# Health Economics I

**Prefix & Number:** PHC6430  
**Semester:** Fall, 2015

**Course Description:** Access to quality health care remains an important public health problem for a significant part of the population. Since delivery of health care in the U.S. is primarily market driven it is essential that we understand the role of markets and market structures as it pertains to access and quality. The purpose of this course is to examine the role of market structures using microeconomic tools and concepts. Within this context, this course examines the theoretical and empirical analyses of major topics in health care economics, such as the production of health, demand for medical care and health insurance, the physician-firm, the hospital market, and government provided health care.

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<th>Credit hours:</th>
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**Pre-Requisites:** Undergraduate Microeconomics  
**Co-Requisites:** Enter

**Location:** CPH 2004

**Instructor Information:** Instructor 1  
Etienne E. Pracht, Ph.D.  
13201 Bruce B Downs Blvd, MDC 56  
4:30-6:00pm Mondays  
(813) 974-7609  
epracht@health.usf.edu  
e-mail  
48 Hours

**Required Materials:**  
- HSC Bookstore [http://usfhsc.bkstore.com](http://usfhsc.bkstore.com)  
- Flash drive

**Recommended Materials:** Articles related to sub-topics are listed in the outline section of this syllabus and will be made available on blackboard.

**Course Format:** The course is divided into nine modules which will be delivered in lecture and seminar format. Student participation is expected and encouraged. The nine modules are delivered over 14 class periods (reserving two class periods for exams).
Learning Objectives:
After successfully completing this course, students will be able to:
1. Identify and articulate the structural aspects of U.S. Health Care markets.
2. Identify economic issues relevant to the health care policy debate.
3. Articulate health policy related concepts involving efficiency and equality.
4. Evaluate policies from an economic perspective.
5. Evaluate the health care market place from a “systems” perspective.

Assessment Strategies:
Tests and grading:
The quizzes, class projects, policy brief, and presentation are mandatory. The microeconomics review quiz will be multiple choice while the final quiz will consist primarily of essay questions. Quizzes which are missed may be retaken only with a legitimate, or officially approved, excuse. No individual extra credit work is possible.

The grading procedure is as follows:
1. Microeconomics review quiz 10%
2. Individual Project 30%
3. Group Project 30%
4. Policy Brief & Presentation 20%
5. Comprehensive Final 10%

This course meets the following Health Administration competencies.

<table>
<thead>
<tr>
<th>Competency</th>
<th>Learning Objectives</th>
<th>Assessment Strategies</th>
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<tbody>
<tr>
<td>A. Management Science and Technology</td>
<td>5, 2, 3, 4, 5</td>
<td>Exams, Term paper</td>
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<tr>
<td>A.1. Understand and demonstrate the use of scientific operational definitions and their measurement, e.g., efficiency, effectiveness.</td>
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<tr>
<td>A.6. Analytical Thinking: Build analytical thinking acumen, e.g., the ability to understand relevant concepts and issues by delving into its pertinent components and formulating solutions</td>
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<tr>
<td>C. Public Policies and Community Engagement</td>
<td>3, 4, 5</td>
<td>Exams, Term Paper, Presentation</td>
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<tr>
<td>C.1. Healthcare System: Explain the organization and financing of the U.S. healthcare system</td>
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<td>C.3. Legal and Regulatory Environment: Comprehend the legal and regulatory environment for health services.</td>
<td>3, 4, 5</td>
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<tr>
<td>C.4. Public Policy: Comprehend the policy process and analyze public policy context and choices</td>
<td>3, 4, 5</td>
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<tr>
<td>D. Concepts of Economic &amp; Financial Management</td>
<td>3</td>
<td>Exams, Term Paper, Presentation, recreation of a CBA</td>
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<td>D.4. Financial Mathematics: Execute financial mathematics, e.g., time value of money calculations, capital budgeting, return on investment, risk analyses, payback</td>
<td>5, 1, 2, 3, 4, 5</td>
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<td>D.5. Reimbursement Methods: Understand differential reimbursement methodologies used by payers (e.g., Medicare, Medicaid, self-pay, commercial, managed care) and the major principles of health insurance</td>
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<tr>
<td>D.6. Economic Evaluation: Explain economic evaluation, e.g. cost benefit/cost effectiveness analysis</td>
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<td>E. Professionalism and Communication Skills</td>
<td>4, 5</td>
<td>Term paper and presentation</td>
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<td>E.2. Integrate and demonstrate effective written communication</td>
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</table>
This course meets the following Health Policies and Programs (also applies to HCO) competencies.

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<th>Competency</th>
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<tbody>
<tr>
<td>Assess the health care system in the United States, including the role of the public health disciplines</td>
<td>1,2,3,4,5</td>
<td>Exams, Term paper, Presentation</td>
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<tr>
<td>Employ analytic skill in health economics and health policy analysis</td>
<td>3,4,5</td>
<td>Exams, Term paper, Presentation</td>
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</table>

Grading Scale and Criteria: The following total scores guarantee the associated grades. The application of a curve will be determined at the end of the semester and will depend on the distribution of grades.

- 91-100 = A;
- 81-90 = B;
- 71-80 = C;
- 61-70 = D;
- 60 and below = F

“+” grades may be applied and will depend on student participation in class discussion.

Grading Policies:
1. No individual extra credit assignments are possible.
2. All exams, the term paper, and the presentation are mandatory. Make up exams will be allowed for a valid excuse (e.g. illness).

COURSE POLICIES

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<th>Attendance:</th>
<th>Attendance is mandatory during student presentations!!</th>
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<td>Permission to Use Lectures:</td>
<td>All unauthorized recordings of class are prohibited. Recordings that accommodate individual student needs must be approved in advance and may be used for personal use during the semester only; redistribution is prohibited.</td>
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<td>Instructor Expectations:</td>
<td>“In the final analysis, each and every student is responsible for his or her own education” … I am here as your guide … (this is the New College of Florida motto)</td>
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<td>Incomplete Policy:</td>
<td>COPH policy: <a href="http://publichealth.usf.edu/academicaffairs/academic_procedures.html">http://publichealth.usf.edu/academicaffairs/academic_procedures.html</a></td>
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<td>Class Participation:</td>
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SECTION I

TOPIC A: Microeconomics Workshop
Overview of Microeconomics
- Chapter 1: “Introduction to The Economics Health and Health Care”
- Chapter 2: “Microeconomic Tools for Health Economists”
- Chapter 3: “Statistical Tools for Health Economists”

TOPIC B: Production of, and demand for Healthcare
- Chapter 5: “Production of Health”
- Chapter 6: “The Production, Cost, and Technology of Health Care”

Background articles

TOPIC C: Demand for Health and Medical Care
- Chapter 7: “Demand for Health Capital.”
- Chapter 9: “Consumer Choice and Demand.”

Background articles

TOPIC D: Providers as economic agents
- Chapter 14: “Hospitals and Long-Term Care (focus on hospitals)”
- Chapter 15: “The Physician’s Practice”
- Chapter 16: “Health Care Labor Markets and Professional Training”

Background Articles
SECTION II: CBA

TOPIC E: Cost-Benefit & Cost Effectiveness Analysis
- Chapter 4: Economic Efficiency and Cost-Benefit Analysis"
- Muening, "Introduction to Cost Effectiveness Analysis" (online)

SECTION III: POLICY

TOPIC F: Healthcare markets, the role of government, competition, and social wellbeing
- Chapter 18: “Equity, Efficiency, and Need”
- Chapter 19: “Government Intervention in Health Care Markets”
- Chapter 20: “Government Regulation: Principal Regulatory Mechanisms”
- Chapter 21: “Social Insurance”

TOPIC G: The Health Insurance Market and Information
- Chapter 8: “Demand and Supply of Health Insurance.”

Individual Project Due (30%)

Group Project Due (30%)

Policy Analysis Brief/Presentation (20%)

Final Exam (10%)
Individual Project
A Hospital’s Market Area Analysis

DESCRIPTION

This project will involve a large dataset, to be made available online, which you will analyze to generate a profile of a particular hospital’s market area.

a. Define the catchment area.
   Related points:
   • Determine all zip codes within a predetermined distance (the appropriate distance will be determined by the catchment area).
   • This will be done using a combination of Microsoft Access, Microsoft Excel, and ESRI ARCGIS.
   • What to turn in: nothing here, see point (b)

b. Find out which competitors are located within the selected hospital’s catchment area using ARCGIS.
   • A map of the area should be included in the project report.

c. Calculate the HHI for the market as determined in point (a) first, using the entire patient population and, second, using the top 3 DRGs of the market.
   • A brief discussion should be included in the report with each result. Address the structure of the market itself.

d. Recalculate the HHI assuming a scenario in which the two largest hospital were to merge. Explain the policy implications.

e. Compare the selected hospital’s patient characteristics to that of the market as defined in point (b) as it pertains to the entire patient population and, separately, for the top 3 DRGs of the selected hospital. In other words, for the selected hospital and the market, examine the demographic characteristics (age, gender, race, payer mix, and average charge).
   • In addition to a table that summarizes the results, briefly discuss how the results relate to the “concept of health capital and the demand for health.”

f. The content of the report so far was tied to the availability of data elements. Suppose you could have designed this study prospectively. What other data elements would you have collected and why? In other words, what other statistic do you think would have been valuable in a market share/structure report?

g. How would you use the information from (a) to (d) to redistribute the hospital’s resources going forward?

h. Finally, examine the top 25 to 50 DRGs for the selected hospital. Can you identify any substitute (in production) services provided by the hospital? Provide a very brief explanation.

i. Turn in a nicely formatted copy of the regression analysis we did in the lab. Calculate the elasticity of hospital charges with respect to severity (provide this under the table).

What to turn in?

The report should not be more than 3-4 pages, single spaced, in length. One page will be devoted, at least partially, to the map produced with GIS. Divide the report in sections, labeled using the letter shown above. Use a blank line to separate the sections. Points will be deducted for typos and incorrect grammar, so, please be careful.

*Additional details concerning the data set and the analysis tools (Microsoft Access, Excel, and ARCGIS) will be discussed in class and in the lab!
Group Project
A Cost Utility Analysis

For the PHC 6430 Class Project you will use the EUROQOL instrument to evaluate the quality of life associated with a condition/disease of your choice. The following outlines the steps to complete this assignment.

1. Select a chronic condition or disease (e.g. arthritis, Lou Gehrig’s Disease, Osteoporosis, etc...) in which you have an interest. Thoroughly research the symptoms and care requirement (e.g. typical procedures, tests, dietary restrictions) the typical person with the condition experiences on a regular basis. Create a concise but complete list and pay particular attention to the severity of the symptoms. This list will serve as the information needed by the expert panel (see part 3 below) to provide you with accurate assessment you will require to calculate the QALYs.

2. Identify one treatment that individuals with the condition can undertake. Consult the literature that has analyzed the impact of the treatment. You may come across CUA or CEA in your research. Pay close attention to such studies as you are, in effect, duplicating at least some of it. In your research, pay particular attention to the effectiveness of the treatment. For example, which symptoms does it relieve or cure. As you did in part (1), compile a list of the symptoms and care requirements. To help your expert panel digest the information, highlight the changes from the first list.

3. Use the health EUROQOL questionnaire to acquire the data you will need to calculate the QOL index. To get the evaluations pertaining to the five quality of life dimensions, researchers have two alternatives: (a) recruit individuals suffering from the condition, or (b) recruit professionals with some expertise in the condition. You have neither the luxury nor the IRB approval for option (a), so you are left with option (b). The experts in this case will be your classmates. The information you acquired in parts (1) and (2) will serve to education your expert panel(s).
   - There will be five groups of four students each. Each student will serve as an expert for each of the other four groups (not your own). Thus, each student will complete (4 x 2) questionnaires: one under the scenario outlined by part (1) the second under the scenario of part (2).
   - Determine a protocol for administering the survey. For example, is it best to provide one expert panel with both scenarios side by side? Or, is it best to present the lists to the expert panel one at a time with, say, a one or two week period in between? Or, is it best to divide your expert panel into two independent groups and present each with only one or the other list of symptoms and treatment regimens? In the write-up, explain your thinking?

4. Use the EUROQOL Calculator to calculate the QOL index under the scenarios laid out in parts (1) and (2).
   - Determine how long, in years, an individual with the condition may survive. Using their average age and life expectancy, calculate the number of QALYs under each scenario. If appropriate, use a discount rate of 3%. Then repeat the exercise, to examine sensitivity, using zero (no discounting) and 1% discount rates.
   - State why the treatment, discussed under part (2), is expected or not expected to last for the remainder of the individuals’ life. If it is not, then adjust your answer accordingly.
   - Calculate the marginal effect of the treatment described in
   - Write up your results in a 2-3 page report.

Each member of your team should take primary responsibility for one of the tasks outlined above. However, since not all tasks are equal in the type and amount of effort required, all team members should contribute to all tasks where possible. In the title page of your report, indicate the names of your research team members and specify which task they performed.
Policy Paper & Class Presentation

GENERAL INSTRUCTIONS

The analysis must focus on an existing health care related regulation. The intent of market regulation is to correct a market failure. For example, licensing requirements concerning the provision of physician services are intended to help consumers who, because of large information asymmetries, are not adequately equipped to judge the quality of services. Similarly, unless you happen to be a chemist and have access to a fully equipped laboratory (not to mention the time requirement), judging the content, if not the effectiveness, of pharmaceutical drugs is difficult to impossible. Therefore, you rely on the government to test and approve drugs to solve this market failure. A suggested outline for your paper is as follows (more on the general structure below):

a. Fundamentally, the interesting question you will be tackling in your paper is “why was (were) the existing regulation(s) implemented?” In other words, how was the market failing before the regulation was implemented?
b. What is (was) the theoretical and empirical evidence to support the notion of market failure?
c. A historical account of the conditions that prompted the policy.
d. How did the regulation succeed (or fail) to correct this market failure?
e. Has the regulation been accepted or challenged, by whom and why?
f. Implications of maintaining or repealing the policy.
g. Discussion and conclusions.

PAPERLESS PAPER:

A. References and citations

Your paper should be based on a minimum of 10 peer reviewed journal articles. You may supplement this with other sources. If you are not certain about a specific journal, just visit the associated website; “peer review” status is usually advertised on the opening page (or look for an “about” menu item).

Why use peer review? Information, especially on the World Wide Web, is characterized by the concept Caveat Emptor (let the buyer beware) and you should always approach it with a healthy dose of skepticism. The peer review mechanism which rules most of academic publications is a way to assure quality and remove unnecessary quantity. Peer review is usually double blind, meaning that neither the reviewer nor the reviewed has any knowledge of the other, therefore removing potential conflicts of interest and assuring an honest and critical assessment of papers before they are accepted for publication. Most journal articles are reviewed by a minimum of three anonymous reviewers (some journals use five). While no system is perfect, as a rule this peer review process weeds out unsupported claims and assures a healthy level of rigor.

When a paper is included in the list of references, it must also be cited within the text itself using the notation (author year). For example, if you were to cite one of my articles published in, say 2011, you should add (Pracht 2011) or (Pracht et al. 2011) following the information.

B. Logistics and outline

a. All components must be turned in by e-mail
b. The term paper should be approximately 4-5 pages in length (font size 12), double-spaced, with 1 ½” left and right margins and 1” top and bottom margins.
c. Outline
   - The term paper should be divided into segments, including, at the minimum, an introduction, a main section, and conclusions. Ideally, the main section should be divided into sub-sections (e.g. THEORY, EMPIRICAL FINDINGS, etc.).
   - The introduction should include a statement of the general form: “This paper will discuss ... The remainder of the paper is organized as follows: section two discusses the current literature ... Section three provides a summary of ... etc.”

C. Due Dates
   - Third week of September (mandatory): E-mail your topic selection
   - Fourth week of October (recommended)
     1. A half page outline of the paper (describing the segments of the paper) and a preliminary abstract.
     2. A bibliography for your paper comprised of mainly (90%) refereed journal articles and books.
     a. Last week of November (required): Final term paper due date.

D. Presentation
   - A brief discussion of the topic.
   - What particular questions / hypotheses did you focus on?
   - Why was it important to research these questions / hypotheses?
   - What are the conclusions and policy implications?
   - Time constraint will depend on the number of presenters.
   - Evaluation will be based on (1) non-verbal presentation skills (maintaining eye contact with the audience), (2) comfort level with materials – i.e. not reading to the audience from notes, (3) logical structure of the presented materials, (4) enthusiasm for the subject – don’t start by telling the audience you did not find the subject interesting, (5) explanations and elaborations provided during the concluding question and answer session.
   - Attendance is mandatory!!!!!

E. Evaluation of analytical paper
   Evaluation of the analysis (paper) will be based on the following: (a) students must demonstrate knowledge of the subject, particularly in the discussion/conclusion sections in which explanations and elaborations on the practical implications of the selected policy must be expressed; (b) the information must be clearly and logically expressed throughout the paper, and failure to follow the guidelines above (see logistics) will result in deductions; (c) strength of references – see above (d) points will be deducted for grammatical and spelling errors.

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<th>INSTITUTIONAL POLICIES</th>
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<td>The most recent version of the Institutional Policies information can be found on the Academic Affairs Forms page at <a href="http://health.usf.edu/publichealth/forms.html">http://health.usf.edu/publichealth/forms.html</a></td>
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<td><strong>Student Handbook:</strong></td>
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<td><strong>Disruption of Academic Process/Academic Integrity of Students:</strong></td>
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### Academic Dishonesty/ Plagiarism:
Plagiarism will not be tolerated and is grounds for failure. Review USF Academic Dishonesty and Disruption of Academic Process Policy at:

**Undergraduate:**
http://www.ugs.usf.edu/pdf/cat1011/2010-2011DRAFT.pdf#page=61

**Graduate:**
http://www.grad.usf.edu/inc/linked-files/USF_Grad_Catalog_2010_2011.pdf#page=42

The University of South Florida has an account with an automated plagiarism detection service (**SafeAssign**), which allows instructors and students to submit student assignments to be checked for plagiarism. I (the instructor) reserve the right to 1) request that assignments be submitted as electronic files and 2) submit students’ assignments to **SafeAssign**, or 3) request students to submit their assignments through **myUSF**. Assignments are compared automatically with a database of journal articles, web articles, the internet and previously submitted papers. The instructor receives a report showing exactly how a student’s paper was plagiarized.

**NOTE:** An institution may not release a paper to a plagiarism detection software without the student’s prior consent unless all personally identifiable information has been removed, such as a student’s name, social security number, student number, etc.. Note that a paper/essay is considered an educational record and an institution may not ask a student to waive their rights under FERPA for the purpose of submitting papers to a plagiarism detection software.

For more information about Plagiarism and **SafeAssign**, visit:

Plagiarism tutorial: [http://www.cte.usf.edu/plagiarism/plag.html](http://www.cte.usf.edu/plagiarism/plag.html)

**SafeAssign:** [http://media.c21te.usf.edu/pdf/student/bbstud_subsafeassgn.pdf](http://media.c21te.usf.edu/pdf/student/bbstud_subsafeassgn.pdf)

### Cheating Statement:
The USF College of Public Health expects students to maintain academic honesty in all courses. By virtue of being registered in a public health course, students agree to refrain from cheating. If cheating in any form (academic dishonesty) is detected, appropriate action will be taken. (Refer to USF Academic Dishonesty Policy).

**Undergraduate:**
http://www.ugs.usf.edu/pdf/cat1011/2010-2011DRAFT.pdf#page=61

**Graduate:**
http://www.grad.usf.edu/inc/linked-files/USF_Grad_Catalog_2010_2011.pdf#page=42

### Undergraduate Academic Policies and Procedures:
http://www.ugs.usf.edu/pdf/cat1011/2010-2011DRAFT.pdf#page=46

### Special Accommodations:
Students in need of academic accommodations for a disability may consult with the office of Services for Students with Disabilities to arrange appropriate accommodations. Students are required to give reasonable notice (typically 5 working days) prior to requesting an accommodation.

Students with Disabilities Services: [http://www.sds.usf.edu/](http://www.sds.usf.edu/)
Students: [http://www.sds.usf.edu/students.asp](http://www.sds.usf.edu/students.asp)
Faculty: [http://www.sds.usf.edu/faculty.asp](http://www.sds.usf.edu/faculty.asp)

### Holidays and Religious Observances:

### Emergency Preparedness:
In the event of an emergency, it may be necessary for USF to suspend normal operations. During this time, USF may opt to continue delivery of instruction through methods that include but are not limited to: Blackboard, Elluminate, Skype, and email messaging and/or an alternate schedule. It’s the responsibility of the student to monitor Blackboard site for each class for course specific
Undergraduate:  
Graduate  
Student assistance is provided by Division of Student Affairs, Office of the Student Ombudsman. [http://www.sa.usf.edu/ombudsman](http://www.sa.usf.edu/ombudsman) |

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<th>RESOURCES FOR STUDENTS</th>
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| Library Resources: | USF Library Resources and Services: [http://www.lib.usf.edu/](http://www.lib.usf.edu/)  
Shimberg Health Sciences Library: [http://health.usf.edu/library/](http://health.usf.edu/library/)  
Shimberg Health Sciences Library Tutorials: [http://library.hsc.usf.edu/](http://library.hsc.usf.edu/) (follow links under ‘Instructional Services’ section) |
| Creating Citations & Using Refworks: | [http://guides.lib.usf.edu/CitingSources](http://guides.lib.usf.edu/CitingSources) |
| Plagiarism & Safe Assign: | See Academic Dishonesty/Plagiarism Section |
| USF Email Accounts: | [http://health.usf.edu/publichealth/eta/pdf/MyUSF_Email.pdf](http://health.usf.edu/publichealth/eta/pdf/MyUSF_Email.pdf) |
| Blackboard Tutorials: | [http://media.c21te.usf.edu/bbstudents.html](http://media.c21te.usf.edu/bbstudents.html) |
| Illuminate Live Tutorials (online courses): | [http://media.c21te.usf.edu/elluminatestudents.html](http://media.c21te.usf.edu/elluminatestudents.html) |
## Calendar 2015

### August 2015

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**Note:**
- Labor Day
- October 2015

### September 2015

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**Notes:**
- Labor Day
- October 2015

### October 2015

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**Notes:**
- October 2015
- Quiz due

### November 2015

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**Notes:**
- Quiz due
- October 2015

### December 2015

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