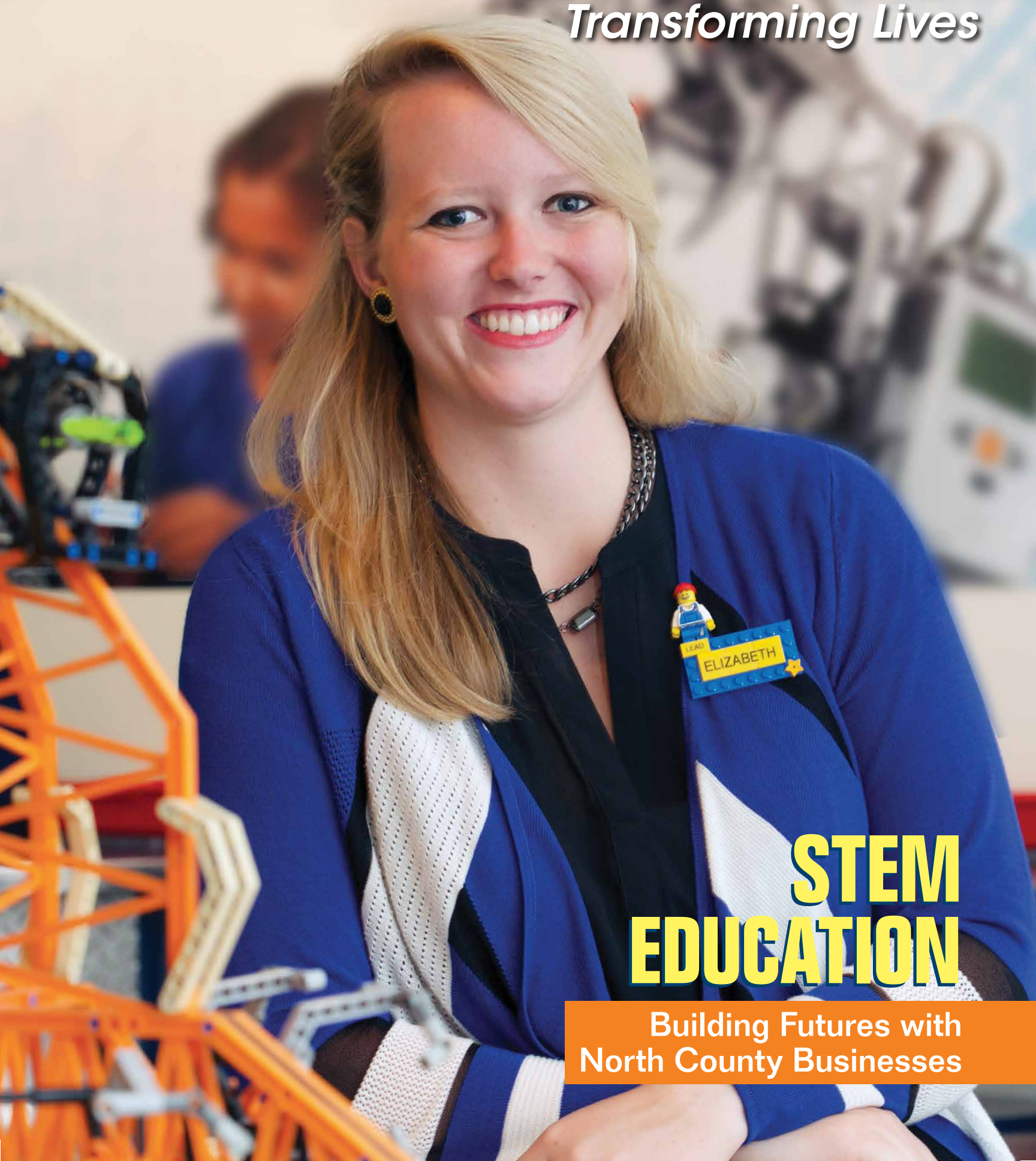


MiraCosta

Transforming Lives



STEM EDUCATION

Building Futures with
North County Businesses

FRIENDS OF MIRACOSTA COLLEGE:



Being asked to lead the collaboration between California community colleges and industry to solve one of the most pressing problems in our state's economy has been an honor. The goal was to address the thousands of jobs that are currently unfilled, and the tens of thousands of Californians who can't get a job because they don't have the right set of skills. The work has been an amazingly rewarding experience.

Chairing the California Task Force on Workforce, Job Creation and a Strong Economy, has given me the opportunity to demonstrate our district's progressive and innovative approach to aligning faculty, curriculum and student services with the region's rapidly changing need—specialized

training at our new Technology Center Institute and the country's first biomanufacturing baccalaureate degree program.

The task force consisted of a mix of community college administrators, faculty, and business and workforce development leaders. We learned a lot from each other, even as our different expectations were exposed. Change takes place slowly in higher education, unlike in business where things move at a much faster pace.

To prepare Californians for the estimated 1.9 million jobs available by 2025 that which will require some college education, our unique task force presented California Community College Board of Governors with 25 recommendations in September, including:

- Common metrics for evaluating career and technical education program success
- Quality and accessibility of labor market data in response to industry needs
- Revised curriculum development process, more closely aligned with employers
- Career pathways with "stackable" components for moving students to successively higher levels of education and training
- Enhanced career awareness, pathway planning, and job placement services, and shared information about high demand jobs and related earning potential among high school counselors and community college students
- Predictable and targeted college funding to create high-quality, often more expensive, career and technical education courses, involving coordination between existing state funding streams

I'm looking forward to updating all MiraCosta stakeholders on our role in this important work for our region and the state.

Dr. Sunny Cooke
Superintendent/President
MiraCosta College

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On the Cover

MiraCosta College alumna Elizabeth Egel has made full use of the scholarship she earned.

Her goal is to mesh her mathematics and computer programming skills as an audio-animatronics programmer at Disney theme parks.

Charitable Gift Annuities:

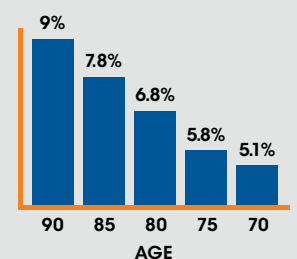
Have you considered the benefits of a charitable gift annuity?

- + The security of guaranteed income for life.
- + The advantage of significant tax savings.

Join the many friends of MiraCosta College who are benefitting from a charitable gift annuity while also creating a legacy for generations to come.

To find out more, contact Linda Fogerson at 760.795.6775 or lfogerson@miracosta.edu.

Sample Gift Annuity Rates



Linda Fogerson, MiraCosta College
Foundation executive director



Right **HERE**, right now.

MiraCosta College alumnus Aaron Byzak is doing all he can to boost STEM education.


After all, he now works as director of government and community affairs for UC San Diego Health, where his responsibilities include handling all legislative and community relations activities on behalf of UC San Diego Health, UCSD School of Medicine, and the UCSD Skaggs School of Pharmacy & Pharmaceutical Sciences.

At UC San Diego Health, Byzak's team designed a program to help underserved communities in southern San Diego County. The HERE Initiative, which stands for Health + Education + Research = Empowerment, is helping prepare the health care workforce of tomorrow by sponsoring STEM-focused high school health academies in public schools.

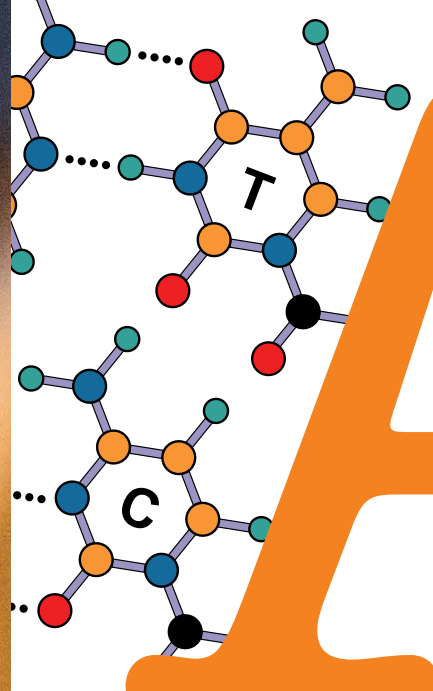
"The problem with many health care career 'pipeline' initiatives is that most of the time they only have disconnected segments of pipe," Byzak said. "The HERE Initiative seeks to align that pipeline."

see **Byzak** page 11

*Aaron Byzak graduated from
MiraCosta College in 2003.*

A close-up photograph of a woman with long, wavy blonde hair, smiling warmly. She is wearing a blue long-sleeved shirt and a gold hoop earring. The background is blurred, showing warm tones of red and orange. The text is overlaid on the bottom left of the image.

“If I’m ever in a position to donate to a scholarship fund once I begin my career, MiraCosta will be the first place I’m going to donate. They helped me so much.”



Mathematics whiz Elizabeth Egel is Exhibit A for the power of charitable giving.

Elizabeth Egel has utilized scholarships created with generous donations to the MiraCosta College Foundation to fund a STEM-focused educational journey that will take her to UCLA, where she is transferring this fall to earn a bachelor's degree in applied mathematics.

Her ultimate goal: meshing her mathematics and computer programming skills as an audio-animatronics programmer at Disney theme parks.

"Computer science has always fascinated me," Egel said. "The ability of a machine to communicate and carry out a specific task is unbelievable. It all starts with the basics of problem solving and that is math, which is why I am pursuing that type of degree. I also nerd-out on anything that has to do with theme parks, especially the way technology has grown in that industry. It was easy for me to put two and two together in order to pick a career."

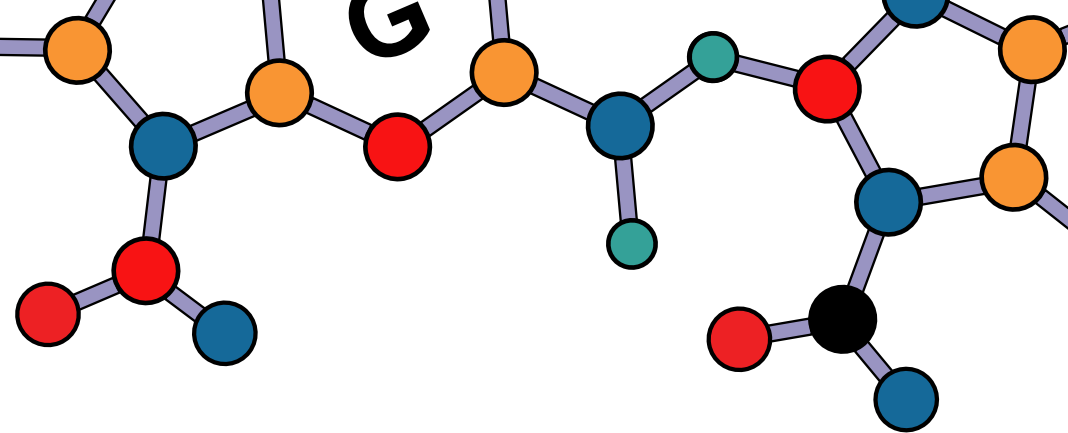
Shaping Her Future

MiraCosta College played a pivotal role in shaping who she is.

"When I got to MiraCosta College, I really didn't know what I wanted to do," Egel said. "Then I took a calculus class and it just clicked. I realized mathematics and solving problems was what I was really interested in and really good at."

She signed up for the MiraCosta College Honors Scholar Program, a program comprised of specialized courses designed to develop exceptional academic ability in highly motivated students. Egel utilized one of the computer programs she wrote to help her coordinate a FIRST® LEGO® League robotics competition while working as an event planner at LEGOLAND® California Resort in Carlsbad.

Egel graduated from MiraCosta College with a 4.0 GPA in May with an associate of arts in mathematics and science, along with a certificate of proficiency in marketing and events management. When she graduates from UCLA she will be one of the 48 percent of UC graduates with



STEM degrees who began their academic careers at a community college.*

MiraCosta College History Instructor Christopher Sleeper, who coordinates the Honors Scholar Program, is among Egel's biggest fans.

"Elizabeth Egel is someone who every student should emulate because she overcame life's obstacles, stuck to her transfer plan and achieved her academic goals at MiraCosta," Sleeper said. "I know that Elizabeth is going to be successful at UCLA because she is highly intelligent and resourceful. More importantly, I know Elizabeth is going to be successful in life because she earns every moment of success while remaining altruistic, charismatic and compassionate in all her personal interactions. She is truly a rare, special gem of an individual."

Future Focus

Egel also is committed to STEM education.

"STEM classes and education go beyond designing robots, though. Science, technology, and engineering are everywhere. They light up our homes and fuel our cars, things we take for granted now. You can't innovate, though, without the problem-solving strategies math holds."

In 2015, Egel earned the Medal of Honor for Academic Excellence, sponsored by the MiraCosta College Foundation and awarded each year to five students nominated by faculty. She was also named to the MiraCosta College President's List and took top honors in the 2013 Behavior Sciences Symposium.

The MiraCosta College Foundation recognized Egel's achievements by awarding her the Mark and Patricia Rudolph Endowed Scholarship in both 2013 and 2014.

"The scholarships really helped," said Egel, whose parents divorced several years ago. "I was able to focus on my grades and not my finances, and it also enabled me to save up to go to a university."

Added Egel, "If I'm ever in a position to donate to a scholarship fund once I begin my career, MiraCosta will be the first place I'm going to donate. They helped me so much." ■

*Community College League of California. (2015). Fast Facts 2015.

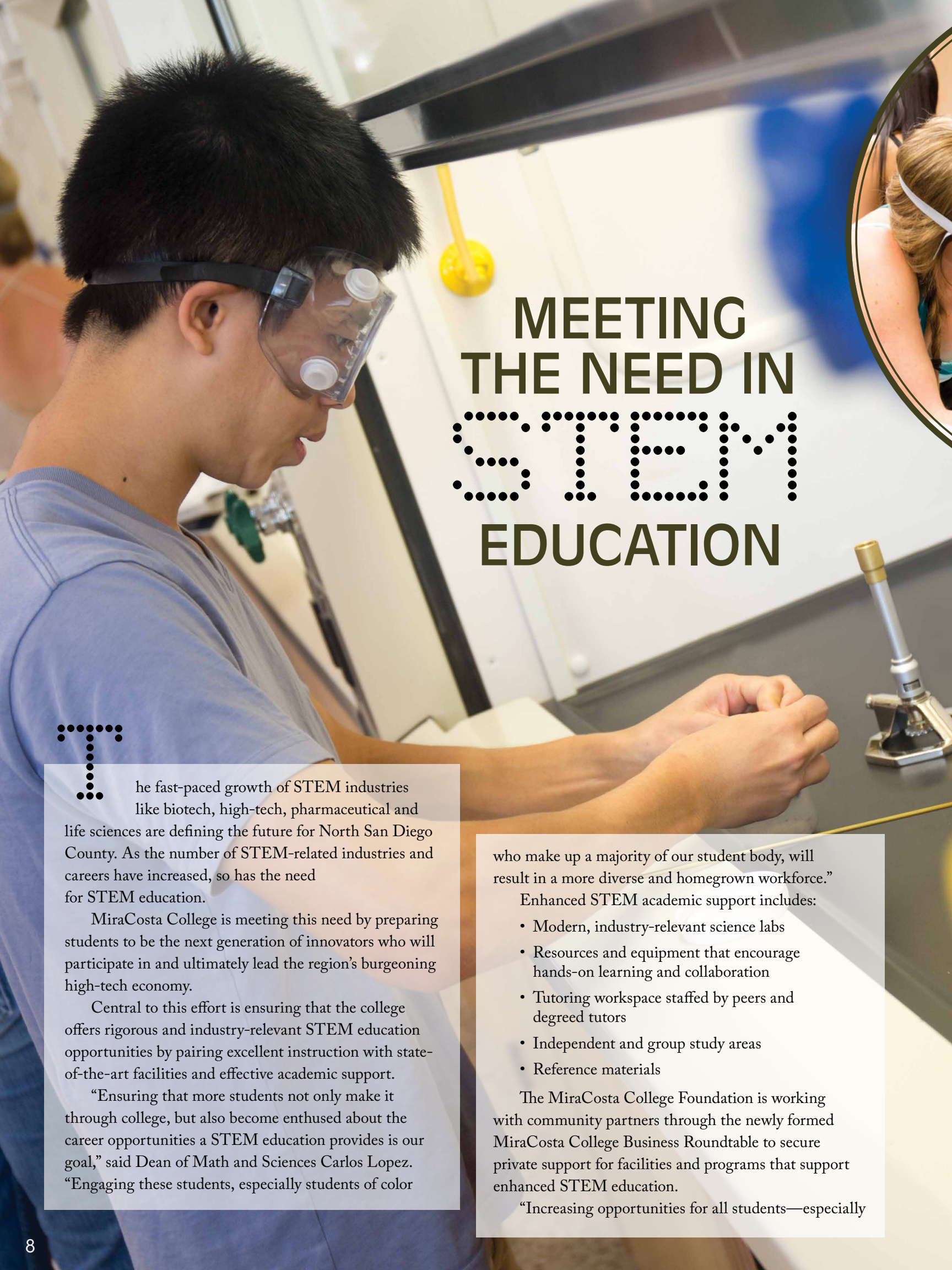


HONORS

Because of its tremendous success and popularity with students like Elizabeth Egel, the Honors Scholar Program will double the number of students taking honors courses this year from 100 to 200 students. The Honors Scholar Program offers intensive instruction and challenging course work through close interaction with faculty to provide students with an enriched educational experience.

Students also become more competitive when applying to the highly selective University of California system; last year's acceptance rate for MiraCosta Certified Honors Scholar students was 85 percent.





MEETING THE NEED IN STEM EDUCATION



The fast-paced growth of STEM industries like biotech, high-tech, pharmaceutical and life sciences are defining the future for North San Diego County. As the number of STEM-related industries and careers have increased, so has the need for STEM education.

MiraCosta College is meeting this need by preparing students to be the next generation of innovators who will participate in and ultimately lead the region's burgeoning high-tech economy.

Central to this effort is ensuring that the college offers rigorous and industry-relevant STEM education opportunities by pairing excellent instruction with state-of-the-art facilities and effective academic support.

"Ensuring that more students not only make it through college, but also become enthused about the career opportunities a STEM education provides is our goal," said Dean of Math and Sciences Carlos Lopez. "Engaging these students, especially students of color

who make up a majority of our student body, will result in a more diverse and homegrown workforce."

Enhanced STEM academic support includes:

- Modern, industry-relevant science labs
- Resources and equipment that encourage hands-on learning and collaboration
- Tutoring workspace staffed by peers and degreed tutors
- Independent and group study areas
- Reference materials

The MiraCosta College Foundation is working with community partners through the newly formed MiraCosta College Business Roundtable to secure private support for facilities and programs that support enhanced STEM education.

"Increasing opportunities for all students—especially



industries require employees with degrees in engineering and the sciences.

“These indicators signal that STEM skills are in short supply in the labor market, relative to demand,” a 2014 Brookings Institution report found.

The Future

Contemporary science labs thoughtfully designed to incorporate academic support for students would further support MiraCosta College’s commitment to serving as a regional leader in innovative and effective STEM education. The college recently opened new science buildings at its Oceanside and San Elijo campuses. Four years ago, the college also launched the highly effective Chemistry Drop-In Tutoring Program, which helped to increase student performance.

“What we’ve learned is that when you properly support STEM education with the right facilities and student support, you see significant increases in the success and retention rates of students,” Lopez said.

And the students agree.

“Increased STEM education opportunities and support would be a great addition,” said Laura Martin, an Honors Scholar Program standout at MiraCosta College who transferred to UCLA this fall to pursue a degree in molecular, cell and developmental biology with plans to become a surgeon.

“Advancement in science is a collaborative effort, and having modern facilities that encourage hands-on learning experiences is a great way to support STEM students. I’m very excited that this is happening.” ■



those with disadvantaged educational background—to gain a strong foundation in STEM education would go a long way toward meeting industry demand,” said Alec Babiarz, a MiraCosta College Foundation vice president and chair of the Business Roundtable.

The Demand is Profound

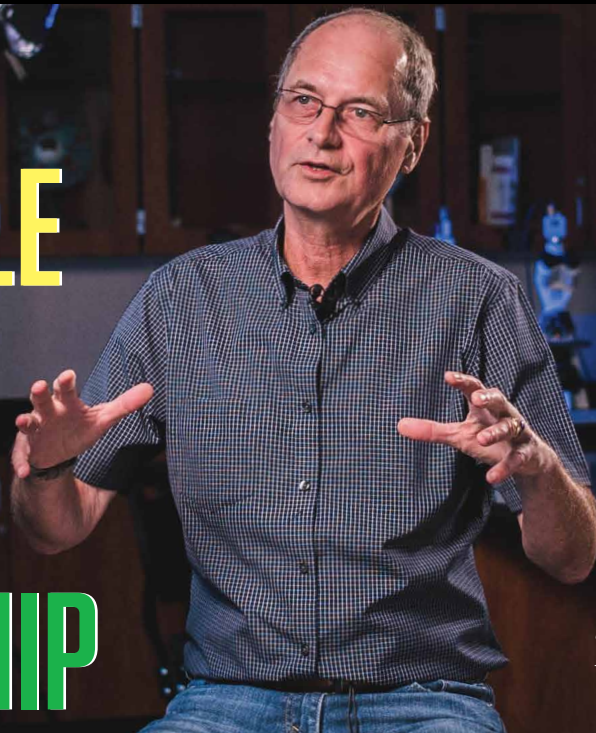
A recent report published by the San Diego North Economic Development Council and Wells Fargo shows strong employment growth in areas such as clean technology, biotechnology and biomedical research, all of which are burgeoning in the San Diego region.

Meanwhile, the Federal Bureau of Labor Statistics projects a 21.5 percent growth in health care practitioners and technical occupations through 2022 and an 18 percent growth in computer and mathematical occupations. And all these high-tech



For more information about the effort to build STEM Academic Support Centers, contact Linda Fogerson at 760.795.6775 or lfogerson@miracosta.edu.

BUSINESS ROUNDTABLE TO PROVIDE A STRATEGIC PARTNERSHIP



Alec Babiarz is seen here during a taping of MiraCosta College's Report to the Region video.

BUILDING A BUSINESS and developing talent go hand-in-hand. With that in mind, MiraCosta College has teamed up with the region's business leaders to launch the MiraCosta College Business Roundtable.

Business Roundtable members serve as advisers to the college superintendent/president on economic and industry trends, as well as short- and long-term workforce needs that will help the college identify and develop educational programs such as enhanced STEM education.*

"A lot of businesses around here have to look outside of the county or even outside of California to find people who are properly trained for

their needs," said Alec Babiarz, vice president of the MiraCosta College Foundation and co-founder of Carlsbad-based ASYMTEK, now Nordson ASYMTEK, which employs about 650 people worldwide.

"The Business Roundtable can reduce industry costs by growing the local workforce capacity and capability. It also offers some networking opportunities that will help both the college and business leaders," Babiarz added.

The Business Roundtable launched this fall with an inaugural meeting in September at the college's new Technology Career Institute in Carlsbad. The group's first project is to secure funding for the construction

of STEM Academic Support Centers at the Oceanside and San Elijo campuses.

The Business Roundtable also hosts regular networking meetings to learn about the region's growing businesses, as well as the college. Members make an annual gift of \$2,500 or more, with proceeds going toward funding Business Roundtable goals.

"The idea is to have a forum in the business community that enables us to have input on the college and its programs," Babiarz said. ■

**The Business Roundtable will serve as a supplement to the MiraCosta advisory boards that currently assist the college's career and technical education programs.*

MORE INFO

If you are interested in joining the roundtable, contact Foundation Executive Director Linda Fogerson at lfogerson@miracosta.edu or call 760.795.6775.



**BUSINESS
ROUNDTABLE**

Byzak took a circuitous route to his job at UC San Diego Health. He attended Cal State San Marcos for a semester after graduating from Carlsbad High School in 1995, but was academically unprepared, which he attributes to a difficult childhood in a family impacted by drug addiction. So, he enrolled at a local community college to become an emergency medical technician and then went to work for American Medical Response (AMR), where he responded to emergency calls in the community.

“The experience made me look at health care very differently,” Byzak said.

Contributing to his changing views was also a heart condition that led to emergency surgery when he was 20. Because he either was uninsured or covered through Medi-Cal for most of his life, Byzak said his condition

classes at the Oceanside Campus. When he graduated in 2003, Senator Morrow hired him as his health policy adviser, a job he worked while simultaneously attending a four-year university.

In 2006, he enrolled in a graduate program at UC Irvine and went to work for Tri-City Hospital District as an assistant public affairs officer. He then transitioned into a role as a health policy adviser for the San Diego County Board of Supervisors. After earning an MBA in health care management and policy, he landed at UC San Diego.

Asked if he feels he has made a difference in reaching his goal of affecting change in the way health care is delivered, Byzak did not hesitate to answer. “Absolutely. Every day I go to work, I get to advocate for health care



Aaron and his wife Amanda met while attending MiraCosta College. They married under the campus clock tower on September 10, 2005.

was never properly treated. It was only when he had a job that offered a good insurance plan that he was able to get proper treatment.

“The unfortunate reality is that we have a system of reactive care rather than proactive medicine,” he said.

That realization led him to change his professional goal to focusing on impacting health policy. He knew he could not affect change by being an EMT; rather, he needed to understand politics and policy and gain a firm grasp about how health care is run as a business. That led him to enroll at MiraCosta College, where he studied history and benefitted from a MiraCosta College Foundation scholarship.

“As someone who struggled to pay my way through school, earning a foundation scholarship felt like winning the lottery.”

While working full-time for AMR and serving as an intern for former state Senator Bill Morrow, Byzak attended

As someone who struggled to pay my way through school, earning a foundation scholarship felt like winning the lottery.

”
Aron Byzak

policies and programs that will allow us to more effectively care for patients.”

Byzak has been presented with a 40 Under 40 Award by *San Diego Metro Magazine*, and in 2012 he was recognized with a Young Influentials Award from the *San Diego Daily Transcript*. In 2013, Byzak was chosen by *San Diego Magazine* as one of its 50 People to Watch. And this year, Byzak will be honored as a Distinguished Alumnus at the National Public Radio “A Way with Words” Community Colleges of San Diego County special event.

Through it all, he gives credit to MiraCosta College.

“MiraCosta College holds a special place in my heart because it helped me realize my own potential—professionally, educationally and personally.” ■



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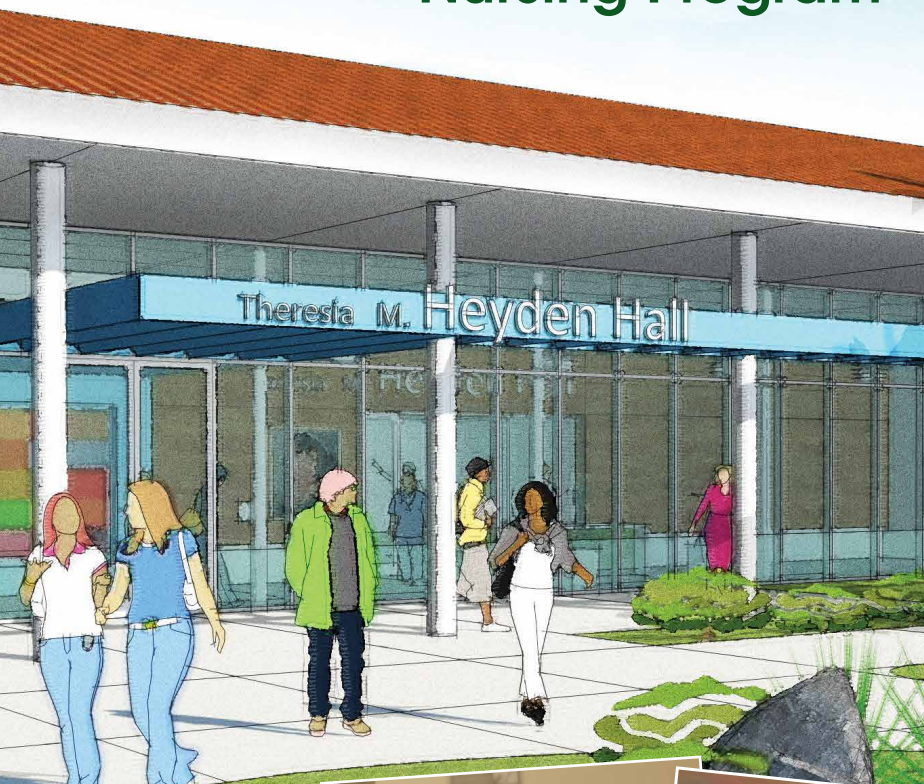
Largest gift in college's history to endow the Allied Health & Nursing Program

Theresa Heyden is establishing her legacy at MiraCosta College with a bequest exceeding \$3 million and the donation of her art collection, which has been carefully assembled from a lifetime of world travel. Her gifts will benefit the MiraCosta College Allied Health & Nursing Program.

"We are so honored to be entrusted with Theresa's legacy because it is one that embodies the values she has held most profoundly in life. She is an inspiration, an embodiment of a zest for life that has allowed her to thrive as a nurse, a prisoner of war, a German immigrant, an American citizen, a refugee camp director, and most recently, a philanthropist," said MiraCosta College Superintendent/President Sunny Cooke.

"Theresa's gift will establish the 'Theresa M. Heyden Endowed Fund for Excellence in Nursing,'" said Linda Fogerson, Executive Director of the MiraCosta College Foundation. The fund will support the Nursing Department's most critical needs, including scholarships, the purchase of new instructional equipment and critical classroom supplies, and the launch of new nursing education programs.

The college has plans to construct a new nursing instructional facility, which, once built, will be named "Theresa M. Heyden Hall." Heyden's art will be displayed throughout the building for the purpose of inspiring learning and curiosity both in the science of nursing and the art of healing. ■



Heyden exudes joy when she meets her scholarship recipients.

Heyden pictured with MiraCosta College graduate Laura Walker and her son, Nico.