

Statement of Teaching Philosophy

Apoorva Jain

**Department of Economics
University of North Carolina at Chapel Hill**

*“In learning you will teach, and in teaching you will learn.”
- Phil Collins*

Research on student learning and teaching shows that active in-class participation is imperative to learning success. Kolbs theory enunciates how concrete experiences by students such as fieldwork and in-class problem-solving trigger the ‘Experiential Learning Cycle’ of student reflection, concept formation and implementation. As Dr. Balabans teaching assistant I was able to experience first-hand the effectiveness of teaching methods based off of David Kolbs ideology. Dr. Balaban is one the very few lecturers in the United States to implement a flipped classroom in a class of over four hundred students. Flipped classroom is a relatively new pedagogical model that allows students to interact and solve exercises in class while working in small groups. This model truly incorporates the idea so well expressed by Phil Collins and allows students to be actors, instead of merely passive recipients of knowledge. I personally saw a remarkable improvement in student learning outcomes from a traditional classroom teaching setting (with Dr. Balaban in the spring of 2013) to flipped classroom teaching (with Dr. Balaban in Fall 2014 - Spring 2016). Having experienced the success of the flipped classroom approach, I strongly believe in the effectiveness of active learning strategies and incorporate them in my own teaching style. Hence, active learning constitutes the foundation of my teaching philosophy and I think of myself as a facilitator of learning rather than an instructor.

During my graduate career at UNC, I designed and taught two introductory courses in the summer of 2013 and 2014. Not fully satisfied with student performance in 2013, I decided to adopt more creative teaching methods in the 2014 summer session. Although the material and textbook were the same for both sessions, in 2014 I included several classroom activities

such as pair and share, videos on real-life economic events as well as in-class exercises (see appendix D). I also made changes to the assessment of student performance by allowing for more writing assignments, which helped students connect the course theory to the news using articles from the Wall Street Journal and New York Times (see appendix C). These changes not only encouraged student participation, peer learning and classroom cohesion but also provided me with instant feedback. Receiving instant feedback allowed me to modify my teaching methods during the course to better aid students learning. Moreover, class activities engaged students in lifelike economic scenarios that helped motivate the theory.

Although the summer course in 2014 was successful in achieving the learning objectives of the course (refer to the detailed course objectives in the syllabus in appendix B), as reflected in student evaluations (see appendix A), I still found it challenging to incorporate a teaching method flexible enough to suit the various learning styles. As the introductory economics course is a prerequisite for obtaining a major in various fields such as Journalism, Business, Health Policy and Management, the student population in the class is considerably diverse. Several students lack the necessary mathematical background to successfully learn to work with the technical tools in economics. In order to overcome this challenge, I applied and was selected to be a Future Faculty Fellowship Program (FFFP) fellow. Under the mentorship of Dr. Donna Bailey, I received training on instructional principles, their implications for teaching practices and strategies to implement these principles. For instance, I learned that understanding the educational background of students helps in designing better instruction, and being explicit about learning objectives helps students in setting their own learning goals. Building from this experience, in my future teaching assignments, I familiarized myself with the level of mathematical expertise of each of my students from very early on in the course. This allowed me to tailor my teaching to each individual student: some needed extra assistance while others needed extra motivation.

I have been passionate about teaching ever since I was a teenager and assisted my dance instructor in teaching new students. I constantly try to improve my teaching skills by participating in various workshops, such as 'Reflection on Student Learning and Your Teach-

ing' and 'Evaluation of Teaching' workshops organized by the Center of Faculty Excellence at UNC. Throughout this process, I have always relished the opportunity to motivate and inspire (and not just instruct) the next generation of economists, scientists, entrepreneurs and journalists.

TEACHING INTERESTS

Introductory Economics: This course would introduce some basic economic models, explain their implementation in the real world and help students realize their limitations.

Microeconomics (undergraduate): This course is the next step following the introductory course. The learning objective is to understand the fundamentals on which economic theory is built and to develop the capacity to think critically with the aid of mathematical tools.

Labor Economics (both graduate and undergraduate): At the undergraduate level, the focus would be on explaining empirical facts with the aid of simple models and their policy implications. At the graduate level, the focus is on providing an in-depth understanding of the existing research, identifying major gaps in the literature and becoming comfortable with using empirical methods.

Economics of Migration and its Policy Implications (both graduate and undergraduate): At the undergraduate level, the course aims to familiarize students with existing theories of migration, empirical facts and their policy implications. At the graduate level, the course would discuss the existing research in more depth and help students identify possible avenues for future research.

Appendix A: Summary of Teaching Evaluations

UNC - Chapel Hill, Summer 2014 Econ 101 - Introduction to Economics		
<i>Course and Instructor Characteristics</i>	<i>My Score</i>	<i>Dept. Score</i>
This course challenged me to think deeply about the subject matter.	4.56	4.34
The instructor clearly communicated what was expected of me in this class.	4.22	4.32
I was able to get individual help when I needed it.	4.27	4.38
The course materials (e.g., course pack, website, texts) helped me better understand the subject matter.	4.18	4.11
The course assignments helped me better understand the subject matter.	4.17	4.28
The instructor evaluated my work fairly.	4.36	4.44
The instructor showed concern about whether students learned the material.	4.78	4.38
The instructor expressed ideas clearly.	4.17	4.18
The instructor showed enthusiasm for the subject matter.	4.70	4.58
The instructor showed enthusiasm for teaching this class.	4.65	4.50
The instructor treated all students with respect.	4.73	4.61
The instructional techniques engaged me with the subject matter.	4.04	4.16
Overall, this instructor was an effective teacher.	4.17	4.29
Overall, I learned a great deal from this course.	4.22	4.24

Notes: Mean scores on a scale from 1 to 5 where 5- strongly agree, 4- agree, 3- neither agree not disagree, 2- disagree, 1- strongly disagree.

Student Comments on Overall Assessment of the Course

- *I feel that Apoorva Jain was fully committed to this course and her passion showed through every single day. She was not resistant to altering her methods or plans in order to aid our learning.*
- *If you did the work and went to class, it was extremely efficient and an interesting class. One of the best classes I have had at UNC. Considering Econ major now.*
- *Very interesting class with well-informed lectures. The teacher welcomed my questions a lot and did not make me feel burdensome with my questions. She was always available to meet. She was also good at providing resources to help students learn better. Excellent instructor!*
- *Overall this course was very challenging for me. I really loved the instructor, she is an awesome person. And I can tell she is passionate about economics.*
- *I loved the way this course was taught. We were able to discuss problems in class which really helped me learn the material.*

Appendix B: Introduction to Economics Syllabus

UNIVERSITY OF NORTH CAROLINA
DEPARTMENT OF ECONOMICS

ECON 101-002: INTRODUCTION TO ECONOMICS

Summer I 2013
MoTuWeThFr 9:45AM-11:15AM, GA 308

Instructor: Apoorva Jain

Office: 202 Phillip Annex

E-Mail: apoorvaj@live.unc.edu

Office Hours: Mondays (11:30 AM – 12:30 PM), and Thursdays (11:30 AM – 12:30 PM), and by appointment.

Website: <http://www.unc.edu/sakai/> - contains the calendar, announcements, supplementary materials
<http://www.saplinglearning.com/> - contains homework assignments

Course Objectives: We will cover a significant amount of material in a very short period of time. The key objectives are to introduce you to: 1) the economic way of thinking; 2) some basic economic models and how economists use models to explain the world around us; and 3) the impact that the government policy has on our communities.

Important Course Dates:

May 28	First Midterm Examination, 9:45 AM
June 7	Second Midterm Examination, 9:45 AM
June 17	Final Exam, 8:00-11:00 AM
June 19	Make-up Final Exam for students with excused absences for the final, 8AM

Required Materials:

- Cowen, Tyler and Alex Tabarrok. **Modern Principles of Economics**, 2nd edition, Worth Publishers, 2013.
- Sapling Learning (online homework website) – registration instructions appear on the last page of the syllabus.
- Basic calculator (~ \$1). A picture of an acceptable calculator is provided on Sakai. You should bring your calculator with you to each class, including exams. If you want to know if calculator is acceptable, then please do not hesitate to ask me. *Unacceptable calculators will be confiscated during exams.*

The Student Store is selling a package that includes a copy of the textbook along with a pre-paid access code to Sapling Learning. If you bought the textbook on the used market, then you can buy an access code directly from Sapling Learning for ~\$30. Registration instructions are provided on the last page of the syllabus.

I encourage you to read a newspaper such as *The Wall Street Journal* or *Financial Times* on a daily basis. *The Economist*, a weekly publication, is also highly recommended. All of these publications are available electronically via the library's e-research tools.

- *The Wall Street Journal* (WSJ). For free access to the WSJ go to <http://eresources.lib.unc.edu/eid/>; under “By Title” click on “P” and scroll down to “ProQuest Newspapers” and click on the link. If you are off campus, then you will need to provide your onyen and password. Once you are in the ProQuest database click on the “Publications” tab and then click on the link entitled “Wall Street Journal; Eastern edition” to access the complete text.
- *The Economist*. For free access to the complete text of *the Economist* go to <http://eresources.lib.unc.edu/eid/>; under “By Title” click on “E” and scroll down to “Economist.com.” If you are off campus, then you will need to provide your onyen and password.

Course Requirements: This course is designed to be very rigorous and demanding. You are expected to work hard, actively participate, ask questions when you have any doubts, and perform to the very best of your ability. Still, the purpose of this course is to teach you something about economics, not to destroy your GPA.

Evaluation for this course will be based upon two mid-term exams (20% each), a cumulative final exam (40%) and “other graded activities” (20%). “*Other graded activities*” include your scores on 5 take-home writing assignments and Sapling Learning (SL) problem sets. A problem set will be assigned for each chapter covered and I expect to cover 21 chapters. **All SL problem sets must be completed on time.** I will drop your lowest score which means that you can miss one SL assignment without penalty. **Writing assignments must be turned in by their scheduled deadline** or a 20 percentage-point penalty will be assessed for each day they are late. You will be given about 4 days to complete each writing assignment. The SL problem sets and the writing assignments (i.e. 25 total assignments) will be averaged together to generate your “other graded activities” grade.

Grades: Letter grades are based on total points and not on an average of the letter grades for course components. The grade distribution for the course depends on how well students perform. There is no maximum number of A's or B's.

Academic Integrity: All students are expected to adhere to the Honor Code (<http://instrument.unc.edu>). Any violation will result in a violation report being sent to the Honor Court.

- You may use your notes and textbook to complete SL assignments. No other assistance is permitted. If you need a hint or guidance on the SL assignments, then you can consult with an instructor or tutor. You may not work on the problems with your classmate(s).
- No assistance is permitted on exams. During the exam, however, feel free to ask your instructor for clarification.
- You will be permitted to discuss the writing assignments with your classmates and/or instructor, but each student must submit their own assignment in their own writing.
- The use of cell phones, pagers, computers, or any other unauthorized device during examinations is an explicit violation of the honor code.

Exam Format: There will be two mid-term exams given during the session (**May 27th** and **June 7th**) and a cumulative final exam (**June 17th @ 8 am**). Each exam will cover material presented in class, readings scheduled outside of class, SL assignments, and suggested problems from the textbook. The exam format will be provided in class prior to a given exam. You should bring a #2 pencil, your UNC ID, and a basic calculator with you to each exam. Students that arrive more than 15 minutes late for an exam will not be permitted to take the exam. A 1.5 hour Q&A session will be held one evening during the week of the exam. The time and location of these meetings will appear in Sakai.

Missed Exams: There are no make-up examinations. You are forewarned well in advance to properly schedule your time and make proper arrangements for other potential conflicts. If you must miss a midterm exam, say due to illness, you may be allowed to transfer the missed credit to the final examination. To qualify for a transfer of credit, you must contact me **before** the start of the missed midterm examination and provide me with an acceptable explanation for missing the exam. You are required to support your explanation with suitable documentation. Only in exceptional cases will credit be transferred if you do not contact me until later. If an acceptable explanation is provided, then the percentage (20%) for the missed midterm examination will be added

to your final exam. If you miss both mid-term exams, then your final exam will carry a weight of only 70%, i.e. a 10 percentage point penalty applies. If you are unable to attend the final exam at the designated time, then you will need to provide me with an "Exam Excuse" from the Dean's Office no later than Wednesday, June 12th unless it is an unforeseeable emergency (like illness) in which case a proof of the sickness (note from clinic) should be submitted after returning to campus as soon as possible. The make-up for the final exam will be held at 8 am on Wednesday, June 19th.

Attendance Policy: Regular attendance is strongly recommended. Absenteeism is most likely to negatively affect your understanding of the subject and, therefore, your grade. Office hours cannot be used as a substitute for a missed class meeting. You are responsible for any announcements and assignments that you may have missed if you choose not to attend class. You should get the missed notes/announcements from one of your peers. It is expected that you will respect your peers and the instructor with appropriate behavior while in class and that you will arrive to class on time with your cell phones turned to the off position. This means that you should refrain from reading the paper, browsing the web, instant messaging, playing games, etc. during class time. I do not consider it appropriate for students to play computer games, work on their Facebook pages, or otherwise engage in recreational activity during class. **Students who are not willing to attend regularly should drop the course.**

In the event that you must miss or anticipate missing at least **3 consecutive classes** because of an **extenuating circumstance**, notify me and the Dean of Students immediately. A student should present his or her explanation for any absences in writing to me in advance if the reason for the absence could be foreseen, or as soon as possible thereafter if the reason for the absence could not be foreseen. Upon receipt of notification from the Dean of Students and your return to campus, please contact me and we will discuss any adjustments to your course grade calculation.

Tips for Being Successful in ECON 101

- Attend all lectures and exam Q&A Sessions.
- Stick to the deadlines given on the course calendar. This means all assigned readings should be completed before they are presented, problem sets should be done by the due date, etc.
- Dedicate at least three hours of study time outside of class for every hour in class.
- Work through the resources that are available in Sakai. These include extra multiple choice questions, solutions to selected problems from the end of each chapter, and a link to the textbook's website (includes more questions and power point slides for each chapter).
- If you find that you are having particular difficulty with any of the material in this course, then get help immediately. *Do not let it build up*. It is expected that you will have read the appropriate sections of the textbook and reviewed your notes BEFORE the scheduled meeting. Many students will wait until the last minute to get help and put extraordinary demands on their instructor's time. I will have office hours twice a week so please take advantage of them.

Calendar and Reading List: A detailed outline with a calendar of required readings and assignments can be found in Sakai. You are expected to have all assigned readings completed before the material is presented. The entire chapter is to be read unless otherwise noted.

Dates	Topic	Reading from Cowen & Tabarrok
May 14 – May 15	Introduction to Economics; Economic Way of Thinking	Chapter 1
May 15 – May 17	Comparative Advantage and Trade	Chapter 2
May 17 – May 23	Supply and Demand; Market System	Chapters 3 & 4
May 23 – May 24	Price Elasticity	Chapter 5
May 28	Exam #1 (material through May 24)	
May 29 – May 30	Market Outcomes in the Presence of Taxes, Subsidies, and Price Controls	Chapters 6 & 8
May 31	Market Outcomes and Policy Suggestions in the Presence Of Externalities	Chapter 10
May 31 – June 3	Firm Level Decisions under Perfect Competition	Chapter 11 & 12
June 3 – June 4	Monopoly: Firm Level Decisions and Policy Suggestions Under Imperfect Competition	Chapter 13
June 5	Market Outcomes and Policy Suggestions in the Presence of Public Goods and Common Resources	Chapter 18
June 6	Intro to Macroeconomics; Measuring Economic Output	Chapter 24
June 7	Exam #2 (material from July 5 through July 16)	
June 10	Economic Growth and Public Policy	Chapter 25 & 26
June 11 – June 12	Savings, Investment, and the Financial System	Chapter 27
June 13 – June 14	Unemployment and Inflation	Chapters 28 & 29
	A Model of the Macroeconomy: Aggregate Demand and Aggregate Supply	Chapter 30
	The Federal Reserve System and Monetary Policy	Chapter 32
	Fiscal Policy	Chapter 35
June 17 @ 8am	Cumulative Final Exam	

Disclaimer: Although the instructor intends to follow this syllabus as closely as possible, there may be times when deviations from the material presented herein are necessary. Changes will be announced as early as possible so that students can adjust their schedule.

Registration Instructions for Sapling Learning

- 1) Go to <http://saplinglearning.com>
- 2) If you already have a Sapling Learning account, log in then skip to step 3.
- 3) If you have Facebook account, you can use it to quickly create a Sapling Learning account. Click the blue button with the Facebook symbol on it (just to the left of the username field). The form will auto-fill with information from your Facebook account (you may need to log into Facebook in the popup window first). Choose a password and time zone, accept the site policy agreement, and click "Create my new account". You can then skip to step 3.
- 4) Otherwise, click "Create account". Supply the requested information and click "Create my new account". Check your email (and spam filter) for a message from Sapling Learning and click on the link provided in that email.
- 5) Find your course in the list (you may need to expand the subject and term categories) and click the link.
- 6) Select a payment option and follow the remaining instructions.

Once you have registered and enrolled, you can log in at any time to complete or review your homework assignments. During sign up - and throughout the term - if you have any technical problems or grading issues, send an email to support@saplinglearning.com explaining the issue. The Sapling support team is almost always more able (and faster) to resolve issues than your instructor.

Appendix C: Writing Assignment

Econ. 101
Jain
Summer II 2014

Article #1

This assignment is due on Thursday, June 26, 2014.

Read “Outsource your way to Success” (Article1.pdf) and answer the following questions in 100 words each (50% penalty for exceeding the word limit).

1. What is Steinsson’s and Nakamura’s perspective on outsourcing housekeeping and childcare and why? As a student of Econ 101, do you agree with their view? Explain using the concepts you’ve learned in the class.
2. What is Athey’s take on outsourcing housework for working mothers?

Other Instructions:

- The assignment should be typed in at least 10-point font and include your name, PID, and a signed statement of the honor code. Failure to type your assignment and/or include a signed statement of the honor code will result in a 0 on the assignment.
- Staple a copy of these instructions to your assignment. Failure to do so will result in a 5 point deduction.
- The assignment is due at 9:45 am on June 26. A 5 point penalty will be assessed for each day the assignment is late. It is your responsibility to print the assignment and give it to me on time. Emailed assignments will not be accepted unless permission was granted.
- You may discuss the assignment with up to 2 of your classmates, but you must write your assignments independently. Copying, paraphrasing, or using others words as your own in writing this assignment is strictly prohibited. I will be checking for these issues during grading, so please be warned and write your assignments independently.
- If you do discuss the article with any of your classmates, then please include their name(s) in parentheses at the end of your essay. Anybody caught violating this policy will be subject to disciplinary action in accordance with the Universitys Honor Code.
- If you have any questions about this assignment, please consult me.

Magazine

Outsource Your Way to Success

It's the Economy

By CATHERINE RAMPELL NOV. 5, 2013

Jon Steinsson and Emi Nakamura do not have enough time to do everything they need to do. They're recently tenured, highly productive rising stars at Columbia University, as well as parents to an infant. But they have a secret weapon helping them prioritize: Econ 101.

One of the oldest, if not entirely intuitive, principles in economics is comparative advantage, developed by the British economist David Ricardo in the early 19th century. As introductory econ students all learn, it explains why countries and companies ought to outsource the production of lower-value goods and services, even if they can produce them more efficiently themselves.

Even if you're faster and more effective than everyone else at a given task — fighting with the cable company, say, or folding your socks just so — you still might be better off if you pay someone else to do it for you. Why? Because there is an opportunity cost for every hour consumed by these tedious, nonproductive tasks; there exists some higher-value activity you could be spending your time on instead.

Steinsson and Nakamura, both economists, take the tenets of their field seriously. And so they outsource as much of the humdrum aspects of their personal lives as they can.

Last year, the couple hired a personal chef. She drops off five healthful meals at the beginning of every week to reduce the time they spend cooking (they used to cook recreationally; now they'd rather spend that time with their son). They have also paid people to: build Ikea furniture for them (even though the service often costs more than the furniture itself); teach them how to use software programs and baby carriers; and load their CD collection onto their computers. They even hired someone to spend hours going through thousands of old family photographs to figure out which are the "good ones."

That last task has proved a bit problematic. It's hard for a stranger to look at snapshots from your childhood and determine which ones represent truly memorable moments. Still, Steinsson remains confident in the theory. "We haven't figured it out yet, but we haven't given up," he told me.

While it's now common, especially in cities like New York, for professionals to hire a housekeeper and pay for some degree of child care, outsourcing other activities is quite rare and even stigmatized among noneconomists. Embracing the D.I.Y. ethos is (wrongly) perceived as evidence of thrift or even moral virtue. A personal chef is the sort of luxury people associate with hedge-funders, Europeans with several surnames and oil sheikhs. Still, you need not be an heiress to benefit from paying for a personal assistant or gofer of some kind. From an economist's perspective, it's similar to taking out student loans: an investment in your future earning potential. Yet few outside the field see it that way.

Part of the problem is that most people don't understand the value of their time, particularly if they are salaried. Paying someone to buy your groceries or take the car to the mechanic sounds like money down the drain if you're not billing hourly. But buying yourself an extra hour to work today can be good for your career tomorrow, if doing so improves your chances of getting a promotion or a raise.

That's why Steinsson and Nakamura paid for housekeeping services even when they were penniless grad students. Outsourcing household tasks meant they had to take on more debt, but they calculated — correctly — that spending an extra

hour working on a paper was better for their lifetime expected earnings than spending that same hour vacuuming.

There is also a strong cultural aversion to certain forms of outsourcing. Hiring people to work essentially as servants smacks of classism or insufficient self-reliance. Scrubbing your own toilet or doing your own laundry supposedly builds character, or something to that effect. And while it's certainly good to have these skills in a pinch, it's probably not a wise financial decision to use them all the time if you could instead be engaging in other activities that improve your — and your family's — well-being.

It doesn't help that these anti-outsourcing mores are reinforced by the U.S. tax code, which encourages us to spend money to live in a gigantic homes (via the mortgage-interest deduction), but discourages hiring household help (via complicated “nanny taxes” on domestic workers).

Outsourcing isn't only for workaholics; it can also create room for leisure time, which is perhaps the hardest argument for non-economists to appreciate. Paying someone else to work so you have more time to play sounds improvident, both financially and morally. But not if buying time for leisure makes working more tolerable. (Oddly, it's perfectly fine if leisure time includes those inefficient D.I.Y. household tasks that some people find rewarding and fun, like pickling beets or knitting.)

“You have to start from a point where you say: What is necessary for me to be happy with my decision to be a working mother?” says Susan Athey, an economist at Stanford's Graduate School of Business. “I think a lot of working mothers end up throwing up their hands in exasperation and saying, ‘I can't live this way!’ and quit their jobs.” If parents who want to work abandon their careers before trying outsourcing all the household tasks they don't enjoy, or feel overwhelmed by, quitting may be shortsighted. Happiness in the present, earning power in the future and familial bliss need not be in conflict.

Especially, Athey says, if the outsourcing costs are temporary ones that enable

parents to remain in the work force and thereby earn more money after they no longer face such a time crunch (e.g., after the kids need less supervision and can even start helping with chores themselves).

Athey qualifies all this by saying that, of course, not everyone can afford a nanny or a housekeeper or a personal assistant — like, for example, if you are yourself a nanny or a housekeeper or a personal assistant. But if you do earn more than people in these occupations, chances are that it would pay off to hire them.

In fact, one economist I spoke with, Justin Wolfers, at the University of Michigan, made me promise before I got off the phone that I would embrace my newfound appreciation of comparative advantage and look into hiring someone to do some errands for me. Hire-a-gofer sites like TaskRabbit and Gigwalk facilitate such outsourcing, their success perhaps a product of their ability to technologically grease a transaction that might otherwise be awkward. And, Wolfers says, the lousy economy means there are a lot of people willing to pick up odd jobs. He was right: last week I posted an online ad to see if I could find a personal factotum for just a few hours a week, and within 24 hours, I received more than 75 inquiries.

I hope to hire someone on a trial basis — thinking, maybe, it will buy me more time to write — but I still haven't decided whom. Going through all those résumés has been overwhelming and extraordinarily time-consuming. It's the kind of task that I'd really love to outsource.

Catherine Rampell is an economics reporter at The Times. Adam Davidson is off this week.

Appendix D: Active Learning Sheet

Econ. 101
Jain
Summer II 2014

Activity #7

Price Per Bushel (dollars)	Quantity Demanded (bushels)	Quantity Supplied (bushels)
\$3	36,000	0
6	30,000	2,000
9	25,000	5,000
12	20,000	10,000
15	16,000	16,000
18	13,000	23,000
21	8,000	30,000
24	3,000	36,000

Question 1

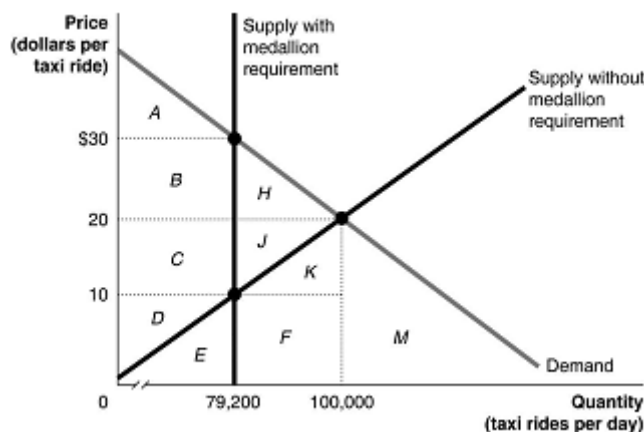
The table above contains information about the wheat market. An agricultural price floor is a price that the government guarantees farmers will receive for a particular crop. Suppose the federal government sets a price floor for wheat at \$21 per bushel. Using the table above, answer the following questions.

- What is the amount of shortage or surplus in the wheat market as a result of the price floor?
- If the government agrees to purchase any surplus output at \$21, how much will it cost the government?
- If the government buys all of the farmers' output at the floor price, how many bushels of wheat will it have to purchase and how much will it cost the government?
- Suppose the government buys up all of the farmers' output at the floor price and then sells the output to consumers at whatever price it can get. Under this scheme, what is the price at which the government will be able to sell off all of the output it had purchased from farmers? What is the revenue received from the government's sale?

- In this problem we have considered two government schemes: (1) a price floor is established and the government purchases any excess output and (2) the government buys all the farmers' output at the floor price and resells at whatever price it can get. Which scheme will taxpayers prefer?
- Consider again the two schemes. Which scheme will the farmers prefer?
- Consider again the two schemes. Which scheme will wheat buyers prefer?

Question 2

To legally drive a taxicab in New York City, you must have a medallion issued by the city government. Assume that only 13,200 medallions have been issued. Let's also assume this puts an absolute limit on the number of taxi rides that can be supplied in New York City on any day, because no one breaks the law by driving a taxi without a medallion. Assume as well that each taxi provides 6 trips per day. In that case, the quantity supplied of taxi rides is 79,200 (or 6 rides per taxi * 13,200 taxis). This is shown in the diagram with a vertical line at this quantity. Assume that there are no government controls on the prices that drivers can charge for rides.



- What would the equilibrium price and quantity be in this market if there were no medallion requirement?
- If there were no medallion requirement, indicate the area that represents consumer surplus.