

Course Syllabus for CIS 492 Systems Design and Implementation Spring 2012

Basic Course Information:

<i>Instructor:</i>	Sharon Tuttle		
<i>Lecture time and location:</i>	Tuesday	1:00 – 2:50 pm	BSS 308
<i>Lab time and location:</i>	Thursday	1:00 - 2:50 pm	BSS 313
<i>Instructor's office:</i>	BSS 322		
<i>Instructor's e-mail:</i>	st10@humboldt.edu or sharon.tuttle@humboldt.edu or smtuttle@humboldt.edu		
<i>Instructor's office phone:</i>	(707) 826-3381		
<i>Instructor's office hours:</i>	Monday, Wednesday	3:30 – 5:00 pm	
	Tuesday, Thursday	11:00 am – 12:00 pm	
	or by appointment		
<i>Course public web page:</i>	follow link from: http://users.humboldt.edu/smtuttle/ or follow link from course Moodle site		

Course Description:

[adapted from the HSU catalog] Apply computer programming and implementation concepts to comprehensive group project. Use management planning and scheduling tools; practice assessing and reporting progress; develop, test, quality assure software; develop documentation.

CIS 492 is a group/team programming course, with teams determined by the instructor. Since this course is intended to be an implementation course, software design and implementation will be more of our focus (you've already taken systems analysis, and this is not an additional systems analysis course). Software engineering principles will come into play and will be a major topic of discussion. In addition, this is a senior capstone course intended to draw together aspects from several previous courses. Because of this, the project for this course has some very particular requirements (for example, it must involve a database of the team's design implemented on the Oracle student database on nrs-labs). A project handout will be provided early in the semester including these requirements.

Like many a programming project course, there will be the usual dichotomy between concepts discussion and the life cycle of the course project --- lecture discussion will typically involve discussions of the course text, The Mythical Man Month, a classic collection of essays on software engineering. Additional reading material will be handed out in class, posted to the course web page, or posted to the course Moodle site.

Although the course is project-oriented, its structure (and the course text) has been chosen to emphasize the process rather than the outcome. The specific grading breakdown is given later in this syllabus -- however, in general, your grade for the semester will be determined by how well your team meets the scheduled milestones,

how well your team accomplishes its objective of a professionally-engineered application, how well you perform within your team, your commitment to the process as evidenced by your attendance and participation during class sessions, your enthusiasm and effort throughout the semester, and your individual performance on quizzes and the course final exam. Note, also, that part of your project grade will be determined by evaluations of your effort by your teammates; these peer evaluations will be done several times during the semester.

Please note that the team approach for the course project is **not** optional. This is not a course for working in isolation on an individual project, but rather for learning how to function effectively as a member of a team developing a piece of complex software. Part of what you will be learning, then, is how to deal with a team setting -- however, if a team member, in my judgment, is refusing to sufficiently participate in/contribute to the team's project, for whatever reason, I reserve the right to remove that member from the team. Since one cannot pass this course without participation in a team project, such a member will not pass this course.

If any student or team has serious issues with a team member, please bring them to my attention **as soon as possible**.

(slightly adapted from Cashman and Eschenbach's Engi 111 Team Contract Guidelines): There will be **no illegal activity** during any team meetings or working sessions. Illegal activity includes, but is not limited to, underage drinking and illicit drug use. This rule must be enforced regardless of whether the meeting takes place on or off campus. The team must notify me immediately (or by the next class meeting) if a violation of this rule occurs and the offending team member will be removed from the team and assigned a 0 for the entire course project.

Details about the project and the teams will be forthcoming. Each team will be assigned a project.

The typical "lecture" session will not be a true lecture, but rather is intended to be a discussion of the chapters of The Mythical Man Month and other reading assigned for that session. Because the quality/benefit of these discussions is dependent on class member participation, and because such participation cannot be "made up" in any real sense, attendance will be taken during the lecture sessions, and 7.5% of the course grade will be based on attendance/participation in the discussions, and 7.5% of the course grade will be based on attendance/participation in the lab sessions (as discussed below). For compelling reasons, each student may have up to two "excused" absences without penalty to their participation grade, but otherwise each unexcused absence from a discussion session will result in a loss of 10% of the attendance/participation grade. (Please note that arriving at the discussion session late may count as an absence.) I reserve the option to further lower the participation grade of any student attending, but not participating in, these discussions.

Also as part of the discussion sessions, each student will be assigned to find an article related to one of the discussion session's topics, using the ACM Digital Library. A handout about this will be made available shortly. Each student will fill out a form which includes how he/she used the ACM Digital Library to find the article, will turn in a copy of the article he/she found, and will make a 5-minute presentation during the discussion session talking about the article and how it relates to that day's discussion topics. This assignment will make up 7.5% of the semester grade, as shown in the grading breakdown.

Lab session attendance is mandatory as well, and attendance will be taken. In a typical lab session, part of the lab session will be presentation/discussion, and part *may* include an opportunity for teams to work on the course project. (You should not assume that lab sessions are only for team meetings; a number of important class activities take place in lab sessions.) Again, for compelling reasons, each student may have up to two "excused" absences from the lab sessions, but otherwise each unexcused absence from a lab session will result in a loss of 10% of the attendance/participation grade. (Arriving to lab late may be counted as an absence as well.)

When part of lab is made available for team meetings, it is important that you realize that such time is **mandatory** team meeting time, and meeting notes are required --- there will be information about this in the upcoming project handout. It is not a time that you can leave early and run errands, it is not a time to work on coursework for other courses. This project is extensive enough that each team should be able to find something to work cooperatively upon during that lab session time that is made available for team meetings. Members who leave early or work on other classes' work should expect to lose points from their attendance/participation grade and from their project participation grade.

This course is labor intensive. Students should anticipate spending a significant amount of time outside of class sessions. In a team-oriented course, it is vital that the teams meet as often as possible -- teams will need to meet more often than just during those parts of lab sessions made available for team meetings. Historically, the most successful teams have consistently cited regular team meetings, starting early in the semester, as an important key to their team's success.

Course Objectives:

After successfully completing this course, students should be able to: *

- better understand the issues involved in developing software systems within teams;
- have been exposed to some software engineering principles;
- have gained system design and implementation experience from designing and implementing a significant software system prototype;
- have applied material from previous courses in a senior capstone experience;
- have gained presentation experience from project-related team presentations;
- be able to use an on-line database (ACM Digital Library) for research.

Course Prerequisites:

CIS 318, CIS 350, CIS 372, and CIS 450, each with a grade of C or better, or instructor consent

Required Course Text, Materials, etc.:

- Brooks, Jr., The Mythical Man-Month: Essays on Software Engineering, Anniversary Edition, Addison-Wesley, 1995. (note --- the 1979 edition will not suffice!)
- Turning Point RF Response Clicker, available at the campus bookstore
- Additional required readings will be made available either on-line, or via resources available through the HSU Library such as the ACM Digital Library and Safari TechBooks Online.

Clickers:

We will be using Turning Technologies student response clickers in discussion sessions. We will be using them in a different fashion than is typical, however -- as an experiment this semester, I will be administering reading quizzes in the form of clicker questions. Because most discussion sessions will involve discussion of assigned readings, and because these discussions are noticeably degraded when students have not done that reading in advance, most discussion sessions start with a reading quiz whose purpose is to encourage class members to do that reading in advance. In the past, these quizzes have been administered on-paper; this semester, we will experiment with giving them in the form of clicker questions.

Unlike my typical clicker question approach, then:

- because the whole point here is to encourage you to do the assigned reading before the in-class discussion of that reading, you will **not** be permitted to discuss your answers to these questions with other class members before giving your final answer, and these will be "closed book and closed note" questions, with no references permitted;
- the questions making up the reading quiz will typically be given at the beginning of the class session, prior to that day's discussion;

* Some of these are adapted from the ACM Computer Science Curriculum 2001, available from link at: <http://www.acm.org/education/curricula-recommendations>

- you will be graded on your answers as if they were traditional quiz answers -- that is, if there are 5 reading-quiz clicker questions for a particular discussion session, your possible grade would be 100, 80, 60, 40, 20, or 0 for that day's reading quiz;
- there may be a time-limit for you to answer each question (this may be subject to change, depending on how this actually works in practice).

Students purchase this clicker (they are available from the campus bookstore); purchased clickers can be returned at the end of the semester for a partial refund of the purchase price or they can be kept for use in future HSU courses. You register your clicker at the beginning of each semester by logging into Moodle and going to the course Moodle site; you should then be asked to enter your clicker code (consisting of 6 characters/digits) from the back of your clicker when requested. You then bring your clicker to every class meeting.

Because of how we will be using clickers this semester, if you forget your clicker for a discussion session, you will need to turn in your reading quiz answers on-paper (and I'll need to check your answers for each question before we proceed to the next question); in such a case, you will also lose **-20** on that particular reading quiz.

I hope to run tests of the system on Thursday of the first week of classes; the first reading quiz will be during the second week of classes. Therefore, you must purchase your clicker and register it as soon as possible. If there is an issue with this (for example, if the bookstore runs out of clickers), contact me immediately.

Finally, please note that use of another CIS 492 student's clicker, or having someone else use your clicker in a CIS 492 discussion session -- that is, pretending that someone is in class who actually is not -- is considered to be cheating, with the same policies applying as would be the case if you turned in someone else's work as your own or permitted someone else to copy your work. Please ASK ME if you are not sure what I mean by this.

Grading Breakdown:

If you are a Computer Information Systems (CIS) major, it is important that you note that you must earn **at least a C in CIS 492** for this course to count towards your major. If you are a Computer Science (CS) major, it is important that you note that you must earn **at least a C in CIS 492** for it to be able to count as a CS major elective.

Your semester grade will be determined by the percentage of points that you earn, **subject to some minimum requirements**. Here are the grade percentages, followed by those minimum requirements:

Project:		50.0%
Attendance/Participation:	Lecture:	7.5%
	Lab:	7.5%
ACM Digital Library presentation:		7.5%
Summary quizzes:	Quiz 1:	5.0%
	Quiz 2:	5.0%
Reading quizzes:		7.5%
Final Exam:		10.0% Thursday, May 10, 12:40 - 2:30 pm, BSS 308

Grade Requirements:

1. To earn a grade of **C or better** in this course, the following two requirements must **both** be met:
 - your overall semester average must **equal or exceed 72.5%** - this is to show a reasonable level of overall mastery of the course material.
 - your overall Project grade must **equal or exceed 60%** - because the team course project is the heart of this course. If you have not met this requirement, you have not truly shown competence in this

course's material.

2. If **both** requirements above are **not** met, then your semester grade will be **either C-** or the letter grade computed according to the mapping given below, **whichever is lower**.

(That is, if a student had an overall semester average of 74% but an overall Project grade of 55%, that student would receive a **C-** for his/her semester grade; if a student had an overall Project grade of 73% and but an overall semester average of 65%, then that student would receive a **D** for his/her semester grade. You are expected to ASK ME if this aspect of the grading policy is not clear to you.)

3. Including the two requirements noted above, your semester grade will be computed according to the mapping given below:

Overall Percentage (based on the given weights)	Overall Project Grade	Letter Grade
>= 93	>= 60	A
>= 90 and < 93	>= 60	A-
>= 87 and < 90	>= 60	B+
>= 83 and < 87	>= 60	B
>= 80 and < 83	>= 60	B-
>= 77 and < 80	>= 60	C+
>= 73 and < 77	>= 60	C
>= 73	< 60	C-
>= 70 and < 73	any	C-
>= 67 and < 70	any	D+
>= 60 and < 67	any	D
< 60	any	F

Final Exam:

Again, the Final Exam for this course is scheduled for **Thursday, May 10, 12:40 – 2:30 pm**, in **BSS 308** (unless I announce otherwise). Note this time and date BEFORE making your end-of-semester travel plans.

Students with Disabilities:

Persons who wish to request disability-related accommodations should contact the **Student Disability Resource Center** in the Learning Commons of the Lower Library, **826-4678 (voice)** or **826-5392 (TDD)**. You can reach the Student Disability Resource Center's web site at:

<http://www.humboldt.edu/disability/>

Please note that some accommodations may take up to several weeks to arrange. If you are eligible for such accommodations, please contact me as soon as possible to discuss them.

Add/Drop Policy:

Students are responsible for knowing the University policy, procedures, and schedule for dropping or adding classes. You can find these on the web at:

<http://www.humboldt.edu/registrar/students/regulations/schedadjust.html>

You can find the University policies for repeating classes at:

<http://www.humboldt.edu/registrar/students/regulations/repeat.html>

Note that the CSU (and thus HSU) policies on withdrawing from and repeating courses changed as of Fall 2009:

- Students may withdraw from no more than 18 semester-units after the first four weeks of instruction; that is, students may withdraw from no more than 18 semester-units between census and the final 20% of instruction, and only then with a serious and compelling reason.
- Students may repeat courses only if they earned grades lower than a C.
- Students may repeat up to 16 semester-units with grade forgiveness.
- Students may repeat up to an additional 12 semester-units with grades averaged.

Be careful – as of Fall 2009, HSU is being much more strict about what constitutes a “serious and compelling reason”.

The census date for Spring 2012 (before which you can drop without a W, and without it counting toward your 18 semester-units drop limit) is: **Monday, February 13th**.

The last date for Spring 2012 to drop with a W on your transcript, with a serious and compelling reason, and subject to the 18 semester-unit drop limit, is: **Tuesday, April 3rd**.

If you do drop the course, note that it is **your responsibility** to drop the course via the web or by completing and submitting the appropriate paperwork, whichever is necessary/appropriate.

Incompletes:

Incompletes are rarely given and only in the case of a true emergency. They certainly are not appropriate for students who find they have fallen behind on assignments, missed a test, or taken on too much academic, work, or family responsibilities. For these situations, dropping the course would be appropriate (**if** that is still possible according to the University policies for dropping courses).

Time Expectations:

Remember the general rule of thumb for college-level courses --- to be successful in a course, you should plan to spend at least 3 hours outside of class for each 1 hour of college course credit. That implies an estimate of at least 9 hours a week spent outside of class for this 3-credit course.

However, you should be warned that:

- This is a senior-level CIS major course and capstone course; it has an accordingly-rigorous workload.
- Programming courses can be notorious time eaters --- occasionally, a problem with code will take large amounts of time to locate and fix. Starting early gives you time to collaborate with your fellow team members when problems arise.
- Past experience has shown that project teams that meet regularly outside of class throughout the semester learn more and create more successful, higher-quality projects.
- Project milestone deadlines will not be extended because you waited too late to start or because you did not allocate enough time before the deadline to work on it; likewise, they will not be extended because of hardware or network failures. You need to keep backups of your files at all times, and need to plan your schedule to be able to work on on-campus computers as necessary.
- If you have not completed a project milestone by the deadline, your best choice is to submit whatever you have managed to do by then, as partial credit is your friend, and to get a good early start on the next milestone.

Academic Honesty:

Students are responsible for knowing policy regarding academic honesty. For more information, visit:

http://www.humboldt.edu/studentrights/academic_honesty.php

Observe that among the actions that are unacceptable are submitting another's program, code, or file as your own and failing to quote material taken from another person's written work.

In a project such as this, it may be appropriate to make some use of code and tools that you find on the web or in the computing literature. You are expected to **clearly attribute** such material.

Asking Questions/Getting Help:

- You are encouraged to ask me questions in class, in office hours, and by e-mail. The most successful students and project teams are those who are not afraid to ask questions early and often (I will gently let you know if you are overdoing it), who do the assigned reading, who attend lecture and lab regularly, and who start project milestones early.
 - It is better to ask a question sooner than later -- for example, it is better to send an e-mail with a specific question as soon as you think of it than it is to wait a day or two until the next class meeting or office hour. If you wait to ask such questions, you may not have time to complete the next milestone before its deadline.
 - It is perfectly reasonable if you send me a question and then end up finding out the answer yourself before you receive my answer; likewise, it is not a problem if you end up sending me several questions in separate e-mails (as you work on different parts of the project while awaiting earlier answers).
- That said, I am expecting that you will ask **specific** questions – overly vague or broad questions are problematic. (For example, an example of a specific question is, “When I try to run the code: (paste in the code), I receive the following error message: (paste in the error message) Can you point me in the right direction about what is wrong?” An example of an overly vague or broad question is: “Here's my code/database model/database design/etc. Is it right?”)
- I try to check my e-mail (`st10@humboldt.edu` or `sharon.tuttle@humboldt.edu` or `smtuttle@humboldt.edu`) about once a day on weekdays, and about once over each weekend. This is another reason to start project milestones early, so that you have time to receive a reply to any questions that might arise. Include CIS 492 and a general description of your topic in the Subject: line, both because including this makes it less likely that I'll overlook your question, and because it will make your message stand out if the spam filter gets confused and puts it in the university spam quarantine.
 - If I have not replied to your e-mail within 24 hours, please re-send it, just in case it did get overlooked somehow.
 - Also, DON'T INCLUDE the word "password" in your e-mails to me -- `pwd` is a handy abbreviation to use instead -- because, due to phishing scams, HSU's spam filtering definitely does not like e-mails with that word in it! (Odd, but this was definitely the case in Spring 2010...)

Additional Coursework-Related Policies:

- You should not expect to be able to finish project milestones during the lab sessions -- like any college-level course, you should expect to put in a significant amount of time outside of scheduled class meetings (lectures and labs) doing the assigned reading, working on project milestones, and attending project team meetings.
- Each project milestone must be submitted as is specified on the project handout to be accepted for credit. This may vary for different milestones. Often, parts of milestones will be submitted using a special tool on nrs-labs.
- Each project milestone and the ACM Digital Library Presentation assignment will be clearly marked with its

deadline.

- **No coursework will be accepted late. If you wish to receive any credit for a project milestone or course assignment, then you must turn in whatever you have done, even if it is incomplete, by the deadline. Partial credit is usually preferable to no credit.** Note that "the computer/network/etc. going down" is no excuse --- if you leave a project milestone or course assignment for the last minute and there are technical problems, you still must turn in whatever you have by the deadline. As with any work done on computer, make frequent back-ups of your files!
- You may submit multiple versions of project milestone files before the deadline; I will grade the latest pre-deadline submission unless you inform me otherwise. This is to encourage you to turn parts in early (since you will know that you can always turn in an improved version if further inspiration strikes). You also don't have to worry about forgetting to submit something that has already been submitted.
- The tool that you will be using to submit some project milestone parts results in a file that serves as your "receipt" for having submitted items. You are expected to retain these "receipt" files at least until a grade has been posted to the course Moodle site for that assignment. If there is a system glitch or other hardware/software/network problem, you may be asked to make me a copy of one or more receipt files; if you do not have them, then you will not receive credit for the files involved. These receipt files are for your protection!
- It is nearly impossible to write unambiguous specifications. If you have questions about "what she means", get them resolved very early in the development cycle by **asking**.
- There is more to computer code than simply whether it runs or not...
 - Part of your grade will be determined by how well your work meets the written requirements. Work that you turn in is expected to meet handout specifications precisely; when one eventually works within a team on large projects, following the specifications precisely is vital, and can mean the difference between a working product and one that just sits there.
 - Note that work may be graded on **style** as well as on whether it runs properly and whether it precisely meets the given specifications and requirements. Discussions on style will be ongoing throughout the semester.
- Some course work may be graded simply based on whether it has been attempted (the instructor's decision is final as to whether this is the case) -- other course work may be graded for correctness, style, and whether it meets specifications. You will not know in advance which will be the case.

Additional Grading-Related Policies:

- If you would like me to e-mail certain course grades to you during the semester, then you must give me permission in writing on the course information form.
- Note that the Project portion of your course grade includes all milestones, required pieces, required presentations, participation, and the final project itself.
- There will be two on-paper summary quizzes, whose dates will be announced at least one week in advance. Each of the summary quizzes is 5% of the semester grade. These are distinct from the clicker-administered reading quizzes discussed earlier, whose average makes up a separate 7.5% of the semester grade.

Additional Course Policies:

- You are expected to read this syllabus and be prepared to sign a statement that says you have received it, have read it, and understand its contents.
- Please note that the course projects will not be returned at the end of the semester; they will be kept by the Computer Science Department for departmental assessment purposes. Each team will be provided with a

binder and dividers to serve as the team's project notebook.

- Make-up exams and quizzes are only possible by special prior arrangement or because of a valid medical excuse.
- You should monitor your e-mail for course-related messages. The University provides a means for you to specify your preferred e-mail address, so if you wish to receive e-mail into an account other than the one HSU provides, change your preferred e-mail address in both Account Center and Moodle accordingly. Course-related messages from me will include CIS 492 in the Subject: line.
- You are expected to check the public course web page and the course Moodle site regularly -- course handouts and possibly more will be posted to the public course web page, and grades will be posted to the course Moodle site. You are expected to monitor your posted grades and let me know about any discrepancies.
- When reading assignments are given, you are expected to prepare (read and study) assigned readings before class and to participate in class discussions. You should understand that there may be material in the reading that will not be discussed in lecture/lab, and material in the lectures/labs that may not be found in the reading. You are responsible for both.
- **Attendance and disruptive behavior:** Students are responsible for knowing policy regarding attendance and disruptive behavior:
http://www.humboldt.edu/studentrights/attendance_behavior.php
- Regular attendance at lecture and lab sessions is expected. If you should happen to miss a lecture or a lab, then you are responsible for finding out what you missed. "I wasn't there that time" is never an acceptable excuse.
- **Late arrival to class:** Please attempt to come to class on time, with your headphones put away and your cell phones turned off. If you must arrive late or leave early, please do so with the least possible distraction to other students. If your late/early habits become disruptive, you may be asked to leave the class permanently.
- **Class disruption:** University policy requires that instructors eliminate disruptions to the educational process. Distractions such as excess talking, ringing cell phones, working on assignments for other classes, inappropriate or distracting laptop/tablet/smartphone/gadget use, demonstrations of affection, packing of books early, loud music leaking from headphones, chronic late arrivals or early departures, excessive comings and goings or other behaviors that disrupt the class are not acceptable. Students indulging in such behaviors will first be warned before being required to leave the class permanently.
- **Emergency Evacuation:** Please review the evacuation plan for the classroom (posted on the orange signs), and review the campus Emergency Preparedness web site at:
http://www.humboldt.edu/emergencymgmtprogram/campus_emergency_preparedness.php
for information on campus Emergency Procedures. During an emergency, information regarding campus conditions can be found at **826-INFO** or:
<http://www.humboldt.edu/emergency>

Tentative Course Schedule: (subject to change!)

Week 1: January 17, 19

- Lecture/Discussion - Intro to course
- Lab - Project handout out; Discussion: Gantt charts; followed by team work on project

Week 2: January 24, 26

- Lecture/Discussion - Reading: Mythical Man-Month Ch. 16
- Lab - Informal team presentation: display database model-so-far, followed by team work on project

Week 3: January 31, February 2

- Lecture/Discussion - Reading: Extreme Programming readings (to be provided)
- Lab - **Project Milestone 1 DUE (database model, initial business rules, and preliminary schedule);** Discussion: User Stories and Acceptance tests, followed by team work on project

Week 4: February 7, 9

- Lecture/Discussion - Reading: Mythical Man-Month Ch.'s 1, 2
- Lab - informal team presentation: display a user story and your acceptance test template, followed by team work on project

Week 5: February 14, 16

- Lecture/Discussion - Reading: Mythical Man-Month Ch.'s 3, 4
- Lab - **Project Milestone 2 DUE; (user stories and first-version acceptance tests) DUE;** team work on project

Week 6: February 21, 23

- Lecture/Discussion - Reading: Mythical Man-Month Ch.'s 5, 6, 7
- Lab - Team work on project

Week 7: February 28, March 1

- Lecture/Discussion - **Summary Quiz 1**, followed by **Project Milestone 3 (1st FORMAL team presentation)**
- Lab - Thursday, March 1: instructor at conference; MANDATORY team meeting during lab time, with meeting notes expected

Week 8: March 6, March 8

- Lecture/Discussion - Reading: Mythical Man-Month Ch.'s 8, 9, 10
- Lab - **Project Milestone 4 DUE (database design);** team work on project

Spring Break - March 12-16

Week 9: March 20, 22

- Lecture/Discussion - Reading: Mythical Man-Month Ch. 11
- Lab - informal team presentation: describe at least 3 uses for PL/SQL in your project; each team **may** do some acceptance testing of the other team's implemented-user-stories-thus-far; followed by team work on project

Week 10: March 27, 29

- Lecture/Discussion - Reading: Mythical Man-Month Ch.'s 12, 13
- Lab - **Project Milestone 5 DUE (project coding progress report)**; Discussion: reports, followed by team work on project

Week 11: April 3, 5

- Lecture/Discussion - Reading: Mythical Man-Month Ch.'s 14, 15
- Lab - informal team presentation: describe at least 3 reports that would be appropriate for your project, and also display a mock-up of one of these reports; each team **may** do some acceptance testing of the other team's implemented-user-stories-thus-far; followed by team work on project

Week 12: April 10, 12

- Lecture/Discussion - **Summary Quiz 2**, then team work on project
- Lab - **Project Milestone 6 DUE (project reports progress report)**; Discussion on User Documentation, followed by team work on project

Week 13: April 17, 19

- Lecture/Discussion - Reading: Mythical Man-Month Ch. 17
- Lab - informal team presentation: display 1 page of your user-manual-in-progress so far; each team **may** do some acceptance testing of the other team's implemented-user-stories-thus-far; followed by team work on project

Week 14: April 24, 26

- Lecture/Discussion - Reading: Mythical Man-Month Ch. 19
- Lab - Team work on project

Week 15: May 1, 3

- Lecture/Discussion - to be determined
- Lab - **Project Milestone 7 DUE (final version of project)**; Final Project Presentations (**Project Milestone 8**)

Final Exam:

THURSDAY, May 10, 12:40 - 2:30 pm, in BSS 308 (unless I announce otherwise)