

# Starting and Maintaining an Academic Year Undergraduate Research Program:

Purposes for such programs  
and  
Finding students

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# Some Purposes for Doing Undergraduate Research

# Prepare students to pursue advanced degrees

- Help students gain acceptance to graduate school
- Help them feel ready for graduate school
- Help them transition and succeed in graduate school
  
- Similar benefits for certain jobs

# Motivate Classwork

- Show students that mathematics lives beyond their textbooks
- Motivate students to elect additional math classes
- Motivate students to major in mathematics
  - Future math teachers

# Expose students to life-long learning

- Knowledge is alive and changing
- “Leading-edge” continues to shift and move

# Introduce Students to Our Profession

- Enrich students' views of academia
- Serve as role models

# Provide Enriching Experience

- Foster close relationships
  - Between students and faculty
  - Among students
- Sense of belonging can help with retention, engagement, overall happiness

# Invigorate Own Research

- Mentoring undergraduate research CAN help your own research program
- Choose problems carefully
- Have high expectations for slow and steady progress
- Learn something new

# Have fun!

- Mentoring undergraduate research can be just as fun and enriching for the faculty member!

# Finding Students

# Your classes

- Upper-level electives
- Introductory courses
- Everything in between

# Talk in your Classes

- Find ways to mention your research (or at least *someone's* research!) in every class you teach
- Do this over and over...

# Guest Lectures

- Bring in a collaborator (find one!) to speak to your students
- Have a “special topics” day where you give a research-related talk

# Projects

- Add projects or other self-directed activities to your classes
- Watch to see who thrives

# Personally Approach Students

- Even if they have not shown any interest in your attempts to recruit, personally approach them!
- Approach students before vacations when they might mention this to parents
- Do not overlook the enthusiastic but “not great” student

# Give a Talk

- Math Club
- College Colloquium Series
- Organize Something on Your Own!
- Bring pizza or cookies

# Make Pretty Flyers

- Bring them to course fairs
- Bring them to your classes
- Post them on your door
- Post them on bulletin boards

# Formalize Your Group

- Find collaborators
- Make a name for your group
- Students beget students
  - Make it fun!
  - Make it important!