

## Former Merit Students

Dan



**Major: Computer Science**  
Product Manager, Google,  
San Francisco, California

Luis



**Major: Computer Engineering**  
Accenture Technology  
Solutions, Stockholm, Sweden

Sarah



**Major: Aerospace Engineering**  
The Boeing Company, St.  
Louis, Missouri

Lyn



**Major: Animal Sciences**  
Veterinarian,  
Champaign, Illinois

Zack



**Major: Individual Plan of Study**  
IB Honors Program at  
UIUC, Champaign, Illinois

Matt



**Major: Bioengineering**  
Medical Doctor, Residency  
in Internal Medicine and  
Pediatrics, Milwaukee,  
Wisconsin

Brittany



**Majors: Chemistry, Molecular & Cellular Biology**  
Pharmacy student at UIC,  
Chicago, Illinois

Krystal



**Major: Biochemistry**  
MD PhD student at  
University of Wisconsin,  
Madison, Wisconsin



“ Nothing can compare to the benefit of the Merit program. I have had a very positive experience, and that's why I'm continuing Merit next semester. The TA's are of superior intelligence and teaching abilities, as well as provide enough time to digest the material. Each teacher has gone above and beyond in assisting every member of the class. I literally feel that without Merit, not only would my grades be suffering, but my dedication to chemistry as well. ”

- Merit Student

## How can I learn more?

**Contact:**

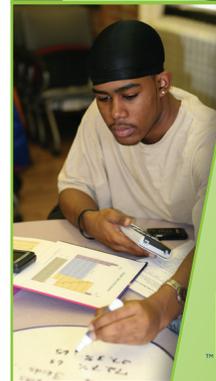
or visit  
[www.merit.illinois.edu](http://www.merit.illinois.edu)

Elise McCarren  
Director, Merit Program  
Department of Chemistry  
[emccarr2@illinois.edu](mailto:emccarr2@illinois.edu)

Jennifer R. McNeilly  
Director, Merit Program  
Department of Mathematics  
[jrmcneil@illinois.edu](mailto:jrmcneil@illinois.edu)

Lily Arias, Ph.D.  
Director, Merit Program  
School of Integrative Biology  
[larias@illinois.edu](mailto:larias@illinois.edu)

Alejandra Stenger  
Director, Merit Program  
School of Molecular and Cellular Biology  
[astenger@illinois.edu](mailto:astenger@illinois.edu)



# Merit Program

**For Emerging Scholars**  
University of Illinois at Urbana-Champaign

“The small groups allow discussion on problems where everybody can participate. This participation is integral to learning and allows our brains to actually process the information in a way that it sticks.”

# Merit Program

## For Emerging Scholars

University of Illinois at Urbana-Champaign



## Overview

The Merit Program is a challenging program for a select group of undergraduates. The program targets students with high potential who are interested in the areas of science, mathematics and engineering. The Merit Program is not a remedial program. To be invited into the program, students must have high academic potential and be committed to excellence. One of our main goals in the Merit Program is to develop a community of scholars among the Merit students. The students in our program work together to solve difficult course problems, develop friendships based on common academic interests, and inspire each other to maintain a high level of commitment to excellence.

## Active Learning

Learning math and science is not a passive activity in which students absorb facts from a teacher as a sponge absorbs water. Students are responsible for learning these subjects through active participation in both the teaching and learning process. Students must learn to solve complex problems by understanding the fundamental concepts of math and science, rather than using algorithms or memorizing facts to get correct answers.

*To achieve this level of understanding, students learn from a variety of sources:*

- **Lecture;** obtain an overview of the concepts
- **Text reading;** obtain the details of concepts and samples for solving problems
- **Homework;** practice solving problems individually
- **Discussion sections;** interact with other students and an instructor to learn concepts and problem-solving.

The Merit Program focuses on active learning in discussion sections with other students. Merit students attend the same lectures, do the same assignments and labs, and take the same examinations as all the other students in the course.

## How does the Merit Program differ from traditional approaches?

In place of hour long discussion sections, Merit students attend 2-hour workshops. These workshops provide ample opportunities for student-student interactions. In place of the traditional classroom, large tables form natural areas for discussions by students. The Merit facilitator provides a challenging worksheet or activity for students and circulates around the classroom providing feedback to students as they work. Students are encouraged to solve problems by thinking aloud and interacting with other students. Different groups of students are encouraged to compare answers since few direct answers are immediately provided by the facilitator. This collaboration among students stimulates additional interactions and more thinking about course content. Workshop problems are based on the material covered in lecture but they are designed to stretch each student's abilities to the fullest extent. The students spend most of the workshop time collaborating in groups and grappling with difficult ideas and problems. Active learning produces a thorough understanding of the concepts and an unusual level of creativity. Our students usually perform better in their courses versus their non-Merit counterparts.



*"I feel that it definitely made me understand calculus, not just do calculus. Spending more time with it definitely helped my grade. The atmosphere was very productive, yet fun. I have met some friends who will be my friends throughout college & life."*

- Merit Student

## What are the benefits of the Merit Program?

Learning to struggle with difficult ideas and problems in an atmosphere of trust and respect is the foundation for success in both graduate school and the corporate world. Merit students learn to exchange ideas and work together with colleagues to understand concepts and solve problems as part of a team. This provides a *community of scholars* to support and encourage success in later courses. Merit students often form lasting study groups which extend to other courses beyond freshman math and science. Merit students also gain confidence in expressing themselves and in their abilities.

## What are the challenges of the Merit Program?

Merit students must study to prepare for each workshop. It is difficult to be an active participant without working before class on homework and struggling with text material. Merit students commit to themselves and their classmates to be prepared to learn and teach during each workshop. The major challenge for Merit students is that our facilitators don't provide direct answers immediately. Instead, the facilitator first encourages the students to compare answers with their peers and help one another, then provides guidance until each student attains true self-confidence in his or her understanding.

## What courses have Merit Workshops?

The Merit Workshops are designed for freshmen and sophomores interested in science, mathematics and engineering. They are found in general chemistry and organic chemistry, integrative biology, molecular & cellular biology, pre-calculus and calculus courses.