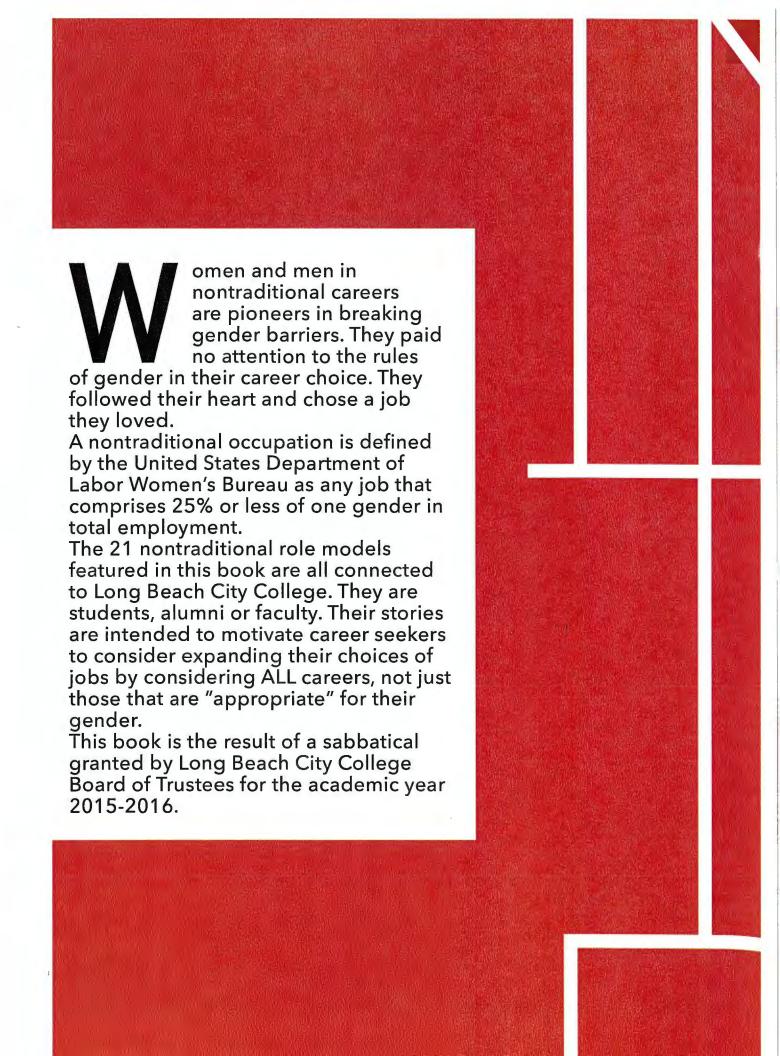
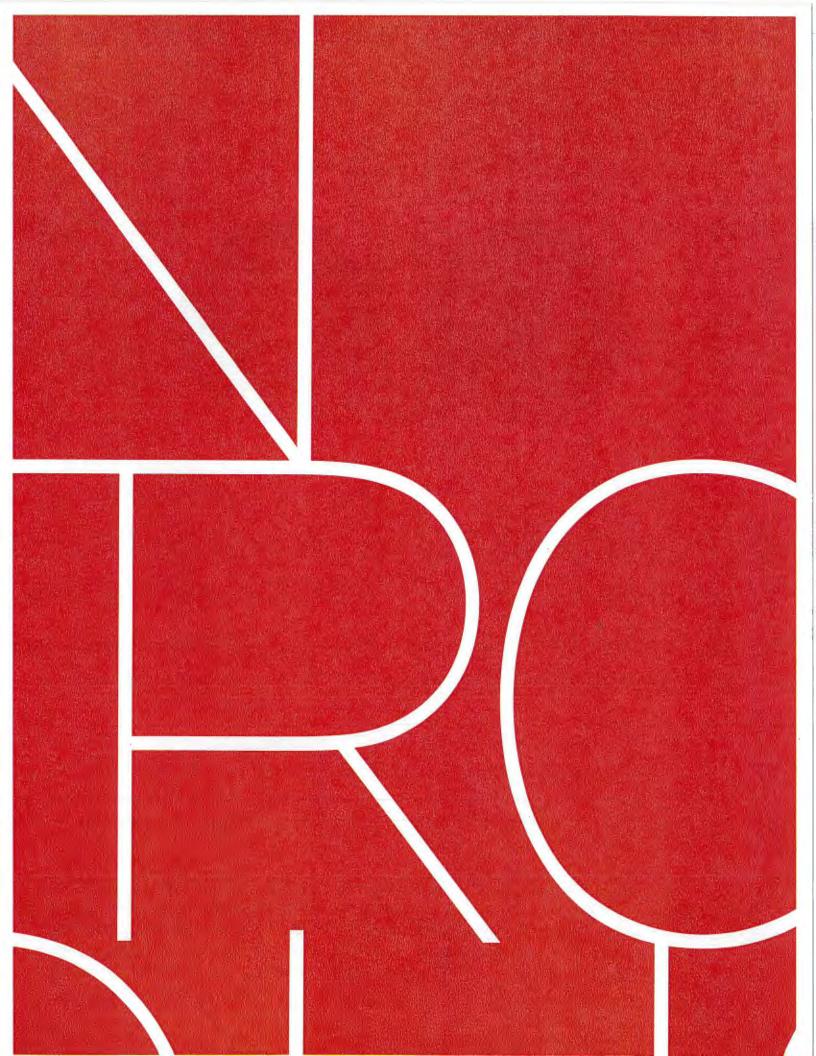
NONTRADITIONAL CAREERS IN THE 21ST CENTURY

LYNN SHAW, Ph.D.









This book is dedicated to my carpenter maternal grandfather Charles Erick Westlund (left) and my pipefitter paternal grandfather Toini Ade Siiter (right). Somehow their passion for hands-on work was passed on to me.

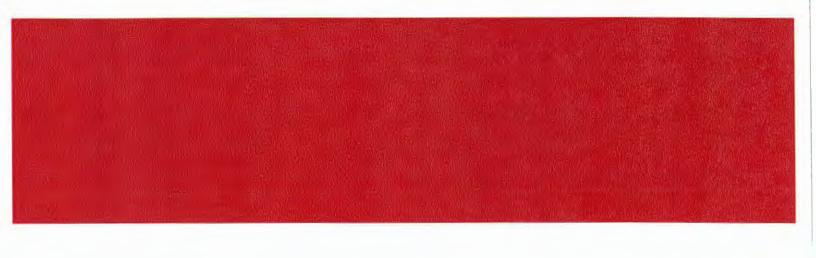


Dr. Lynn Shaw has been a miner, steelworker, longshore worker and journey-level electrician. She is currently working as a visiting faculty fellow in the California Community College Chancellor's Office, implementing the recommendations of the Strong Workforce Program to improve, expand and enhance career technical education at the 113 California Community Colleges.

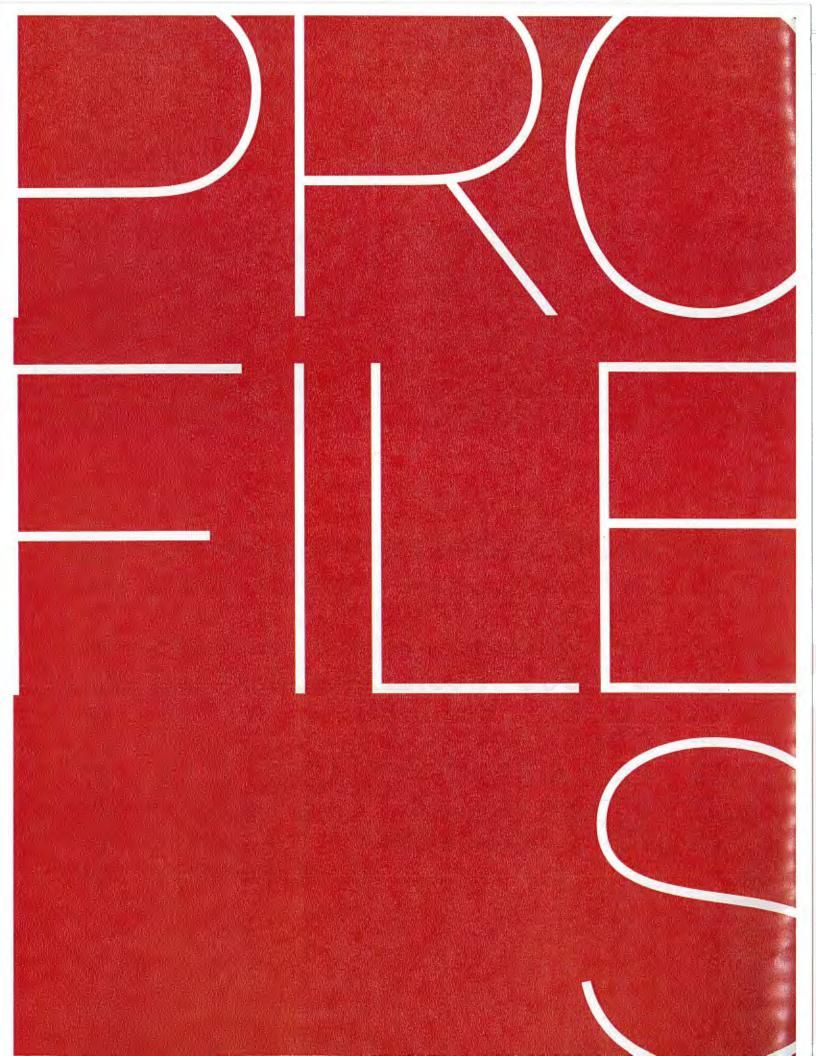
CONTENIS

00		- A		00
110	$\mathbf{k} \wedge \mathbf{l}$,,,,,
08	KAT	$\Box A \cup$	АГ	UU

- 09 MARY PERROT
- 10 ALANNA CUMMINGS
- 11 ARDEL GUILLAMAS AVELINO
- 12 RENAE POWELL
- 13 MONA ABASSI
- 14 ELEVILA THOMPSON
- 15 MARK MARANO
- 16 SUSAN CULLY
- 17 JENNIFER GOMEZ
- 18 STEFANI RIOS



- 19 LADERA BARBEE
- 20 JESSICA LOSCH
- 21 KIM MOSLEY
- 22 HEATHER DY
- 23 D'JESUS TRUJILLO
- 24 JULIE SCHNEIDER
- 25 KIM STERN
- **26 PAULA BRUNETTI**
- 27 EILEEN MILLER
- 28 ZOILA ROSILLO





CAREER GOAL: WELDER

"My advice to a woman considering a nontraditional career is try everything and eventually you will find something you like. There is no greater feeling than working hard to perfect a skill and knowing you can take it away with you-that's empowering.

atie Fajardo is a student in the Welding program at Long Beach City College. Katie has worked many different jobs, everything from bike messenger to security guard, but they never "felt right." She didn't like being cooped up in an office behind a desk. She wanted to work outdoors and with her hands. "Welding gives me a sense of pride and accomplishment. Welding uses the hottest materials and you can handle it as a woman. It is a finely tuned skill. I found my niche and it is welding."

The Metal Fabrication Department has 3 Associate Degree and 5 Certificate options.

Associate Degrees: 0% Women and 100% Men Certificates: 13% Women and 87% Men Number of students: 6% Women and 94% Men Welding, Soldering, and Brazing Workers are 4.8% women and earn a median wage of \$733 per week.

Chemists are 39% women % and earn a median wage of \$1,380 per week

*While Chemists are just over 1/3 women, other science occupations have nearly zero women; Astronomers, Physicists,

Atmospheric and Space Scientists.

"My advice to a woman considering a nontraditional career is get an advanced degree, otherwise you will be stuck with a lower-level job. Do research as an undergraduate. Women going into science have to be serious about it. You have to think about things and have a strong desire to know

you are right.

PROFESSOR OF PHYSICAL SCIENCE

ary has her Ph.D. in Chemistry and is a graduate of the Massachusetts Institute of Technology (MIT). Before she started teaching, she was a chemist researching and creating products such as compounds for shampoos and adhesives for labels. She has 4 patents. "Originally I was interested in art, but I was so good at math and science that my art teacher said I should do that instead."

The Physical Science Department has 1 Associate Degree with courses in Astronomy, Chemistry, Physics, Geology, Physical Geography and Environmental Science.

Associate Degrees: 40% Women and 60% Men Number of students: 51% Women and 49% Men



My advice to a woman considering a nontraditional career is if you really want to do something, do it. And work hard at it; be efficient in everything you do. Persevere no matter what happens in your personal life. Focus on your goal. Learn as much as you can. Broaden your horizons.

graduate of the Sheet Metal program at Long **Beach City College** with an Associate of Science Degree. She also completed a 5-year Sheet Metal Union Apprenticeship program and was the only woman out of 72 graduates. Before these accomplishments she got into trouble, served time in jail and completed a rehabilitation program. "You have to learn to see and do what is REALLY important and ask yourself, 'is this beneficial or not?'"



The Metal Fabrication Department has 3 Associate Degree and 5 Certificate options.

Metal Fabrication Degrees: 0% Women and 100% Men Certificates: 13% Women and 87% Men

Number of students: 6% Women and 94% Men

Sheet Metal Workers are 5.2% women and earn a median wage of \$857 per week.

Registered Nurses are 10% men and earn a median wage of \$1,190 per week.

ARDEL ARDEL LAMAS GULLAMAS REGISTERED NURSE, SENIOR DIRECTOR OF OPERATIONS, ST. MARY MEDICAL CENTER ARDEL ARDEL LAMB ARDE

rdel Guillamas Avelino is a nursing graduate of Long Beach City College. He came from a family of nurses. Three of his uncles and 4 aunts were nurses. When he was 10, he was badly injured in a fire and spent 3 months in the hospital. The nurses who cared for him showed so much compassion and demonstrated how important it is to give the human touch to promote healing, that he decided to become a nurse.



My advice to a man considering a nontraditional career is that you should do it! You have to show yourself as capable, academic, practical and have some sort of mentor. Nursing is a multifaceted profession: There's bedside nursing, research nursing, public health nursing, management nursing and nursing education.

The Registered Nursing Department and the Vocational Nursing Department have both an Associate Degree and Certificate option.

Registered Nursing Associate Degrees: 78% Women and 22% Men

Certificates: 79% Women and 21% Men

Vocational Nursing Associate Degrees: 92% Women and 8% Men

Certificates: 86% Women and 14% Men

Number of students Registered Nursing: 82% Women and 18% Men Number of students Vocational Nursing: 91% Women and 9% Men

RENAE POWELL

PROFESSOR OF COMPUTER AND OFFICE STUDIES

is a pioneer in the field of computers. She was unafraid to take any job in her field. She began at the bottom and climbed her way up through her own talent, drive and abilities. "When I began in this field I worked operating a mainframe computer that filled a room. Computer work came naturally to me and I was passionate about every job I had. When co-workers saw I could do the work, doors opened for me. I love teaching, especially when I can see that students finally get it. That is rewarding for me."

enae Powell

"My advice to women considering a nontraditional career is if you have a passion, don't le't anyone's comments distract or stop you from doing the career you want."

The Computer and Office Studies Department has 7 Associate Degree and 17 Certificate options, everything from Web Designer to Android App Developer.

Associate Degrees: 24% Women and 76% Men Certificates: 29% Women and 71% Men Number of students: 39% Women and 61% Men Computer Programmers are 21.4% women and earn a median wage of \$1,253 per week.



MONA ABASI

CAREER GOAL: ROBOTICS ELECTRICIAN

ona jumped around a lot looking for a career that she was passionate about. She traveled, took classes in art, woodworking, automotive, international business, and biomedical. She always had an interest in nontraditional careers for women because she sees herself as more of a tomboy. "The whole idea of makeup and business formal didn't work for me. I was much more attracted to the jobs men did." Mona is taking solar classes, robotics classes and general electrical theory and lab classes. "I love the whole idea of electricity. Electricity is a natural phenomenon that we've harnessed. I want to see how it works. I want to be smart and make things."

My advice to a woman considering a nontraditional career is don't let anything stand in your way. If you have an interest, nothing can stop you. Don't be shy. You have to stand up for yourself. We need more women in the Electrical program.



The Electrical Technology Department has 1 Associate Degree and 6 Certificate options.

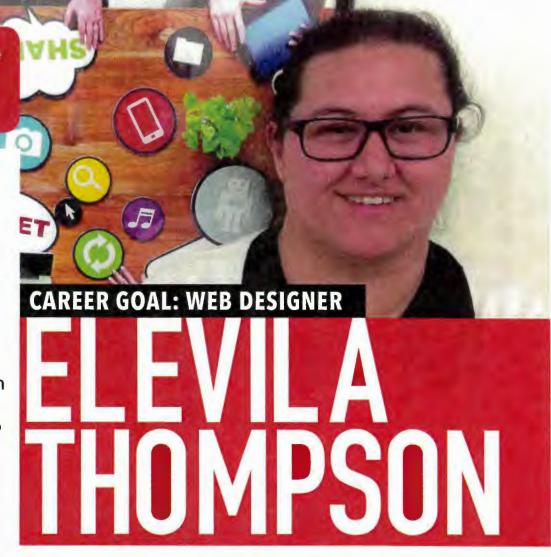
Associate Degrees: 6% Women and 94% Men Certificates: 2% Women and 98% Men

Number of students: 5% Women and 96% Men

Electricians are 2.4% women and earn a median wage of \$884 per week.

Applications and Systems Software Developers are 19.8% women and earn a median wage of \$1,736 per week.

levila is an online Web Design student and also works in the computer lab at Long Beach City College. She has spent several years trying out different career directions, from a Marine Biologist to living in Japan for two years. She has always been good at art and computers, even as early as first grade. "I decided Web design and development could merge the two strengths that I have, art and computers."





My advice to a woman considering a nontraditional career is to get hands-on experience now and learn everything you can about Web development. Go to programs and groups that are targeted for women and girls. Make it happen for yourself! Go out and do it. The only person stopping you from doing it is yourself.

The Computer and Office Studies Department has 7 Associate Degree and 17 Certificate options, everything from Web Designer to Android App Developer.

Associate Degrees: 24% Women and 76% Men Certificates: 29% Women and 71% Men Number of students: 39% Women and 61% Men

PRE-KINDERGARTEN TEACHER

ark is a graduate of Long Beach City College. He began his career by working with community groups that offered childcare and he worked his way up to an administrative position. But he missed working with children, so he is now a teacher at the Long Beach City College Child Development Center. "As a male preschool teacher you stand out in this field and people notice you. I design curriculum, I interact with children, I assess children's development, and I work on integrating math and science into the lessons. Teaching children is everyone's work!"



My advice to a man considering a nontraditional career is follow your heart and don't follow social scripts. Being a Pre-Kindergarten teacher is hard and draining, but it is very rewarding. It's important for children to see male role models.

The Child and Adult Development Department has 3 Associate Degree and 2 Certificate options.

Child Development Degrees: 87% Women and 13% Men Certificates: 100% Women and 0% Men

Number of students: 94% Women and 6% Men

Preschool and Kindergarten Teachers are 2.8% men and earn a median wage of \$625 per week.



PROFESSOR OF COMPUTER AND OFFICE STUDIES

usan Cully has worked in multiple careers. She is convinced that if you have an understanding and knowledge of computers, you can use it in any industry. "I was raised in a way that nothing was considered nontraditional. I never felt there was anything I couldn't do. I grew up thinking that there weren't any gender roles."

The Computer and Office Studies Department has 7 Associate Degree and 17 Certificate options, everything from Web Designer to Android App Developer.

> Associate Degrees: 24% Women and 76% Men Certificates: 29% Women and 71% Men

Number of students: 39% Women and 61% Men

Network and Computer Systems Administrators are 19.1% women and earn a median wage of \$1,286 per week.

JENNIFER GOMEZ

CHEF INSTRUCTOR

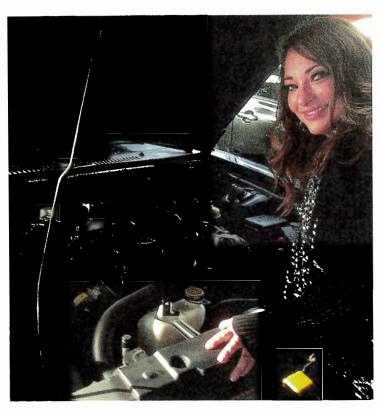
hen Jennifer was young, she thought all she wanted to do was get married and have a family. She ended up working in medical assisting, but realized that it wasn't her passion. She was always a good cook and loved spending time in the kitchen with her grandmother. She decided to pursue what she loved and entered a community college culinary program. After graduation, she worked in a variety of culinary positions including doing banquets, making desserts and teaching cooking in a private school. "I love the smells and tastes of all the different foods. I love to cook because it brings me closer to people."



My advice to women considering a nontraditional career is to follow your passion. Know that cooking gives you the potential to be your own boss. You can run a food truck, you can be a food stylist, you can be a chef, you can be a pastry chef, or you can write cookbooks. You can do so many things with culinary training.

The Culinary Arts Department has 1 Associate Degree and 1 Certificate option.

Associate Degrees: 81% Women and 19% Men Certificates: 82% Women and 18% Men Number of students: 64% Women and 36% Men Chefs and Head Cooks are 19% women and earn a median wage of \$1,418 per week.



STEFANI RIOS

CAREER GOAL: AUTO MECHANIC

tefani Rios is a student in the Advanced **Transportation** program at Long Beach City College. Stefani has always had a fascination with cars, engines and getting them to work. "I love the smell of the engine, the sounds of the tools, and the smell of grease. I just get chills when I think about engines. My goal is to open an allwomen auto repair shop."

My advice to a woman considering a nontraditional career is go for it; it is worth the time and effort. Women are honest and more thorough and precise. And it is easier for women to trust a woman with their car. Times are changing.



The Advanced Transportation Department has 2 Associate Degree and 4 Certificate options.

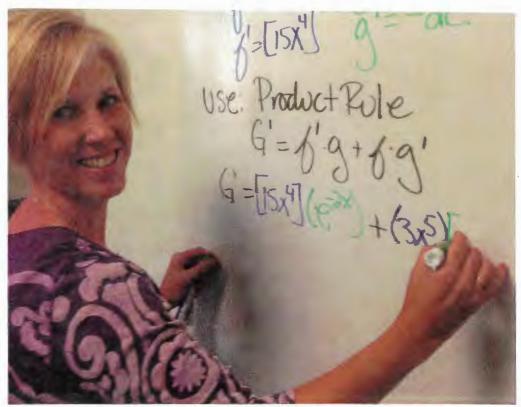
Associate Degrees: 4% Women and 96% Men Certificates: 5% Women and 95% Men

Number of students: 12% Women and 89% Men

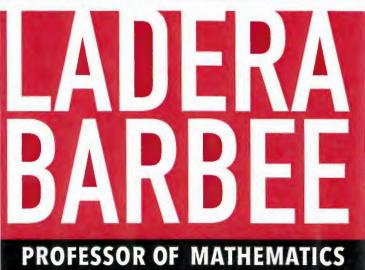
Automotive Service Technicians and Mechanics are 1.3% women and earn a median wage of \$737 per week.

Mathematicians are 0% women* and earn a median wage of \$2,074 per week.

*The Bureau of Labor Statistics does not have a value for any occupation that has less than 50,000 women employed nationally.



"My advice to a woman considering a nontraditional career is live life with a view that you don't see barriers. There are no male- or female-dominant roles. Don't see restrictions on any level."



n fifth grade Ladera got her first C in an algebra class. She had been a straight-A student and this C motivated her to work hard in math. She ended up loving the black and whiteness of math. "You answer the question and you are done. It is concrete. I enjoy the challenge of math. People often say they are bad at math. I'm not sure how they can say that. It is like saying you can't think logically. Math is a vehicle to think analytically and logically. No one says I am bad at reading. I appreciate the beauty of math."

The Math and Engineering Department has 1 Associate Degree with additional courses in Statistics and Engineering.

Associate Degrees: 32% Women and 68% Men Number of students: 29% Women and 71% Men

JESSICA LOSCH



"My advice to a woman considering a nontraditional career is participate and ask questions, take an active role. Look, observe and then act. Women have to be twice as good at what we do. What your employer and men you work with care about is that you can deliver the results."

RENEWABLE ENERGY SYSTEMS ENGINEER

essica is an electrician with a specialty in renewable energy and teaches part time at Long Beach City College. She began her higher education studies at Long Beach City College and returned vears later when she needed business classes to open her own electrical business. "Women are scary bright and most men are terrified of that. I'm a strong woman and there is a balance that has to be met working with men, which comes with mutual respect." Jessica is now working as a solar power expert, managing and designing solar systems.

The Electrical Technology Department has 1 Associate Degree and 6 Certificate options.

Associate Degrees: 6% Women and 94% Men

Certificates: 2% Women and 98% Men Number of students: 5% Women and 96% Men Electrical Power-Line Installers and Repairers are 3% women and earn a median wage of \$1,018 per week.



KIM MOSLEY

ELECTRICAL INSTRUCTOR

"My advice to a woman considering a nontraditional career is to be sure it is something you really want to do before you commit a lot of time and resources. Be sure the career is really what you think it is. If you like problem-solving, you would like being an engineer."

im Mosley is an electrical engineer. Kim spent 19 years as an engineer in a nuclear power plant, working on systems design and maintenance. She began her higher education at a community college and then transferred to Cal Poly. In her engineering classes, she was the only African-American woman. "When I started I had no idea what an engineer or scientist really did. I later learned our work is to figure out solutions to problems and implement the solution. Engineers apply what we know of the physical world to make our world a better place."

The Electrical Technology Department has 1 Associate Degree and 6 Certificate options.

Associate Degrees: 6% Women and 94% Men Certificates: 2% Women and 98% Men

Number of students: 5% Women and 96% Men

Electrical Engineers are 12.3% women and earn a median wage of \$1,568 per week.

HEATHER DY

PROFESSOR OF LIFE SCIENCE

eather first thought she would go to medical school, but as she was completing her master's degree she started an unpaid internship in a coroner's office and loved it. "I did it for experience and exposure to something new in the science field...a different perspective. I have loved science since third grade. As a young girl, I dissected a pig and kept the heart in a jar. I never thought I couldn't do things. I never felt limited by my gender. I like the hands-on problem-solving work in science. There is lots of room for women in science."





My advice to a woman considering a nontraditional career is know your subject well. Be confident in who you are. Be good at the work you do. Bring your own true self to your work. Always try to make it better. Grow, reach, and learn.

Biologists are 52.7% women* and earn a median wage of \$1,233 per week.

> *While Biologists are just over ½ women, other science occupations have nearly zero women; Agricultural and Food Scientists, Conservation Scientists and Foresters, and Life Scientists (all other).

The Life Science Department has 1 Associate Degree with courses in Marine Biology, Anatomy, Microbiology, Wildlife Biology and Physiology.

Associate Degrees: 69% Women and 31% Men Number of students: 65% Women and 35% Men

D'JESUS TRUJILLO

RUNWAY COACH AND FASHION STYLIST

'Jesus Trujillo is working in the fashion industry and is a student in the Long Beach City College Fashion Department. He spent years getting a Business Administration degree to please his family. Once he finished his degree he decided to do what he really wanted; to work with fashion, clothes and models. DJ has an appreciation for cultural and ethnic influences and uses fashion to communicate that beauty. He sees his job as making the vision of the designer come to life on the runway.

"My advice to a man considering a nontraditional career is to be happy with your own uniqueness, your courage, your nerve and your talent. As long as you are secure in who you are there is nothing to stop you. It doesn't matter what gender you are, it's your talent that counts."

The Fashion Design Department has 3 Associate Degree and 5 Certificate options.

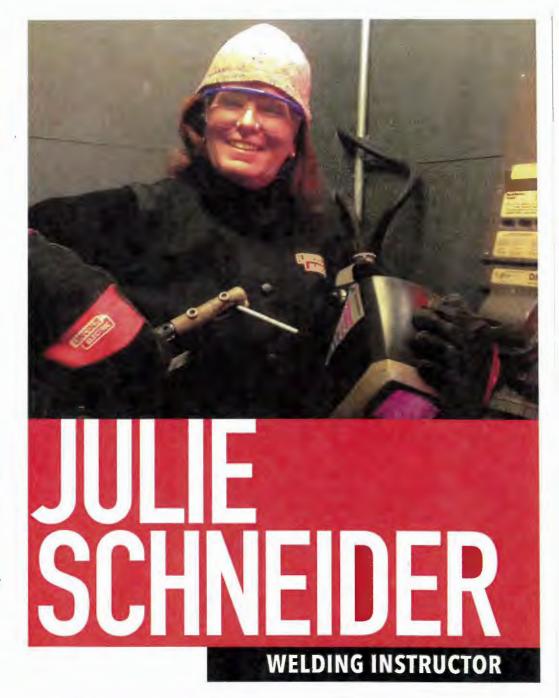
Fashion Associate Degrees: 93% Women and 7% Men Certificates: 77% Women and 23% Men

Number of students: 81% Women and 19% Men

Tailors, Dressmakers, and Sewers are 19.4% men. Fashion Designers have a median wage of \$1,205 per week.

Welding, Soldering, and Brazing Workers are 4.8% women and earn a median wage of \$733 per week.

ulie Schneider began her career as a welder in an auto factory in Detroit. She has done many jobs before and after that (makeup artist, producer, service worker, warehouse worker), but always comes back to welding. "Welding is my trade. It offers a steady paycheck and it is something I can do my whole life. I like welding because it is unique, badass, rough, and abrupt."





My advice to a woman considering a nontraditional career is to know yourself and be able to acclimate to a male workplace culture. You have to know what you are capable of, socially and physically. What I hope for the future is that it will no longer be a fish-out-of-water scenario for a woman going into a nontraditional career.

The Metal Fabrication Department has 3 Associate Degree and 5 Certificate options.

Metal Fabrication Degrees: 0% Women and 100% Men Certificates: 13% Women and 87% Men Number of students: 6% Women and 94% Men



KIM STERN

CAREER GOAL: POLICE OFFICER

im Stern is a student in the Administration of Justice Department at Long Beach City College. As a history graduate of University of California, Los Angeles, she worked in various jobs including an internship for the Conan O'Brien show. But she wasn't doing what she really wanted, so she returned to Long Beach City College and began her studies to become a police officer or FBI agent. After getting her certificate in Forensics, she started working as a police cadet.

"My advice to a woman considering a nontraditional career is have a strong interest in your career choice. Don't just jump in; do your research. Take classes to be reassured and reaffirmed that this is what you really want to do. Talk to people in your chosen professions. Get a mentor."

The Administration of Justice Department has 1 Associate Degree and 2 Certificate options.

Associate Degrees: 56% Women and 44% Men Certificates: 57% Women and 43% Men

Number of students: 51% Women and 49% Men

Police Officers and Sheriff Patrol Officers are 12.4% women and earn a median wage of \$743-\$1,043 per week.

PAULA BRUILE CAREER GOAL: ELECTRICIAN

aula worked as a bartender for many years. The work was not rewarding for her. She remembered that as a young girl she was drawn to her dad's tools and loved working with her hands. She found a job with a sign company doing electrical installations, hanging off the sides of tall buildings. "I have always leaned toward nontraditional work. I'm very energetic and sitting in an office doesn't appeal to me."

My advice to a woman considering a nontraditional career is don't do it just because the money is great, do it to be strong and empowered and feel good about yourself and the work you do. And on the job, pull your own weight. Don't expect others to do it for you. No job is a woman or man's job; with modern equipment anyone can do the job.

The Electrical Technology Department has 1 Associate Degree and 6 Certificate options.

Associate Degrees: 6% Women and 94% Men Certificates: 2% Women and 98% Men

Number of students: 5% Women and 96% Men

Electricians are 2.4% women and earn a median wage of \$884 per week.



EILEEN MILLER

ADMINISTRATION OF JUSTICE INSTRUCTOR/FORMER POLICE CHIEF

"My advice to a woman considering a nontraditional career is don't have any restrictions on yourself when choosing a career. You should choose a career that you like. If you are thinking about becoming a police officer, go on a ridealong and see if it suits you. Women need to be more confident."

ileen started her career as an entry-level police cadet. She worked her way to the top and became the Chief of Police at Santa Monica City College for 14 years. Eileen came from a family of 5 brothers and 5 sisters and she looked to her brothers to see what to do. "Police work is not about your gender, it is about how you conduct yourself. Being female was never going to restrict me in what I wanted to do. The decisions I make I want to be wise decisions, not based on right or wrong."

The Administration of Justice Department has 1 Associate Degree and 2 Certificate options.

Associate Degrees: 56% Women and 44% Men Certificates: 57% Women and 43% Men Number of students: 51% Women and 49% Men First-Line Supervisors of Police and Detectives are 15.9% women and earn a median wage of \$1,149 per week.

ZOILA ROSILLO

ASSISTANT PROFESSOR OF COMPUTER AND OFFICE STUDIES

oila Rosillo is from a proud but poor immigrant family. She saw computers on television and wondered why she didn't have one. This began her lifelong fascination with technology. "Computers changed my life." In class she challenges students to go one day in their everyday life without technology. No one can. "This demonstrates to students that you use computers multiple times in a day."



"My advice to women considering a nontraditional career is to hurry up and choose the computer industry for your career. The sooner you enter, the more natural it is for you."

The Computer and Office Studies Department has 7 Associate Degree and 17 Certificate options, everything from Web Designer to Android App Developer.

Associate Degrees: 24% Women and 76% Men Certificates: 29% Women and 71% Men

Number of students: 39% Women and 61% Men

Computer Network Architects are 12.4% women and earn a median wage of \$1,650 per week.

ullet hanks to the students of Golden Valley High School who printed this book as a part of their Career Technical Education program and their instructor Darren La Rue. Also, thanks to Jonah Coloma, my book designer, who is a student in the Digital Media program at Long Beach City College. Special thanks to Terri Long, the Vice President of Academic Affairs at Long Beach City College for her ongoing support of faculty and the Sabbatical Committee for giving me this opportunity. Also, thank you to Lauren Sosenko and Eva Bagg from Institutional Effectiveness for assistance with the number crunching. And finally, thanks to family, Don and Eunice Siiter (parents), Tom Siiter (brother), and Ken Shaw (husband) for their love and support.

ong Beach City College wants you as a student. If you are seeking to upgrade your skills, or get a degree or certificate, Long Beach City College has classes for you. Become a nontraditional woman or man today.



Rosie The Riveter c. 1942- c.1943

LEARN A NEW SKILL TODAY AT LONG BEACH CITY COLLEGE. WWW.LBCC.EDU