

# Week One: Stat 439 Intro

## This Week

- Course Overview
- Overview of proportions
- Overview of contingency tables
- Overview of generalized linear models

## Next Week

Tuesday:

- Watch lecture video
- Submit lecture notes

Thursday:

- Lab 1
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## Ice Breaker Questions:

1. Name:
2. Major:
3. Night Owl or Early Bird?
4. Favorite thing you did this summer?
5. What is your favorite ice cream place in Bozeman?

Your favorite ice cream place is an example of *categorical data*.

**Questions #1:** Given  $X$  out of 15 people picked sweet peaks. Assume that this class is a reasonably representative sample of all MSU students.

- Is there a statistical distribution that corresponds to this framework ( $X$  out of 15)?
- How do we estimate the proportion of students that preferred Sweet Peaks?
- What about uncertainty in that estimate?

**Question #2:** Do we believe there is an association between night owls and favorite ice cream shop?

Let's create a table that summarizes this information.

**Question #3:** Assume we also have the number of times per week a person eats ice cream, can we write down a model that uses this information to predict the probability a person picks sweet peaks?