- Approximately 20 questions
- 50 minutes
- Exam administered via Moodle
- 6 questions per page (to reduce calls to Moodle)
- In lecture hall
- From 3:00 – 3:50
- Multiple choice, fill-in, matching, True/False
- "Open Book"
- No computer? See me ASAP.
- Accessibility Students - Extra Time? See me ASAP.

- # Web Services
  - http, xml, json, api

- # REST & SOAP
  - REST is an architectural style
    - Stateless, layered, cacheable, scalable
    - Uniform interface methods (http), data format (json, xml)
    - 70% of public APIs
  - SOAP is a protocol
    - Relies on XML
    - Requires WSDL
    - Less flexible than RESTful web services

- Software and the Law, Software as IP

  - How do you determine who owns Intellectual Property
  - What are the differences between
    - Copyright
    - Patent
    - Trademark
    - Trade secret

- Cloud Computing
  - What drives an organization to use the cloud?
  - Private Cloud versus Public Cloud
  - Cloud providers: AWS, Google, Microsoft Azure, IBM
  - Advantages/Disadvantages of using the Public Cloud
  - Amazon's cloud service's growth & revenue
  - IAAS, PAAS, SAAS – what are they?

- Heroku – PAAS offered by SalesForce
  - To develop apps in the cloud

- **Software Testing**
  - The costs of poorly tested software
  - Different Types of Testing
    - Unit, Regression, Integration, UAT, Load Testing
  - How a written TEST CASE drives UAT
  - Automated Unit Testing – Framework like PyUnit
    - Eases Regression testing
    - Relies on "assertions"
    - Eases Code Refactoring

- **TDD – Test Driven Design/Development**
  - No code is written until its unit test is written

- Code Analysis
  - Static versus Dynamic using a software tool
    - Static – just looks at code
    - Dynamic – executes the code
  - Using dynamic tools
    - Debugger
    - Memory Analyzer
    - Profiler – where it spends time

- Net Neutrality
  - History of internet neutrality
  - What does it mean?
  - What is at stake in the FCC vote next week?

- Documenting Your Code
  - Why do it?
  - Formatting comments
  - Tools like Doxygen