Bergen student Ana Parra Vera is a firm believer that science, technology, engineering and math careers aren’t just for men. This computer science major and newly elected secretary of the S.T.E.M. Student Union has big plans for power; “girl power,” that is.

Parra Vera became a member of the S.T.E.M. Student Union in spring 2013. She was eager to participate in an organization that offers a hands-on approach to learning. “I was particularly excited to work on projects geared toward the environment.”

As a summer 2013 S.T.E.M. student intern, Parra Vera is a member of the all-female engineering team of the vertical wind turbine demonstration project. The students have been working on a five-foot high, 3-bladed wind razor that converts air into usable electrical energy. Her fellow team members include Bergen students Maria De Abreu, Miriam Natovich, Indiana Suriel and team leader Rou Yun (Yisha) Wang.

According to a report published by www.whitehouse.gov, women who work in science, technology, engineering and math earn on average 33 percent more than their counterparts in other fields. Parra Vera emphasizes the importance of encouraging women to pursue a career in one of these areas. “If a woman is unsure whether she possesses the right skills set or is interested in learning more about our initiatives, she should visit the College’s S.T.E.M. Center and learn about our projects. Ask questions and then decide.”

Originally from Caracas, Venezuela, Parra Vera worked as an au pair when she first arrived in the U.S., as part of a cultural exchange program. She was initially accepted to Stevens Institute of Technology but decided to attend Bergen because it was a more affordable alternative. In 2010, she received a merit scholarship from the Research and Development Council of New Jersey to pursue her studies in computer science at Bergen.

“I have always been intrigued by computers,” she said. “I love programming. It is the best feeling when a program runs smoothly and does what it is supposed to do without any problems. One day, I hope to become the next Melissa Mayer (CEO of Yahoo and former executive of Google).”

Parra Vera also is a member of Phi Theta Kappa and works at the College’s tutoring center, helping students with their mathematics and computer science courses.

Upon graduation from Bergen, Parra Vera hopes to continue her studies at Stevens Institute of Technology and possibly pursue a career in software development or robotics.

Welcome back! The start of an academic year brings about exciting possibilities and new challenges, especially for students interested in science, technology, engineering and mathematics. I encourage you to become a member of the S.T.E.M. Student Union, which is a great way to meet students of different backgrounds and connect outside of the classroom.

From innovative projects, such as the renovation of the College’s softball field house, to weekly get-togethers at Starbucks, members of the S.T.E.M. Student Union have developed a camaraderie that goes beyond the technical aspects of their respective disciplines. Initiatives such as these also may be of interest to non-S.T.E.M. majors, who can assist with documenting project work and contributing to the website.

Students can include this type of volunteer work on their resumes when applying for positions in the S.T.E.M. field or when transferring to four-year institutions. Currently, there is a high demand for S.T.E.M. professionals in the workplace. According to a recent Georgetown University study, approximately 63 percent of S.T.E.M. graduates with a bachelor’s degree earn higher salaries than individuals holding a master’s degree in non-science majors.

Many of the department’s faculty members have worked in the S.T.E.M. industry and can offer support and guidance. A group of 20 S.T.E.M. faculty members will be available to assist new students with questions about academic and extracurricular activities. Please utilize their services and resources. They are here to help smooth your transition to college.

Bergen now offers two aviation degrees, which can lead to careers in the airline industry. If you have an interest in aviation, visit the state-of-the-art simulator in the Technology Building. You may even have the chance to spend your summer interning with air traffic controllers at Newark Airport.

With the support of the faculty and your peers, now is the perfect time to become a member of the S.T.E.M. community. Take advantage of opportunities and explore new courses. Have a wonderful semester.

Sincerely,
P.J. Ricatto

Dean, Mathematics, Science and Technology
Are you new to Bergen? Do you feel overwhelmed by all of the academic and extracurricular options, yet have the nagging feeling that you are missing out on opportunities that you may not know about?

A group of 20 faculty members are dedicating their time to helping new S.T.E.M. students at Bergen succeed. Many of the faculty members are not only professors but they have worked in the S.T.E.M. industry and can provide real-world guidance and advice that will help students achieve their goals and successfully transfer to four-year institutions.

The professors’ fields of expertise range from microbiology to mechanical engineering, to organic chemistry. Their previous positions include a CEO from the medical diagnostic industry, a pilot, a medical doctor and K-12 teachers. The professors hold degrees from the University of Tennessee, Cooper Union, Temple University, City University of New York, Caltech, Columbia University, Cornell University and more.

For additional details about how you can connect with your faculty advisor, please contact Jessica Montanaro at jmontanaro@bergen.edu or (201) 301-1711.

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Message from S.T.E.M. Student Union President, Jonathan Aisoni

I am Jonathan Aisoni, the newly elected president of the S.T.E.M. Student Union, which was founded in fall 2012 by a small group of Bergen students from science and non-science majors, who were interested in developing hands-on science and engineering research projects.

I want to emphasize that our projects are multi-disciplinary. For example, in the algae biodiesel project, English majors and writers are needed to help document our work by writing articles and contributing to our website. In addition, artists and horticulturists will be needed to design a grand outdoor sculpture made of transparent tubes of circulating bright kelly-green algae.

There are many other projects you may want to get involved in: renovating a softball field house to transform it into an energy independent student workshop, designing a solar bbq that will ultimately provide hot water for our workshop, and building a single seat electric car. The sky is not our limit, as we are now beginning our agricultural drone project.

I invite you to offer more ideas for projects and join our teams in putting our coursework into practical use. Please send your name, phone number and email address to stembcc@gmail.com.

Sincerely,
Jonathan Aisoni
S.T.E.M. services offered by the Cerullo Learning Assistance Center - CLAC
(Room L-125 and A-113)

What is Supplemental Instruction?
The Supplemental Instruction (SI) program is designed to organize and improve the ways in which students prepare for class. Each SI session is designed to help students review course material, while developing effective study habits.

S.T.E.M. Workshops at the CLAC
Faculty members from the biology, chemistry, physics, and mathematics departments will conduct workshops to discuss some of the major topics offered in courses from these respective disciplines. Stop by the CLAC to see if the workshops are relevant to your classes.

Other services for S.T.E.M. Students offered at the CLAC:
- One-on-one appointments
- Drop-in appointments
- In-lab tutoring
- Walk-in assistance for S.T.E.M. courses
- Study groups
- Online tutoring (Smarthinking)

All CLAC services are for registered students and are free-of-charge. For additional information, please contact Luis DeAbreu at ldeabreu@bergen.edu.

Consider a Career in Air Traffic Control, Airport Operations or Airline Management!
AS.NSM: Aviation Operations (AS.NSM.AVT.OPR) - AS.PS: Aviation Administration (AS.PS.AVT.ADM)
Visit www.bergen.edu/aviation for more details.
Q. I’m confused by all of the different degree options - what is the difference between an A.A., A.S., and A.A.S. degree?

A. A.A. stands for Associate in Arts and A.S. stands for Associate in Science. These degrees prepare you to complete a bachelor’s degree in a specific major. They also are transferrable under the Lampitt Bill, which ensures full transfer of your community college credits to any in-state public four-year institution. A.A.S. stands for Associate in Applied Science. This degree is more technical. Students acquire skills and knowledge that can be used in select jobs immediately after completing their associate’s degree. This degree is not covered by the Lampitt Bill; some of the courses in this degree may transfer, while others will not. If you plan on transferring to a bachelor’s degree program, the A.A.S. degree is NOT for you.

Q. I want all my courses to transfer. How do I make sure this happens?

A.

1. Make sure you are in an A.A. or A.S. degree program and complete your entire degree at Bergen in order to be covered by the Lampitt Bill.

2. Make an appointment with me, the S.T.E.M. counselor, to review your transfer plans.

3. Go to www.njtransfer.org to review which courses at Bergen will transfer to your intended institution and major of choice.

4. If you are interested in out-of-state colleges or universities, the process is more complicated. Make an appointment with me or any of the transfer counselors so we can plan your next steps.

Q. What are S.T.E.M. jobs?


Bergen is doing its part by providing extra services to students who are specifically geared towards these majors, to make sure our S.T.E.M. students are well-prepared and ready to transfer and complete their bachelor’s degree at a four-year college.

To submit your questions for the next “Ask Jessica” column or to make an appointment with her, please email jmontanaro@bergen.edu or call (201) 301-1711.