

# Midterm 2

- Thur Nov 1, in class
- Read the textbook, other articles posted, and lecture notes
  - see syllabus for textbook pages
  - NOT lab material
  - NOT cumulative
- Critical thinking
  - Analyzing experiments, interpreting data
- 20% of grade for Term 1

# Midterm

- Arrive early – you will need the full 75 minutes.
- 9:30 sharp to 10:45 sharp
- Use a pencil for Scantron
- Spread out. Do not sit next to each other.
- Keep your eyes on your own exam.
- Put away everything except a pencil. No papers, no pencil cases, no headphones etc. Bring photo ID.
- **\*\*\*\*\*Stop writing when the time is done. If you do not, points will be deducted, in fairness to the other students.\*\*\*\*\***

# Midterm

- Write your name (clearly) on exam & Scantron!
  - Last name
  - First name
  - Student ID
- Use the correct side of the Scantron!
- Multiple choice: 60 questions, 2 points each
- Short answer: 1 question, 20 points
  - Experimental design, proposing an experiment

# Midterm

- Use your time wisely.
- Read the question. Make sure you understand the question before you answer.

# Academic misconduct

- Will be treated very seriously.
- **This includes writing past 10:45 am, when the exam is over.**

# Make-up exams

- Only for validated medical reasons
- Must contact me and submit documentation ASAP (within 24 hours)
- Make-ups will be oral exams (75 minutes) in presence of professor & TA

# Regrading exams

- Written request for regrades. Need to explain why you think the exam should be regraded.
- I reserve the right to regrade the entire exam (not just a particular question), which means that your grade could go down upon regrading

# Short answer question

I'll state a hypothesis, describe a study to test the hypothesis, and give the results of that study.

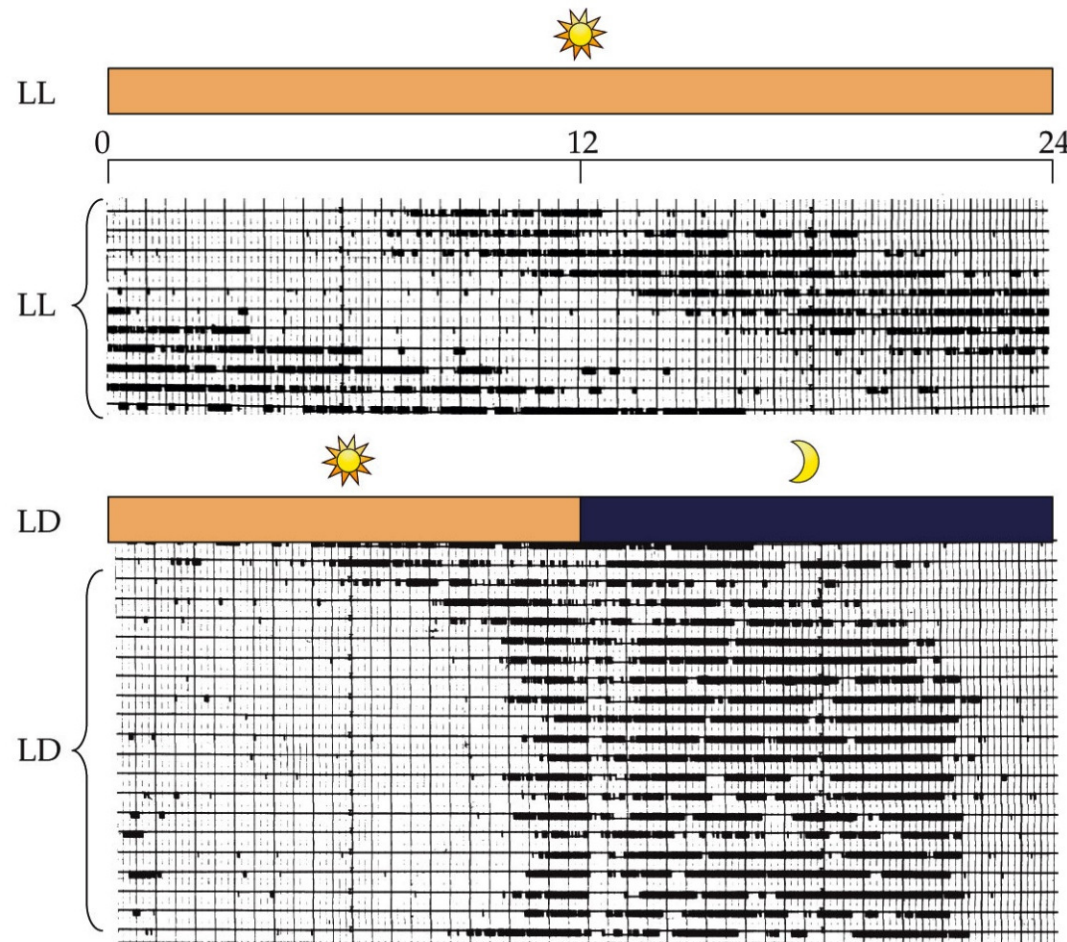
- Main conclusions – in relation to the hypothesis (4 pts)
- Identify & explain one strength of the experimental design (5 pts)
- Identify & explain one weakness/limitation of the experimental design (5 pts)
  - with respect to testing the hypothesis
- Describe one follow-up experiment to further test this hypothesis. A study **not** described in lecture or in textbook. Include control groups and predictions. Use your creativity! (6 pts)



# Short answer question

- DO NOT list multiple strengths and weaknesses!
- State one strength and one weakness – and explain each well.
- “One strength is...”
- “One weakness is...”
- **Write legibly and in full sentences.**

Researchers hypothesized that calling in male crickets is regulated by a neural circadian clock. Researchers caught male crickets in the wild and then placed each cricket in a small individual enclosure in a lab. Each enclosure was kept at 21°C and was light-tight, had its own incandescent light bulb on a timer, a microphone, food, water, and cork insulation to reduce external sounds. Crickets were randomly assigned to be exposed to either constant light (LL) or 12L:12D (n=10 subjects per group). Consider the 12L:12D group as the control group. These graphs show data from one cricket on LL and one cricket on 12L:12D, but results were similar for other subjects in each condition.



- What are the main conclusions from this experiment, in relation to the hypothesis? Explain. (4 pts)
- What is one strength of the experimental design? Explain. (5 pts)
- What is one weakness/limitation of the experimental design? Explain. (5 pts)
- Describe one follow-up experiment to further test this hypothesis in crickets (a study **not** described in lecture or in textbook). Include control groups and predictions. Use your creativity! (6 pts)