quizzes, but actually I often so heavily signal them that often the fact that there is a surprise quiz won’t be too surprising, plus we’ll have sufficiently many that the real surprise may be days when we don’t have a quiz).

Please use only black or blue pen (no pencil allowed) on handwritten turn-ins (typically take-home quizzes), and even in computer-generated text (such as if you typeset your take-home quiz answers on a computer) please don’t use the colors red or purple, as we may use those in our grading. As to in-class quizzes, ideally you’ll do those in black or blue pen, but if you truly feel that writing in pencil is far better for you than using pen, you may do your in-class quizzes in (black, number 2) pencil.

By the way, if you see in Blackboard a 0.01% as your grade on a quiz or project, what that means is the following: If you don’t submit something, we of course record a 0.00%. But if you hand something in and get a zero (or even any grade between 0 and 0.01%), we will often record it in Blackboard as a 0.01%, so that I can see that you did hand it in.

As mentioned earlier, depending on how the course goes, we might do discovery-based learning for the entire rest of the course once we start that; or we might have a superchunked in-groups project in the form of tackling and presenting a topic (usually some chapter that I assign your group from our Hemaspaandra and Ogihara textbook).

All in-class quizzes are closed-book unless they explicitly say otherwise. The quizzes are also closed notes, except for the one sheet of cram-notes prepared by yourself, as discussed elsewhere.

Anyone with a documented disability for which accommodation is relevant to this course should please have the appropriate university office inform me of this and the related accommodations immediately (and should please speak privately with me after the first class so we can start on the logistics related to those accommodations).

Note that a quiz may at times be on material that is related to class but that you have not seen before. You should not assume that the number of quizzes will be the same in the second half of the term as in the first half. On some days, we may have more than one quiz on the same day. You should not at all assume that quizzes will be mechanical playback of information. Some might be, but others may expect you to apply and/or extend and/or demonstrate creativity and insight. Somewhat relatedly, some quizzes may be easy and some may be hard. Coming in prepared is always a good idea (and is expected). Some quizzes may be take-home exercises that ask you to do something, such as come to an office hour and demonstrate your skill in some technique.

No questions may be asked during quizzes, and none will be answered; the process breaks the flow and concentration of the class, and can be unfair as to who gets what information due to having
asked or not having asked questions (even if one tells the whole class something about a problem in the middle of the exam in response to a question, such as a correction/change to a problem, some people may have already spent/wasted time on that flawed problem and some may have not, and the former group will be put at a disadvantage just due to the order they tackled the questions in). If you see on a quiz something that you’re sure makes solving the problem impossible (or equivalent to something such as resolving P versus NP that is something I wouldn’t possibly ask you on a quiz) or makes the problem meaningless or incoherent, what you should do is that as part of your answer you should clearly explain what you have noticed, and why it seems to make the problem impossible or meaningless or incoherent. If what you notice seems to be a very minor technical typo and you are sure it is and you see the correction, you probably should note that, fix it, and the solved the fixed problem (but if the original one was really what was meant, you probably won’t get credit if you change it to a different problem; and just noticing for example a spelling error or a missed “the” doesn’t get you out of having to solve a problem).

Timing of the Reading, in the Context of Discovery-Based Learning: For the discovery-based learning in class to work well, it is important that you do the readings in the time periods in which I assign them. Obviously, you should complete each reading by its “Due” date/time. But I mention that, though doing so is not forbidden, if you try to read ahead in order to guess and find the answer to a day’s discovery-based learning challenges, you may be cheating yourself of much of what the course offers. The challenges are to help you explore and learn and prove, and to learn how to prove, but if you come in having read an answer intentionally, you won’t get that effect.

It is true that we may well have quizzes related to the in-class discovery research, but most typically that will happen at the class after the discovery (or at an even later class), and so you’ll if anything be better prepared for the quiz if you really were seeing the problems freshly during the in-class discovery research so that you saw the obstacles and from the class learned what overcomes them. (It is also true that some of the in-class discovery activities may themselves count as quizzes. But even then, the most typical case will be the class by the end has combined into one group that all proposes a joint answer and all get the same grade; and if you managed to pre-guess or pre-read the problem, you’ll be doing more harm than help to your learning, as you’ll have lost the chance to work to find the insights that the quiz is hoping you and your classmates will reach.)

After some in-class discovery research days, I’ll on the web site post reading that covers or is related to what we just learned. In those cases, you absolutely should do that reading before the next class (or by its due date, but the due date will typically be the start of the next class in such cases).

Regrading: If you want some quiz regraded (if there is a group project I’ll grade you on it and regrading won’t apply), you must notify the grad TA (only via the email address “csc486staff” in the domain cs.rochester.edu—not via his personal email address—since “csc486staff” sends it to him, me, and the undergrad TAs) of that via email within 48 weekday hours (i.e., Sat. and Sun. do not count against those) of it being given back, along with an emailed explanation of what you feel was graded incorrectly, and an emailed color scan (B&W is ok if you don’t have access to a color scanner) of your entire graded item (all parts of it—not just what you are asking for a regrade of). Note that the entire quiz that you are asking to be regraded may be regraded (not just the issue about which you are asking), and the grade may move either up or down (and moving down is a very real possibility, e.g., if I (or a TA) discover that a TA (or I) missed some errors, or just graded overgenerously relative to what the regrader thinks during the regrading. We will usually send you the outcome of the regrading within a week of when you make your regrading request, although that is not a promise; rare cases may take longer. Also, a regrading request is irrevocable; once you make it, you cannot withdraw it. And regrading the scan you must submit, it must be identical to what
was handed back to you; altering what was handed back to you, in any way, before scanning it for a regrading request will be treated as an Academic Honesty violation.

Before requesting a regrading, weigh carefully the fact that some or all the regrades may be done by me, and although your TAs are excellent and sharp-eyed, I'm perhaps even more sharp-eyed and perhaps far more demanding, especially regarding having clean, clear, complete answers; like most professors, I spend much of my research time finding flaws in my own and in other professor's argument lines, and so we tend to want arguments to be complete, clear, and error-free. And I am not a fan of partial credit for flawed proofs—proofs are right or are wrong; one flaw opens lets in a universe of invalid conclusions. Simply put, it makes sense to use regrading if we gave you almost no credit for an answer that in fact was correct; regrading is not there so students can try to argue their way to a few more partial-credit points on an incorrect answer.

The only exception to the above time limits and scheme is that during the last 10 calendar days before the last day of classes (i.e., from December 3 onward), anything on which you want a regrade has a single 24-calendar-hour-after-the-class-where-it-was-available-for-return time limit for being submitted for regrading (so look over things given back during the last ten days within the first 24 hours of getting them back, please).

Texts:

(required) Bovet and Crescenzi, Intro. to the Theory of Complexity Classes, the online edition—NOT the earlier printed edition.

(required) Hemaspaandra and Ogihara, The Complexity Theory Companion, Springer-Verlag. (Both the softcover and the hardcover versions of this book are equally good to use.)

(recommended but actually we'll very, very rarely refer to it) Papadimitriou, Computational Complexity, Addison-Wesley.

Places like Amazon and so on have the required Hem-Ogi and the recommended Pap texts, and the UR Bookstore (which is the Barnes and Noble at the corner of Elmwood Ave. and Mt. Hope Ave.) might have them in the computer science section of its textbook department, which is located on the second floor of that store. But please do be aware, see below, that I have asked the library to put their copies on 2-hour reserve at the library for our course, so that is a place where you can get access to them (unless someone else has them out). Bovet–Crescenzi is kindly made available online by the authors at

http://piluc.dsi.unifi.it

(use the link to "Introduction to the Theory of Complexity" to get to the pdf of the book).

Also, your own notes (whatever notes you take in class) surely will be useful to you.

Books on Reserve: On reserve, for this course, at Carlson Library, are quite a few books, including the above books, texts covering some or all of course’s topics, some more advanced (and less advanced) complexity books, some review books on discrete mathematics, and some just-plain-interesting books that I thought that you, as emerging computer-science researchers (and writers), might enjoy. Note that though the course is CSC286/CSC486, the library may list the books under the reserve list of one or both of those numbers.

You can usually get to the library’s list of reserve books for our course, and the status of each, through the Blackboard system (click on the “Reserves” button in our course area), or perhaps alternatively directly through the library’s own online catalog system.

WWW Site: You are expected, as part of taking this course, to visit the course web site

http://www.cs.rochester.edu/u/www/u/lane/=courses/=CSC486/
frequently (i.e., wise would be to peek at it relatively often each day—indeed, it makes a very good homepage for your browser!). Be careful to make sure your browser isn’t caching and showing you an old version that you previously visited (browsers love to do that). The web site will be the path that I will use to post reading assignments (and my quick description of what the topic of each past class was). The web site also has much other information, not just pointers at its end, but also within the day-by-day listing—both as items and as Notes inside each of the days. (The web site’s Notes and BlackBoard’s “announcements” feature are the two main paths used for communication; there is not a hard and firm rule as to which is used for what, but the general flavor tends to be that I often put things in Notes if they are things I want to be stay on the web site or are things that are part of the initial build of a day’s web-site block, and on the other hand for quick reminders/hints that come to mind after I do the initial build of a day’s web-site block I sometimes lean toward BB announcements.)

Note that I usually don’t send a BB announcement when I add Notes to the web page. (I assume either you look at it often yourself (the Notes go up under the session-by-session blocks, in chronological order, and so it is easy to see what the most recently added Note(s) are), or that—since you are CS students and so know your way around computers way better than I do—you added to one of your browsers the existing extensions that notice/alert when the page is updated or, even better, that you use something like Follow That Page; do be careful though... after the first moment I save a changed version, it can take a minute or few for the page to stabilize, as I look at it and see if the update I merged into the main page came out ok after the merge-in and if not I quickly fix things. I very highly recommend using Follow That Page to be automatically notified of all updates to our home page. You can find the information on how to use that service described on our home page in the Navigation Information section near the page’s top; it takes just about 90 seconds to get everything totally set up and running.

**Blackboard Announcements:** Many day-to-day reminders/announcements (aside from those made verbally in class) will be transmitted using the Blackboard “Announcements” feature. You can see these announcements within Blackboard. By default, Blackboard will *not* send you these by email (except I can by hand-checking a special box each time override that and I try to remember to, but I make no promises about always remembering; so...). But you can, by changing your settings in Blackboard, arrange for it to do so (although the UR Blackboard administrator warns you that that option is not necessarily reliable; and so you even if you have it turned on you should very frequently peek at the course’s Announcements area within Blackboard). You *definitely should do so; I assume that you have, and that you thus are quickly getting all late-breaking updates!*

So, how do you turn on email notification of Announcements? Here is how, thanks to the UR Blackboard Administrator:

In your main Blackboard screen, click on the caret or “V” near your name in the upper-right, then choose Settings, then choose Edit Notification Settings. *Fixing your general settings won’t save you; the course ones override those in a bad way.* So under Edit Individual Course Settings, select this course, and then check the Email box at the top of the email column, and then make sure to *click on Submit.* (If you get a big red error screen when doing this, wait a few minutes and try again at few times; Blackboard is prone to such errors but they usually go away in a few minutes when one retries.)

**Fun with Numbers:** Although the course is both CSC286 and CSC486, depending on which you are registered under, I’ll often just refer to it by one or the other of the numbers (or sometimes as CSC286/486 or CSC2/486).

**Various Other Good Stuff on the Course Web Site, Including Advice on Presenting a Paper:** Please note the “Useful Links” section on our course homepage, which contains many
items. For example, that section contains a link to excellent guides by Parberry and Parberry-
Spillman on how to present a paper; these should be big help in preparing your group presentations
on the second part of the course (if we this year have group-based chapter-presenting).