A recording of this presentation is available: https://player.mediaamp.io/p/U8-EDC/qQivF4esrENw/embed/select/media/0tDhVT52vb0y?form=html

MIC 401 Research Paper

Explained
Overview

• MIC 401 course goals
• Proposal versus peer-reviewed style Research Paper
• Options for Thesis students (Barrett or 4+1)
• Finding a topic
• Finding a mentor
• Resources
MIC 401 Course Goals

• Develop a research proposal
• Effectively communicate your proposal (written and orally)
MIC 401 Topics

• Anything related to microbiology (viruses, bacteria, archaea, fungi, protists, algae, helminths, etc.), or

• Anything related to immunology

*The sky is the limit!*
Proposal vs. peer-reviewed style Research Paper

Research Paper (past work)
• Review state of field
• Identify your question
• State your hypothesis
• Describe methods used
• Describe and discuss results obtained
• Limitations
Proposal vs. peer-reviewed style Research Paper

Research Paper (past work)
• Review state of field
• Identify your question
• State your hypothesis
• Describe methods used
• Describe and discuss results obtained
• Limitations

Proposal (future work)
• Review state of field
• Identify open question
• Propose a hypothesis
• Methods for testing hypothesis
• Expected outcomes
• Pitfalls & alternative approaches
Options for Thesis students

Your MIC 401 paper must be original work on an original idea

➢ You cannot submit any portion of your thesis for MIC 401
➢ You cannot submit any portion of a proposal that your advisor has written

• Barrett:
  • Propose the next steps of your work if you were turning your Barrett thesis project into a Masters thesis project (future work), or
  • Propose a project that is an offshoot of your research topic

• 4+1
  • Propose a project that is an offshoot of your research topic
Finding a research topic

• You need to know what has already been done
• 99.99% of research is incremental progress (conservative), not paradigm-shifting ideas (risky)
• Start reading!
  • Review articles
  • Research articles
Finding a mentor

• Can be anyone who holds a PhD, within or outside of ASU
• Align your research interests with theirs
• Ask them early, with a personalized email
  • Introduce yourself and describe the purpose of your email (to ask them to serve as a reader for MIC 401)
  • Describe the topic you’d like to write a proposal on
  • Attach a relevant paper (review article or research article) that sparked your interest or that you want to model your study on
• Follow up if you have not received a response in 4-5 days
• If still no response, ask another potential reader with similar research interests
Resources

• ASU Library
Resources

• ASU Library: **MIC 401 Library Guide**
Resources

• Research search engines (Web of Science, One Search)
  • Video: Using Web of Science for Literature Searches
## Resources – finding a reader

### Faculty by Expertise

- **Acoustic Guitar**: 1
- **Agri-Food Systems**: 1
- **Air Quality**: 1
- **American History**: 1
- **Analytical Chemistry**: 5
- **Animal Studies**: 3
- **Applied Mathematics**: 6
- **Advising - academic**: 1
- **Agriculture**: 1
- **Alternative Fuels**: 1
- **American Literature**: 1
- **Ancient Greece and Rome**: 1
- **Anthropology**: 2
- **Applied Mathematics - Life and Social Sciences**: 1
- **Aging**: 6
- **Agriculture**: 3
- **Alzheimer's**: 3
- **Analysis**: 1
- **Animal Behavior**: 14
- **Applied Linguistics**: 1
- **Aquatic**: 2
Resources – finding a reader

Aquatic

Novel coronavirus information

Fall 2020 update  |  FAQ page  |  Class flexibility for students  |  Novel coronavirus updates

Susanne Neuer

Read more

Nancy Grimm

Read more
Resources – finding a reader

Susanne Neuer

 soaredasu edu/susanne-neuer

Research

Teaching

Public Work

Biography

Susanne Neuer’s research bridges marine biogeochemistry and plankton ecology and is focused on the biological carbon pump, its relationship to plankton community composition, trophic links and surface productivity. Her research group has published articles on the

Expertise Areas

Climate Change

Marine
MIC 401 Research Paper

Explained