EXP 3422 Conditioning and Learning
Study guide for Exam 2

Chapter 2 (beginning on page 55) and **Chapter 3** (not section 3.5, "applications"):

We will postpone some things until next exam, so not pages from middle of p. 79 until the beginning of p 84.

Additional Study Questions:

1. Describe the general structure and common properties of neurons. Describe chemical synaptic transmission.

2. Describe the Aplysia experiments on habituation and sensitization: what was done and found, how were sensory adaptation and motor fatigue ruled out, what conclusions were drawn regarding the processes underlying sensitization and dishabituation (same or different), what are the neural mechanisms underlying habituation and sensitization?

3. Know Pavlovian terminology (CS, US, CR, UR, acquisition, extinction, ISI, ITI, stimulus control, etc.). What types of responses can be conditioned by Pavlovian procedures? What is meant by conditioning of an "expectation"? Distinguish between Pavlovian and Instrumental conditioning procedures.

4. What control groups are needed in Pavlovian conditioning? What does each control for?

5. What is the CER procedure and how does one calculate suppression ratio?

6. What was Pavlov's view of acquisition and extinction? What phenomena led him to propose his view of extinction?

7. What are the mechanisms of neural inhibition? Compare and contrast to the mechanisms of neural excitation. How can you test for neural inhibition?

8. What procedures are used for training and testing conditioned inhibition?

9. The temporal relationships between the CS and US can be arranged in various ways. What do we call each of these temporal relationships? What types of arrangements work best?

10. Contrast contiguity with contingency. What do the terms P (US/CS) and P (US/noCS) mean? What type of learning do you get when P (US/CS) > P (US/no CS), when P (US/CS) < P (US/no CS) and when P (US/CS) = P (US/no CS)? Be able to predict what type of learning will occur if given values for these two terms. Know "contingency space." What implication did contingency have for the types of control groups used in Pavlovian conditioning?

11. What three "challenges to contiguity" did we discuss? How did they challenge this view?

12. How did taste aversion learning challenge traditional views of Pavlovian conditioning? Which of these challenges appears to be true and not just a matter of degree?

13. What is the blocking effect and what is Kamin's hypothesis regarding the blocking effect?