Andrews University

Department of Mathematics

UNDERGRADUATE RESEARCH APPLICATION

OPPORTUNITIES: When you participate in research, you have the opportunity to:

- Get a "feel" for research. This will give you a better idea whether research should be part of your career plans.
- Gain significant one-on-one experience with a faculty mentor. If you do good work, this is a great way to earn an excellent recommendation for graduate school, professional school, or employment.
- Develop skills for graduate school, professional school, and employment, such as critical thinking, problem solving, and persistence.
- Earn coauthorship on resulting presentations and publications—if you go deeply enough into the work.

RESPONSIBILITIES: You must:

- Display a high standard of professionalism and ethics. This includes reliability and punctuality, integrity in the collection and use of data, and faithful documentation of your work as instructed by your mentor.
- Register for MATH497 Research in Mathematics (0-3 credits) or HONS 497H Honors Research (2 credits) or an equivalent research course.
- Dedicate at least 60 hours for 0-1 credits, 120 hours for 2 credits, and 180 hours for 3 credits. You also must spend sufficient time each week to keep your project running smoothly. **NOTE: If you are funded through the Office of Research with a URS (Undergraduate Research Scholarship), the requirement is 120 hours whether you are registered for zero, one, or two credits of research.**
- Present your research at a research conference and/or departmental colloquium as requested by your mentor.

RESEARCH VENUES: There are two venues for undergraduate research.

- On-campus research with an Andrews University faculty mentor.
- Off-campus summer internships or REU programs with an off-campus mentor. **In this case you also will need an on-campus faculty mentor to serve as the teacher of record for your research credits.**

Faculty Mentor or Program	Area	Prerequisite Coursework
Bosman, Anthony (bosman@andrews.edu)	Knot Theory	Recommended: MATH215 Intro to Linear MATH355 Foundations Adv Math
Henson, Shandelle (henson@andrews.edu)	Dynamical Systems	Helpful but not required: MATH215 Intro to Linear MATH286 Differential Eq MATH426 Math Modeling
Kang, Joon (kang@andrews.edu)	Partial Differential Equations	Required: MATH431-432 Real Analysis
Moore, Robert (moorer@andrews.edu)	Mathematics Education	
Oh, Yun Myung (ohy@andrews.edu)	Differential Geometry	Required: MATH192 Calculus II MATH240 Calculus III MATH215 Intro to Linear MATH286 Differential Eq
Weldon, Lynelle (weldon@andrews.edu)	Mathematics Education	
Seabird Ecology Team Henson, Shandelle (henson@andrews.edu) Hayward, Jim (hayward@andrews.edu)	Ecology, Animal Behavior, Mathematical Ecology	
Off-campus REUs or Internships* (need an on-campus faculty mentor)	Various	Various.

***See** https://www.andrews.edu/cas/math/resources/research_internship.html

QUESTIONS: Contact Dr. Shandelle Henson, Research Coordinator for the Department of Mathematics.

Name: _____ ID# _____ Major: _____

Phone number: _____ Email: _____

Current year: ☐ Freshman ☐ Sophomore ☐ Junior ☐ Senior

Term(s) for research*: ☐ Fall ☐ Spring ☐ Summer Year: _____
☐ Fall ☐ Spring ☐ Summer Year: _____
☐ Fall ☐ Spring ☐ Summer Year: _____
☐ Fall ☐ Spring ☐ Summer Year: _____

**It usually is beneficial to continue research over multiple semesters. Please check as many semesters as you think you would continue in the research.*

Why would you like to do research, given the significant responsibilities it entails?

RESEARCH PREFERENCE: Visit with at least three mentors from the list on the previous page. Have the faculty members sign here, indicating that you have visited with them about either working with them or doing an off-campus REU/internship. (This is not a promise to take you as a research student.) Rank your interest from 1 (most) to 3 (least).

Faculty Member or Program	Faculty Signature	Rank Interest (1-3)

PERSONAL COMMITMENT: Given the significant responsibilities that come with the privilege of research, my initials beside each of the following points indicate that I understand and agree to each commitment.

Initials Commitment

_____ I will display a high standard of professionalism and ethics. This includes reliability and punctuality, integrity in the collection and use of data, and faithful documentation of my work as instructed by my mentor.

_____ I will register for MATH497 Research in Mathematics (0-3 credits) or HONS 497H Honors Research (2 credits) or an equivalent research course.

_____ I will dedicate at least 60 hours for 0-1 credits, 120 hours for 2 credits, and 180 hours for 3 credits (and 120 hours if I am funded by a URS for 0-2 credits). I also will spend sufficient time each week to keep my project running smoothly.

My signature below indicates that I have serious intent to participate in undergraduate research and I have truthfully completed this application.

Name (printed):_____

Signature: _____ Date: _____

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Application received date: _____ Approved: Y / N Date: _____

Approved by: _____ Assigned mentor: _____