

UNIVERSITY OF ILLINOIS  
AT URBANA-CHAMPAIGN

# Engineering Law

Professor Barich  
Class 1



[illinois.edu](http://illinois.edu)



# Welcome To Engineering Law!

- About Me
- Class Mechanics
- Grading
- Overview
- Start Part I



# About Joe Barich

- University of Illinois ECE grad – 94 BS, 96 MS
  - Took Engineering Law as an undergrad
- About 20 years as a Patent Attorney
  - 15 Years at large, IP-specialty firm
  - Founded Barich IP Law Group
  - *2019 Illinois Super Lawyer*
  - *Patent Buddy*® List of Top Patent Prosecutors (top 2%)
- Adjunct Professor, U of I College of Law
  - Teach Patent Prosecution, Intro to IP, founded IP Clinic
- Lecturer in College of Engineering
  - Teach Engineering Law, Startups
- Notre Dame Executive MBA, Guest Lecturer on IP
- U. of Wisconsin, Masters of Engineering Management
  - Teach Engineering Law



# Class Mechanics

- Syllabus
- 14 class meetings –
  - 5 min “half time” around 5:15-ish
- Office Hours
  - After class or by phone
  - Answers may be shared with the class
- Required reading
  - Coursepack available at IUB
  - Materials at [www.joebarich.com](http://www.joebarich.com)
- Extra Background
  - Legal Aspects of Engineering, by Cynthia Gaynor,  
10<sup>th</sup> Ed



# Other Class Matters

- Taking notes by hand is recommended
  - Many studies confirm taking written notes results in higher grades
  - The Coursepak has been specifically designed to allow you to take notes by hand
- Electronic Device Usage Policy
  - No Audio, Photographic, or Video Recording allowed
  - Don't distract others by texting, IM-ing or taking a call – go in the hall if needed
  - Don't browse distracting sites



# Grading - 1

- Three Exams and a Quiz grade - 25% each
  - Quizzes 20 questions – T/F and multi-choice
  - Exams 60 questions – T/F and multi-choice
  - All Quiz and Exam questions reviewed
    - Objective is LEARNING, not just grading
    - Discuss/identify imperfect questions and give credit
  - Check grades on COMPASS
  - Grad students must write additional paper



# Grading - 2

- More about quizzes
  - Quizzes are not announced (attendance motivator)
  - Take top 4/5 quizzes, 5<sup>th</sup> is extra credit –max 100%
  - Example 1 - Took 4/5 Quizzes and got 85% on all. Pts from 4 Quizzes = 340/400. You get 85% for your quiz score.
  - Example 2 - Took 5/5 Quizzes, got 85% on each one. Pts. from 4 Quizzes = 340/400. Add in 85 points from 5th quiz, so total quiz points would become 425/400, but cap at 400/400 for total quiz score of 100%
  - Example 3 - Took 5/5 Quizzes, got 60% on each one. Pts. from 4 Quizzes = 240/400. Add in 60 points from 5th quiz, so total quiz points become 300/400 = 75%.



# Grading - 2

- Combined Exam and Quiz score
  - 100-95 = A
  - 95-90 = A-
  - 90-85 = B+
  - 85-80 = B
  - 80-75 = B-
  - 75-70 = C+
  - 70-65 = C
  - 65-60 = C-
  - Less than 60 = D
  - Less than 50 = F



# Engineering Law Overview - 1

- Three Sections
  - Basics of the Legal System including where laws come from and the court system
  - Contracts and Torts
  - Intellectual Property
- Exam for each section
  - Exam Timing – Finish a section's material, then have Exam the second half of next class (first half is new section's material)
  - For Exam dates see Syllabus



# Engineering Law Overview -2

- Goals of the Class
  - Greater understanding of your position relative to the law
  - Highlight legal pitfalls in practice
  - Help you identify a potential legal problem
- This class does not make you a lawyer
- This class does not represent legal advice about any real-world situation
- No attorney-client relationship



# Why Study Law As An Engineer?

- The legal and governmental systems in place influence a lot of what you can do as an engineer – or the way that you go about doing it
- Influences what you can build and sell (or what the product can and can't do)
  - IP infringement, products liability, regulation such as RF spectrum or FDA approval, etc.
- Influences how you can fund your product
  - Govt. grants, contracts, selling shares, debt financing, going public, etc.
- Influences how you can protect what you make
  - IP, contracts, anti-industrial espionage, etc.
- Influences how you must behave toward others
  - Contract law, negligence, anti-discrimination, warranties, etc.



# Helping Engineers Approach Law

- Issue: Law in general seems uncertain/erratic/unpredictable/unscientific to an engineer
  - Visualize outcomes as a probability curve rather than a yes/no answer
  - Think of it as an analog system rather than a binary digital system – when is an analog bit 1 or 0?
  - Many legal “Rules” are outcome probability influencers, not absolutes
    - Interestingly, presenting something as an absolute to an evaluator may increase its influence on the evaluator
  - Legal “machine” is very complex with many situationally dependent inputs and biases
  - Continually adapting/evolving “operating system”  
 that is “updated” with new laws and case decisions

# Engineers Need To Know Law

- “This is an interesting statistic, particularly at a time when young people are thinking about their careers: The most common educational background of CEOs in the S&P 500 companies – all right, the nation’s most powerful corporations – the most common study of CEOs is not business, it’s not finance, it’s not economics – it’s actually engineering. It’s engineering.”
  - President Obama, October 2010 address at White House Science Fair



# Engineering Law : Part I

- Let's get started!
- Basics of the Legal System
  - Where Laws Come From
  - Enforcing Laws and Agreements with the Court System
- Ultimate Source of US Law is the US Constitution



# Articles of Confederation - 1

- Today's Constitution is really the second "US Constitution" in a way
- "States" were separate countries
  - Had their own armies/militias, debts, laws, currencies, etc.
  - Wanted to band together for defense, but remain free to live as they wanted to
- Articles of Confederation
  - in use 1777, force of law 1781 (Britain ended  blockade in 1783)

# Problems with the Articles - 1

- Who is leading this thing?
  - No president, executive, or judiciary
  - States send representatives, but their commitments are not binding on their “countries”
- War debts are huge!
  - Who is responsible for “national” debt? Not me! Not my state!
- No taxation
  - No way to pay off state/national debt
- No way to resolve disputes between states



# Problems with the Articles - 2

- Tough to make treaties
- Massive depreciation
- Shay's Rebellion 1786-87
  - Massachusetts small farmers revolt against taxes
  - Initially no money to raise army to suppress
  - Revolt suppressed, but increased desire for strong central government
- States are under threat from large, aggressive countries
- Need to band together economically and legally



# Idea of A Constitution

- The idea of the Constitution was not popular
  - Federalist vs. Anti-federalist
  - States wanted to be free to live their own way
- Need to do something about the war debt and regulation between states, though
- Convention was called to amend the Articles of Confederation (not to make a new Constitution)



# US Constitution - 1

- Convention decided instead to go with a new US Constitution
  - Adopted on September 17, 1787, by the Constitutional Convention
  - Eventually ratified by conventions in each U.S. state
- Ultimate Source of US Law today
- The ultimate contract between the people and the government



# US Constitution - 2

- The US Constitution was often ratified by a very small majority in the states
- States did not trust the new government
  - Demanded limitations on Federal power
  - Specific enumeration of federal rights
  - Bill of Rights
  - 10<sup>th</sup> Amendment - “The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people.”



# Constitutional Powers - 1

- Article 1 Powers of Congress (Legislative)
  - Section 8 – Enumerated Powers (18)
  - The Congress shall have power To:
  - Cl 1 - lay and collect taxes, duties, imposts and excises, to pay the debts and provide for the common defense and general welfare of the United States; but all duties, imposts and excises shall be uniform throughout the United States;
  - Cl 3 - regulate commerce with foreign nations, and among the several states, and with the Indian tribes; (“Commerce clause”)



# Constitutional Powers - 2

- Section 8 – Enumerated Powers of Congress (18)
  - Cl 8 - promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries; (Copyrights and Patents)
  - Cl 9 - constitute tribunals inferior to the Supreme Court; (Federal Court System)
  - Cl 18 - make all laws which shall be **necessary and proper** for carrying into execution the foregoing powers, and all other powers vested by this Constitution in the government of the United States, or in any department or officer thereof. (“**necessary and proper clause**”)



# Constitutional Limitations

- Section 9 – Limitations on Congress (8)
  - Cl 2 - The privilege of the Writ of *Habeas Corpus* shall not be suspended (you can demand a jailer bring a prisoner to a court to determine whether the jailer is lawfully imprisoning the prisoner)
  - Cl 3 - No “*ex post facto*” laws (can’t make something illegal after the fact)



# Limitation on State Power - 1

- Section 10 – State Limitations (3)
- No state shall:
  - Cl 1 – Make a treaty, coin Money, Impair the Obligation of Contracts (edited for clarity)
  - Cl 2 – Tax imports/exports
  - Cl 3 – Keep troops, enter into any Agreement or Compact with another State, or with a foreign Power, or engage in War



# Bill Of Rights - 1

- Most States refused to sign the Constitution without a Bill of Rights
  - Massachusetts Compromise – We will sign, but a bill of rights has to be added that covers these items X, Y, Z ...
    - Mass, Maryland, South Carolina, New Hampshire, Virginia, New York
- Rhode Island refuses to even call a constitutional convention
- North Carolina refuses until Bill of Rights is actually passed



# Bill Of Rights - 2

- 1 – Freedom of religion, speech, the press, and the right to peaceably assemble
- 2 – A well regulated Militia, being necessary to the security of a free State, the right of the people to keep and bear Arms, shall not be infringed.
- 4 – No searches without a Warrant and no Warrants without probable cause – and that particularly describe the place to be searched and the persons or things to be seized
- 5- No person ... shall be compelled in any criminal case to be a witness against himself, nor be deprived of life, liberty, or property, without due process of law; nor shall private property be taken for public use, without just compensation.



# Bill Of Rights - 3

- 7 - In Suits at common law, where the value in controversy shall exceed twenty dollars, the **right of trial by jury shall be preserved**, and **no fact tried by a jury, shall be otherwise re-examined** in any Court of the United States, than according to the rules of the common law.
- 9 - The enumeration in the Constitution, of certain rights, shall not be construed to deny or disparage others retained by the people.
- 10 - The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people.



# Later Amendments

- 13 – Abolished Slavery (1865)
- 16 – Legitimized Income tax (previously found unconstitutional) (1913)
- 17 – Senators to be elected by popular vote instead of by state legislatures as recited in Constitution (1913)
- 18 – Liquor Abolished (1919)
- 19 – Women get to vote (1920)
- 21 – Repealed 18<sup>th</sup> - Liquor OK (1933)
- 26 – Voting age set to 18 (1971)
- 27 (most recent) – Congressional pay increases only after an intervening election (1992)



# Executive Power

- Article II of the US Constitution
- Elected by electors appointed by the states
  - Commander in Chief
  - Grant Pardons
  - Make treaties (need 2/3 consent by Senate)
  - Nominate ambassadors, Judges, etc (need advice and consent of Senate)
  - Deliver State of the Union Address
  - “He shall take Care that the Laws be faithfully executed”



# Judicial Power

- Article III of the US Constitution
- The judicial Power of the United States, shall be vested in one supreme Court, and in such inferior Courts as the Congress may from time to time ordain and establish.
- The Judges, both of the supreme and inferior Courts, shall hold their Offices **during good Behavior**, and shall, at stated Times, receive for their Services a Compensation which shall not be diminished during their Continuance in Office.



# Article IV – The States

- **Full Faith and Credit** shall be given in each State to the public Acts, Records, and judicial Proceedings of every other State.
- The Citizens of each State shall be entitled to all Privileges and Immunities of Citizens in the several States.
- A Person charged in any State with a Crime, who flees but is found in another State shall be delivered up to be removed to the State having Jurisdiction of the Crime.



# The Supreme Court

- No enumerated ability in the Constitution to declare anything “unconstitutional”
- No law giving Supreme Court that power
- How did they get it?
- Also, how come the federal courts get to review state court decisions – that’s not in the Constitution either!



# Marbury v. Madison

- John Adams (2<sup>nd</sup> president) is defeated by Thomas Jefferson, but party controls Congress
- Passes last-minute laws creating many new judgeships to be distributed to cronies, but appointments must be “received”
- Marbury’s appointment does not reach him (by horse) and he sues Madison (the new Secretary of State) to deliver it
- Supreme Court finds the statute under which Marbury was appointed was “unconstitutional,” so Marbury loses – can’t force delivery.
- “It is emphatically the province and duty of the judicial department to say what the law is.”

 Jefferson does not appeal because he “won”

# Expansion of SC Power

- SC's power to declare federal law constitutional?  
They made it up and people went with it.
- Supreme Court gets to review State Laws for compliance with US constitution
  - Calder v. Bull, 3 U.S. 386 (1798)
- Supreme Court gets to review State Court Decisions for compliance with US constitution
  - Martin v. Hunter's Lessee, 14 U.S. 304 (1816)
- Supreme Court orders are binding on State Executive
  - Cooper v. Aaron, 358 U.S. 1 (1958)



# Expansion of Congress' Power

- Congress's powers are specifically recited in the Constitution (18)
- The 10<sup>th</sup> Amendment says
  - The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people.
- How can Congress make so many laws outside of their enumerated powers?



# The Commerce Clause -1

- Remember the commerce clause!
  - Cl 3 - regulate commerce with foreign nations, and among the several states, and with the Indian tribes; (“Commerce clause”)
- Seems pretty limited as written, right?
- However, since the 1930s, Congress has taken a very expansive view of the power afforded to them under the commerce clause
- The Supreme Court has validated Congress’ view
- How did that happen?



# The Commerce Clause - 2

- President Roosevelt and the New Deal (1930s)
  - Great Depression – it’s a tough time!
  - Roosevelt’s party controls Congress, wants Federal minimum-wage laws, child labor laws, agricultural relief laws, etc
  - SC strikes down laws as unconstitutional
    - Not one of the enumerated powers of Congress
  - Roosevelt threatens to “stack” Court - 9->15
    - Number of Justices not set by Constitution
  - Supreme Court backs down and declines to strike down the National Labor Relations Act giving the Federal government the power to regulate labor (other cases follow)



# The Commerce Clause -3

- The Commerce Clause is used to justify:
- Federal Minimum wage laws (because the product moves in commerce)
  - *US v. Darby*, 312 U.S. 100 (1941)
- Federal Anti-Discrimination Law
  - *Daniel v. Paul*, 395 U.S. 298 (1969)
  - Can regulate recreational facility because  $\frac{3}{4}$  of items sold at snack bar were purchased outside the state – therefore it's involved in interstate commerce
- Most federal criminal laws, such as drug laws



# Commerce Clause Limits -1

- More recent SC cases have imposed some limits on the Commerce Clause
- Gun-Free School Zone Act
  - Additional penalties for guns in schools
  - *US v. Lopez*, 514 U.S. 549 (1995)
  - Struck down – no substantial relation to interstate commerce
  - Province of the states
- Violence Against Women Act
  - Federal bonus penalties for violence against women
  - *United States v. Morrison*, 529 U.S. 598 (2000)



Similar reasoning

# Commerce Clause Limits -2

- *National Federation of Independent Business v. Sebelius*, 132 S. Ct. 2566 (2012)
  - “Obamacare” decision
  - Majority of court finds it outside commerce clause
  - But! Upheld as an exercise of congressional taxing ability in a 5-4 decision
    - Remember the 16<sup>th</sup> amendment!
    - VERY broad taxing powers to Congress



# Constitutional Issues For Engineers - 1

- Engineer Exposes Unconstitutional Wiretapping
  - Under the Foreign Intelligence Surveillance Act (FISA), the NSA must get a warrant from a special secret court to carry out domestic wiretapping.
  - Post 911, Dick Cheney directs NSA to harvest, analyze and store vast quantities of domestic communications without a FISA warrant
- AT&T engineer reveals that San Francisco switching hub he worked at had a secret room where NSA staff operated
- Warrantless wiretapping of US citizens is illegal  
 and room is shut down

# Constitutional Issues For Engineers - 2

- President of ISP receives National Security Letter (NSL) from FBI demanding private customer records
  - No warrant, no showing of probable cause or even reasonable suspicion
  - Letter says it is a crime to talk to anyone about the letter - even a lawyer
- "Internet users do not give up their privacy rights when they log on, and the FBI should not have the power to secretly demand that ISPs turn over constitutionally protected information about their users without a court order. I hope my successful challenge to the FBI's NSL gag power will empower others who may have received NSLs to speak out."
- The Justice Department's Inspector General has reported that between 2003 and 2006, the FBI issued nearly 200,000 NSLs.



# Constitutional Issues For Engineers - 3

- Inspector General of Department of Justice 2013 Memo
  - “[P]rior OIG review assessing the FBI’s use of national security letters (NSL) ... found that the FBI had misused this authority by failing to comply with important legal requirements designed to protect civil liberties and privacy interests.”
  - “The OIG has identified recent instances in which Department employees made inaccurate or incomplete statements to Congress or other government entities.”
- Snowden NSA Whistleblowing
  - Dec 2013 Federal Judge finds the NSA program “almost Orwellian”
  - “I cannot imagine a more 'indiscriminate' and 'arbitrary' invasion than this systematic and high-tech collection and retention of personal data on virtually every single citizen for purposes of querying and analyzing it without prior judicial approval ... Surely, such a program infringes on 'that degree of privacy' that the founders enshrined in the Fourth Amendment.”
  - Dec 2013 National Security Advisor Susan Rice confirms that NSA officials have “inadvertently” made false representations to Congress



# Constitutional Issues For Engineers - 4

- Riley v. California, 134 S.Ct. 2473 (2014)
  - When arresting someone, police can't access their cell phone without a warrant
  - Note! If police have consent, they don't need a warrant.
    - “Can I have a look at your phone?” “Uh, OK.” Is likely consent.



- Break!
- See you in 5 mins



# Federal Law Making

- Congress includes the Senate and House
- Senate
  - 100 senators, 2 from each state
  - 6 year terms, staggered elections - 1/3
  - Re-election rates often 90%
- House of Representatives
  - 435 members – based on population of state
  - 2 year terms, lower re-election rate



# Powers of Congress

- Both House and Senate must pass a bill for it to become a law
- Senate special powers
  - Ratify treaties (2/3 majority)
  - Approve Presidential appointments
  - Impeachment trials
- House special powers
  - Originate revenue-raising (tax) laws
  - Impeachment proclamations



# To Become a Law - 1

- Bill is Introduced (any member)
- Referred to committee
  - 20 in the House
  - 16 in the Senate
- Committee hearing –public, testimony
- Amendment?
- Committee Action – vote and report



# To Become A Law - 2

- Each Full chamber (House, Senate)
  - Debate?, Amendment?, Vote?
- Other chamber – matching?
- If approved, goes to President
- Becomes a law if
  - Signed by President (no veto)
  - Delivered, but no action for 10 days (in session)
- Does Not become a law if
  - Vetoed (2/3 of both chambers can override)
  - Pocket Veto – if unsigned when Congress ends its session (less than 10 days after delivery)



# Lobbyists

- Attempt to use persuasion to influence the lawmaking process
- Constitutional - “right to petition”
- Often former Congress members
- Required to register (crime not to)
- Bills are often written or advised by lobbyists
- Examples - AARP, ABA, NAACP, NRA



# 1998-2017 Lobbyist Spend

Sector	Total
<a href="#">Misc Business</a>	\$7,848,975,885
<a href="#">Health</a>	\$7,781,339,526
<a href="#">Finance/Insur/RealEst</a>	\$7,761,522,772
<a href="#">Communic/Electronics</a>	\$6,217,715,373
<a href="#">Energy/Nat Resource</a>	\$5,591,905,207
<a href="#">Other</a>	\$3,918,679,373
<a href="#">Transportation</a>	\$3,871,696,919
<a href="#">Ideology/Single-Issue</a>	\$2,461,021,659
<a href="#">Agribusiness</a>	\$2,271,856,387
<a href="#">Defense</a>	\$2,197,238,125
<a href="#">Construction</a>	\$851,507,850
<a href="#">Labor</a>	\$754,715,947
<a href="#">Lawyers &amp; Lobbyists</a>	\$472,770,157



Note: These amounts do **not** include campaign contributions.  
**Source - Center for Responsive Politics (CRP)**

# Ways to Stop A Law

- Lobbyists convince congressperson to decline to introduce
- Route to friendly committee
- Table in committee
- Keep amending to end of Congress
- “No” recommendation from committee
- “No” vote on floor
- Differing versions between chambers
- Veto
- Pocket Veto



# Ways to Help A Law Along

- Build consensus before introduction
  - Bipartisan sponsorship
  - Many co-sponsors
  - Popular pressure, studies supporting
  - Executive non-objection
- Route to friendly committee
- Similar versions between chambers



# Presidential “Laws”

- Executive Orders
  - Order issued by the President
  - Few restrictions, but can’t contradict law
  - Can be huge - E.O. 9066 Internment of American Citizens of Japanese Descent
- Signing Statements
  - President signs a bill, but directs government as to how it should be implemented



# Treaties - 1

- Constitution – President and 2/3 of Senate to ratify Treaty, right?
- Since 1789, US has made about 18,500 international legal agreements
  - But! Only about 1,100 were treaties with 2/3 Senate approval as per the Constitution
  - But how?
  - Source: 2015 Congressional Research Service



# Treaties - 2

- Real “Treaty” – need 2/3 of Senate
  - Can be anything non-excluded by Constitution, even beyond the enumerated Congressional powers
  - *Missouri v. Holland (1920)*
- Congressional-Executive Agreement
  - Must be within enumerated powers
  - Not tough with Commerce Clause
  - Senate majority
- Sole-Executive Agreement
  - Must be within the powers of the President



# Treaties - 3

- Treaties are treated like regular laws
- Treaties can be ruled unconstitutional, just like laws
  - Example – Treaty to do something excluded by Constitution
- Treaties can be withdrawn from
  - No ruling on whether a president can unilaterally withdraw from treaty without congressional consent
  - Example - Bush unilateral withdrawal from Anti-Ballistic Missile Treaty (ABM) in 2002



# United States Code

- Congressional law appears in the United States Code (Annotated) U.S.C., U.S.C.A
- 50 Titles
  - Copyrights – Title 17
  - Patents – Title 35
  - Tax Code (IRS) Title 26 (3,000+ pages)
  - Takes up a bookcase – a large one



# Code of Federal Regulations

- Code of Federal Regulations (CFR)
- Agency-made law
- 50 Titles – not the same as USC
  - Title 37 – Patents, Trademarks & Copyrights
  - Title 26 – Internal Revenue – 13,000+pages
- We will discuss agency rule-making later
- Takes up multiple bookcases



# State Constitutions

- All states have their own constitutions
- US constitution sets the floor – states can give more rights, but not less
- State constitutions vary widely
  - From 7,500 words to 300K+



# Illinois Constitution

- Starts with a Bill of Rights
  - Includes several rights not in US constitution
  - s 6 - Need warrant to eavesdrop
  - s 17 – No discrimination in employment or the sale or rental property
- Includes pension guarantee – A8, S5
- Provides for constitutional convention to be offered to voters every 20 years



Voters declined in 2008

# State Laws

- Federal Law preempts state law
  - E.g., No state patents
  - Narrowly construed
- *Altria v. Good* (2008)
  - Federal tobacco advertising law did not preempt state “smoking and health” ad law
- Primarily only binding in the state, but
  - Full faith and credit
  - Long arm jurisdiction
- Illinois Compiled Statutes (ILCS)



# Working With a Legislature - 1

- As a business, legislatures want the jobs you can provide – jobs mean votes!
- Negotiate package with legislature
  - No state income and/or property taxes
  - Free land or a guaranteed state contract
  - State dollars to build roads, infrastructure, maybe even part of your facility or to “train” new workers
- Take advantage of state and federal programs



# Working With a Legislature - 2

- State of Illinois examples:
- Navistar gets \$64.7 million package to keep headquarters in Illinois in 2010
  - \$63.9 M in tax credits over 10 years and \$750K in training funds
- Motorola Mobility - \$100 M (\$10M/year)
  - To keep MM in Illinois (May 2011)
  - \$1.25M job training, \$3M capital expenses
  - About \$34,750 for each of the 3,000 jobs (\$3,475/year)
  - MM collects and retains “state income tax” from employees



# Working With a Legislature - 3

- Foxconn – \$3 B (\$200M/15 years) 2017, WI
  - Largest-ever subsidy by a state to a foreign company
  - \$2.85B in cash, \$150M in tax breaks
  - \$66,600 a year for each of the 3,000 initial workers (FC may grow workers to 13K, but no guarantee)
  - Workers will be paid \$53K, including health care
  - Each Wisconsin household's share to pay is ~\$1,200
  - Only get full \$3B for 13K jobs, but get \$1.35B if they never expand past 3K jobs.
- Small businesses, too
  - City of Chicago EDGE program – companies with 100 or fewer employees creating 5 or more jobs



- Questions?
- See you next class!

