Applied Quantitative Methods: Online Course Syllabus

A graduate-level course on public policy and public administration, Fall 2020

Course: Applied Quantitative Methods in Public Policy (PUBPL/PADMN 6290-090)

Instructor: Levi Pace, PhD

Title: Senior Research Economist, Kem C. Gardner Policy Institute; Adjunct Instructor, Master of Public Policy Program, College of Social and Behavioral Science

Email: levi.pace@utah.edu

Office Hours: Mondays 7:00 to 8:00 PM and Fridays 12:30 to 1:30 PM via the Virtual Office Hours page

Course Description

This applied statistics course covers analytical methods to inform public policy. We use data and software to probe policy and management questions. Topics include descriptive statistics, hypothesis testing, inference based on a sample, associations between categorical and/or interval variables, and visualization of data and results. A few of the methods we practice are *t* tests, chi square tests, and regressions. We discuss how to select suitable analysis methods for a given situation. We emphasize effectively communicating findings with stakeholders. Examples in videos and assignments are relevant to the missions of government and nonprofit institutions. Throughout the course, guest speakers from the policy community address quantitative and career issues.

From the university's course catalog, Applied Quantitative Methods in Public Policy "involves the analysis of quantitative data, the application of statistics for understanding and conducting public policy research and the use of statistical software. Specific topics include descriptive statistics for discrete and continuous variables, probability theory, hypothesis testing, bivariate associations, ordinary least squares regression and logistic regression. Emphasis is on interpretation of findings."

Course Outcomes

Upon completion of this course, students will...

- discuss what is being measured in context when obtaining and reviewing data;
- use Excel and SPSS to generate descriptive statistics, manipulate tables, create graphs, conduct hypothesis tests, and run regressions;
- interpret and apply quantitative results in a range of government and nonprofit situations;
- select and employ analysis methods that serve policy and management objectives;
- create new connections to local nonprofit and government communities and issues; and
- become self-aware of their own quantitative skills, will feel more comfortable with data analysis, and will communicate visually, verbally, and textually about data.

Required Materials

Access to course materials in Canvas: https://utah.instructure.com/courses/635800

Access to spreadsheet and statistics software to complete assignments: Course materials exclusively use IBM SPSS and Microsoft Excel. This Canvas page addresses using SPSS remotely or purchasing a student license.

Optional Materials

This course is designed without a required textbook. The instructor presents concepts and demonstrates analysis methods reinforced by assignments with feedback. Students who prefer reading can find helpful online material and published texts. I recommend two books I've learned a lot from.

- *Applied Statistics for Public and Nonprofit Administration* by Kenneth J. Meier, Jeffrey L. Brudney, and John Bohte, 9th ed. by Cengage Learning, 2015, ISBN: 978-1285737232
- *Elementary Statistics in Social Research* by Jack Levin, James Fox, and David Forde, 12th ed. by Pearson, 2017, ISBN: 978-0134427768

This is optional reading for students who want to go into more depth on a topic they need for their project or just general interest. I've cross-referenced our lessons on Canvas with the text in this pdf. Students are welcome to ask the instructor for page scans on a topic. Another option is to rent them for the semester as eTexts, less than $30 on Amazon (see Applied Statistics... and Elementary Statistics...).

Recommended Content

Students have many resources to learn how to conduct socially aware quantitative analysis. Methodology, context, and communications matter. With regards to racism and other inequities, the following pages center the voices of communities of color. Students may find in these curated media items perspectives on issues where data-informed social change is needed.

- "Where can I start?" Resources for your antiracist journey (Links to an external site.): blog from the Diversity and Social Justice Committee, College of Social Work, University of Utah
- Social equity resources for public policy and administration: Canvas page designed for this course

Evaluation

Students' final grades for the semester will be calculated based on the following weights for six types of assignments. Participation refers to Canvas discussions. The number of assignments is in parentheses. The numerical scale below represents how students earn letter grades, which the registrar posts within two weeks of the end of finals week.

Category	**Weight**
Proposals (2)	10%
Projects (2)	25%
Practice Sets (11)	15%
Quizzes (11)	20%
Exams (2)	20%
Participation (9)	10%
Course Total	**100%**

Grading Scale		
A	93.0%–100%	(outstanding)
A-	90.0%–92.9%	(very good)
B+	87.0%–89.9%	(good)
B	83.0%–86.9%	(acceptable)
B-	80.0%–82.9%	(marginal)
C+	77.0%–79.9%	(below standard)
C	73.0%–76.9%	(below standard)
C-	0.00%–72.9%	(fail)

Late Work
Life happens. Please contact me with any questions, as early as you know you have a conflict. Make-up exams must be arranged in advance with the instructor. Late assignments besides exams will be accepted for partial credit. Within five business days of a deadline, the late penalty is 20%. For work received after five business days, the late penalty is 50%. This allows students some flexibility during an unusual week, without abandoning the course structure that improves learning engagement.

Drop Two Practice Sets, Quizzes, and Discussions
With so many assignments this semester, to give students added flexibility, they can miss two weeks of practice sets, quizzes, and discussions for any reason without the need to make arrangements or communicate with the instructor. At the end of the semester, the instructor will change the lowest two scores on practice sets and the lowest two scores on quizzes to 100 percent. Also, each exam will allow students to choose which questions to answer, designed to not penalize students for missing one module per exam if they know the other modules well. There is no exam for modules 12 to 14. Both grades for the proposals and projects count.

Learning Methods

Data literacy and analytical tools are important in the policy world. People within and across organizations need to interface well with researchers, analysts, data scientists and other experts to achieve good outcomes. Learning more about analysis helps us as data consumers and enables us to create and evaluate numerical information ourselves.

I've tried to set this course up with enough space for you to practice and express yourself. The course is fairly structured, partially because it's online. I think all the resources and check-ins will help people looking for cairns in unfamiliar terrain. I'll be listening for feedback so I can make adjustments to make the course a better fit for more graduate students.

Statistics can be challenging in the ways that it can be challenging to learn a language or get used to an unfamiliar device. With curiosity and time, anyone gradually gets better at stats. This course is an investment in yourself and your career. I realize you have other commitments that may often need to come first, such as employment, family, and other courses. Thanks for being part of this group.

Below is a brief description of course components that come up in the weekly modules. I'll give more detailed instructions with each assignment. Opening data files I use in the lecture videos and following along as a form of active listening should make the other assignments go more smoothly.

Proposals
Students will be asked to submit two separate one-page proposals for topics they select, incorporating written feedback from another class member. The goal is to think of practical applications for what we learn. Students can follow their interests related to their workplaces, any nonprofit, local government concerns, national topics of public debate, management issues, etc. To practice research design for decision-making, students frame questions, identify likely data sources, and outline types of analysis that would be helpful.

One of two may be carried out later for the project, but for proposals, we’re just looking for reasonable, concise, thorough plans that benefited from peer suggestions. Grading is mostly based on effort. The first proposal is worth 4% of final grade; the second 6% because it calls for draft and final submissions.

Projects
Canvas will randomly assign students to groups for Project 1, usually three people each. Groups can choose from one of a few datasets the instructor identifies. Groups select a research theme, methods, and variables, given some parameters in the grading rubric. The goal is to incorporate some of the methods learned in the first 10 modules, but with an emphasis on regressions. Worth 10% of final grade.

When selecting a topic to develop on their own for Project 2, students can draw from either of their proposals (or introduce a third topic if they prefer). As they get further into the analysis, they can take the topic in new directions that seem noteworthy or impactful. Students find their own data and share their self-directed projects with the class, incorporating many statistics methods learned from multiple modules, such as frequency tables, central tendency measures, visualization, hypothesis testing, multivariate regressions, and crosstabs. Worth 15% of final grade.

Practice Sets
These provide a low-stakes practice opportunity with an answer key. Whereas the original presentation is in lecture videos, practice questions are explained in writing, so you're getting it two ways.

Grading is based on completion to reward commitment to the learning process. You get full credit for attempting each part of each question. Practice sets can be time consuming, but they're straightforward and support the other 85 percent of your grade. The lowest two practice set scores will be dropped to allow students to skip, partially complete, or complete late two weeks' worth without consequence.

While you work on the practice questions, you're welcome to use any learning resources that help you, such as lecture videos, notes, web pages, books, and classmates. You have as much time as you need, and you can save your work and come back to it up until the due date.

Quizzes
These are intended to measure your progress with the mechanics of generating and interpreting numerical information for given scenarios. Quizzes provide structure to practice using data skills.

Since quizzes are based directly on questions in the practice sets, reviewing those questions, your answers, and answers from the instructor are great ways to prepare. Examples in module videos are also be similar to what is on the quiz.

To allow flexibility, all students will have their two lowest quiz scores (by percentage) dropped. There shouldn't be too much pressure with quizzes, only a moderate amount. You have as much time as you need, and you can save your work and come back to it up until the deadline. This is a space for review and continued learning.

To that end, while you work on quiz questions, feel free to use any learning resources that help you, such as lecture videos, notes, web pages, and books. I would discourage you from relying on another person for input during quizzes. The goal is to understand each skill yourself.

Exams
We have three timed, proctored exams that take a small, fairly random sample of content for all objectives in the modules covered. Quizzes are a good indication of the types of questions on exams, but in terms of content, anything from the practice sets is fair game.

Exams are opportunities for students to show what they are learning. Exams encourage students to review and remember how to do statistics they figured out once or twice for examples in lecture videos, practice sets, and quizzes.

Students will have some choice over which questions to answer for credit during the exams—perhaps any three out of four. Exams are timed at about one hour. Through practice, you will know how to approach each question and not feel rushed. Sometimes at work we need to pull something together in a limited amount of time.

Please schedule a time to take your exam with the university's UOnline Exams and Proctoring service (ProctorU) or an alternative arrangement. You can use your own computer. Verify in advance that you will have access to SPSS and Excel. Specific instructions will be provided with each exam.

Participation
Discussion forums are an opportunity for students to give their insights and react to what the instructor and guests bring up. There are also some brief survey questions about the course and your data analysis ability. The lowest two discussion scores will be dropped to allow students a couple of missing or late submissions whenever they choose. Some of the best interactions in class are not structured or graded.

Online Course Expectations

While the academic expectations of this online course are equivalent to those in a traditional course, instructors and students should know about some additional expectations when participating in the online version.

Instructor Expectations
The course instructor is familiar with the topics and methods you will encounter this semester. Students can expect the following of their instructor as a mentor and facilitator of the learning experience:

- The instructor will design the course to include lectures, learning materials, and assignments that will challenge students and will provide them with opportunities to learn and practice course content.
- Though this online course includes pre-recorded lectures, it is not a class that is run automatically by technology. The instructor and teaching assistants will interact with the class via announcements, virtual office hours, the Canvas Inbox feature, emails, and feedback on assignments, among other methods.
- The instructor will respond to emails in a timely fashion, usually within 48 hours, not including weekends and holidays.
- The instructor will be available for individual consultation via virtual office hours, email, and phone. Students will not be required to come to campus in order to meet with the instructor.
- The instructor will provide feedback on the assignments in a timely manner.
- The instructor will follow all official University of Utah policies regarding conduct in the classroom, incompletes, and accommodations. Accommodations will be considered on an individual basis and only with required documentation.
- The instructor will verify the functionality of assignments and other course components before the start of the semester. The instructor will promptly address any issues that arise with learning content and notify students of any changes.

Student Expectations
Though the online format allows students greater flexibility to complete their work, this course does have a structure and timeline, including due dates for course assignments. The instructor expects students to do the following for this class:

- Students will log in to the course a minimum of three times per week.

- To do well in online courses, students must be self-motivated, organized, and willing to stay on top of their schedule. Students should take control of their learning while in this course.
- Students will regularly check course announcements. The announcements tool is the instructor's official means of communication when distributing information to the entire class.
- Students will update their Canvas settings to ensure they receive timely notifications from the course.
- If students have any questions, are struggling with course materials, or need further assistance from their instructor, they will take the initiative to contact their instructor via the Inbox feature in Canvas or via email.
- Students will engage with the course, students, and the instructor in a respectful and professional manner at all times.
- Students will notify instructors immediately of any course resources that are not working. Students are not excused from completing work, nor can they make up any points missed, because of functionality issues that were not brought to the instructor's attention.

Course Engagement and Participation
Class participation is an essential part of the learning process. Students are responsible for their learning and are required to actively participate in all components of the course. Students are expected to engage with instructional content and complete assignments for each module. Open and critical discussion associated with the course material is welcomed and encouraged at all times.

Netiquette
Class members are expected to follow established norms for online behavior while participating in the class and interacting with each other. We look for inclusive language, for example, related to gender and race. We are careful about our assumptions about people and places. On Canvas and through other communication media, we use respectful tones with regards to disagreements and personal differences. When we realize we have been offensive, we take responsibility. When students notice racist, sexist, homophobic, transphobic, or threatening speech, they should name the issue and participate in constructive dialogue. Likewise, the instructor is responsible for noticing and addressing problematic behavior, leaving space for free speech and encouraging learning without shame about being inclusive.

Responding Together to the COVID-19 Pandemic

Remote Learning
In this fully online course, no in-person interaction is required of class members. We interact and share resources without coming to campus and without meeting with other students or the instructor. The information below mainly applies to our offline activity.

Healthy Practices
Social distancing, good hygiene, face coverings, testing and tracing are best practices for managing risks to ourselves and people who may be more vulnerable than us. If students choose to do some of their online work at the University of Utah or in another space outside their home, they should follow professional health recommendations.

Health Guidance
One reliable source of practical information on the pandemic is COVID-19 Central @ THE U, especially relevant for students near Salt Lake City. Wherever you live, identify trusted health experts at local, state, federal, and research institutions.

Face Coverings
Based on CDC guidelines, the University requires everyone to wear face coverings in shared public spaces on campus. As a reminder, when I wear a face covering, I am protecting you and your contacts. When you wear a face covering, you are protecting me and my contacts. For an exception to the face covering policy based on the Americans with Disabilities Act (ADA), please contact the Center for Disability and Access (see below).

Reporting COVID-19 Infection
Students, staff, and faculty must self-report if they test positive for COVID-19 (click "Report Potential Exposure" under COVID-19 Self Reporting Form here). Getting tested and sharing the result helps reduce disease spread.

Here for You
Please tell the instructor if you need flexibility because you or someone close to you gets ill this semester. Recovery, caretaking, quarantine, and grieving may disrupt our participation. In the event of a personal crisis, due dates can be adjusted as we communicate and arrange for our continued learning. Health and safety come first.

University Policies and Resources

Below is information about resources and policies that should help us create a constructive learning space this semester. Topics are ADA accommodation, personal wellness, violence and harassment, LGBT identity, veterans, English language learners, academic integrity and inclusivity. Feel free to contact the instructor and reach out on campus for any concerns, whether or not they are addressed below.

ADA Accommodation
The University of Utah seeks to provide equal access to its programs, services and activities for people with disabilities. If you will need accommodations in the class, reasonable prior notice should be given to the Center for Disability and Access (CDA), Olpin Union Building, Rm. 162, (801) 581-5020 (V/TDD). CDA will work with you and the instructor to make arrangements for accommodations. All information in this course can be made available in alternative format.

Respect and Inclusion
At the University of Utah, we form supportive learning communities where we respect the personal backgrounds, identities, and views that make us who we are. One source of leadership and assistance is the Office of Equity, Diversity, and Inclusion (EDI), Park Building Rm. 204, 801-581-7569. For example, EDI provides a current list of campus resources and connects people with our Black Cultural Center, American Indian Resource Center, and LGBT Resource Center.

Discrimination, Harassment, and Violence
Civil rights laws and norms provide accountability for violence or harassment related to race, ethnicity, national origin, color, sex, gender identity or expression, disability, age, pregnancy, veteran status, religion, or genetic information. If you experienced or notice discrimination or sexual assault, you are encouraged to report it to the Office of Equal Opportunity and Affirmative Action/Title IX, Building 73 (332 S. 1400 E.) Rm. 112, reporting page, (801) 581-8365, or the Office of the Dean of Students, Olpin Union Building, Rm. 270, reporting page, (801) 581-7066.

Bias Incident Reporting
The Office for Inclusive Excellence, Olpin Union Building, Rm. 270, 801-585-5994, responds to speech and actions that discriminate, demean, embarrass, or exclude individuals. The office provides consultations and an "educational resource toolkit" for people to learn about addressing prejudices. Students, employees, alums, family members, and visitors can report an incident of bias online, with the option to remain anonymous. We accomplish more with mutual respect across our differences in race and ethnicity, national origin and citizenship, gender identity and expression, sexual orientation, ability and appearance, socioeconomic status, age, veteran status, and religion and politics.

Gender Pronoun and Name Preferences
Class rosters the instructor receives show students' legal names and "preferred first name." I will honor you by referring to you with the name and pronoun that feels best for you. Please advise me of any name or pronoun changes. Through Campus Information Services, you can update your preferred name.

Learners of English as an Additional Language
If you are an English language learner, please note several on-campus resources for your language and writing development: the University Writing Center, Marriott Library, Rm. 2701, (801) 587-9122 and the English Language Institute, 540 Arapeen Dr. Rm. 115, (801) 581-4600. Please let me know if you have any questions about language barriers related to my teaching. I only speak English and Spanish, but I would like to see students with any linguistic background succeed in this course.

Undocumented Student Support
Immigration is a complex phenomenon with broad impact on those directly involved and those indirectly as family members, friends and loved ones. If your immigration status presents obstacles to engaging in specific activities or requirements, you may request confidential assistance from the Dream Center, Annex building (1901 South Campus Dr.) Rm. 1120, (801) 213-3697. The center offers several resources to support undocumented students (with and without DACA) and students from mixed-status families. Involving the center will not jeopardize your student status or financial aid.

Veteran Center
If you are a student veteran, you are welcome to engage with the university's Veterans Support Center, Olpin Union Building, Rm. 161, (801) 587-7722. The center offers student support, ongoing events and links to outside resources.

Personal Wellness
Personal concerns such as stress, anxiety, relationship difficulties, depression, cross-cultural differences, etc. can interfere with our ability to succeed and thrive at the University of Utah. For support and confidential consultation, contact the University Counseling Center, Student Services Building, Rm. 426, (801) 581-6826, and/or the Center for Student Wellness, Eccles Student Life Center, Ste. 2100, (801) 581-7776.

Campus Safety
The University of Utah values the safety of all campus community members. Emergency alerts and safety messages regarding campus safety are sent via text message. For more information regarding safety and to view available training videos, visit safeu.utah.edu. To request a courtesy escort, you can reach campus police at (801) 585-2677. For safety or medical emergencies, dial 911.

Academic Integrity

The University of Utah has standards to encourage individual learning, academic integrity and proper attribution for others' ideas. The university's [Code of Student Rights and Responsibilities] discusses cheating, misrepresenting one's work, plagiarism, and fabrication or falsification in section B2.

Module Objectives

Subtopics are listed as learning objectives. Of the 16 modules, 5 without new content are in parentheses.

1. Quantitative research

A. Learn about the course and self-assess stats ability and confidence

B. Consider purposes of quantitative methods

C. Identify sources of policy-related data

D. Give examples of different types of performance measures

E. Identify measurements as nominal, ordinal, or interval

F. Identify dependent and independent variables for hypothesis statements and research questions

2. Distributions

A. Create and interpret frequency distribution tables

B. Calculate group and cumulative percentages for tables in A

C. Create and interpret histograms and other charts

3. Central tendency

Calculate and compare, using raw data or frequency tables:

A. Mode, for nominal and ordinal data

B. Median

C. Mean, including weighted average

4. Dispersion

A. Determine domain, range, and percentiles

B. Calculate and interpret standard deviation (and introduce the normal distribution)

5. (Exam week)

A. Review modules 1–4

B. Take Exam 1

6. Inference

A. Apply probability theory to the normal distribution

B. Understand inference concepts, samples and populations

C. Calculate confidence limits

7. Hypothesis testing

A. Discuss hypothesis testing concepts

B. Test differences between means for an interval independent variable with two groups (t test)

8. Regressions 1 of 2

A. Understand how regressions measure correlation between interval variables

B. Run and interpret linear regression with one independent variable

C. Test for assumptions of linear regression and recommend alternatives when they are not met

9. Regressions 2 of 2

A. Discuss time series trends and forecast future values

B. Run and interpret linear regression with more than one independent variable

C. Run and interpret logistic regressions

10. (Exam week)

A. Review modules 6–9

B. Take Exam 2

11. (Project 1)

A. Do the semi-guided project

B. Collaborate with colleagues

12. Analysis of Variance

A. Test differences between means for more than two groups

B. Perform one-way and two-way analysis of variance (ANOVA)

C. Comment on peers' quantitative work on Project 1

13. Contingency tables

For nominal and ordinal data:

A. Create and interpret crosstabs with two variables

14. Nonparametric tests

Run and interpret nonparametric tests for nominal data:

A. Significance: Chi-square

B. Correlation: Cramér's V

Run and interpret nonparametric tests for ordinal and interval data:

C. Significance: Mann-Whitney and Kruskal-Wallis

D. Correlation: Gamma and Spearman's

Note: There is no exam over the content in modules 12–14. This year, doing a guided first project in groups seems better for career-relevant learning than the review and extra practice of taking an exam.

15. (Work on Project 2 solo)

A. Do the open-ended project

B. Incorporate skills we've practiced this semester

C. Self-assess stats ability and confidence

16. (Project 2 presentations, finals week)

A. Complete your own analysis and share it with peers

B. Comment on peers' quantitative work

C. Choose appropriate methods from this course for policy situations you encounter in the future

D. Incorporate context and planning considerations when designing and managing data projects

Guest videos (2 hours 30 minutes)

These 19 segments are spread across about half of the modules:

- Meet our Guests (3 parts, 24 min total)
- Policy Process (9 min)
- Career Purpose (10 min)
- Grad School (3 parts, 26 min total)
- Types of Data (11 min)
- Analysis at Your Workplace (3 parts, 25 min total)
- Learning on the Job (2 parts, 13 min)
- Valuable Quantitative Skills (3 parts, 22 min)
- Work-Life Balance (2 parts, 9 min)

Calendar

To give students flexibility, due dates are spread out with time-consuming assignments at the end of the week. Assignments are due before midnight (11:59 PM).

During a typical week…

- **Tuesdays** are the last day to take a **quiz** on any new material covered the previous week.
- By **Thursdays** you should post something on the week's **discussion** topic.
- Most **Saturdays** a **practice set** is due. By the end of Monday, I'll review student responses to open-ended practice questions and answer any questions to help you get ready for the quiz Tuesday.
- **Exceptions:** Our routine changes during weeks with exams, Thanksgiving, and project due dates.

Non-routine assignments:

- **Proposals** are due the last day of the week, Sunday. Discussions about them are on Thursdays.
- **Project** submissions and posts are due on various days as noted.
- Students can schedule their two proctored **exams** anytime from Thursday of exam week through Monday of the following week. Make an appointment well in advance for remote online proctoring or an alternative arrangement. Verify that you will have access to Excel and SPSS during the exam, likely using your own computer.

Below are tentative dates for the course. Official due dates show in Canvas assignments and in the "Course Summary" section below the online version of this syllabus. Any change in our schedule will occur there, flagged by an announcement. I intend to update this document as well.

Module (Dates)	Topic	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Comment
1 (Aug 24 to 30)	Quantitative research				D		PS1		
2 (Aug 31 to Sep 6)	Distributions		Q1		D		PS2		
3 (Sep 7 to 13)	Central tendency		Q2		PP1		PS3		Labor Day (Mon)
4 (Sep 14 to 20)	Dispersion		Q3		D		PS4	PP1	PP peer review
5 (Sep 21 to 27)	*Exam week*		Q4		E1	E1			E options, students choose day
6 (Sep 28 to Oct 4)	Inference	E1			D		PS5	PP2	PP draft
7 (Oct 5 to 11)	Hypothesis testing		Q5		D		PS6		
8 (Oct 12 to 18)	Regressions 1 of 2		Q6		PP2		PS7		PP peer review
9 (Oct 19 to 25)	Regressions 2 of 2		Q7		D		PS8	PP2	PP final
10 (Oct 26 to Nov 1)	*Exam week*		Q8		E2	E2			E options, students choose day
11 (Nov 2 to 8)	*Project 1 in groups*	E2							
12 (Nov 9 to 15)	Analysis of variance		PJ1		PJ1		PS9		PJ1 due (Tue) comments (Thu)
13 (Nov 16 to 22)	Contingency tables		Q9		D		PS10		
14 (Nov 23 to 29)	Nonparametric tests		Q10		D		PS11		Thanksgiving break (Thu-Fri)
15 (Nov 30 to Dec 6)	*Project 2 solo*		Q11		D		PJ2		Reading Day (Fri), PJ2 draft (Sat)
16 (Dec 7 to 11)	*Project 2, finals week*			PJ2		PJ2			PJ2 presentation and discussion

Note: D = discussion, PS = practice set, Q = quiz, E = exam, PP = proposal, PJ = project

You can find tuition, drop-add dates in the University of Utah's academic calendar. Since we don't have due dates on Monday, September 7, we'll proceed as usual the week of Labor Day.

Grading flexibility: Keep in mind grades for two discussion assignments, two practice sets and two quizzes will be dropped as noted under Learning Methods. That should help make demands from this course more reasonable.

Note about syllabus: This syllabus is not a binding legal contract and is subject to change.