Patents

1. What subjects and publication types are included in the database?

   USPTO: US Patents
   Google Patent: US Patents
   Esp@cenet: US Patents & Worldwide Patents
   SciFinder: Chemical Patents – US & Worldwide
   Reaxys: Chemical Patents – US & Worldwide
   Orange Book (FDA): Pharmaceutical Patents
   SureChEMBL: US Patents & Worldwide Patents

2. What are the coverage dates?

   USPTO: 1790 – present
   Google Patent: 1790 – present
   Esp@cenet: 1836 – present (US Patents)
   SciFinder: 1907 – present
   Reaxys: 1976 – present (English Language)
   Orange Book (FDA): ~1988 – present
   SureChEMBL: ~1880 – present (US Patents)

3. What Boolean or Proximity operators are used by the database?

   USPTO: AND, OR, ANDNOT
   Google Patent: See Google practice (week 3)
   Esp@cenet: AND, OR, NOT
   SciFinder: See SciFinder practice (week 4)
   Reaxys: See Reaxys practice (week 6)
   Orange Book (FDA): not allowed
   SureChEMBL: AND, OR, NOT – must be in uppercase

4. If truncation is allowed then what symbols are used?

   USPTO: $ = a string of characters of any length
   BUT it is field dependent
   Must have a minimum of 4 characters
   Example: find$ correct
            eye$ incorrect
   Google Patent: See Google practice (week 3)
   Esp@cenet: * = a string of characters of any length
   ? = zero or one character
   # = exactly one character
   SciFinder: See SciFinder practice (week 4)
   Reaxys: * = a string of characters of any length
   Orange Book (FDA): automatic
   SureChEMBL: not an option at this time
5. If wildcards are allowed then what symbols are used?
   USPTO: $ = a string of characters of any length
          BUT it is field dependent
   Google Patent: See Google practice (week 3)
   Esp@cenet: not allowed
   SciFinder: See SciFinder practice (week 4)
   Reaxys: * = a string of characters of any length
   Orange Book (FDA): none
   SureChEMBL: not an option at this time

6. How do you search for a phrase?
   USPTO: Field dependent
          Quotes around the phrase in some fields
          Hyphens between the terms in some fields
   Google Patent: See Google practice (week 3)
   Esp@cenet: quotes around the phrase
   SciFinder: See SciFinder practice (week 4)
   Reaxys: Use NEXT operator between terms
   Orange Book (FDA): automatic
   SureChEMBL: quotes around the phrase

7. Is it possible to group words from the same concept?
   USPTO: Yes
   Google Patent: No
   Esp@cenet: No
   SciFinder: No
   Reaxys: Yes
   Orange Book (FDA): No
   SureChEMBL: No

8. Any unique features?
   USPTO: 1976 – present: Full text searchable
           1790 – 1975: Searchable by Patent Number, Issue Date, and Classification Code
           Allows you to do a cited reference search
   Google Patent: 1790 – present: Full text searchable BUT OCR software has introduced some mistakes. For example:
                   Orville Wright is Oryi!!e Weight
                   William S. Harley is Wxedxaxc S. Hagley
                   You can see other patents that have cited a patent
   Esp@cenet: You can see other patents that have cited a patent
   SciFinder: You can see other items (articles & patents) that have cited a patent
              Can search by a chemical structure
   Reaxys: Can search by a chemical structure
   Orange Book (FDA): Can see what compounds are in FDA approval medicines
                     Can see what patents are associated with medicines
   SureChEMBL: Can search by a chemical structure
pat2pdf.org: Viewing a specific patent

Viewing patents: http://www.pat2pdf.org/ - enter the US patent number. The number must have seven (7) digits. If it doesn't then you need to add some leading zeros (0).
   Example: if the patent number is 12,345 then you would enter 0012345 into the search box.

1. Abraham Lincoln (16th US President) is the inventor of one patent – US 6,469.

   What is the title of the patent?

   When did Lincoln submit his patent application?

   When was the patent issued?

   Where was Abraham Lincoln living when he filed his patent?

   City          County          State

2. You and a male friend go to a bar. In the bar your friend asks a woman “What’s your sign?” She answers, “I am a patent attorney and would like to see you use US 6,293,874.” Was your friend insulted or complimented?
   (hint: look at the picture at the bottom of page 1.)

   Find a neighbor that can help you answer this question – What was Bob doing that might have been protected by a patent?


Go to http://www.uspto.gov/.
   1. Hover over Patents (near the top of the page)
   2. Click on Patent Search
   3. Find the USPTO Patent Full-text and Image Database (PatFT) section.
   4. Click on the Advanced Search in the Searching Full Text Patents (Since 1976) section.
USPTO: Searching for Assignees

Assignees are usually a company, an organization, or a country. Sometimes they are a person.

Examples: AN/general-foods$
AC/"los angeles" AND AS/ca
ACN/IT
ACN/KR

3. How many patents have been issued to the United States Postal Service(s) since 1976?

(you should get 251 – 300)

4. How many patents have been issued to Genentech since January 1, 2016?

(you should get 50 – 100)

How to limit by date or date range?
Go to the advanced search page and click on the Issue Date link to see how to search for a range of dates.

USPTO: Finding Cited References

When to use: REF is a cited US patent search – only searches patent numbers
FREF is a cited foreign patent search – only searches patent numbers
OREF is a cited book, journal article, conference proceedings, etc. search

Click on the link in the chart to get more info about this field. Precede your search term with the <field code>/
Examples: REF/7,000,000
OREF/bauman and OREF/smith
OREF/"notre dame"
FREF/2,188,638

5. To discover how many times a US patent has been cited or referenced, which field code would you use?

FREF OREF REF

5a. How many times has Abraham Lincoln’s US patent from Q1 been cited or referenced by other patents since 1976?

(you should get 5 – 10)
USPTO: Searching for Inventors

**Inventors** are always people – never an organization or company.

Examples: IN/bauman-mark$
IC/"green bay" AND IS/wi
ICN/GT
ICN/KR

6. Ron Popeil has appeared in commercials and infomercials selling a variety of products over the past 50 years. Early in his career he was selling products invented by his father and uncle. Later he was selling his own inventions. How many patents does he hold?

   (you should get more than 50)

Did you get 29 patents?

1. Are you sure he always goes by Ron?
2. Does he have a middle initial/name that he consistently uses?
3. Use the truncation symbol after the name (see example above)

7. How many patents does Steve Jobs (1955-2011), the co-founder of Apple Inc. and founder of NeXT Software Inc., hold?

   (you should get more than 450)

Did you get 367 patents?
(See the previous question for a hint)

8. How many patents have been awarded to inventors from your hometown?

   Record your answer on the board.

9. How many patents are invented by people or assigned to organizations based in Notre Dame Indiana? Do you know any of the inventors?

   (you should get 190-240)

   Hint: Did you search by inventor’s city? How about searching by assignee’s city.
   (Be sure to use the correct Boolean operators and parentheses, if needed.)
SureChEMBL: Finding patents on the web

Go to www.SureChEMBL.org

10. How many patents have Notre Dame as the Assignee?
   Click **Fielded Search** link
   Select bibliographic field... Assignee(s)/Applicant(s)
   Type “Notre Dame” (be sure to include the quotes)
   Click **Apply** button
   (You should get between 500-1,000)

11. The answer for Q10 is larger than the answer for Q9. Give two reasons why

   1. ______________________________________________________________________
      (Hint: Look at the Publication Number column)

   2. ______________________________________________________________________
      (Hint: Do Q12 to help you answer this)

12. How many patents have Notre Dame as the Assignee between 1950 and 1970?
   Click **Fork Search** link then click the **Apply** button
   Add a date range to the **Publication Date** field – be sure to type the TO in all caps
   Click the **Search** button
   (You should get between 10-20)

13. How many patents mention this compound? (You should get between 10-20)

   1. Draw the compound
   2. **Select Structure Search: Identical**
   3. Click the **Search** button
   4. Click the structure in the results
Google Patents: Finding older US patents

Go to http://www.google.com/patents

14. Look for patents issued to General Foods (Gen Foods) between January 1974 & December 1975? (Hint: Do a search so the cog button will appear then use the Advanced search to complete this search.)

How many patents do you get? (You should get between 9-14)

15. On 11 Mar 1975, Ruth Siems et al., while working at General Foods, were granted a patent for instant stuffing mix. The trade name for this product is Stove Top.

What is the patent number?

How many times has this patent been cited or referenced by? (Click on the title and look for Referenced by) (You should get between 5-15)

Esp@cenet: Finding older US patents and patents from other countries

Go to http://worldwide.espacenet.com
Click on the Advanced Search link to the left of page.
Select the collection you want to search in: Worldwide.

16. On 11 Mar 1975, Ruth Siems et al., while working at General Foods, were granted a US patent for instant stuffing mix. The trade name for this product is Stove Top. General Foods Corp also patented this product in Australia, Canada, and Great Britain.

What are the publication numbers and publication dates for the patents in those three countries?
(Find Ruth Siems’ patent. Click on the patent title then look for the Also published as section.
What is a patent family? Generally speaking, a patent family is a group of patents which, like the members of a family, are all related to each other.)

<table>
<thead>
<tr>
<th>AU – Australia</th>
<th>CA – Canada</th>
<th>GB – Great Britain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patent number:</td>
<td>Patent number:</td>
<td>Patent number:</td>
</tr>
<tr>
<td>Issue date: (see date after patent number)</td>
<td>Issued date:</td>
<td>Published date:</td>
</tr>
</tbody>
</table>
USPTO: Finding the current U.S. Class for an older patent
When there is a change or modification to the classification system, all existing patents have their classification updated to reflect the changed schema.

17. Go to the Parts of a Patent handout. Find US 2,752,339. What is the issue date?

________________________________________

18. Still looking at the print patent. What was the primary US Class and sub-class when this patent was issued?

________________________________________

The classification schema has changed several times since this patent was issued.

19. What is the current primary US Class and sub-class for US 2,752,339? Current CPC?
   (Hint: Use Google Patent for this question – Classifications section.)

________________________________________

   Primary US Class/Subclass is the 1st one
________________________________________

   Cooperative Patent Class (pick the 1st one)

20. Using the US Class and sub-class you found in Q19 - How many patents have the same US Class and sub-class since 1790?
   (Hint: Use USPTO for this question.)

   Example: CCL/263/24

   ___________________________
   (You should get 140-170. If you didn’t then search the entire database, 1790-present)

21. Using the Cooperative Patent Classification you found in Q19 - How many patents have the same CPC?
   (Hint: Use USPTO for this question.)

   Example: CPC/Y10S36/01

   ___________________________
   (You should get 1,850-1,950)

Did you get zero results? Use zero instead of the letter O.
Did you get an error? Remove all the spaces in the CPC.
< 100? Search the entire database, 1790-present
USPTO: What subjects do those classification symbols represent?

a. Within USPTO database, click on the Home link.
b. Click on Searching by Class (center column).
c. Scroll to the bottom of the page
d. Select CPC Sections
e. Select Y
f. Continue selecting sub-sections until you get a definition.

22. What subject does the CPC Y10S 36/00 represent? How about Y10S 36/01?

Y10S 36/00 ___________________________ (1)
Y10S 36/01 ___________________________ (2)

Y10S 36/01 is a subset of the larger category.

Really! Do you think an organization known for using this would file a patent for them? Makes one wonder who would?

Finding pharmaceutical patents – FDA Orange Book

Go to http://www.fda.gov
1. Click on the Drugs tab
2. Find the Spotlight section (on the right)
3. Click the Orange Book Search link

23. Ezetimibe is the active ingredient for the prescription drug with the proprietary name of Zetia, which is used to treat high cholesterol levels.  
   (Hint: click on the Appl No link then on the Patent and Exclusivity Information link.)

   What is the Zetia patent number? ___________________________
   (Pick the patent in line 1)

   When does the patent expire? ___________________________

24. Find the active products for Eli Lilly Co (or Eli Lilly and Co)

   How many active products for Eli Lilly? __________
   (You should get between 50 – 100)

   How many products are Over the counter (OTC)? ________

   How many products require a Prescription (RX)? ________
Other practice problems:

25. In 1906, the Wright brothers were awarded a patent for the airplane they flew at Kitty Hawk NC. What is the patent number?

   The patent number will be lower than 1,000,000

26. List the design patent numbers issued to the Harley-Davidson Motor Company prior to 1924?

   The patent numbers will be between D50,000 and D55,000

27. In 1906, the Wright brothers were awarded a US patent for the airplane they flew at Kitty Hawk NC. They also patented their airplane in Great Britain. What is the publication number and publication date for that patent?