

Interdisciplinary Lecture Series

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The Idea

- ❁ Hold a 'Lecture Series' in math club
 - ❁ Choose collaborating department
 - ❁ Pick common topic
 - ❁ Host two complementary talks
 - ❁ One focuses on the mathematics of topic
 - ❁ One focuses on other discipline

Benefits to Students

- ❁ Learn connections to other disciplines
- ❁ Get to know students from other majors
 - ❁ Especially for math students minoring in that field
 - ❁ Also other majors minoring in math
- ❁ See faculty collaborate

Benefits to Students

- ✿ Get to view math department as a greater part of university
- ✿ See faculty struggle with a non-math topic
 - ✿ Faculty may know math but do they know other subject?!
- ✿ Students doing a special project can also give a talk

Benefits to Faculty and Department

- ✿ Get to know faculty from other departments
- ✿ More non-math majors participating in math major activities
- ✿ Raises profile of the department in the university

Topics That Work

Biology

Topic: DNA

 Biology talk: “Enzyme Actions on DNA”

 Math talk: “DNA & Knot Theory”

Topic: Mathematical Biology

 Math talk: “Mathematical Biology”

 Biology talk: “Insecticide and Potatoes”

Topics That Work



Chemistry



Topic: Buckyballs



Math talk: “Geometry of Buckyballs”



Chemistry talk: “Chemistry of Buckyballs”



Topic: DNA



Math talk: “Unknot or Not?”



Chemistry talk: “DNA & Knotted Molecules”



Topic: Crystal Packing



Math talk: “Planar Patterns from the Crystallographic Restriction to Quasicrystals”



Chemistry talk: “Crystal Structure in Chemistry”

Topics That Work

- ❁ Chemistry

- ❁ Topic: Big Bang

- ❁ Math talk: “Mathematics of the Big Bang”

- ❁ Chemistry talk: “Chemistry of the Big Bang”

- ❁ Computer Science

- ❁ Topic: Logic

- ❁ Math talk: “A History of Logic”

- ❁ CS talk: “The Use of Logic in Computer Science”

Topics That Work

Art

Topic: Tilings

-  Math talk: “Mathematics of Tilings”
-  Art talk: “Tilings in Real Life”

Topic: Perspectives

-  Math talk: “Geometry of Perspectives”
-  Art talk: “Perspectives in Paintings”

Other Possible Topics

- ❁ Computer Science
 - ❁ Network Reliability
 - ❁ Coding Theory
 - ❁ Algorithm Complexity
- ❁ Political Science
 - ❁ Voting
- ❁ Health or Nursing
 - ❁ Spread of Disease

Other Collaborators?

- ❁ Music
- ❁ Physics
- ❁ Engineering
- ❁ Kinesiology
- ❁ Economics
- ❁ Finance

Practical Aspects

- ✿ Contact other department
 - ✿ Math club officers contact respective officers
 - ✿ Math club advisor contacts respective advisor
 - ✿ Schedule talk times
 - ✿ Reserve larger room for talks
- ✿ Choose topic and speakers
 - ✿ Encourage collaboration between speakers
 - ✿ Remind speakers to pitch talk at an introductory level

Practical Aspects

- ❁ Funding for lecture series
 - ❁ Request money from student association for joint event
 - ❁ Math club and other club split remaining costs
- ❁ Advertising event
 - ❁ Post fliers in both department areas and around campus
 - ❁ Place (free?) ad in student newspaper

Why Should You Try It?

- ✿ More students see more math!
- ✿ Shows math is connected to everything
- ✿ Half the work for math club officers and advisors
- ✿ It's fun!

Questions?

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❁ Thanks to all UT-Tyler faculty and students who helped out with our past events!