If your hands aren’t dirty, you haven’t done science.

www.csusm.edu/stem

Just ask Samantha Lang

There’s no need for a fire extinguisher or flame retardant clothing, but you should know if you approach Samantha Lang, her brain will be on fire—all the time, everyday.

Lang, a second-year biological sciences M.S. student, admits to average high school grades and being academically adrift and non-flammable until her junior year at CSUSM. That changed after she took animal physiology with Dr. Deborah Kristan. She remembers actually understanding muscle movement, learning to read a scholarly paper and getting a glimpse at the benefits of undergraduate research. At that point, the sparks began to fly!

The flame spread quickly after Lang went to work in Kristan’s lab studying the effects of calorie restriction on host susceptibility to an intact pathogen. She won the California State University Annual Student Research Competition, in the division of biological and environmental sciences, and has been named a Sally Cassanova Pre-Doctoral Scholar. She’ll be off to Harvard University this summer for a research experience and hopes to pursue a Ph. D. there in immunology and infectious disease after finishing her Masters Degree.

And now she says she’s almost always thinking about what she will do, might do, or could change in her research. But for Lang, the real accomplishment is not rewards or recognition, but rather a change in perspective.

“I love helping people, bettering the world,” she said. “With my research in immunology and infectious disease, I have an opportunity to have a large global impact. To sit here and tell someone that I am going to have a global impact is crazy, just crazy.”

On second thought, you better bring a jug of water.

There are MORE Opportunities Outside the Box...

FIND OUT MORE AT WWW.CSUSM.EDU/STEM.

IF YOU ARE INTERESTED IN EXPERIENCING THE CSUSM RESEARCH LABS AND LEARNING MORE ABOUT OUR MULTI-DISCIPLINARY APPROACH, EMAIL STEM@CSUSM.EDU.

California State University
SAN MARCOS
College of Science & Mathematics

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Q: No offense, but CSUSM doesn’t have a reputation as a science and mathematics school. Why would I choose it?
A: No offense taken. Some people think CSUSM is an education school for students wanting to become teachers. Others think it’s a business school. We ask you judge our College of Science and Mathematics by our students, faculty and research facilities. Our faculty put the emphasis on teaching their students. Because we don’t have Ph. D programs in Science and Math, our students work side by side with professors on their research projects. Come and take a look, tour the labs, talk to our professors and students and then decide.

Q: Even if I get a great education, I’m worried that CSUSM’s lack of recognition as a strong science and math school might limit my options if I want to attend graduate school.
A: Undergraduate research experience is a key factor when applying to graduate school. That experience can lead to getting an academic paper published, which is also important to graduate school admissions officials. If this is a concern, we will connect you with students who applied for graduate schools so you can ask them yourself.

Q: Look, I like science and math and I am pretty good at them. But I want to pursue a secure career that will pay well. I’ve already decided to pursue engineering and CSUSM doesn’t have engineering. Sorry.
A: College provides the perfect opportunity to find out what you like, what you are interested in and what you might want to do long term. A great majority of college students change their majors at least twice. By stressing undergraduate research and a multi-disciplinary approach, you can learn to be anything – not just one thing. And then you can focus on one thing. If a student does have an idea of what they want to do, we can help. For example, students who show an interest in electronics can pursue an applied physics degree with a concentration in applied electronics. Students are surprised to find out that the course load is very close to that of an electrical engineering major. And many of our students go on to work for companies as engineers.

Q: I’ve read your materials and looked at your website and it talks about research, research, research. I want a career. Just on this q-n-a you’ve used the word seven times so far. I don’t want to be an academic researcher.
A: The point of stressing undergraduate research (that makes nine) is not to push you to graduate school. The first purpose is to allow you to figure out what you like and what you want to do. Undergraduate research (10) can help put into context the concepts you learn in the classroom. Most importantly, you’ll develop problem-solving skills. Those skills serve as the foundation for innovation. Companies are looking for problem-solvers and innovators. Companies tell us that our alumni come to them ready to hit the ground running and often require less training than their newly hired counterparts. And if you would like to talk to alumni or the companies that hired them, let us know.

TO LEARN MORE ABOUT CSUSM COLLEGE OF SCIENCES AND MATHEMATICS, GO TO WWW.CSUSM.EDU/STEM.
TO SCHEDULE A TOUR OF OUR LABS, EMAIL STEM@CSUSM.EDU.
IF YOU WANT TO TALK TO CURRENT STUDENTS OR ALUMNI, EMAIL AND WE CAN HELP YOU WITH THAT TOO.