### Name:\_\_\_\_\_\_\_\_\_\_\_\_\_

**Application Engineering and Development INFO 5100**

# FINAL Exam

## Friday Dec 17, 2011

1. (20 pts) Draw the object model for the vaccine distribution ecosystem. The model must for focus on the different players (institutions), the people, and their ability to log in into their work areas. Do not include any of the inventory aspects of the system. Your model must enable users of any entity to login.
2. (20 pts) Draw flow diagram that show the logical sequence of how work responsibilities flow within the ecosystem. Also include the manufacturer as a key player. Add numbers to show the order of movement of the steps.
3. (20 pts) Draw the model for the inventory catalog from the distributor perspective. Describe an algorithm that shows how to calculate the number of doses available in the vaccine inventory catalog. In addition, write the java code to show how you mapped your model to java code as well as how perform calculation described in the algorithm you proposed above.
4. (20 pts) Draw a diagram to show the complete model of the CDC ecosystem. This must include the orders, inventory, staff, etc.
5. (20 pts) Orders must be identified through their unique ids. Suppose we want to assign a unique order id to each order generated within the ecosystem. Write java implementation to show how this can be implemented within your system.