# CS130 Software Tools

## Winter 2011

# Course Overview

- CS130 is a course on the collection of tools and techniques that you will need to help you through your academic career and perhaps even in your own research if you chose that path

- We will cover design, creation, research, data collection,  analysis and reporting of data and information for an academic setting

# Problem Solving

1. Understanding the problem
2. Reviewing the "knowns"
3. Researching the "unknown"
4. Formulating your strategy and determining (adopting the right method)
5. Doing the work and understanding the data

# Some Terminology

Define each of the following and give an example of each:

hardware

software

open source

# Tool Selection

Word Processing

* Good for what?

# Tool Selection

Spreadsheets

- Good for what?

# Tool Selection

Statistical Analysis

- Good for what?

# Tool Selection

Presentations

- Good for what?

# Key Points

- You must understand the task at hand to select the appropriate tool
- You must understand the tool and its limitations to get the proper results
- Not all tools are created equal and cover all aspects of every problem
- This is true regardless of what the vendor of the tool might tell you

# Research Projects

- descriptive

- relational

- causal

# Research Methods