LEARN BY DOING

Hands-on learning. This philosophy of teaching students has been the cornerstone at Cal Poly for over 100 years. As you read through the following pages, you will see learn by doing is alive and well in Animal Science. Whether putting on the largest junior livestock show in California, making sausage, conducting applied animal research, or preparing students for veterinary school, our students learn by doing.

Now, we are taking learning by doing to a whole new level. Through the leadership of a team of Cal Poly faculty, including Animal Science Professor Matthew Burd, the Animal Science, Biology, and Biomedical Engineering departments received $1.4 million from the California Institute for Regenerative Medicine. This funding will support 10 Cal Poly students during a two-year scientific journey into the innovative field of stem cell biology.

During the first year, the students will receive instruction at Cal Poly in tissue engineering, molecular biology, and stem cell theory. During the second year, students will develop cutting-edge research skills during a paid nine-month internship at some of the world’s leading stem cell research host institutions. Upon returning, these students will complete their master’s degree and be ready to enter the professional world of stem cell research and development. Cal Poly students may hold the key to the future success of treatment of disease in humans and animals.

We strive to continuously adapt new technologies in animal science. Through tough economic times and major budget challenges in higher education, it is critical that we don’t lose sight of our goals to develop the next generation of young leaders from Cal Poly.

“The dogmas of the quiet past are inadequate to the stormy present. The occasion is piled high with difficulty, and we must rise with the occasion. As our case is new, so we must think anew and act anew.”

—Abraham Lincoln
If the trend continues, more and more Cal Poly Animal Science alumni will be hanging out their doctor of veterinary medicine shingles in the coming years.

It’s true. A record number of Cal Poly Animal Science students are being accepted into veterinary medical schools in California, around the country and abroad.

In fact, a higher percentage of Cal Poly students were recently accepted to UC Davis’ School of Veterinary Medicine than were UC Davis students. For the term beginning fall 2009, 149 UC Davis students applied for admission to its vet school. Of those, 39 were admitted, for a 26 percent acceptance rate.

Of Cal Poly’s 55 student applicants, 19 were accepted, for a 34.5 percent acceptance rate.

According to Professor Jaymie Noland, the acceptance rate of Cal Poly students into vet schools over the last five years has been fairly stable at around 72 percent. “We are seeing a trend of more applicants each year,” she said. “In the last four years, 43 to 55 students applied to vet school. In the 10 years prior to 2006, we averaged only about 25 applicants.”

Our recent figures are pretty impressive, notes Noland, acknowledging that the reasons for the upswing are not completely clear. She does have her hunches, though.

“We are definitely attracting higher-caliber students, and faculty mentoring has also improved,” she said. “Strict, aggressive meetings with students and advisors, especially during their first quarter at Cal Poly, has helped to better inform students of what is required by veterinary medical schools.”

“This year we had 55 students apply to vet schools, and 33 have confirmed acceptance in schools in the United States and around the world,” Noland said. “We will have several more gain entrance by the beginning of the fall term. We are now seeing more than 70 percent of our pre-vet students make the grade. We do very well.”

The students heading to vet schools are grateful for the education and support they received from their professors and peers at Cal Poly.

“My class was very dedicated and diligent,” said Allegra Roth, who will study veterinary medicine at Western University of the Health Sciences in California. “I was surrounded by intelligent peers who flourished under the guidance of excellent professors. Dr. Peterson, Dr. Noland and Dr. Burd all contributed significantly to my knowledge base and hands-on experiences.”

Alicia Yocom, who is headed to UC Davis, says the interpersonal skills she gained at Cal Poly will be most valuable to her: “One thing that sets Cal Poly apart is that while we are learning by doing in our enterprises and classes, we are also learning how to work with each other and professionals in our fields.”
Stem cells.

Two little words that potentially have the power to win the war on many diseases and alleviate suffering.

The fast-growing field of stem cell research promises new, effective treatments for a host of ailments suffered by humans and animals alike. And three Cal Poly Animal Science undergraduates are taking part in a study that could have broad implications for veterinary medicine in the future.

All in their third year, Jane Isquith and twin sisters Kelly Shaw and Karen Shaw are researching equine mesenchymal stem cells, which can be isolated from many adult tissues, including bone marrow, fat and blood.

“These stem cells seem to have the potential to differentiate into multiple tissues, such as fat, bone and cartilage,” Kelly Shaw said.
The students are working with stem cells in culture, learning how to characterize their general behavior.

“Because this specific work is relatively new in the research world, and certainly at Cal Poly, we had to learn as we went along,” Karen Shaw said. “We learned the optimum conditions at which they grow, the rate at which they propagate or multiply, and we began to characterize the multiple morphologies of the cells.”

After they learned to manage and efficiently grow this type of cell in culture, they began to examine the cells’ differentiation potential, attempting to induce the cells to transform into different cell lineages.

They have also been examining the survivability of the cells and their general potential for self renewal, as well as how long they can viably exist in a cell culture.

The source from which the students isolated the cells is a fairly novel source, according to Kelly Shaw, and this will be one of the first studies done with a complete characterization.

Ultimately the students hope their research can be used to advance veterinary medicine, where it can help in the treatment of tendon and bone injuries in horses.

“We are certainly far from this point, but recognize the incredible potential of this research to advance to this clinical application,” Kelly Shaw said.

While the students are working to advance veterinary medicine, they are also advancing their knowledge base and lab skills.

“I have learned so many valuable lab techniques, such as cell culture and differentiation protocol,” Isquith said. “I have also learned about other aspects of scientific research, such as writing grants and compiling results from experiments. All of this has been so informative and helpful, especially since I am planning to go to grad school for a doctorate in biomedical research.”

During the research process, the students discover the unknown. “Not always knowing exactly what would happen in our trials and always being ready to adapt based on what we did discover” was especially valuable to Karen and Kelly Shaw.

“The hands-on philosophy of Cal Poly is unique and allows for limitless opportunities, such as our research project,” Kelly Shaw said. “The Animal Science faculty members are extremely willing and eager to work with students in achieving what may seem to be lofty or impractical goals by other universities.”

Animal Science Professor Dan Peterson is the study’s lead investigator and Professor Matthew Burd is co-investigator: “As a veterinarian, it is rewarding to be part of a team composed of talented undergraduate students, directed by outstanding faculty in biotechnology, and supported by the Animal Science Department,” Burd said. “This combination is potent, and I believe we will achieve our goals for our students and horses.”
Cory Ann Hom-Weaver’s (ASCI ’09) senior project took her on a two-week cruise in the waters off Kauai, Hawaii, on an 87-foot sail boat, complements of the U.S. Navy.

“When I first thought about a senior project, the last thing that came to mind was whales, and yet there I was, in the middle of the Pacific in search of the elusive minke whale,” Hom-Weaver said.

The project was led by marine biologist Tom Norris, president of Bio-Waves Inc. in Encinitas, Calif., and funded by the Navy. And it brought Hom-Weaver back to her hometown of Kauai.

The objective was to collect as much data as they could about that particular whale in that particular location. For two weeks, the 10-member crew towed a 200- to 400-meter long hydrophone array behind the vessel, collecting “boings,” biological signals made by the minke that are thought to be a type of song related to courtship and breeding.

“Back on land, I was able to analyze the boings that we had sampled and compare their pulse repetition rate (the difference in frequency between the harmonics of the signal) to boing noises that had been previously collected off Kauai,” Hom-Weaver explained.

“I also analyzed boings that had been collected near Guam and the Northern Mariana Islands – where minkes were not known to exist – and compared those data to data collected in Hawaii and in waters off San Diego. We wanted to see if the population of whales around the Northern Mariana Islands had distinct stock structure from the two types already identified,” she said.

The team discovered that the boings collected off Kauai were statistically different than the other two types.

So why is this information important?

“Boings are thought to be a type of song that might be related to reproductive behavior,” Hom-Weaver said. “It is possible these islands are places of breeding and courtship. It is important to know the location and reproductive behaviors of these animals for management and conservation purposes.

“In its national defense mission, the Navy is responsible for environmental stewardship,” Hom-Weaver explained. “Therefore, if they know the location and population densities of these animals, they can limit their practices to areas with low marine mammal populations, so as not to interfere with them.”

Now on terra firma, Hom-Weaver ruminates about her senior project experiences.

“I learned how to set up and use a hydrophone array for passive acoustic operations. I learned that field research is much harder than it looks. I learned the basics of sailing and the art of patience. When you’re working on the water all day long, with computer equipment that is not ‘sea worthy,’ trouble shooting is a great skill to have.”
Recent Animal Science graduate Laura Lamerdin (ASCI ’09) spent much of her senior year in the broiler house, tracking the movements of broiler chicks in an attempt to find a better feeding method for the flock.

The broiler house, which contains 6,000 chicks at a time, uses an automated feeding system that operates off two censor feed pans. When those feed pans are emptied, the system is triggered to send feed down the feed line to fill up all 42 pans.

“The system, though, only works if the censor feed pans are completely emptied,” Lamerdin explained. Unfortunately this does not happen very often.

This means the broilers may have limited feed access at times, which may compromise growth. So Lamerdin set out to find where the birds tend to locate and why they don’t feed out of the censored pans.

After visually dividing the broiler house into 14 sections and tagging 30 focal birds, she recorded their location three days a week in one-hour increments. She discovered that birds use only 28.3 square feet of space during days 1-11 of production and 17.2 square feet of space during days 12-42 of production, representing a 60 percent drop in space utilization as birds get older.

She also found that the broilers were not using the space near the censored pans. This is important, Lamerdin says, because we now know that this is more of a bird behavioral issue than a mechanical issue. “We can try new things, such as enrichment factors that would help stimulate bird movement or provide a more desirable environment near the censored pans to entice the birds to eat from those pans.”

Her senior project taught her proper research methods and how to analyze and write up the data.

“I also learned a lot about broiler behavior. Birds do not use much space at all,” she said. “When people think about birds they think of them running around and flapping their wings, but my research has shown quite the opposite. Birds are, for the most part, stationary with little movement When they did move, it was only about 10 feet at a time.

“The best part about the project is that my research is going to be useful to management. We now understand what the problem is,” Lamerdin said.

Lamerdin presented the results of her research at the California Animal Nutrition Conference in Fresno in May. Her project is part of a larger research effort supervised by Animal Science Associate Professor Brooke Humphrey.
Trent Barnhart (ASCI ’04) likes to monkey around at work.

He grapples with gorillas, goofs off with giraffes, frolics with foxes, and mingles with meerkats. It’s all in a day’s work for Barnhart, animal care coordinator for mammals at the Santa Barbara Zoo.

From assisting with births to witnessing necropsies, Barnhart’s days are never boring. On his first day as a zookeeper in May 2005, he witnessed the birth of twin male black-and-white ruffed lemurs. Not only has he assisted in several births since then, he has also served as substitute mom for one newborn Channel Island fox whose mother developed mastitis.

“That was an interesting experience, having to come in around the clock for hand feedings,” Barnhart recalled.

For the last four years, Barnhart has worked primarily with giraffes, gorillas, meerkats and Channel Island foxes – animals he calls “very challenging.”

“In respect to animal behavior, gorillas and giraffes could not be on more opposite spectrums,” he said. “Giraffes are very curious and investigative, but appear to be frightful of all new stimuli. Our gorillas are highly intelligent and can be mischievous at times, but are usually well behaved.”

Though Barnhart says working daily with the animals is his greatest reward, he admits it can be stressful as well. “We are often put into new, challenging situations, and there are no textbooks we can refer to,” he said.

Most of the animals undergo routine physical exams, having blood drawn, digital X-rays and ultrasounds taken, urine samples collected, and vaccines given.

“Just vaccinating a giraffe is quite the experience,” Barnhart said. “I was the first keeper to train our giraffes to get weighed and accept blood draws.” He also helped train giraffes to enter a chute/squeeze system where they are partially sedated.

“I have also been working on training the gorillas to allow us to brush their teeth — while awake — and present their body for a cardiac ultrasound.”

Barnhart says Cal Poly gave him a definite edge over some of his colleagues. “Usually only the most experienced professionals in zoo settings get to perform many of the techniques that students commonly use at Cal Poly.”

Cal Poly also helped Barnhart improve such skills as working with others in a close environment, speaking in public and communicating effectively.

Those skills are integral to Barnhart’s efforts to educate the public about animals and the need for increased conservation efforts. “Most people are not aware that animals in our own backyard are being threatened with extinction everyday,” he said.

He aims to create a positive environment for the animals and for the people who visit and want to learn more about conservation and the environment.

“I hope to make zoos one of the major resources for information about environmental conservation efforts throughout the world,” he said.
Cal Poly student-athletes inhabit a challenging world, where demanding course work, grueling training schedules, and travel to games and tournaments add up to a schedule that leaves little, if any, time for anything else.

“It’s a tremendous challenge,” said Andrew Thulin, head of the Animal Science Department. “Most people don’t have a clue how much work these young people have in classes such as chemistry, biology, reproductive physiology, immunology. Add to that, daily workouts and trekking to games, and it’s essentially like having a full-time job.”

Even with all they have to juggle, though, Cal Poly student-athletes don’t just rise to the challenge, they seem to actually thrive on it.

Adam Morales, a third-year animal science student competing on the men’s swim team, has been competing since he was six years old. “I love the sensation of being suspended in the water and being able to use muscle from my head to my toes to help propel me,” he said.

Most students probably would dread waking up before dawn to exercise. Not Morales. He rises at 5:20 a.m. to face an hour-and-a-half hard-core workout with his teammates, a close-knit group, he says, because they “share the common bond of having to balance school, a social life, our sport and, for some athletes, even a job.”

Recent pre-vet graduate Megan Harrison (ASCI ’09) played women’s basketball on a full scholarship. She, too, enjoys the discipline that goes along with being a college athlete.

“All you definitely need to manage your time wisely and stay on top of the school work,” she says. “It is very time consuming, but if you manage it correctly, it can be done.”

Harrison managed her time based on what she thought was most important, but she also tried to find time for herself.

“I think it’s important to have an outlet outside of school and basketball,” Harrison. “Mine is riding horses. It takes my mind off everything else.”

During the season, she also woke before sunrise to squeeze in two hours of practice before morning classes. Then it was back to the gym for a film session, weights, or more shooting workouts. “Somewhere in there I would find time to eat something before heading out for my afternoon classes,” she recalls.

“By the time I got home – usually around 6 p.m. – I would do homework, pass out around 10 p.m., and start the whole day over again.”

Despite the punishing schedule, Harrison graduated on time and holds the record as the second leading scorer in Cal Poly basketball history.

“I will always love sports, but after I graduate, I want to start a career in animal science and move on with my life,” Harrison said. She hopes to find a career that allows her to continue to work with horses, preferably in equine nutrition.

Morales has about another year to go before he graduates. After college he plans to join the U.S. Navy and hopes to become a Navy Seal, an elite group that favors disciplined sailors with solid determination – two traits Morales already embodies.

In all, nine Animal Science students participated in athletics in 2008–2009. They are: Kaleena Andruss, junior, women’s soccer; Megan Harrison (ASCI ’09), women’s basketball; Masson Blow, freshman, wrestling; Monica Hemenez, junior, women’s soccer; Molly McElrath, freshman, women’s swimming; Adam Morales, senior, men’s swimming; Kelly Salmon, freshman, women’s track; Karin Schleicher, sophomore, women’s swimming; and Rebecca Tratter, junior, women’s basketball.
Western Bonanza’s Junior Livestock Show Turns 25!

Former Western Bonanza Managers

Cal Poly’s Junior Livestock Show Celebrates 25th Anniversary

Alumnus Mark Reiche’s (AGB ‘86) 1984 senior project not only lives on, it’s practically taken on a life of its own.

The Western Bonanza Junior Livestock Show, which celebrated its 25th anniversary in February, began as a simple steer and heifer show with fewer than 100 entries. It has grown into a nationally recognized California Junior Livestock Association-sanctioned show, attracting hundreds of exhibitors ranging in age from 9 to 21.

The Western Bonanza livestock event now includes sheep, meat goat, swine, steer and heifer shows. One of California’s largest Junior Livestock Shows, Western Bonanza accommodates over 450 exhibitors entering over 1,800 head of livestock.

The event has evolved into a livestock show managed entirely by Cal Poly students in the livestock show management classes. The Western Bonanza Management Team and students in ASCI 212 each winter contact sponsors, select awards and merchandise, market and promote the event, and manage hundreds of entries. In 2009 more than 100 students representing 10 different majors were involved.

During Western Bonanza’s 25th anniversary, youth exhibitors traveled from throughout the western United States to compete for over $40,000 in prize money and $50,000 in awards and prizes, all generated by corporate and general sponsorships raised by students.

The livestock show has enjoyed tremendous growth and success in the last five years, said faculty advisor and professor Wendy Hall. “We have seen an increase in exhibitors, livestock numbers and sponsorships, especially corporate support.”

Students raised a record $52,000 in sponsorships in 2009. “Our corporate and general sponsors are a tremendous asset to the program, providing the needed monetary support for the show and the appreciated moral support to the management team,” Hall said.

Western Bonanza’s 25th anniversary celebration was a big success, in part because many past student managers, sponsors and exhibitors returned to mark the show’s silver anniversary. Among the past managers attending were event founder and first manager Mark Reiche traveling from Kansas City, Mo.; Stacy Neill Sosa, 1986 show manager, traveled from Turlock, Calif.; Pam Fyock, 1988-89 show manager, came from San Antonio, Texas; and Deirdre Flynn Lefty, 1992-94 show manager, joined the group from Lincoln, Calif.

Longtime sponsor and winner of the 1985 Supreme Champion Heifer buckle John Toledo of Visalia attended, as did Paso Robles resident Lori LaMacchia, winner of the 1985 Senior Showmanship buckle.

“We look forward to Western Bonanza continuing its reputation of ‘The Best in the West,’” said Hall. To help in that effort, Jacky Hildebrand from the Agribusiness Department will join Hall as co-advisor of the 2010 program. “Jacky brings a great deal of fair and livestock show experience to the table,” Hall said. “She will be a wonderful addition to the educational and leadership portion of the program.”

Sausage. The mere mention of the delectable delicacy can start the salivary glands flowing and the stomach rumbling. For students in Robert Delmore’s processed meat manufacturing class, the word also gets the creative juices flowing.

The class covers the principles of sausage making. At the end of the quarter, the novice chefs create their own unique sausage and present them at the annual SausageFest, where faculty, staff and community members gather to taste and judge the savory results.

It appears there are no limits to the students’ imaginative creations: Asian, duck, maple-flavored, Italian, bratwurst, linguisa— even vegetarian. Using beef, pork, lamb and chicken, the recipes are virtually endless.

But not all are equally tasty. The challenge, it seems, is in finding the correct balance of ingredients and seasonings. And sometimes less is more. “A little bit of sage goes a long way,” Delmore says.

In addition, the ingredients have to be blended and chopped in a certain way so that the end product does not come out rubbery or too crumbly.

Delmore teaches the basics, but also knows that college kids will sometimes deviate. They might not realize how important it is to carefully weigh a particular spice. And sometimes the product is, well, more than Delmore can swallow. “I’ll take a bite, smile at the student, and spit it out,” he says.

By far, the best part of the class is SausageFest, with students interacting with members of the community. The five-year event has grown from a modest 40 people to last year’s record 250. The top three best-tasting sausages are awarded Viewers’ Choice Awards.

The objective of the class is to learn the principles of sausage making. “Whether you’re making 5 lbs. or 5,000 lbs., the principles remain the same,” Delmore says. And in the end, “Sausage should taste like meat, not meatloaf!”
THOROUGHBRED ENTERPRISE TRIP
Is Thoroughly Entertaining

In late April this year, eight students and their advisor traveled from San Luis Obispo to Kentucky.

Why? To watch some ponies run, of course! Professor Jaymie Noland took eight of her Thoroughbred Enterprise students on a five-day trip across the United States to witness one of the most amazing horse races in the world: the Kentucky Derby. This was to be the 135th running of the Derby, but the first one for many of the students. When the students arrived in Kentucky, they first headed off on their East Coast barn tour of Lane’s End, owned by Will Farish.

The group also visited Haygard Equine Veterinary Hospital, Margaux Farms, Wintergreen and Gainesway, where they were able to meet with some of the most elite trainers, veterinarians, owners and riders in the thoroughbred industry. The team got up close and personal with thoroughbred stallions Curlin, AP Indy, Five Star Day, Borrego, Elite Squadron, Pollard’s Vision, Afleet Alex, Corinthian, Tapit, Mr. Greeley, Smart Strike, and sire of this year’s Kentucky Derby Winner; Birdstone. The team members were given private tours by industry legends and witnessed palpations, ultrasounds, pregnancy checks, and two live breedings.

Thanks to Steve Schwartz, a member of Cal Poly’s Animal Science Advisory Council and a lawyer for many of the nation’s largest racing barns, the team received first-class treatment at the Derby and attained seating in the Silks Room overlooking the finish line.

The Cal Poly Thoroughbred Enterprise students say the trip was a chance of a lifetime, and they will forever be appreciative of the people who helped them to have such an experience.
Ridin’ High: Equestrian Team Leads the Pack in Competitions

The Cal Poly Equestrian Team congratulates team member Vanessa Thomas, who rode in the Cacchione Cup Competition at the 2009 Intercollegiate Horse Show Association National Championships and placed fifth overall.

In addition to Thomas winning the Cacchione Cup (awarded to the rider with the most points at the end of the regular season) for the region, Cal Poly’s team also had four additional riders point out of their divisions and compete in the regional finals. Erin Schlegal and Marina Dawson competed in the Western Division, while Claire Lyles and Kami Tiano competed as hunt seat riders. Schlegal did very well in the Western Division, making it all the way to the semifinals.

Cal Poly’s Equestrian Team had great success this year, winning the Reserve Champion Team Award numerous times at both the English and Western shows. Out of the eight teams in the region, Cal Poly finished third in the English Division and sixth in the Western Division.

“We plan to become even more competitive next year,” said Equestrian Team President Kaitlin Spak. “We are looking forward to another great year of riding and showing!”

The team is especially grateful to its sponsors and donors for their continuous support and generosity.

Vet Sci Club Wins Award

The Cal Poly Veterinary Science Club was awarded second place in this year’s Club of the Year for large clubs (50+ active members) from the Ag Council.

The Club of the Year award honors a club’s activity and leadership in the college and community.

“It is a great honor for the club to have been acknowledged in this fashion, and it means a lot to all of our members,” said 2009-2010 Veterinary Club President Kyle Bautista. “It is especially gratifying to our Officers Board members, who work extremely hard to make the club a great place for students to meet new friends and forge relationships that will see them through the remainder of their time at Cal Poly."

The club has grown to more than 75 official members and is active within the departments of Animal Science and Biology, as well as the College of Agriculture, Food and Environmental Sciences (CAFES). The club currently has 76 registered members, including 43 freshmen, 18 sophomores, 9 juniors and 6 seniors. The club consists of predominantly Animal Science majors, but also has four Biology, one Chemistry, and one Music major.

Meetings are held every two weeks and generally include a guest speaker or labs in which the students actively participate in learning new techniques, technologies or pre-veterinary school preparatory measures. The club also takes annual trips to such locations as UC Davis Veterinary Medical School, Western University School of Veterinary Medicine, Colorado State School of Veterinary Medicine, and the San Diego Wild Animal Park’s Paul Harter Veterinary Medical Center.
Before coming to Cal Poly as a junior, Kristina Wolf (ASCI ’09) had been a bookkeeper, a claims evaluator, a loan officer, a human resources liaison, and a partner and co-owner of a popular candy store franchise.

Now she is a single mother with a bachelor’s degree. Admirably she put herself through college by holding down several jobs. Apparently, though, being a mother, a student with a major grade point average of 4.0, and working 20 hours a week just wasn’t time consuming enough.

So, she served as secretary for the Mortar Board Philanthropic Honor Society and for the Latinos in Agriculture club, and as the chronicler for Alpha Zeta Professional Agricultural Fraternity.

But wait, there’s more. Wolf also somehow managed to squeeze in some volunteer activities, as well, such as collecting over 800 textbooks for an agricultural college in Zambia, Africa, participating in the Brizzolara Creek Restoration project, and the Relay for Life American Cancer Society Fundraiser Walk.

It’s not surprising then that Wolf was selected the 2009 Outstanding Senior for Academic Excellence by the College of Agriculture, Food and Environmental Sciences.

“Kristina Wolf is a remarkable role model for young people who dream of attaining success, but have had to face major challenges along the way,” said Animal Science Department Head Andrew Thulin. “When most young people would have given up on their dreams, Kristina became ever more focused to achieve success herself. More importantly, she was driven to help others around her achieve success.”

At almost 30, Wolf is a bit older than most of her classmates, yet the diminutive redhead blends right in with the younger crowd. She speaks rapidly and is quick to laugh, but things haven’t always been easy for the recent graduate.

After her first year at Cal Poly in 2003, Wolf got married, became pregnant and was put on bed rest for a month. After her daughter, Emily, was born, the tiny infant developed such severe digestive problems that Wolf needed to care for her around the clock, forestalling Wolf’s education another four years.

During those years, she went through a divorce and moved back in with her parents. Emily underwent double surgery (two procedures at the same time) to correct her condition, and Wolf began to get her life back on track, returning to Cal Poly in fall 2007 to resume pre-vet studies.

Her plans on becoming a vet were derailed, though, “after spending several days in the back of a dairy cow without finding anything I was supposed to,” she said. “Plus, I’m so short that my arm ached after awhile — and I got stepped on. After those three long days, I changed my mind about becoming a vet.”

Wolf credits Professor Rob Rutherford for pushing her outside her comfort zone. “He makes sure you ask the right questions, that you find stuff out for yourself,” Wolf said. “For students who really want to learn, Rutherford is the man.”

While an undergraduate, Wolf minored in rangeland resources management, co-offered by the Animal Science and Earth and Soil Sciences departments. This summer she begins studies for a master’s degree in soil science, with plans to go on to earn a Ph.D. The switch in majors will allow Wolf to examine the relationship between soil, plants and animals … even humans. “I decided I didn’t want to treat animals after they’d gotten ill. I prefer to figure out ways to prevent it from happening in the first place.”
Pocino Foods Co. Gift to Aid Animal Science

MEAT PROCESSING CENTER

"With this new facility, the opportunities are endless."

The Animal Science Department is proud to announce that Pocino Foods Co., a longtime meat industry leader in product development, has become a partner in Cal Poly’s J and G Lau Family Meat Processing Center and its laboratory for food innovation.

Pocino’s gift of $225,000 will allow Cal Poly to support the rapidly growing market for ready-to-eat and ready-to-cook foods. Students will be able to develop and produce their own products, and the center will serve as a research niche for the many companies that do not have on-site test kitchens and pilot plants.

“Product innovation is a fast-growing sector of the meat industry,” said Animal Science Department Head Andrew Thulin. “Consumers demand high-quality, convenience products, and this support from Pocino Foods Co. is critical for us to prepare students to meet the challenges of developing and producing these products.”

Pocino Foods Co. was founded in 1933 and is one of the premier prepared-meat companies in the United States. Frank G. “Jerry” Pocino, son of company President Frank J. Pocino, graduated from Cal Poly in 1974 in Food Science, and Jerry’s daughter Alison earned a Cal Poly Food Science degree in 2006. Jerry’s daughter Melanie is currently studying Agribusiness.

“Cal Poly’s been good for my family,” said Frank J. Pocino, “and it’s time for my family and our business to do good for them as well.”

In the meat business since 1954, Pocino has seen an evolution from “very basic, very primitive methods” to the sophisticated product development and safety standards of today.

“The innovations have been tremendous,” he said. “I think we’ll continue to see changes in the food safety area. We’ll see better packages, better material handling, better controls within companies.”

The new Meat Processing Center will address each of these areas through applied research for industry and hands-on experiences for students. It has received more than $5 million from alumni and industry. Many of its corporate partners share Pocino’s commitment to product innovation and have rallied around this project specifically because of this critical niche.

“Our students will enter a meat industry that demands innovative ideas and value-added products,” Thulin said. “With this new facility, the opportunities are endless.”
Recently I took my two grandsons and family to Sea World in San Diego and was given the VIP tour of the whale exhibit by ASCI alum Laura Morgan, senior whale trainer. Laura brought two of the giant mammals out for us to see and demonstrated some of the training they had received.

I was astonished at the latest technologies Laura is using at Sea World. They employ an extensive artificial insemination program, complete with heat detection, semen collection and use of sexed semen. Laura discussed their health program and how the trainers establish bonds with the whales, which are truly individuals with exceptional intellect.

Laura told me, “When it comes to Cal Poly, I am always willing to show off the whales. I truly believe that without the help of the amazing professors there and the education I received, I would not be where I am today.”

Laura tries to return to Cal Poly each fall to speak to the Introduction to Animal Science students about the many careers you can have with a degree in Animal Science.

I could not have been prouder of the Animal Science Department while I observed the passion she had for her work.