

## Setting the Scope for M.S. Research Projects

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Building on previous presentations by  
Andrew Goodliffe (2012)  
and Sarah Sarah Penniston-Dorland (2014)

### Session outline

- ▶ Your goals
- ▶ Student's goals/needs
- ▶ MS considerations
- ▶ External constraints
- ▶ Personal experiences
- ▶ Your project

### What makes a successful MS project?

- ▶ Thesis defense
- ▶ Technical proficiency/demonstration of skills
  - ▶ Writing, critical thinking, project completion
- ▶ Answering a specific question
  - ▶ e.g., Flood synchronicity in a watershed
- ▶ Timeliness: need to get it done
- ▶ Conference presentation, maybe publication
- ▶ Furthering your research agenda

### Your goals & student goals

Your goals

Students' goals

### Your goals

- ▶ What are the needs of your research program?
- ▶ How can an M.S. project feed into other aspects of your research program? Pilot data?
- ▶ Can you adapt a larger-scale project into a smaller M.S. project? Can you expand a smaller project into an M.S. project?
- ▶ How many other students do you have? Where/how will your M.S. students fit in?

### Student's goals/needs

- ▶ What are the student's goals after completing the master's (why are they doing this)?
- ▶ What are the student's skills, interests, and abilities?
- ▶ Should a master's project be published?
- ▶ What are your overall learning outcomes for an M.S. student?
- ▶ How much time can your student devote to this?
- ▶ Academic background

### MS Considerations

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- ▶ Projects can vary widely
  - ▶ Technical proficiency/demonstration of skills vs. furthering science
  - ▶ Writing skills and commitment
  - ▶ Student's other commitments
  - ▶ Scale of theses in your department
  - ▶ Is this approach different than PhD students? If so, how/why?
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### Personal experiences

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- ▶ Our experiences
    - ▶ Have a specific question for student to answer
    - ▶ Manageable expectations
    - ▶ Regular meetings (ideally weekly)
    - ▶ Periodic meetings with committee also important
    - ▶ Clear expectations from you and your student
      - ▶ For example, when will drafts be returned?
    - ▶ Timelines and regular updates
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### Design your own M.S project

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- ▶ Goals
  - ▶ Funding?
  - ▶ Amount of time? Summer required?
  - ▶ Logistics: Travel? Equipment? Lab?
  - ▶ Previous skills required?
  - ▶ Other?
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