

MiraCosta

Transforming Lives



**THE
COMMUNITY COLLEGE
ADVANTAGE –
*EXCEPTIONAL FACULTY***

**SCHOLARS, AUTHORS,
EXPERTS IN THEIR FIELDS &
MASTERS AT THE CRAFT OF TEACHING**

Geology and oceanography instructor Keith Meldahl stands by a fault line revealed in uplifting coastal rock.

MiraCosta, Transforming Lives is published by the MiraCosta College Office of Development and Foundation in collaboration with the Public Information Office. We greatly appreciate the participation of those who allowed us to tell their stories and invite you to further your acquaintance with our talented instructors. *Hard Road West* by Keith Meldahl is available at libraries, book stores and online. Visit Julie Harland's Web site, and enjoy exercising your mind: www.yourmathgal.com

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DEAR FRIEND OF MIRACOSTA COLLEGE

WHAT DO THE BEST COLLEGE TEACHERS DO?

Upon reflecting on this question, I remembered a story concerning my son, Andres. A few years ago, my son returned from his second year at college with his best set of college grades to date. Finally, I thought, my long-winded, usually untimely, father-son lectures during his high school years about managing his time, improving his study skills, and



Francisco C. Rodriguez, Ph.D.
Superintendent/President
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staying focused took hold. Understandably proud of his success, I asked him what made the difference this time, hoping to receive perhaps a minor nod of affirmation for my previously dispatched pearls of wisdom. His response was clear and immediate, "Dad, I had some really great professors."

So, what makes a great professor? I was curious. As I probed my son for clues and through our extended conversation, I recognized the behaviors that are descriptive of and familiar to the best college teachers. The best college teachers are extremely knowledgeable of their discipline; prepare and facilitate demanding and intellectually rigorous lectures, group discussions and assignments; maintain high expectations for student learning in an environment marked by care and trust; and have in place a systematic feedback loop that allows them to check for learning.

While Andres didn't describe his experiences using the words precisely as I have, he did describe the behaviors of his professors in this way and how positively he *felt* about being in their classes. Through their enthusiasm, his

professors made him want to learn and apply the material, in and out of class. As importantly, he became more responsible for his own learning and, I sensed, discovered the joy of it.

New York University Professor Ken Bain, author of, *What the Best College Teachers Do*, would agree. Professor Bain drew on the experiences and techniques of multiple college and university professors over fifteen years who have been described as "the best." He discovered that it is not what teachers do, *it is what they understand*. He shares that the best college teachers understand how their students learn, create meaningful and robust assignments, evaluate what they and their students do, and integrate that feedback into future classes. What sets the best teachers apart, he emphasizes, is a combination of believing that students *can* succeed, providing challenging activities to demonstrate learning, offering encouragement, and caring to learn about their students' needs and ability to succeed. The best professors value human learning; they firmly believe that teaching matters and that students can learn.

No matter how sage I believe my advice is to my own son, I cannot compete, nor do I wish to, with his professors' powerful influence on him and how they make him feel about the process of learning. And they have done so while maintaining high standards of excellence and a high ethic of care. Now that is what I describe a higher education.

The stories and profiles contained in this issue provide rich narratives of what the best teachers do, and serve as vivid examples of the enduring and transformative power of education.

Enjoy,

Francisco C. Rodriguez, Ph.D.
Superintendent/President

Reference: Bain, K. (2004). *What the best college teachers do*. Harvard University Press: Cambridge, MA.



The Rodriguez men, Francisco and son Andres, enjoy time together cheering their hometown team, the San Francisco Giants.



LINDA FOGERSON
Executive Director, Development and
Foundation, MiraCosta College

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For more information call Linda Fogerson, 760-795-6777, or use the enclosed envelope to let us know you would like a phone call.



Julie Harland employs both encouragement and the latest communications technology to support students' math competence.

A $\left[\frac{\text{Solution}}{x} \right]$ to the Math Problem

Why do bright, motivated college students struggle with math? Often to the point that it seems an insurmountable barrier capable of derailing them from the pathway toward college degrees and careers of their choosing?

Because, according to math instructor Julie Harland, students have misconceptions about learning math, why they should, and whether they can. Along their educational paths, they've picked up the idea that math either comes easily to a gifted few or for the rest of us, will always be too difficult to understand. Because, as the typical student explains, "I'm not a math person."

Julie can empathize; she admits it's entirely possible that during 12 years of schooling a student may have missed out on receiving math instruction from a teacher who majored in math, loves the subject, or specializes in teaching it. It can take only one bad experience, she notes, for a person to develop an aversion to math, not likely to be countered in a society populated by math phobics.

However during 29 years teaching math, Julie has seen that anyone willing to put in the time

lots of practice, but the result is worth it. I tell them, "math is fun and you can do it."

A semester with Julie, whose love of both math and teaching drives her efforts, can be a refreshing change for students. Holding a master's degree in math from UCSD, she has a deep appreciation for the subject and provides clear explanations of the mechanics as well as the broad applications.

So committed is she to her belief that everyone can master math, she's made it her mission to provide worldwide access to her class. Julie has created 400 ten-minute math lessons, each addressing a specific topic, and posted them on YouTube, a video sharing Web site. Anyone with an Internet-accessing device can watch the videos, and site calculations show they are viewed 1,000 times a day. Extremely gratifying for Julie is the feedback from those educators and students who write to thank her for providing open access to high quality mathematics instruction.

Julie's goal is to provide the tools that enable students to realize their own intellectual capacities to learn and enjoy mathematics. Mistaken notions of its superfluousness to "real lives" are corrected by

“Students know they need to pass college math, yet many think it's knowledge they'll never use again. I tell them: while they may not go to work and be asked to solve algebra equations, they will be expected to solve problems. Understanding mathematical concepts and applications enables someone to examine a problem, recognize the larger context, and logically break it down to resolution.”

Julie Harland, MiraCosta College Math Instructor

can do well at math. She explains, "Learning math requires participation; working through problems leads to real comprehension. There is no special mental capability; its time on task with this subject. It's more like learning an instrument, which takes

students themselves as they gain competence and comprehension of the subject whose logic underlies all of the arts and sciences. A positive experience can rectify a student's confidence and appreciation for math. ■

YOUR INVITATION TO MAKE HISTORY — THE OSHER INITIATIVE

Grateful thanks
to the individuals
and organizations
that set up the
following named
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Howard Charitable
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More than half of California's undergraduate students are enrolled in a community college. These students represent six of 10 California State University and three of 10 University of California graduates—and yet just four percent of the billions donated to support higher education are directed to community colleges and their students.

The Bernard Osher Foundation, MiraCosta College, and our philanthropic investors are working to change that statistic.

Bernard Osher has made the largest commitment ever to a community college system—\$50 million. He was strategic when he made the gift. He placed \$25 million in a scholarship endowment to immediately benefit California's community college students. Then, he challenged the state's 110 community colleges to raise an additional \$50 million, which he would match—\$1 for every \$2 raised.

For our part, MiraCosta College has invested in building a foundation for the purpose of ensuring that motivated, hard-working students have access to higher education despite their lack of financial resources. Spreading the word has enlarged our community of supporters, with the number of donors to the college growing from 350 in 2005 to more than 1,550 today.

Recognizing the importance of investing in our students and their potential, individuals and organizations throughout the region are enthusiastically doing their part. As a result, the amount of direct financial assistance provided to MiraCosta's students has increased 400 percent over the past five years, growing from \$75,000 in 2005 to \$320,000 in 2010, benefitting 668 students. In the same period, \$1.5 million was donated for scholarship and program endowments, which will generate funding in perpetuity to help students and enhance learning.

So far, Bernard Osher's gift has spurred more than \$450,000 in giving to MiraCosta College, an amount that will provide a minimum of 33 students with \$1,000 scholarships annually. Until the matching funds are exhausted, or before June 2011, the Osher Foundation will match any amount MiraCosta College raises for endowed scholarships that conform to the Osher criteria.

The Osher Foundation and our donors are making a significant impact, but the truth is many, many more MiraCosta students would put scholarships to good use in their educational endeavors. The need is clear; of our current credit students, 40 percent, or about 5,800, are living at or below poverty level. Eighty-two percent of our students are employed, with 36 percent working full time.

With Bernard Osher leading the way, our college foundation developing partnerships, and our friends generously investing in deserving students—we are increasing the percentage of philanthropic dollars designated to assist community college students. ■



Victoria Owens is very grateful for the opportunity to go back to school. "I am truly honored and blessed to be an Osher Scholar," shares Victoria. "I'm a single mother of seven children; this award means my educational expenses will be less of a burden on myself and my children."

Her first experience with MiraCosta was in 1992, when she completed the Adult High School Diploma Program. "I wish I could have gone to college right after high school, but I'm hopeful that by going back now I am inspiring my kids to want a better life through pursuing a college education." In 2006 Victoria enrolled at MiraCosta, at the same time as her oldest daughter. Taking classes part time, she's working toward an associates degree in business and plans on transferring to earn a bachelor's degree.

When **Keri Minnick's**

husband, Caleb, was stationed at Camp Pendleton, the young couple moved from Montana to Oceanside. Even though they both have to work, their priority is getting college educations. "I go to school full time and work part time, and Caleb works full time on the base and goes to school part time," Keri explains. To alleviate some of the financial burden of school, Keri applied for scholarships, and last year she was awarded an Osher Scholarship.

"I am very appreciative of this scholarship because it paid for my tuition and books, which enabled me to work fewer hours so I could focus more on learning and doing well in school." The extra study time paid off for Keri—she is starting classes in finance at CSU San Marcos this semester while also finishing up a course at MiraCosta.

"My statistics teacher, Jeff Jolley, inspired me to pursue a career as an actuary, assessing and managing risks, and I can't wait to work in the field. After getting my finance degree, I would like to work for a few years and eventually get my M.B.A."

Virginia Saenz is focused

on earning a bachelor's degree in nursing. "When I have a goal, I am passionate about accomplishing it," explains Virginia about becoming a nurse. "When I took my first two nursing classes, I realized, I can do this. I'm able to help patients and reassure them; it's so gratifying and I love it."

Virginia is a single mother of three children and works two part-time jobs in addition to taking classes at MiraCosta. This is Virginia's third semester as an Osher Scholar, and she considers the scholarship integral to her success in college. "Without this scholarship, it would be impossible for me to go to school consistently and finish in a reasonable amount of time. I am so thankful for this scholarship, to know that someone believes in me, not only that I need it, but that I can succeed in college, is very inspiring."

R.S.V.P. Your gift is an investment that will promote academic achievement, make college possible for all students, and ultimately strengthen California's economy and workforce. Scholarships are awarded to students who have completed 24 units of degree-applicable study, are enrolled in at least six units for the ensuing semester, and have demonstrated financial need by qualifying for a Board of Governor's fee waiver. For more information, call 760-795-6777 or use the enclosed envelope.

At many colleges, upper-division classes afford students their first direct interaction with a Ph.D. who is actively engaged in scholarly research. At MiraCosta College that opportunity exists in a student's first class.

Keith Meldahl entered the University of Chicago intending to major in history, but left with a geology degree. He had discovered that the long-evolving physical processes that create earth's surface, which predate and shape human history, make



The beach provides professor Meldahl's students evidence of the erosive forces of wind and waves on soft, sedimentary rock cliffs, further weakened by development.

for more fascinating study. It was not so much a forsaking of one discipline for another, but an expansion of his interests to a greater timeframe. "History and geology aren't really all that different," Keith explains. "They are both about events that happen in a linear fashion—for me it's all history, whether it's written over a few decades or over millions of years."

Keith moved west, continuing his studies and earned a Ph.D. in Geosciences at the University of Arizona. He's built a career as college professor, field geologist and recently, as published author. His explorations of the geologically active and scenically spectacular western U.S.

spurred a curiosity about the Forty-Niners who braved the California Trail, an overland route originating on the banks of the Missouri River and leading to the gold fields along the Sierra Nevadas' western edge. Keith's book, *Hard Road West, History and Geology along the Gold Rush Trail*, is an eloquent description of the

path, as recorded in pioneers' journals, and an explanation of the geologic features that the pioneers encountered along their route. Earthly forces not only planted gold in California; these forces erected a daunting landscape of mountain barriers and scarce water across the West, creating one of the most challenging overland journeys in human history.

Working on the project reinvigorated Keith as a teacher, giving him new insights that he brings to the classroom. As a MiraCosta College geology and oceanography instructor of thirteen years, he loves his role helping students to better understand the planet—its compositions, tectonism and sometimes explosive energy. His goal is to make them feel at home living on the active edge of a continent, hopefully motivating their stewardship of its resources.

In addition to serving students who attend on-campus classes, Keith teaches online classes. As he sees it, the college's mission of access to higher education means meeting that desire in as many ways possible. MiraCosta's door is always open—regardless of when in people's lives they decide they're ready for college, and online classes offer flexibility around work schedules and family obligations. They also require discipline and motivation on the part of students, which Keith notes is a positive move toward ownership of the learning process.

Happy to edify at any occasion, Keith extends MiraCosta's educational purpose into the wider community by frequently speaking to civic organizations and at local events. Whether the topic is the creation of marine terraces and coastal bluffs or a discussion of how California's gold influenced the outcome of the Civil War, interest is high among our region's residents.

Through Keith's engaging efforts, the relevance of geology comes alive, with the power to determine human activities as well as shake us awake in the middle of the night. ■

Inspiring



Dr. Lynne Miller, who earned her Ph.D. in Anthropology from UC Davis, teaches introductory and advanced anthropology classes, and often inspires her students to major in anthropology or, at the very least, to become active pursuers of knowledge. As she says, “My goal is for students to learn, not only interesting facts, but also how to think, and ask questions, and to be excited about learning.”

Judging from a class observation, she is succeeding. In a discussion about DNA, chromosomes, and why it is that some people have blue eyes instead of brown, Lynne could hardly finish a sentence because her students were so engaged in the material that they continually raised their hands to either contribute to the conversation or ask a clarifying question. Most interesting question of the day: “Why can’t different species mate?” This led to a discussion of mules, the definition of species, and chromosome pairing.

“Dr. Miller has a wonderful ability to make a difficult subject understandable. She is very interactive, very dynamic, and she always makes time for students. She is one of the most popular teachers but definitely not because her classes are easy. She does a fantastic job of preparing students for transfer and success in upper-division course work,” says MiraCosta honors student Liberty McDonald.

Lynne benefitted from an upbringing that gave her an early start learning about the traits and tools of humanity. When only 13 years old, she went on her first archaeological expedition in Africa with her mother, anthropologist Sheryl Miller, to search for tools made by the earliest modern humans.

Since that first expedition, Lynne has traveled far and wide, from Madagascar to Papua New Guinea to Borneo. For 20 years, she has studied a wild population of capuchin monkeys in Venezuela. During a recent sabbatical, she tested the monkeys’ decisions to take a food reward when they could see a model predator.

“Field research like this comes directly back to the classroom. Students are much more inspired by professors with personal experience in the subject,” Lynne says. Those taking her Primate Behavior and Ecology course design and complete a research project on primate behavior, making repeated trips to the San Diego Zoo or Wild Animal Park to observe their subjects. She walks them through the basics of research: developing a hypothesis, recording observations, analyzing the data, and presenting the results in standard written and poster format.

“Accomplishing the project is a source of pride for students,” says Lynne, adding that her students are invited to present their posters to professional anthropologists at the Southern California Primate Research Forum, an opportunity usually reserved for graduate students and college seniors.

Lynne’s active engagement in field research, professional associations and unique experiences inform her class discussions and provide her students with real-time information about the world in which they live. Regardless of a student’s eventual academic goals, his or her opportunity to study with professor Miller early in their college career will undoubtedly ignite life-long intellectual curiosity. ■



Anthropologist Lynne Miller exposes students to a field of study they find absorbing: the biological and environmental influences that make them who they are.

Lives of Inquiry





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Architecture instructor **David Parker** gets the Construction Materials class outdoors, putting what they learn in the classroom about building, materials and methods into practice; and he figures, they might as well be useful while they're at it. The benefits extend beyond his students' skill development — enhancing the college campus and helping a family they'll never meet have a home.

With the sponsorship of the MiraCosta College Foundation, David arranged for his students to volunteer on a Habitat for Humanity project in National City. They worked on a four-bedroom home that will be occupied by an immigrant family of seven from Sudan, putting sheathing on the roof, installing windows and wood trim, and wrapping the house with moisture barrier. On MiraCosta's Oceanside campus the class recently built a display pavilion now being used to exhibit models and drawings created by architecture students.

The unique and practical class activities make it popular among do-it-yourselfers seeking technical knowledge as well as those taking it as a requirement of the Architectural Technology Program. Constructing purposeful projects together creates an atmosphere akin to a semester-long barn-raising or as Danny Rodriguez puts it,

“a good social vibe.”



At semester's start the display pavilion existed only as a drawing. Over the ensuing six weeks the construction materials classmates combined their efforts, completing the structure that now serves as a showcase for student talent and the architecture program.

GOOD WORKS RESULT FROM COURSE DESIGN

“Working for Habitat for Humanity was a fulfilling experience,” says **student volunteer Danny Rodriguez.**

“As soon as we arrived at the site we were briefed on the program's purpose and the project, and then got the chance to literally build a house from the foundation to the roof. It was a lot of fun, and I learned a lot.”



Student Yassaman Shayan's interest in architecture began during the course of earning an interior design degree at SDSU, and she's now pursuing an Architectural Technology certificate at MiraCosta.

“I was finally able to work with the tools and learn the basics of how a building is built from the ground up. I gained priceless experiences and confidence that will help me both in my career and on my personal projects.”