



University of San Diego
SHILEY-MARCOS
SCHOOL OF ENGINEERING

CHANGEMAKING ENGINEERS

Making a World of Difference



In a world full of problems,
engineers provide solutions.

Shiley-Marcos School of Engineering

Imagine. Innovate. Inspire.

At the University of San Diego, our engineers are creating solutions to society's biggest challenges in socially, ethically and professionally responsible ways. We ask hard questions and provide answers that inspire others who share our passion for imagination, innovation and building a brighter future.

The Shiley-Marcos School of Engineering produces Changemaking Engineers. Our expanded engineering curriculum addresses societal and global needs, rising to meet the grand challenges within engineering. These include an engineering praxis that engages social justice, humanitarian goals, peace and sustainability.

Earn a BS/BA in:

- Electrical Engineering
- General Engineering
- Industrial and Systems Engineering
- Mechanical Engineering

Earn a BA in:

- Computer Science

Earn an MS in:

- Cyber Security Engineering



Fast Fact #1

An impressive 54 percent of our engineering graduates participate in internships. And 63 percent of our graduates receive their first job offer before graduating, another 16 percent within three months of graduation.



What makes us unique? *Plenty.*

BS/BA Requirement

USD's engineering programs are the only ones in the nation that require all engineering students to graduate with a joint BS/BA degree. This means our students follow a more significant liberal arts curriculum than engineering majors at other schools. As a result, our graduates have impressive writing and public speaking skills, are strong critical thinkers and have developed global awareness and a sensitivity to diverse cultures. All of this is accompanied by technical expertise in one of four majors: General Engineering, Electrical Engineering, Industrial and Systems Engineering and Mechanical Engineering.

In the fall of 2016, the school began offering the new general engineering degree. This allows students the flexibility to focus their engineering study in areas such as embedded software or sustainability. They are also able to take more electives and combine study in different areas, such as business or environmental studies.



Fast Fact #2

All of our programs offer close interaction with faculty, small class size, the opportunity to practice engineering in the lab and numerous networking opportunities.



Real-world experience? *Absolutely.*

Hands-on Program

We offer a supportive education that inspires students to innovate, create and ultimately make a difference by practicing real-world engineering. Our students work on open-ended problems on their own as well as within teams in the school's garages, studios and labs through projects that are linked to theory and tied to challenging, open-ended issues. This authentic engineering performance and teamwork creates graduates who are able to operate independently as well as participate on engineering teams in the work force on their first day of the job.

Employment Outcomes

The median salary for graduates' initial career placements is \$60,000. Sample employers include Caterpillar, Clarity Design, Cubic Corporation, Johnson Controls, Northrop Grumman, Solar Turbines, SPAWAR and the Walt Disney Company.



It's about quality,
not quantity.

Faculty Mentorship and Small Class Size

Our faculty members are hired to teach undergraduates, not to focus primarily on research, which is frequently the case at other institutions. Our student/teacher ratio is incredibly low, and classes are taught by faculty, not graduate students. USD engineering students have high interactivity with faculty and often develop relationships that remain strong long after graduation.

More Time in Projects, Labs and Classes

Engineering students at the University of San Diego receive considerably more engineering class, project and lab time than most, if not all, other U.S. undergraduate engineering programs. Our degree has 147 credit hours, while the average engineering degree only requires 120-124 hours.



Fast Fact #3

We do what we mean and mean what we say: Our school has a solid track record of involving students in local community outreach. We are also committed to supporting the needs of our military and veteran students.



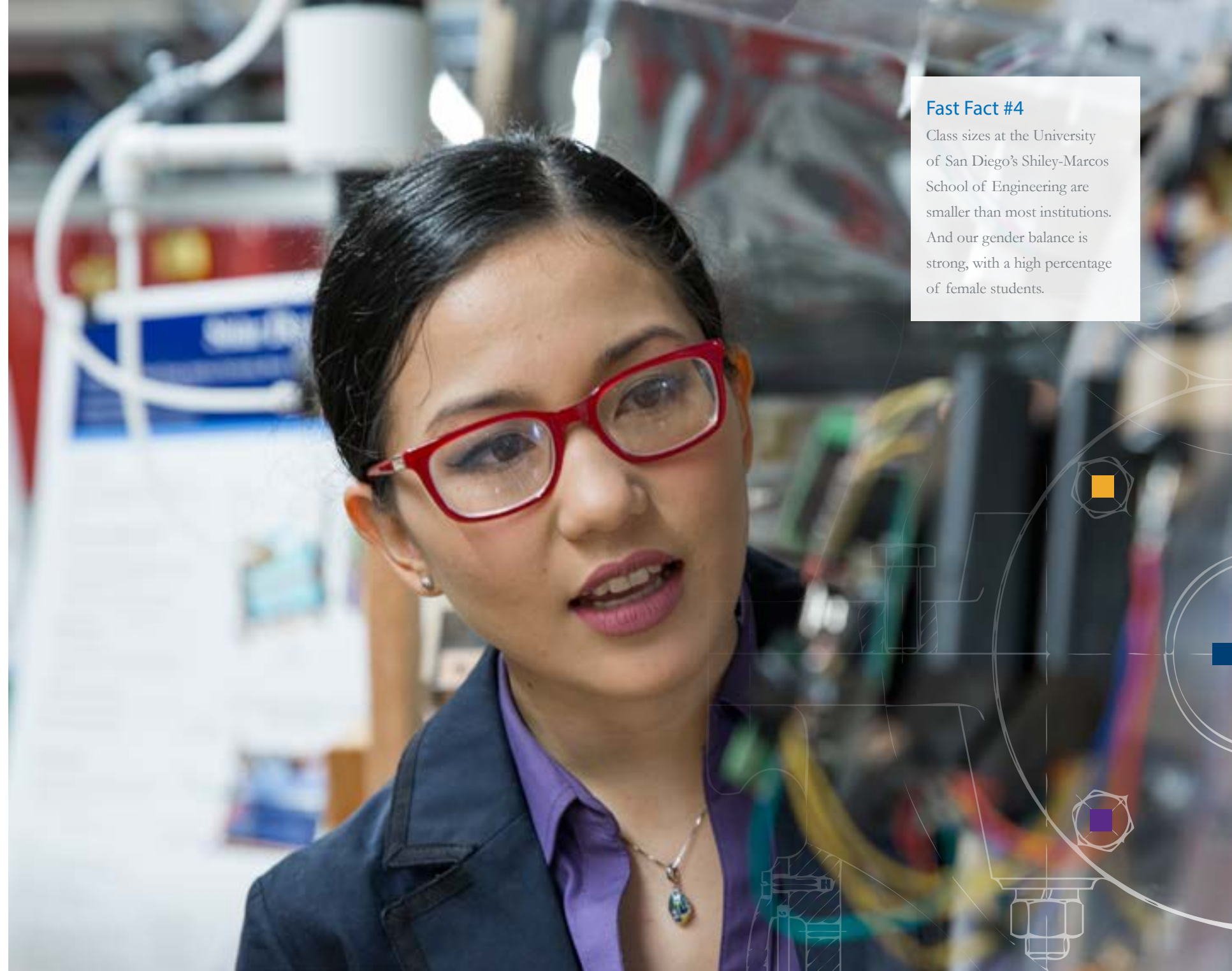
Diversity is the key *to creativity.*

Varied Student Body

Nearly 30 percent of USD's engineering students are female, far higher than the national average and higher than other engineering schools in the San Diego area. Additionally, more than a third of the university's undergraduate students are from underrepresented groups.

Global Reach

More than 70 percent of University of San Diego students have a study abroad experience during their time at USD. And a large number of students in the Shiley-Marcos School of Engineering participate in a wide variety of study abroad opportunities. Examples include studying sustainability in Paris, thermal sciences in London and advanced electronic circuit design in Australia.



Fast Fact #4

Class sizes at the University of San Diego's Shiley-Marcos School of Engineering are smaller than most institutions. And our gender balance is strong, with a high percentage of female students.



Become a world changer. *Become a Changemaking Engineer.*

Extensive Networking

Internships, industry and community involvement bring our students together with a variety of organizations. Students are able to meet prospective employers and find new opportunities while giving back to their community. In the fall of 2014, the school launched an industry partnership with many companies that are sponsoring student teams to work on projects. This work on interdisciplinary, authentic engineering projects will prepare students well for their careers. Additional partners will be added in the coming years.

Highly Ranked

In 2016, *U.S. News & World Report* ranked the Shiley-Marcos School of Engineering #13 nationwide for schools that do not offer a PhD program.

Shiley-Marcos School of Engineering

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Engineers make a world of difference by making our lives safer, more enjoyable and more productive. Our graduates are Changemaking Engineers of the first order, who are thoughtful, informed and engaged participants in the global community.

Our brand-new Cymer Ideation Space, Donald's Garage and fabrication lab are designed with student success in mind. This is where budding engineers test ideas, fabricate prototypes and build finished, tested pieces. Our students have the space they need to tinker with things, to make mistakes and errors, and move on to create better and better versions.

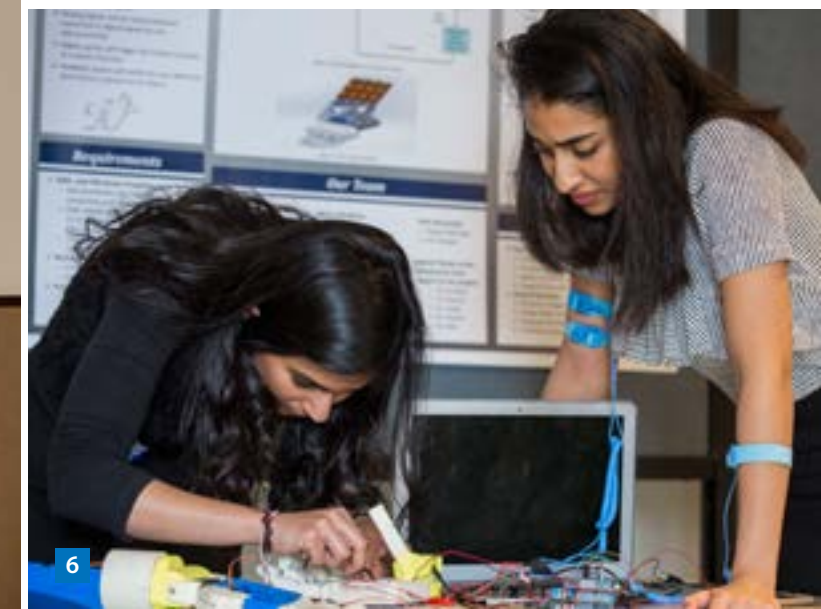
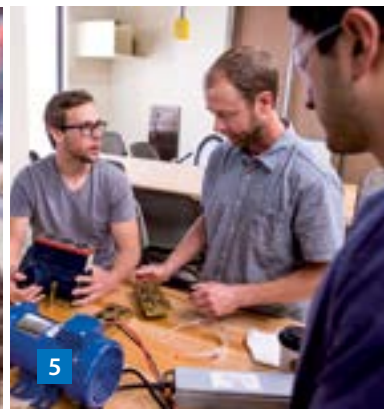
Our Legacy



Darlene Marcos Shiley established the Shiley-Marcos School of Engineering in 2013 with a generous gift. The gift honors her family's dedication to education and pays tribute to her late husband, renowned engineer Donald P. Shiley.

1. A team puts their heads together in the Cymer Ideation Space. // 2. Movable walls allow maximum flexibility for large or small groups. // 3. A humanitarian engineering trip to the Dominican Republic to install water chlorinators. // 4. Students design a water filtration system. // 5. Teams work closely together, particularly on their senior projects, with the help of their professor. // 6. Two students work on a prosthetic hand senior project.

To learn more and apply today, go to www.sandiego.edu/engineering.





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Shiley-Marcos School of Engineering
Loma Hall
5998 Alcalá Park
San Diego, CA 92110-2492
usdengr@san Diego.edu
www.sandiego.edu/engineering
(619) 260-4627

Undergraduate Admissions
admissions@san Diego.edu
(619) 260-4506