

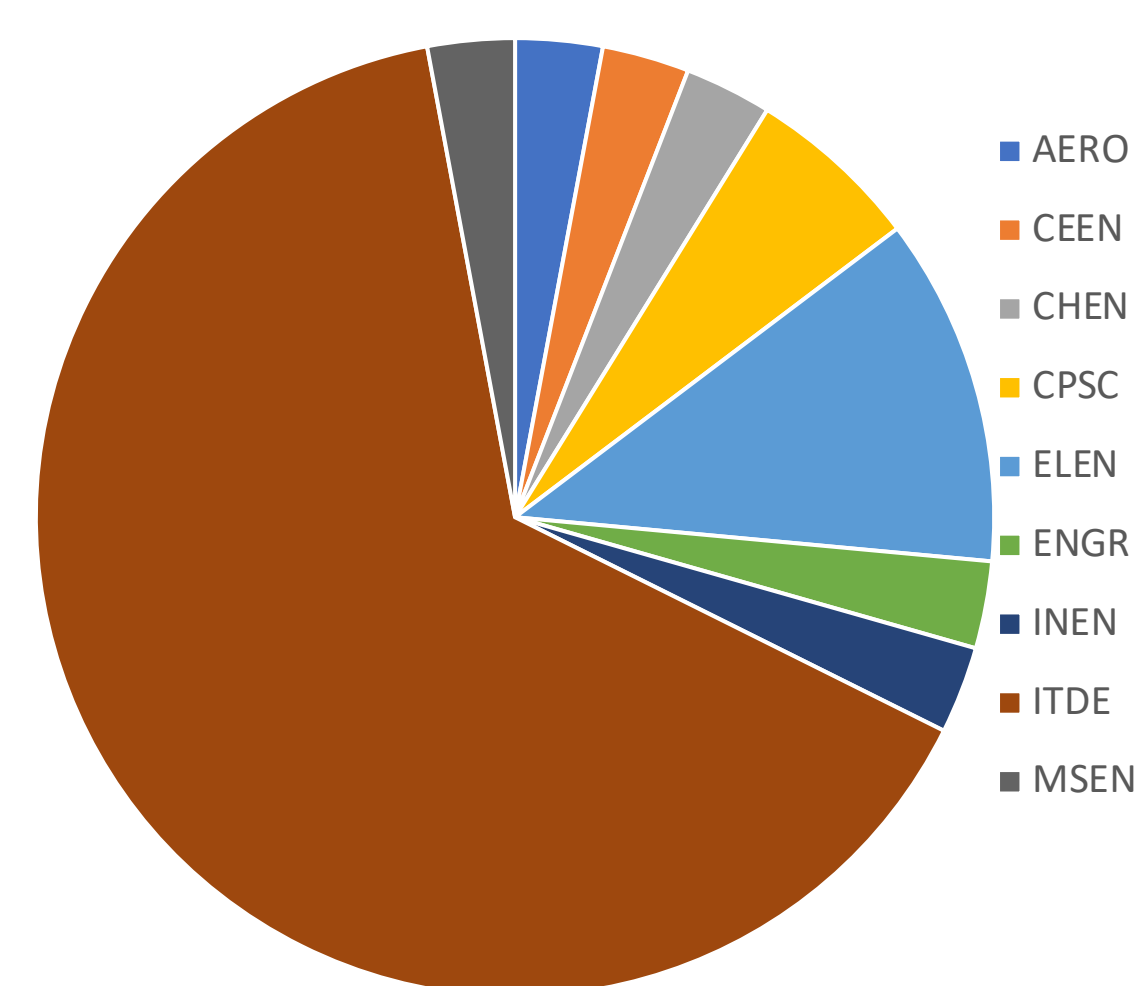
## SUMMARY

Incorporating the multidisciplinary expertise of a research librarian who specializes in scholarly communication can enhance the quality and impact of student publications and writing. Doing so early in the PhD program better prepares students for the culture of academia.

## LEARNING OUTCOMES

- Describe the trends of scholarship in engineering
- Demonstrate understanding of the research lifecycle in engineering publications
- Critically evaluate data management planning through case study review of an engineering project plan
- Compare scientometrics rankings of engineering publications and conferences to quality markers
- Contrast and evaluate the methods of evidence synthesis and original research
- Compare the implementation of evidence synthesis research methods and standards in engineering scholarship and disciplines
- Develop a draft paper publication
- Prepare a research pitch or proposal (student choice)
  - Choose and defend an outlet for your paper and evaluate its quality/impact using scientometrics and quality markers
- Review a peer paper, in adherence to predominate peer review standards in engineering

## STUDENT MAJORS



# Research Lifecycle and Publication in Engineering: a first year PhD Course

**IDEATION**  
Reading & writing about research



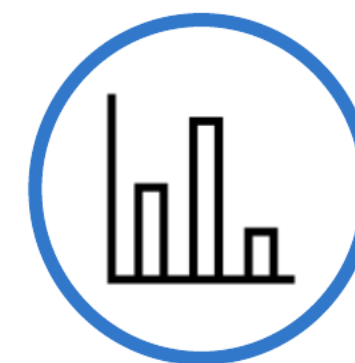
**FUNDING IDENTIFICATION**  
Finding funding opportunities using Pivot, and writing in style of grant proposals



**TARGETING OUTLETS**  
Evaluating and questioning journal and conference metrics and rankings. Choosing a journal to target for the lit review paper.



**DATA MANAGEMENT PLANNING**  
Practicing research integrity, open science, and FAIR data management planning. Critiquing a real DMP.



**PEER REVIEWING**  
Reviewing papers with formative and appreciative feedback techniques. Peer review doesn't have to feel like hazing.



**BUILDING ON YOUR WORK**  
Developing a systematic review protocol to pivot the literature review to a systematic review. Turning in a mock or real protocol.



**SEARCHING LITERATURE & FINDING COLLABORATORS**  
Finding and discussing papers, and connecting with collaborators via Pivot and TAMU Scholars.



**PITCHING RESEARCH**  
Pitching and proposing research topics - grants, conferences, journals, and competitive pitches



**PROJECT PLANNING**  
Planning a project with the Literature Review Matrix



**WRITING SKILLS**  
Learning to "write quickly, edit slowly". Turning in a first draft of the literature review.



**INCORPORATING & RESPONDING TO REVIEWERS**  
Incorporating feedback, and responding to peer reviewers. Turning in a final draft literature review with peer review response.



**INCREASING IMPACT**  
Increasing impact through thoughtful evaluation of quality, citation metrics, and open science. Once you learn to put your work out in the world, you enable the research lifecycle to start again.



## INSTRUCTOR

**Dianna Morganti, MLIS, PMP**  
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Multidisciplinary Engineering  
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Course syllabus

## FUTURE PLANS

- Collaborate with English Department colleagues on scaffolded classes
- Publish OER
- Research writing anxiety interventions in class
- Research specifically on anxiety in writers with first languages other than English
- More cross pollination among students in teams

Thanks to my colleagues for course support and feedback:

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- Dr. April Douglass



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