Oberlin's CLEAR Center

Building Quantitative Skills Since 2012

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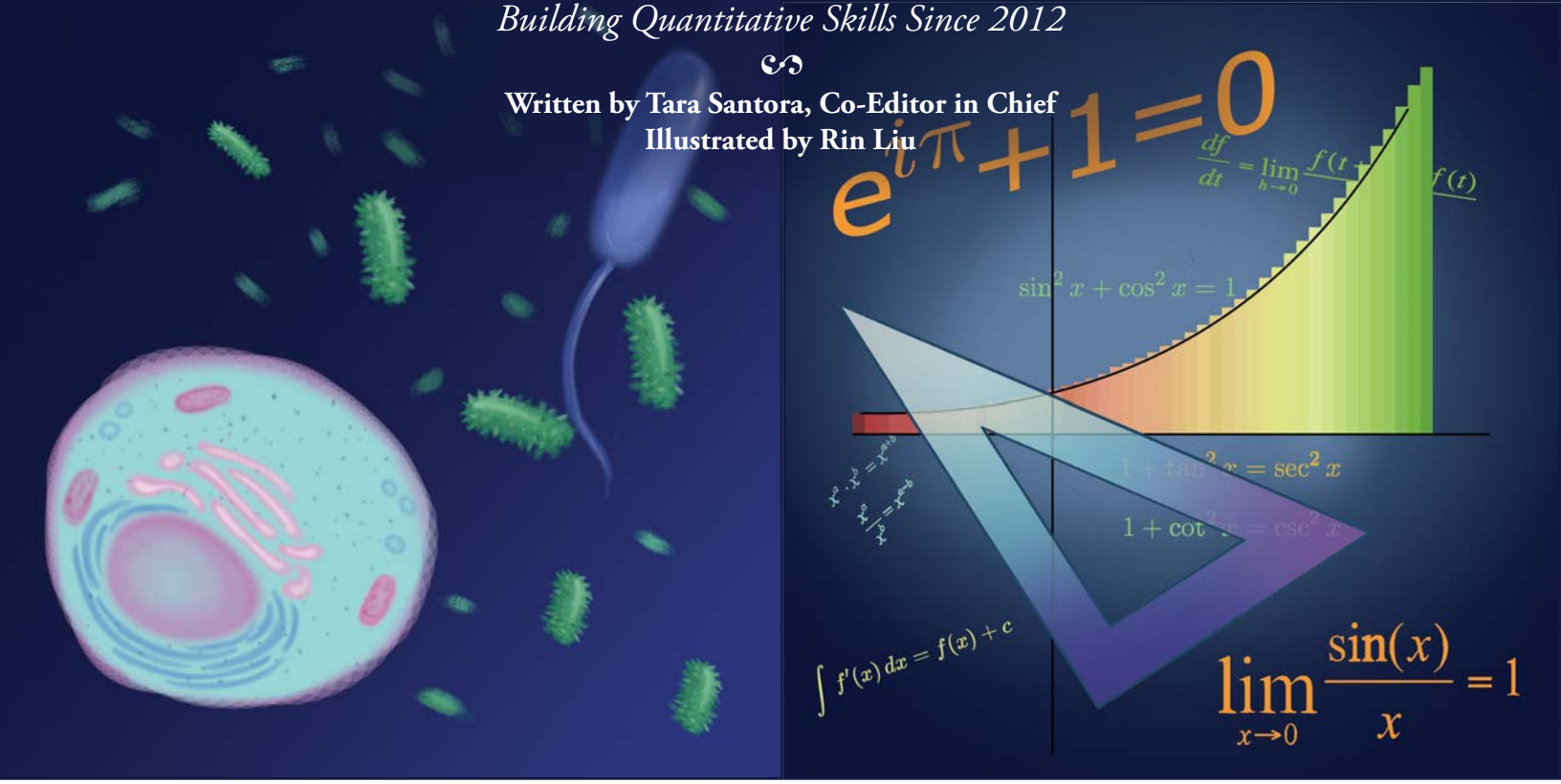


It's the night before my lab report is due, and I have *no idea* how to calculate the micrograms of acid phosphatase in my extract. I try to call my lab partner, but she doesn't pick up the phone. I bite nervously on the end of my pencil. I can't figure this out alone.

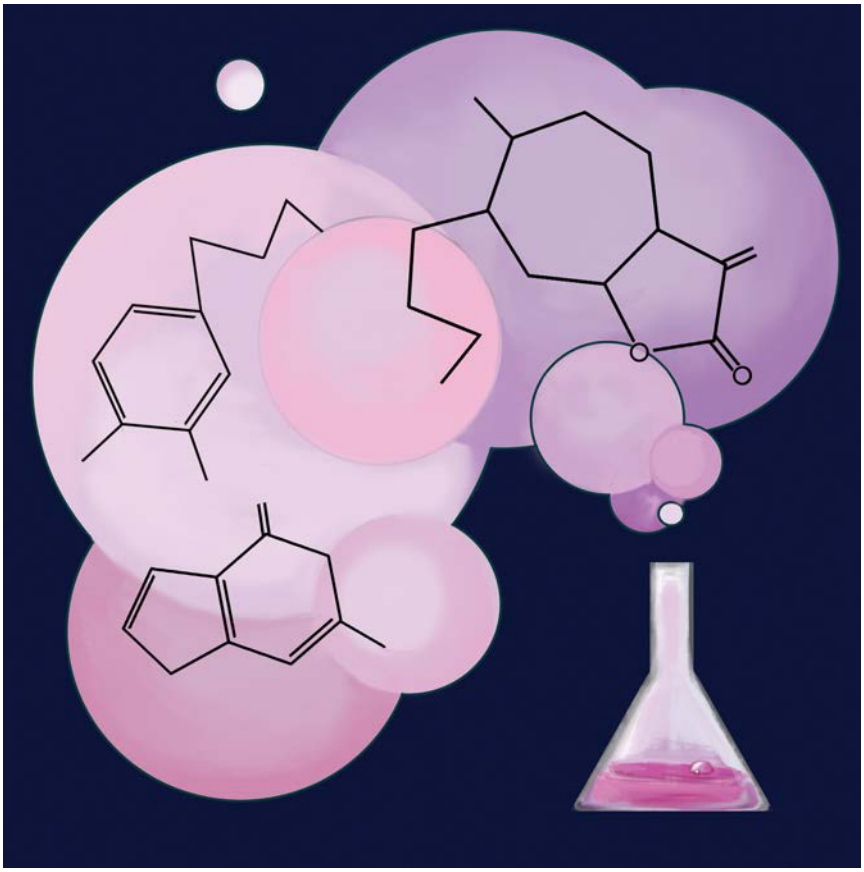
Luckily, I don't have to. I shove my lab notebook and calculator into my backpack and head to the Quantitative Skills Center, a part of the Oberlin CLEAR Center. I slide the door open sheepishly, but my fear of asking for help disappears as a drop-in tutor groans about how they hated this lab too and hunkers down to help.

Oberlin's Center for Learning, Education, and Research in the Sciences (CLEAR Center) was founded in 2012 when the College was awarded a Howard Hughes Medical Institute (HHMI) grant of $800,000. One of the goals of the grant, and thus the CLEAR Center, is to promote the achievement and retention of students, especially underrepresented students, in science, technology, engineering, and mathematics (STEM). Since 1920, graduates from Oberlin College have gone on to earn more PhDs in science and engineering than students from any other liberal arts college in the United States. Oberlin wants to keep this trend going and to help underrepresented students become a larger, fairer proportion of these PhDs.

What is the CLEAR Center? It is not a physical place, and it

cannot be reduced to one program or goal, which makes the Center difficult to define. The CLEAR Center, founded by former director Marcelo Vinces, hosts several programs, talks, and events each year, each with the goal of supporting students in the sciences. Perhaps the most widely known program on campus is Oberlin Workshop and Learning Sessions (OWLS). Several STEM classes have OWLS, which typically hold the form of two hour-and-a-half sessions per week led by two students who took the course in the past. OWLS are designed to encourage active and collaborative learning in a fun and low-pressure environment and to support students who learn in ways that may not be catered to during lecture classes.

Some OWLS sessions are based on worksheets while others may feature Jeopardy review games or Q&A sessions. No matter the format, OWLS sessions are designed to reframe course material in easily understandable and sometimes goofy ways. One Introductory Chemistry OWLS session is famous for balancing chemical reactions using Skittles (and eating the treats once you find the correct answer). OWLS gives students who are struggling in class the chance to ask questions and gives students who feel confident with the coursework an opportunity to solidify their understanding by explaining concepts to their peers.



Not only does the OWLS program support students, but it also allows student teachers to learn and practice how to be effective educators and moderators. Speaking as a former Introductory Biology OWLS leader, I greatly benefited from learning how to explain tricky concepts and how to design worksheet problems that build critical thinking skills. As a complete biology nerd, I also savored the chance to get new students excited about all things biology.

A program led by the CLEAR Center that assists a broader range of students is the Quantitative Skills (QS) Center. Drop-in tutors at the QS Center are available weeknights at the Science Center Library and Mudd Library to assist with a variety of questions. Of course, quantitative skills are necessary for subjects as varied as physics to economics, so the QS Center is in no way limited to STEM students. Tutors are trained to help with everything from problem sets to lab reports to Microsoft Excel assignments. Social sciences and humanities students working with quantitative materials or technology are welcome to drop by!

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Oberlin's CLEAR Center also features science-related events throughout the semester. One yearly favorite is Lab Crawl, where professors across disciplines, including the social sciences and humanities, open their labs for curious students to see what they do and ask questions. Lab Crawl makes student and faculty research more visible on campus and helps prospective student researchers find faculty mentors. Another high-profile event hosted by the CLEAR Center is the Celebration of Undergraduate Research, which allows students to present their research in either a poster session or oral presentation and commemorate the accomplishments of their peers.

The CLEAR Center is not only about STEM; one of its major goals is to increase interdisciplinary learning. One way the program does this is through its Roots & STEM series, which focuses on the human elements of science and technology and is co-sponsored by the College's Gender, Sexuality, and Feminist Studies department and the Multicultural Resource Center. Past events have included a Celebration of Black Scientists and a Symposium on Science, Social Engagement, and Social Justice.

Although the original HHMI grant has now run dry, Oberlin was recently awarded a new 5-year, $1 million HHMI Inclusive Excellence grant to change how science is constructed and taught at the College. The forthcoming changes will be designed to improve the learning experiences of science students from diverse backgrounds.

A student-focused academic resource such as the CLEAR Center cannot be run without dedicated and visionary faculty. When the CLEAR Center began in 2012 with its first HHMI grant, Marcelo Vinces became the founding director. After his and others' tireless work and dedication to CLEAR, which led to the attainment of the $1 million HHMI grant, Marcelo will be leaving Oberlin. We at *The Synapse* wish him luck with his future endeavors, and welcome the new CLEAR director with excited anticipation of what they will bring to our scientific community.

As a QS Center tutor and former OWLS leader, I have seen the CLEAR Center resources and events not only help students with their coursework, but increase their confidence and faith in STEM. The CLEAR Center reminds us that science is not a solitary activity but a communal one, that it's okay to ask for help, and that peers are friends, allies, and study buddies—not competition. ●

Oberlin's Quantitative Skills Center has drop in hours in 1st floor Mudd and the Science Library Sunday-Thursday from 9-11 pm. Visit the following website for more information: http://new.oberlin.edu/office/clear/for-students/drop-in-tutoring/index.dot.