

V I T A E

WINTER 2015

THE MAGAZINE OF
VALENCIA COLLEGE

**CHANGING THE
TUNE OF DESIGN**
A 3-D printed violin represents
a new era of innovation.





VITAE

THE MAGAZINE OF VALENCIA COLLEGE

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A traditional Mexican folkloric dance group performs during Spirit Day at East Campus as part of Hispanic Heritage Month in October.

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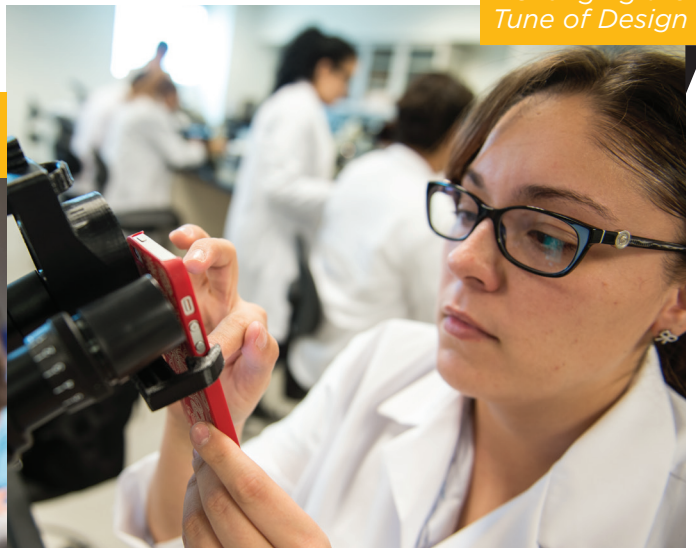


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Valencia Featured on “PBS NewsHour” for Efforts to Help Low-Income Students Finish College

Valencia was one of five cutting-edge colleges and universities featured in an August special on “PBS NewsHour,” as a team of PBS reporters examined how some schools are trying to close the “graduation gap” between well-to-do students and students from low-income families.

Valencia and the University of Central Florida were highlighted for their unique transfer agreement—DirectConnect to UCF.

Although the number of Americans who enroll in college has grown dramatically over the past 40 years, the percentage of students who actually earn a college credential by the age of 24 has not. The only significant increase has been for families with the highest household incomes.

Every night for a week, the “PBS NewsHour” examined efforts on campuses across the country—from the University of Texas at Austin to Valencia College in Orlando—focused not just on getting more low-income, first-generation students into college, but through college to a useful credential.

[▶ valenciacollege.edu/pbsnewshour](http://valenciacollege.edu/pbsnewshour)



Alexandrea Castro (left), who graduated in spring 2015, is featured in the “PBS NewsHour” special.

Shugart Named One of America’s 10 Most Innovative College Presidents

In September, Washington Monthly magazine named Valencia College’s president, Dr. Sandy Shugart, one of the nation’s most innovative college presidents. Shugart was recognized for overhauling the college’s approach to incoming freshman, focusing on “front door”

courses in order to improve success rates. Others on the list include Dr. John Hitt, president of the University of Central Florida, who was cited, along with Shugart, for coming up with the groundbreaking DirectConnect to UCF transfer program.

Valencia to Add Bachelor's Degree in Sign Language

Valencia is seeking state approval to offer a Bachelor of Science degree program in sign-language interpretation. The college currently offers an associate degree in sign language. However, new regulations are requiring students to have bachelor's degrees before they become Certified Deaf Interpreters. There's strong job demand for sign-language interpreters in the Orlando area. Florida has the nation's third-largest population of people with hearing difficulties at 210,779 —roughly 1.8 percent of Florida's population, according to the 2014 Annual Disability Statistics Compendium. If Valencia receives approval from state officials and the regional accrediting agency, it may begin offering the program in January 2017.



Students practicing sign language on East Campus.

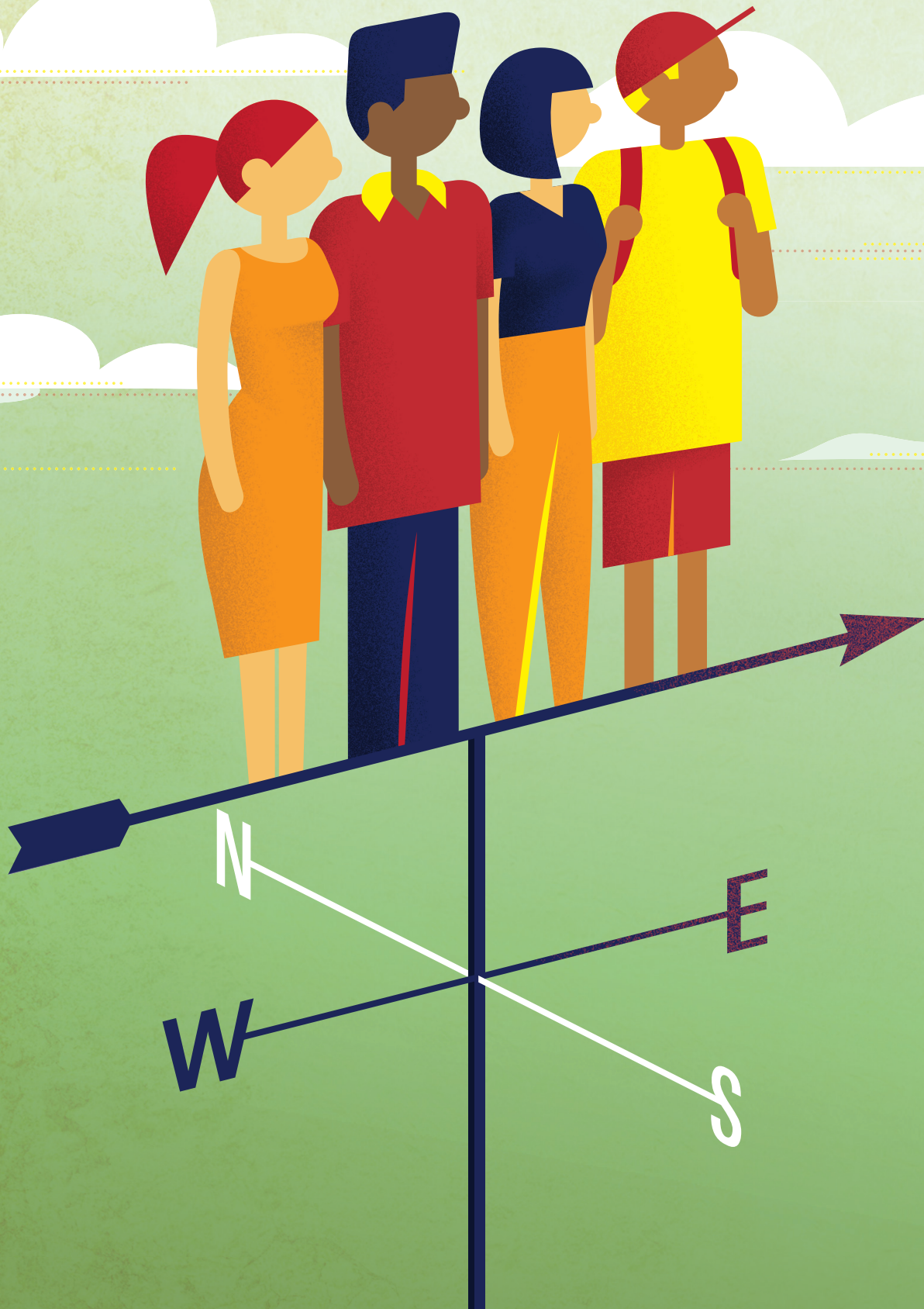
Engineering Society Wins Statewide Awards...Again

In September, Valencia's student chapter of the Florida Engineering Society received two prestigious awards. For the third consecutive year, the chapter won Most Active Student Chapter among two-year engineering programs. In addition, professor Charles Davis, who serves as an advisor to the Valencia FES chapter, was named the Engineering Faculty Member of the Year. This is the second consecutive year that Davis has received the honor.

In giving Davis the award, the FES Board recognized his work advising the Valencia College chapter, as well as his continued efforts to educate future engineers in the areas of applied engineering as it relates to math, technical design, quality assurance, ethics, communications and management. Davis was also credited for his volunteer work with professional and industry organizations. He is currently serving as chair of the Florida Professional Engineers in Industry (FPEI).

The Florida Engineering Society honors Charles Davis as the Engineering Faculty Member of the Year.





FINDING THEIR WAY AFTER FOSTER CARE

For those who have aged out of the foster care system, Valencia offers more than specialized guidance—it offers a path to stability.

//BY SUSAN FRITH

Valencia student Jeremiah Jones was discouraged when he arrived at Charmaine Lowe's office on West Campus last spring. The 23-year-old former foster youth had no job, and he was about to lose his housing.

But Lowe, who'd just been hired as Valencia's new success coach, offered Jones more than words of encouragement. She connected the student with an employment specialist, who helped him find work. She helped him get rent assistance, money for textbooks, and even pots and pans for his kitchen. "She reached out to me on a day-to-day, and a week-to-week basis," Jones says. "She gave me an outline for the classes I'd need to excel in and reach my graduation date." Now he has a good job with Ralph Lauren and hopes to eventually earn a computer engineering degree from Florida State University.

Lowe's position was created in January through a partnership with Community Based Care of Central Florida, the lead agency for Florida's Department of Children and Families (DCF) in Orange, Osceola and Seminole counties. It builds on Valencia's efforts to make college dreams a reality for those who have aged out of the foster care system and may lack the traditional support networks that many of their classmates take for granted. Around the country, it is estimated that only 3 percent of former foster youth make it through college.



At least 160 students are taking on that challenge at Valencia this semester. “I have a lot of students who are just trying to survive one day at a time,” says Lowe. Working with case managers, she offers academic advising to keep students on track with their majors, connections to campus and community resources, and a friendly ear.

“We offer some type of stability,” says Kenya Richardson, financial aid coordinator for West Campus and one of the first at Valencia to reach out to foster students. “We’ve kind of created a one-stop shop for these students so we can personally assist them and make sure they’re successful through their college experience.”

Richardson started working with foster students at Valencia about 10 years ago “by fluke.” It was the peak of registration. She was taking calls at the Answer Center one day when a representative from DCF phoned about a student who was having trouble with enrollment. (The department handles cases of foster care, ward of court, legal guardianship, and adoption.) A week after Richardson helped that student, the representative called back. “She asked me to be the point person for all of their students to help guide them and ease the burden of some of the administrative barriers and numerous steps of enrollment.”

“I agreed, but I did not know or realize what I agreed to,” she jokes. By 2011, with more than 200 students identified as coming from the foster care system or as homeless (another group Richardson was assisting), it was clear she needed some back-up. The college hired financial aid liaisons to share the workload and give students a contact at each campus. One key task is helping students obtain Florida tuition waivers, which are available to current and former foster students until they reach age 28. (Once students secure these waivers, they can take any Pell Grant money they receive and apply it to living expenses.) Foster students also get priority registration to make it easier for them to find classes that fit their personal schedules and meet the requirement of being enrolled full-time.

Valencia financial-aid specialist Terrie Meyers has worked with foster students on the East and Winter Park campuses. At times her role has extended outside of school. She has provided temporary shelter in her own home, shopped for a baby shower and taken a student to buy her first car.

“She’d finally saved enough money,” Meyers says. “So we planned on a Saturday—I picked her up, and we went car shopping.” Meyers and a friend helped the student get the best car for the money she had. “It was very rewarding,” she



Left: Charmaine Lowe goes over some paperwork with Jeremiah Jones. Above: Financial-aid specialist Terrie Meyers often goes beyond her traditional responsibilities to help former foster students on East and Winter Park campuses.

says. “We were concerned about her catching the bus early in morning when it was dark. This gave her more leeway to come and go, and stay late on campus if needed. It was a proud moment for her.”

A few weeks before the fall term begins, Charmaine Lowe’s office is crowded with binders and notebooks, highlighters and index cards, all collected during a school supply drive for Valencia’s foster students. She plans to visit each campus to distribute student success kits. Lowe, a Valencia graduate who has volunteered with pregnant teens and abused children, brings to her job a passion for helping under-served groups. “I love seeing people succeed and do really great things.”

As a success coach, she works closely with case managers to help students line up the resources they need. “She was the only one I could talk to at a time when I didn’t have the proper resources,” says Valencia student Brandon Pinkney. “She’s been pushing me to work harder.” Finding stable housing has been a challenge, but Pinkney calls college his “number one priority,” adding, “I don’t give up for anything.” He hopes to earn his associate degree in a veterinary field.

“My kids have really expressed gratitude for Charmaine,” says Central Florida youth advocate Rebecca Moses. Moses serves as youth advisory board chair for Community Based Care of Central Florida. She also works at The Faine House, which provides shelter, mentoring, tutoring, and life-skills training for those ages 18 to 23 who are making the transition out of foster care. “Charmaine creates a very warm, safe space for everybody.

FACTS ABOUT FOSTER YOUTH

26
THOUSAND

Approximately 26,000 youth nationwide transition out of the foster care system each year.

7%
— TO —
13%

Only 7 percent – 13 percent of foster care children enroll in higher education programs.

ONLY
3%

Of those who enroll in college, it is estimated that only 3 percent will obtain a bachelor’s degree.

11
OUT OF
50

Florida is one of only 11 states that have statewide support programs for postsecondary education. Less than half of states, including Florida, have tuition waiver programs.



Sources: Casey Family Programs, 2010; National Working Group on Foster Care and Education, 2014; Fostering Success Michigan, 2015.

She's very down-to-earth and straight to the point. I think she's a role model, especially for a lot of our young women."

Beyond financial hardships, Moses says the young adults whom she works with have "been bounced around between different homes and schools, so they may lack credits or education in certain areas." They may need some extra guidance as they work toward independence, and many deal with emotional scars.

"We have stories of abuse from parents or from siblings, sexual abuse, kids whose parents have killed their siblings or other parents, parents who simply died," she says. "I think one of the biggest things is for people to remain patient with [these students] and understand they're trying to navigate life on top of a massive amount of trauma."

Lowe understands that because of their history, many foster students "don't trust people so easily," so she works hard to earn that trust. "When someone comes in my office, I'm very, very open. I explain to them who I am and what I do and why I'm here for them." She treats them like traditional college students, tailoring the kind of help she gives to each individual's needs. That occasionally takes a bit of detective work.

One student was receiving support services, including psychological counseling, but was floundering academically. "I asked her, 'Is there anything making you unsuccessful here at Valencia?'" The student admitted she was too shy to ask questions in class. "When I come to college, I feel like I should already know the answers," she told Lowe, "and I don't want to look stupid."

Lowe urged her to speak up. "I said, 'Look, trust me, if you raise your hand and ask that question, there are going to be at least 10 other students who have that same question.'" At the end of the semester the student returned to her office, excited to tell Lowe that she'd passed all of her classes.

Another student's challenges were more external. "She was living in a hotel room with four kids and trying to maintain a part-time job as well as come to Valencia and attend classes." Lowe was able to find her free day care. "That kind of lightened the load for her."

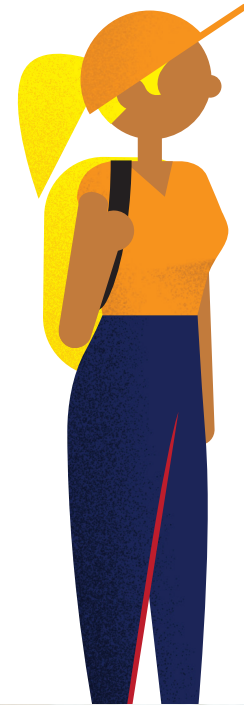
With the added resources for those exiting the foster care system (and the prospect of success coaches being added at additional colleges throughout Florida), Lowe is hopeful that the college success rate will change.

“

I think one of the biggest things is for people to remain patient with [these students] and understand they're trying to navigate life on top of a massive amount of trauma.”

She's impressed with the resilience shown by many of her students. "They become very strong [and] very determined," she says. "Once they have that, they are on the road to success."

That's what happened to Valencia alumna Amanda Russo ('09). Russo had been in and out of foster care since she was 8 years old. By the time she came to college, she was living with her grandmother, but she had aged out of the foster care system. She qualified for a Pell Grant and a tuition waiver, but struggled to afford transportation and textbooks. And like many foster students, she had a hard time making the transition from high school to college. Students who've come through the foster system "don't have the same support to build those study skills," Russo says. "It's your individual responsibility to push yourself."





Left: Student Brandon Pinkney often checks in with Charmaine Lowe. Above: Graduate Amanda Russo, who is expecting a baby girl, now teaches English and creative writing at Olympia High School.

She enrolled in too many courses, made poor grades and went on academic probation. As a result she lost her Pell Grant.

But Russo managed to pull herself together and improve her grades. “It was almost out of spite,” she says. One of her foster parents had told her in ninth grade that she wouldn’t ever amount to anything. Russo couldn’t stand the thought that she might be proving the woman right.

She met with Kenya Richardson, who helped her go through the appeals process to get back her Pell Grant. “That took a huge burden off, and I was able to focus on academics.” A counselor helped her map out a plan to graduate “relatively on time.” In 2011 she earned her bachelor’s degree from the University of Central Florida in English Language Arts Education.

Now a high school teacher, Russo shows students her transcripts because she wants them to know how she stumbled but got back up. “To have my degree means stability,” she says. “A lot of foster youth live their entire lives in transition. They don’t know if they’re going to be gone next week. They can walk in, and their foster parent can say, ‘You’re leaving on Monday.’”

“To be in a stable situation, to have a stable job that I love that is my calling, and to be able to provide for my family is huge,” she adds. “To have that support to go to college and make my life better than my parents’ lives, knowing my own daughter is never going to have to be in that situation, that’s so important to me.”

Russo is thrilled that Valencia created the success coach position to help other former foster youths like her. “It’s a great school, and the fact that they’re building on that support, I’m ecstatic about.”

 valenciacollege.edu/foster-care

DECEMBER

Alumni: A Night of Celebration

Dec. 18, 2015, from 7 – 9 p.m.
Award ceremony from 7:30 – 8 p.m.
Special Events Center, West Campus
A drop-in reception with heavy refreshments and live music.
Admission is free.
valenciacollege.edu/alumni/events



"Half Cat," 2014, plaster, fiberglass, paint, and fabric by Leah Brown

Spring Symphonic and Jazz Band Concert

Feb. 23, 2016, at 7:30 p.m.
Performing Arts Center, East Campus
Admission is free.
valenciacollege.edu/arts

JANUARY

Leah Brown: Installations

Jan. 15 – March 4, 2016
Opening Reception: Jan. 15, 2016, from 6:30 – 8:30 p.m.
Artist lecture at 7:30 p.m.
Anita S. Wooten Gallery, East Campus
Dreamlike landscapes by Fort Lauderdale-based artist, Leah Brown.
Admission is free.
valenciacollege.edu/arts

3 in Motion

Jan. 29, 2016, at 8 p.m.
Performing Arts Center, East Campus
Valencia Dance Theater in conjunction with Dr. Phillips High School Dance Magnet Program and Yow Dance Company.
Tickets: \$12 general admission; \$10 for students, faculty/staff, alumni and seniors; \$6 for children under 12.
valenciacollege.edu/arts

FEBRUARY

21st Annual Film Celebration

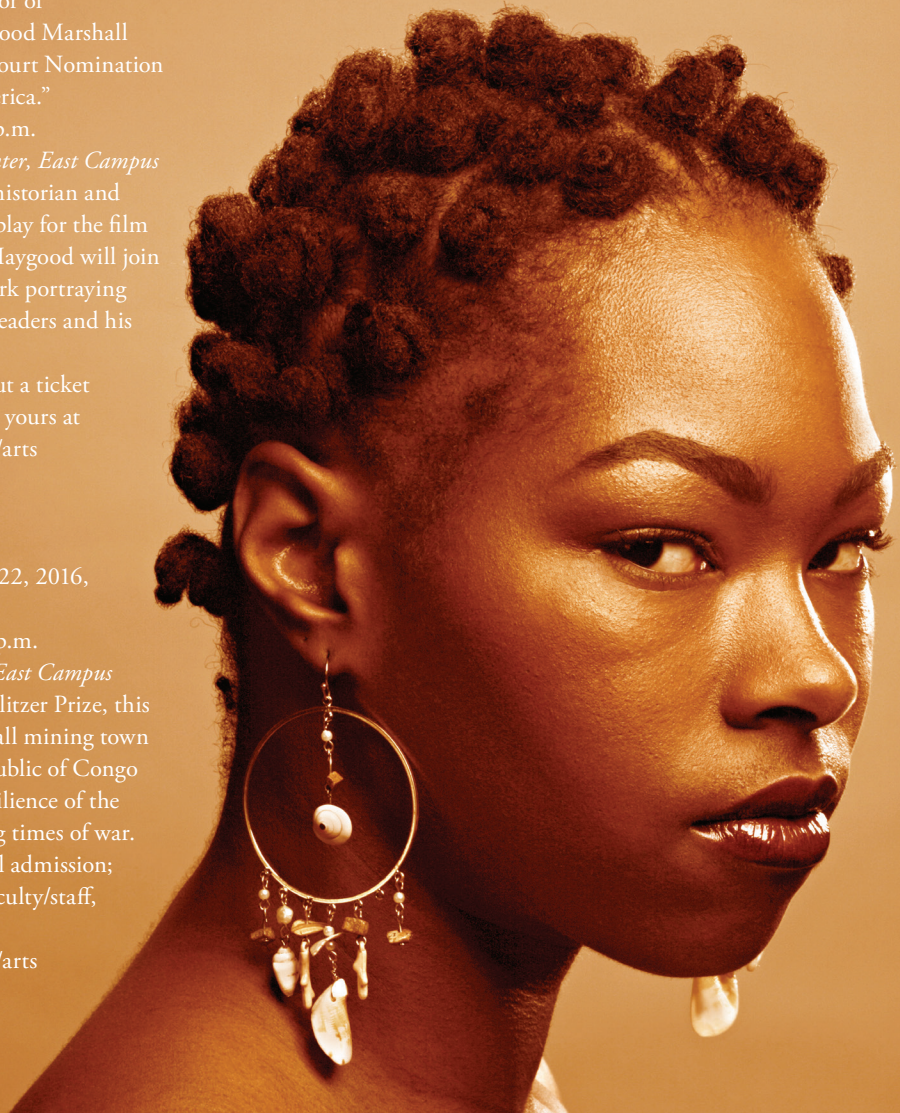
Feb. 11 – 13, 2016
Check website for times and films.
Performing Arts Center, East Campus
Tickets: \$7 general admission; free for Valencia students.
valenciacollege.edu/arts

Spring Keynote Series

Wil Haygood, author of "Showdown: Thurgood Marshall and the Supreme Court Nomination That Changed America."
Feb. 17, 2016, at 7 p.m.
Performing Arts Center, East Campus
Best known as the historian and writer of the screenplay for the film "The Butler," Wil Haygood will join us to discuss his work portraying African-American leaders and his new book.
Admission is free but a ticket is required. Reserve yours at valenciacollege.edu/arts

"Ruined"

By Lynn Nottage
Feb. 17, 18, 19, 20, 22, 2016, at 7:30 p.m.
Feb. 21, 2016, at 2 p.m.
Black Box Theater, East Campus
Winner of 2009 Pulitzer Prize, this is a play set in a small mining town in Democratic Republic of Congo and looks at the resilience of the human spirit during times of war.
Tickets: \$12 general admission; \$10 for students, faculty/staff, alumni and seniors.
valenciacollege.edu/arts



MARCH

Valencia Spring Dance Concert

March 25, 26, 2016, at 8 p.m.

Performing Arts Center, East Campus

Tickets: \$12 general admission; \$10 for students, faculty/staff, alumni and seniors; \$6 for children under 12.

valenciacollege.edu/arts



APRIL

“The Bourgeois Gentleman”

By Molière

April 1, 2, 4, 7, 8, 9, 2016,
at 7:30 p.m.

April 3, 10, 2016, at 2 p.m.

Black Box Theater, East Campus

A madcap, fast-paced farce about the pretensions and desires of the middle class in noble circles of 1670's France.

Tickets: \$12 general admission; \$10 for students, faculty/staff, alumni and seniors.

valenciacollege.edu/arts

Valencia College 11th Annual 5K Run, Walk & Roll

April 2, 2016, at 6:30 p.m.

West Campus

For athletes of all abilities. Funds raised will support Valencia students through veteran, law enforcement, fire safety and EMS scholarships.

Entry fee: \$20 – \$35

valenciacollege.edu/alumni/events

A Night of Jazz Concert

April 5, 2016, at 7:30 p.m.

Performing Arts Center, East Campus

Admission is free.

valenciacollege.edu/arts



House Band Concert

April 8, 2016, at 7:30 p.m.

Performing Arts Center, East Campus

Admission is free.

valenciacollege.edu/arts

Symphonic Band Art Concert

April 12, 2016, at 7:30 p.m.

Performing Arts Center, East Campus

Admission is free.

valenciacollege.edu/arts

Spring Choral Concert

April 14, 2016, at 7:30 p.m.

Performing Arts Center, East Campus

Admission is free.

valenciacollege.edu/arts

Annual Juried Student Exhibition

April 15 – May 20, 2016

Opening Reception: April 15, 2016,
from 6:30 – 8:30 p.m.

Award ceremony at 7:30 p.m.

Anita S. Wooten Gallery, East Campus

Admission is free.

valenciacollege.edu/arts

Spring Opera Theatre Workshop Performance

April 22, 23, 2016, at 7:30 p.m.

Black Box Theater, East Campus

Admission is free.

valenciacollege.edu/arts

Student-Directed One-Act Festival

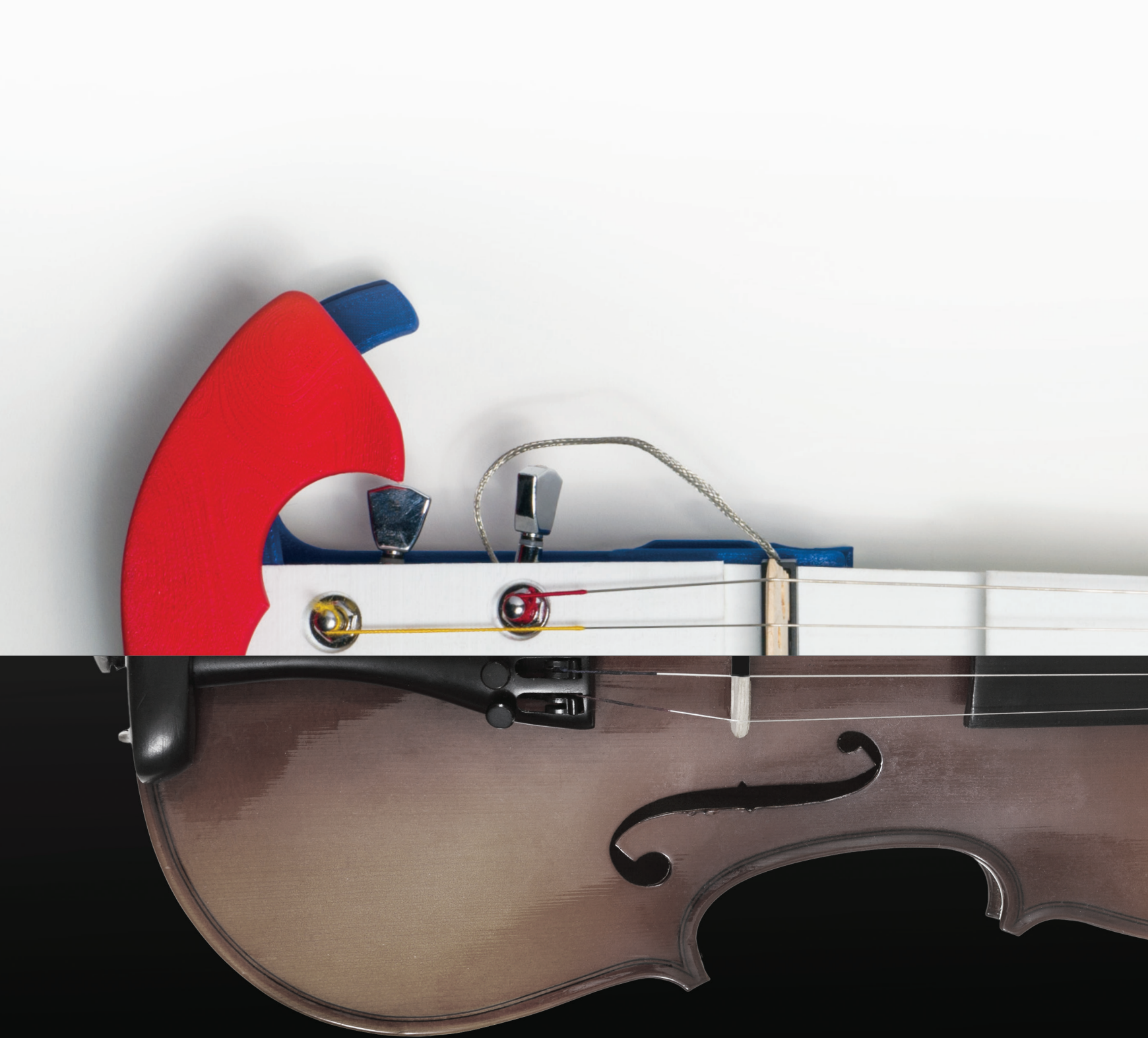
April 22, 23, 2016, at 7:30 p.m.

Lowndes Shakespeare Center,

Loch Haven Park, Orlando

Admission is free.

valenciacollege.edu/arts



Featured on the cover: Valencia music student and violinist
Vedda Kangalova, winner of the Valencia Foundation's
2015-16 William and Doris Paisley Memorial Music Scholarship

CHANGING *the* TUNE



of DESIGN

//BY MELISSA TCHEN

As an electric violin emerges from Valencia's 3-D printing lab, it represents a new era of design. From modifying the classics to developing modern innovations, designers are harnessing the power of 3-D printers to quickly and inexpensively bring ideas to life.

A few months ago, English professor Neal Phillips didn't know much about 3-D printing. Now he considers himself an enthusiast.

Being the first person to get to play a 3-D printed electric violin will do that to a musician.

The violin, which was produced and assembled in the 3-D printing lab on Valencia's West Campus, was the result of a summer-long side-project that lab manager Pat Lynch devised for her lab assistants.

Lynch had been looking for a challenging project to help her lab assistants improve their skills while also keeping the printers running when classes weren't in session during the summer.

When Lynch saw the violin on thingiverse.com, an online community for sharing 3-D printing designs, she knew she had found the right project.

"I thought it would be a really good project," says Lynch. "When you're done, you don't just have a piece of plastic—you have a functional instrument."

Phillips, an experienced violinist, was recruited to test the violin after it was complete. It played wonderfully—so much so, that he's been using it onstage during performances with his country-rock band, Spayed Koolie.

"It works like a traditional violin. It just plays beautifully when it's amplified," says Phillips. "It's sharp-looking too."

While it may play like a traditional violin, it certainly was not produced traditionally.

Made to Print

3-D printers create real objects from computer-generated 3-D models. They work much like traditional printers, but instead of ink, they print material (usually plastic) layer by layer until the desired object is built.

Valencia's 3-D printing lab has nine printers in seven different models—many of which have been donated by local companies and industry partners. Most look like small microwaves or toaster ovens.

It's the job of the lab manager and her assistants to know the printers inside and out in order to keep the machines running smoothly for students enrolled in 3-D printing and rapid prototyping courses.

"I was pretty familiar with all the printers in the lab," says former lab assistant, Andrew Ton. "So going from what I knew to trying to print the violin was pretty easy, but it still took some refining. Some pieces required special attention. We picked and chose printers based on their strengths and weaknesses."

The most commonly used printers in the lab only have a 6-inch printing bed, limiting the size of the products they can make. To accommodate for this, the violin was printed in three pieces that could be fitted together, rather than as a whole.

The lab's standard, smaller machines are able to print very inexpensively—a 2-inch donut-shaped ring costs 17 cents to print. By comparison, one of the larger (and also faster and higher quality) machines will print the same shape for \$18.

Although the plastic filament used for making the prints come in all colors—from red, green and blue to fluorescent, glow-in-the-dark and even wood grain—the lab rules prohibit changing out the color spools on the large machines until the previous one runs out.

This cost-saving measure is how Lynch and her lab assistants ended up with a patriotic violin.

"The printer happened to have red filament at the time and at some point the white filament got swapped out for blue and voila—red, white and blue," explains Lynch.

After all the pieces were printed out, then came the challenge of assembling the violin. That meant trips to home improvement stores and online shops

to find the right parts, screwing and gluing the printed pieces together, and figuring out how to string a violin.

"I didn't think it'd be that hard," says Ton. "We thought we could just watch a YouTube video on how to string a violin, but we ran into a bunch of roadblocks, which extended the process."

With each attempt to print and assemble the violin came the opportunity to learn and make subtle improvements for the next go-round. And it all paid off in the end, when they were able to hear the violin play.

"It was really exciting, like 'wow, we just did something that can create music'—and we printed it," says Ton, who is now studying IT at the University of Central Florida.

Playing it Forward

As with many 3-D printed products, the violin cost much less than a traditionally manufactured instrument would. A Yamaha electric violin sells for about \$750. Lynch's violin cost only \$121.87, including all printing filament, hardware and strings.

“
It works like
a traditional
violin. It
just plays
beautifully.”





Left: Neal Phillips performs on Valencia's 3-D printed electric violin. Above: Professor Tommy James (second from left) leads his Intro to 3-D Printing class in examining and critiquing each other's latest prototypes.



Lynch estimates that she could get the cost down to under \$100 simply by printing one of the pieces on a more cost-effective printer.

It's this kind of affordability that presents opportunity—potentially to print more violins for underprivileged children interested in playing the instrument. It's something that Phillips hopes can be explored.

In the meantime, Valencia's violin is already being used to help youth in another way—leveraging the wow factor of 3-D printing to get elementary-school children excited to learn about STEM (science, technology, engineering and mathematics) and STEAM (which adds “arts” to the acronym).

Recently, Lynch and Phillips teamed up to present during STEM night at Stenstrom Elementary School in Oviedo. The elementary-school students were able to see 3-D printers in action, learn about how Valencia's violin was made, hear it perform and were even given the chance to play it.

“They could all relate to a musical instrument,” says JoAnn Archer, STEM teacher at Stenstrom Elementary. “To say, ‘hey we printed this from a 3-D printer, and look at how great it sounds and

what it does,’ it was very engaging for them.”

The violin also stood as an example of how STEM can be applied across disciplines.

“When you think STEM, you think of engineering, our tech corridor, defense contracts, space—and while that's important, we want students to see how STEM is being incorporated into other fields as well,” says Archer. “That's why we zoned in on that violin—here's an example of how a musician is using technology to improve what they're doing.”

Educating the Future

STEM education is becoming increasingly important, as the future job market will require more employees who possess skills in those areas—including those who can operate and design for 3-D printers.

Before 3-D printers, new designs had to be manufactured, which could take months and cost thousands of dollars in tooling and production. 3-D technology allows designers to test ideas and make subtle refinements to prototypes cheaply and quickly before investing in expensive molds.

Local companies such as Siemens and Lockheed Martin can use 3-D printers to rapidly prototype

new ideas onsite. When they want to create a new tool or product, they can rapid prototype it for pennies, tweak as needed and get a final product out much faster.

Other applications for 3-D printing include prosthetic devices, printing of brain scans, architectural models and crime scene documentation, just to name a few.

Valencia students who complete the Rapid Prototyping Specialist certificate through the Drafting and Design Technology Associate in Science program are learning design and printing skills that can make them more employable, says Andy Ray, program chair.

“Several of our partners, in drafting especially, have hired our students as interns, and graduates as well. Their companies are increasingly using rapid prototyping and need employees trained to use this technology.”

Ideas in 3-D

Employers who hire Valencia’s 3-D students gain more than technicians who can operate 3-D printers—they get creative problem-solvers.

In professor Tommy James’ Intro to 3-D Printing class on the West Campus, the students are still mastering the basics of 3-D printing,

but more than that, they are learning to think like designers.

The students are taught to take a concept from an idea in their mind, to a sketch on paper, to a 3-D computer model, to a physical 3-D print. Then, after a group review, they must revise and reprint until they are satisfied with the product.

On presentation day early in the fall term, the students prepare to share their latest prints—designs that solve a problem. The assignments are purposefully open-ended, to give the students plenty of room for creativity.

Student Elizabeth Treat, nicknamed “Her Majesty,” heads to the front of the class to present her solution for a cookbook holder. Previously, Treat had trouble finding a bookstand that wouldn’t fall over under the weight of large cookbooks, or that could keep the pages from flipping open.

Almost as soon as she pulls her presentation up on the screen at the front of the class, the peanut gallery comes to life. “Hey, weren’t you supposed to cook us something?” “Yeah, where’s our food?” “Hey, how do we know this thing really works?”

In a class where critiquing is a key element of collaboration, some gentle ribbing is part of the camaraderie. So are nicknames. In addition to

Her Majesty, there’s Blue, Little John, Sky, Boy Scout and La La.

After Treat’s presentation comes to an end, the group converges on her model. They pass it to one another, picking it up, testing the joints, opening and closing it, even trying to bend it and break it. The stand holds steady.

“So, is this a success?” asks James. The group unanimously agrees that it is. “Now how can we improve it?”

James pushes the students to think of ways the product could be made more universal. Could it be mounted to kitchen cabinets to sit at eye level? Could the slots in the back be given a purpose? Everyone starts to chime in, building off each other’s ideas—it could be adjustable to hold a smartphone, or a tablet, or index-sized recipe cards. By the time they are done, Treat has a list of ideas for improving her already successful product.

This cycle of design, print, test, tweak and repeat is called rapid prototyping—and it’s changing the face of design.

Below: Biology students test a 3-D printed smartphone-to-microscope attachment created by Valencia student Josue Gimbernard. Right: Elizabeth Treat tests her 3-D printed cookbook holder. Far right: An open-air 3-D printer provides full view of the printing process.





Rapid Prototyping

Student Josue Gimbernard, who has completed Valencia's Rapid Prototyping Specialist certificate, estimates that he's already gone through more than 100 prototypes for his invention, which he's calling MicroSnap. The product is an attachment that allows science students to mount their smartphones to microscopes in order to photograph what they're observing.

Although digital microscopes exist, they are very expensive, costing up to \$3,000, which most schools can't afford. And the photo quality is not as good as that of a standard smartphone.

"Up until this point, students have been relying on hand drawings to capture or save whatever they're looking at through a microscope," explains Gimbernard, who has filed for a patent on his invention. "Now students can just put their phone right onto the eyepiece to take photos or video."

The idea for Gimbernard's product originated as a project in James' Advanced Rapid Prototyping class, where the students were tasked with making a tool for their phones.

Gimbernard, who's always had a love for the sciences, enjoyed studying biology with his now 9-year-old daughter. Wanting a way to record the

things they looked at, he shelled out \$500 for a camera that would work with a microscope. But the picture quality wasn't very good. One day, he started trying to hold his phone camera over the lens and realized if he could align everything just right, he could get a much better quality photo.

But aligning the hole of the camera with the hole of the microscope lens was difficult to do manually. With his 3-D printing skills, Gimbernard could make an apparatus to hold the two together.

At first, he created a product that worked just for his phone and his microscope but through the rapid prototyping process, he was able to quickly rework his design so that it could accommodate any smartphone and any microscope.

Gimbernard already has a potential investor lined up for his product, which is currently being tested by Valencia biology students as well by ophthalmologists at Nemours Children's Hospital.

"It's been a huge learning process," says Gimbernard. "Now it's to a point where it looks good and the students get it and it's easy, it's printable, I'd like to know if it works well on a large scale."

Tune Changer

Back in the 3-D printing lab, there are still improvements to be made on the electric violin.

Phillips is serving as a design consultant for improving how the violin plays. His top two recommendations are to make the chinrest more comfortable and to modify the neck so that the left hand can slide up and down more easily in order to reach the strings.

After making Phillips' recommended changes, Lynch plans to modify the original designs and post them back to thingiverse.com. The 3-D printing community is very collaborative, building off each other's ideas and sharing updated designs online. Working together virtually reinforces the benefits that 3-D printers have had on design—the ability to improve designs quickly and inexpensively.

And Phillips sees Valencia at the forefront of improving the design of 3-D printed violins.

"I look at it as kind of the equivalent of the space shuttle Columbia—the first one that's actually working and being used," says Phillips. "Valencia's right in there with the top two or three to get out there first. We're on the cusp of this." ❖

 valenciacollege.edu/3-D

Wendy Toscano

As a lawyer, she closed many cases. Now she's opening the eyes of paralegal students to the world of law.

//BY LINDA SHRIEVES BEATY

If you ever watched the old TV series “Night Court”—in which a big-city judge has to deal with a never-ending string of non-glamorous, non-violent petty crimes—then you’ve got a pretty good glimpse of Wendy Toscano’s introduction to the law.

Toscano, now the program chair of Valencia’s paralegal studies program, was a law student at George Washington University in the summer of 1989, when she landed an internship in D.C. Superior Court.

The work was routine—researching case law—but her boss, Judge Eric Holder, would go on to make a name for himself as the first African-American to serve as U. S. Attorney General.

“It was the summer after my first year of law school,” recalls Toscano. “We handled criminal misdemeanor cases—like the time a couple left their dog locked in a hot car to go to a bar and get a few drinks. And of course there were prostitution cases.”

After graduating from law school, Toscano returned to her hometown, Maitland, and took a job as an associate at Lowndes, Drosdick, Doster, Kantor & Reed. There, she did what all Lowndes associates do—a rotation spending time working in every division. “In the end, you get very well-rounded attorneys, who have basic experience in family law, bankruptcy, real-estate law and litigation,” says Toscano.

After six years working in civil litigation at Lowndes, Toscano became the first general counsel for the Central Florida Educators’ Federal Credit Union. In 1997, she took time out to have kids—

two boys, now ages 12 and 16—and stepped away from full-time work.

Yet Toscano always wanted to teach. In 2010, she became an adjunct professor in Valencia’s paralegal studies program. Today, she looks forward to her classes—and the wide-ranging class discussions.

“My students range from Vietnam vets to students right out of high school, to people wanting to make a career change,” she says. “I also have students who were lawyers in other countries—Brazil, Colombia, Russia—and cannot practice here. They take our classes and work as paralegals, while they decide if they want to go to law school in the United States.”

Now in its 40th year, Valencia’s paralegal program is certified by the American Bar Association and is well regarded in Orlando’s legal community. “It’s a rigorous program. Paralegals do a lot of the heavy lifting for law firms, so our students do a lot of practical, hands-on research and they get a lot of experience drafting documents,” says Toscano. “As a result, we’ve built quite a reputation.”

That’s why 98 percent of Valencia’s recent paralegal graduates landed jobs after graduation.

Although many of her students will spend much of their careers as paralegals, law school beckons others. “I do have a lot of students who go through the program, then work as paralegals and see how attorneys work and how they live—they work 24/7, the trial work, the billing—and then decide whether they want to invest the time and money in law school.”



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Festival Gets it Write at Winter Park Campus

//BY LINDA SHRIEVES BEATY

On the night that Brian Turner came to Valencia, the room was packed—with more than 85 students, faculty members and even literary celebrities.

They'd stuffed themselves into a room at the Winter Park Campus to hear Turner, an Army veteran, poet and memoirist who has served tours of duty in Bosnia and Afghanistan. They jammed the room to hear his gritty poems that describe life as an infantryman in a war that feels very foreign and remote to most Americans.

Turner was invited to speak at Valencia as part of the first Winter Park Writers Festival, a three-day event held at the Winter Park Campus in late September.

Before enlisting in the Army, Turner earned a Master of Fine Arts degree in poetry. When he signed up, the recruiters never asked him what his degree was in. They may not have realized the Army was getting a poet. We, however, are the beneficiaries.

After he read "Here, Bullet," a poem that is also the name of his best-selling and award-winning first book, he reflected on the poem—which he wrote in 15 minutes while serving in Iraq. "There are some poems we write that we turn back to

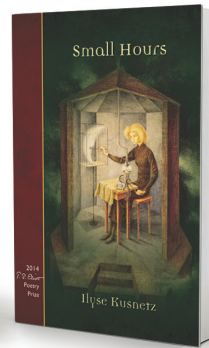
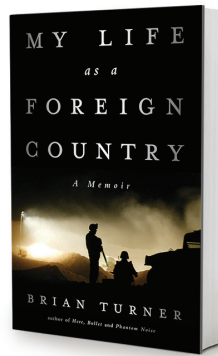
again and again... It's like drawing water from the well," he told the audience. "I'm still trying to figure out what that poem is all about."

Turner told a crowd of fans—including former U.S. poet laureate Billy Collins and novelist Philip Deaver—that he began taking poetry classes at Fresno State, as a long-haired, surfing bass guitarist who simply wanted to write better lyrics for his band's music.

Along the way, he met a professor who shoved a poem by Pulitzer Prize winner Phil Levine into his hands and, with that, lit a spark in a young man. "For me, that poem really stuck with me," said Turner, reciting Levine's poem "They Feed They Lion" from memory.

At the Valencia reading, Turner reflected on his decision to join the Army, a decision based on his reverence for generations of family members who'd served in American conflicts from the Civil War to Vietnam. Subconsciously, he said, he joined the infantry and forced himself through "a ritual test to see if I could survive this trial of fire." That, he said, "is a pathology."

In addition to "Here, Bullet," Turner read from his other award-winning collection of poetry, "Phantom Noise." His latest work, "My Life as a



“My Life as a Foreign Country” by Brian Turner, “Small Hours” by Ilyse Kusnetz and “True Places Never Are” by Cate McGowan.

“**Authors learn from each other, so we try to go to readings to hear new work and refine our own.**”

Foreign Country: A Memoir,” has been called “a stunning war memoir” by the New York Times.

“I wasn’t really familiar with his work,” said Valencia student Alex Homem, who attended the Thursday night reading. “But I thought his style was terrific. He has a very forceful way of speaking.”

For audience member Amy Rippis, the reading was a delight. “Before I came here, I didn’t know who he was, but it was a wonderful reading,” said Rippis, a former journalist who lives in Winter Park.

The crowds didn’t surprise organizers, including English professor Cate McGowan. “Brian Turner is a draw,” she said. “He’s as big a celebrity in the writing world as anyone—he’s world renowned.” As for the literary celebrities in the audience, she notes that “writers, even famous ones, support each other. And authors learn from each other, so we try to go to readings to hear new work and refine our own.”

On the second night of the festival, in addition to Turner, audiences heard readings from Valencia professors Ilyse Kusnetz and McGowan. Kusnetz, whose book, “Small Hours,” won the 2014 T.S. Eliot Prize for Poetry, read two poems: “Match Girls,” about the young women who worked in

match factories in the early 20th century and were often poisoned by the materials they worked with; and “The Explosion Museum,” a poem about a museum with exhibits about explosions in miniature.

McGowan read from her collection of short stories, “True Places Never Are,” which won the 2014 Moon City Prize for Short Fiction.

The final night of the festival wrapped up with one more reading by Turner, McGowan, Valencia instructor Jared Silvia (who’s host of the WPRK radio show, “Functionally Literate”), and a poetry slam, featuring a contest between four writers of “flash fiction” and four poets. Despite stormy skies, a crowd of more than 50 showed up for the final evening.

That kind of turnout has festival organizers at the Winter Park Campus gearing up for next year—when they plan to host the second Winter Park Writers Festival.

“We are definitely talking about another festival,” McGowan said. “Now who shall we invite to read next year? That’s the question.”

Hear writers read their poetry.

 valenciacollege.edu/writers



Above: Cate McGowan reads a short story from her book “True Places Never Are.” Right: Brian Turner signs books after his reading.



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IN PICTURES

In a chemistry lab during Valencia's weeklong Summer STEM Institute, graduating high-school seniors learn to create green slime.

The class of 2015 is the first to hold its commencement ceremony at a new venue—the University of Central Florida's CFE Arena.



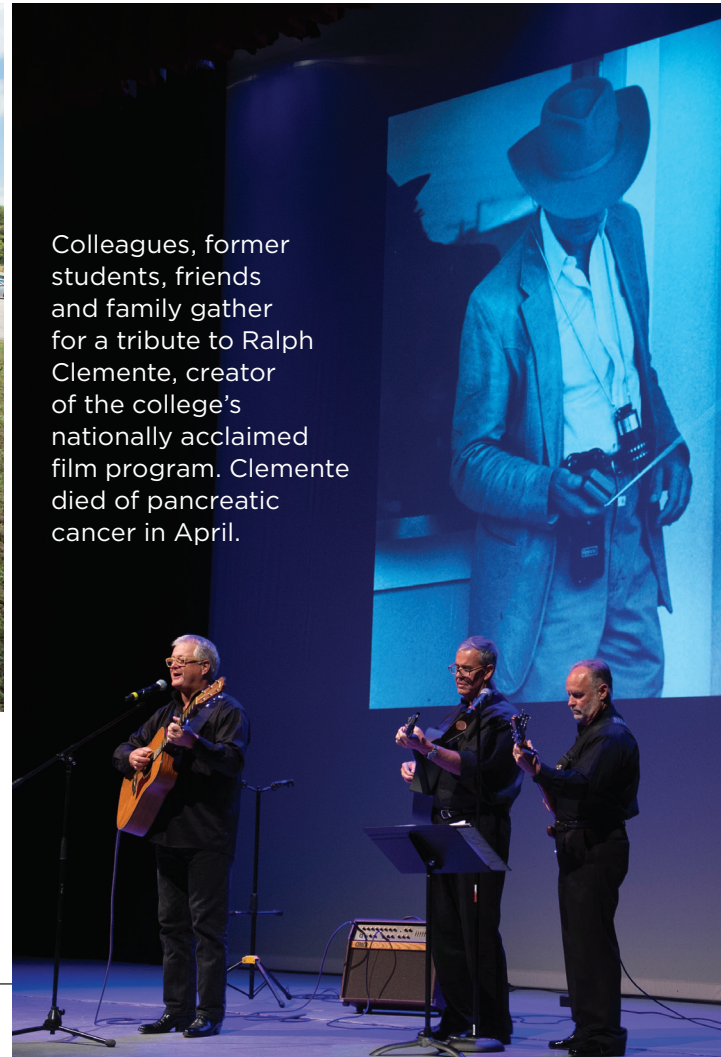


To celebrate Global Peace Week in September, students on East Campus assemble into a giant human peace sign.

As part of a workshop by the Astronaut Memorial Foundation, engineering students test their parachute designs by dropping them from NASA's Mobile Launcher platform at the Kennedy Space Center.



Students enjoy games, contests, food and fun at Spirit Day on West Campus.



Colleagues, former students, friends and family gather for a tribute to Ralph Clemente, creator of the college's nationally acclaimed film program. Clemente died of pancreatic cancer in April.



Performers practice their routine for the musical "Sweet Charity." The award-winning Bob Fosse production ran at Valencia this fall.



Photograph: Television Food Network

Manny Washington, '11

In high school, Manny Washington dreamed of an acting career but chose a more practical route—and became a firefighter like his dad. At the Orlando Fire Department, he has become one of the firehouse chefs, with a lineup that includes dishes such as skirt steak with homemade chimichurri sauce, served with cilantro-lime rice with black beans and fresh plantains.

So when a friend suggested he try out for an episode of Food Network’s “Cutthroat Kitchen,” Manny leaped at the chance. On the episode, which aired in August, Manny blew past the other contestants and won the \$25,000 competition. Since then, he has been invited to compete in food competitions, but dreams of one day hosting his own TV show. “Eventually, my dream is to go around the nation to see other firefighters and highlight firefighters who cook,” he says.



1 Patricia Kleba, '93

Pat teaches nursing at the University of Wisconsin-Green Bay’s Professional Program in Nursing.

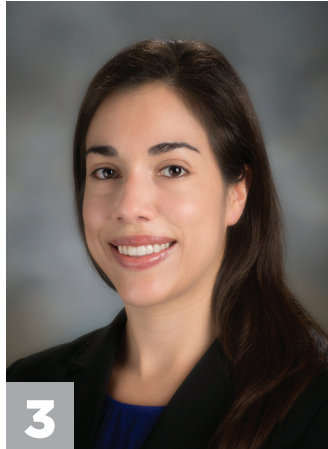
2 Brian Macon, '95

Brian is enjoying his 15th year as a member of Valencia’s math faculty and this year will serve on the Alumni Association board.



3 Monica Elizabeth (Linan) Reyes, '03

After earning a Ph.D. in cancer biology from The University of Texas Health Science Center at Houston, Monica became a postdoctoral fellow in the Department of Epidemiology at MD Anderson Cancer Center in Houston, Texas. This summer, she was appointed vice chair of the Presidential Career Symposium for the Postdoctoral Association Executive Committee to help lead the organization of the 5th Annual Presidential Career Symposium.



4 Sabrina Anne (Charleston) Roberts, '05

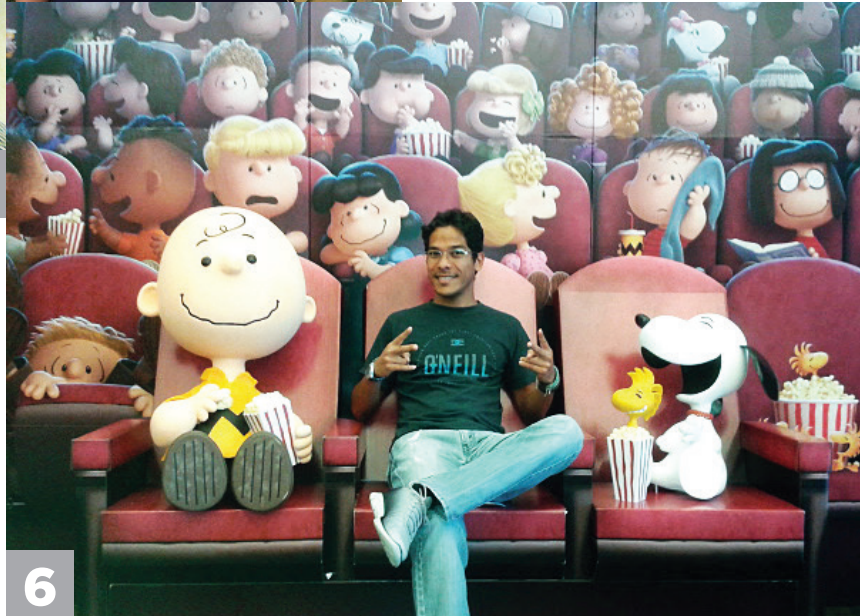
Sabrina received her master's in integrated marketing communication from California State University, San Bernadino. She is also teaching communication studies at both a university and a community college.

5 Laura Lord, '07

Laura earned her accreditation in public relations, as granted by the Universal Accreditation Board, Public Relations Society of America.

6 Richard Aponte, '08

Richard, who earned a technical certificate in digital media and was a composer for the hit films "Kung Fu Panda" and "Epic," has most recently been involved with the new Peanuts movie. Working in the stereoscopic department, Richard's job is to create the depth of 3-D, while keeping the stylized look of the original cartoon.





7 Thomas Pringle, '08

Thomas was awarded his bachelor's degree in philosophy from St. John Vianney College Seminary in Miami, and is now pursuing his master's in divinity from St. Vincent de Paul Regional Seminary in Boynton Beach.

8 Sandra Canzio, '09

Sandra is a licensed Realtor who enjoys helping people find their dream homes (third from left).

9 Pierina Nuñez, '09

Pierina's paintings and sculptures have been exhibited at the Orlando Museum of Art, the Gallery at Avalon Island in downtown Orlando and the Osceola Arts Center. Most recently, Miami's prestigious Art Basel commissioned Pierina to create a mural in the famous Wynwood Art District of Miami during its upcoming show in December.



10 Mark Kenneth Berrios-Ayala, '11

Mark is a law clerk for the Honorable Judge Migna Sanchez-Llorens in Florida's Eleventh Judicial Circuit Court, while attending Florida International University College of Law in Miami.

11 Laura (Enriquez) Skelton, '11

Laura Enriquez married Brian Skelton in April, and also welcomed their first child.

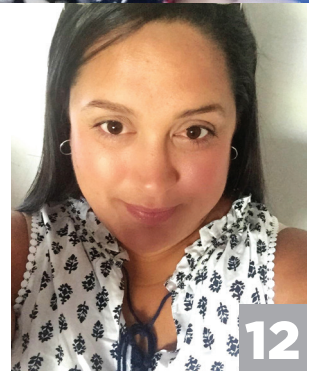


12 Michelle Porto, '14

Michelle is pursuing a psychology degree at the University of Central Florida.

Carlos Xavier Sanchez, '15

(Not pictured)
Carlos is attending Rollins College as an economics major while working for Bank of America.



Let Everyone Know What You've Been Up To!

To be featured in Class Notes, visit valenciacollege.edu/alumni/class_notes and fill in the submission form or mail to: Class Notes Editor, Valencia Alumni Association, 1768 Park Center Dr., Orlando, FL 32835.

The Alumni Association can also help to spread the word! Let us know about your meetups, networking events, annual retreats, reunions and save-the-dates that your fellow alumni might like to attend or did attend with you. Whether it's getting a group together for sporting events, charity fundraisers, a day at the parks or just brunch and lunch, let us know. And if you send pictures, we might just include them in the next issue. We can share your adventures and good times with our readers, so that next time they can plan on joining in on the fun!

And don't forget: If you have an idea for a future article, please contact the Alumni Association. Send all suggestions to:

alumni@valenciacollege.edu



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Social media guru Josh Murdock shares some tips and best practices for networking in an increasingly digital world.

Josh Murdock, or Professor Josh as he's known on social media and in the classroom, is an instructional designer at Valencia and an associate faculty member who teaches Social Networking for Job Search. He is actively involved on social media and in person with many technology-related groups in Orlando, including FLBlogCon and Startup Weekend Orlando. He also serves on the board of directors for the Valencia Foundation.



Complete your profile.

The more information you provide, the easier it is for people to get to know you and find common connections or, in the case of LinkedIn, for recruiters to decide if they want to hire you. Include a profile image so people can put a face to a name.



Be strategic about your network.

Go for quality over quantity when it comes to your connections. Connect with those who will help you learn, meet your goals or who share a common career focus or personal interest.



Reach out to new contacts.

When trying to network with someone new, send a personal message stating why you want to connect. You may not get a response right away, so don't be afraid to follow up.



Choose your platforms wisely.

You don't need to have a presence on LinkedIn, Facebook, Twitter and everything in between to network successfully. Be realistic about how many accounts you can keep up with and choose the platforms that work best for your purposes.



Follow your interests.

Join a group on Facebook, LinkedIn or Meetup.com to connect with people with shared interests and your relationships will likely grow from there.



Build on your in-person networks.

Many clubs, volunteer organizations and even conferences have social media accounts. Follow the ones you're involved with to continue conversations and stay connected between meetings.



Practice social karma.

Make a point to comment on, like and share posts from others in your network. That way, when you want the same from them, they'll be happy to help.

Start Networking.

▶ Connect with Josh.

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▶ Connect with Valencia.

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Promoting Women in Engineering

With money from a Duke Energy Foundation scholarship, students are better able to focus on their studies.

//BY LINDA SHRIEVES BEATY

It's tough to juggle a part-time job with a college schedule. It's even tougher when you're studying engineering—a very demanding curriculum.

For Maryam Atallah, the schedule was grueling. While studying engineering at Valencia and taking classes four days a week, she was also working five days a week at the Apple Store at a nearby mall.

But thanks to a scholarship from the Duke Energy Foundation, Maryam was able to cut back her work hours and focus more on her studies. Scholarship recipients are awarded \$4,275 a year up to a maximum of four consecutive years.



Maryam Atallah

For Maryam, who's 21 and now studying aerospace engineering at the University of Central Florida, the money not only gives her more time to study—it has helped her pay for a four-month study abroad program in Germany, where she is currently taking classes in automotive, mechanical and aerospace engineering.

"This scholarship is making a once-in-a-lifetime opportunity come true!" says Maryam.

Like Maryam, Shakira Cummings works as many hours as she can at Universal Studios—where you can find her working behind the counter at the Three Broomsticks Pub—but it's tough juggling an engineering curriculum with work. So she was relieved when she learned she'd won a scholarship from the Duke Energy Foundation.

"With engineering courses, it's really hard to work and go to school. Some people do it, but I'm one of those people who gets easily overwhelmed," says Shakira, a former biology major turned engineering major. "I have to work harder at everything because everything's math-based. But with the

scholarship, I was able to work less and spend more time studying."

Shakira, who's 22, started her college career as a biology major at Florida State University. But after a year at FSU, it was too expensive to stay in Tallahassee. So she moved home, got a job and started taking classes at Valencia College. Here, she dabbled in a lot of majors—psychology, sociology, journalism.

"I tried everything and I thought, 'Maybe I should just go back to pre-med.'" Thanks to Valencia professors Jose Garcia and Boris Nguyen, she discovered she loved calculus—and soon changed her major to engineering.

Now in her first semester at UCF, Shakira is taking three classes and two labs in computer engineering. "I thought it was a light load, but with the labs and the lab reports and the regular homework, it's very time-consuming," Shakira says.

That's why the Duke Energy scholarships have been invaluable to recipients such as Maryam and Shakira. Designated specifically for women studying engineering, they are part of Duke's efforts to diversify the engineering workforce.

And at Valencia, where 16 percent of the current engineering majors are women, the scholarships have made a large impact. For the 2013-14 and 2014-15 academic years, a total of \$150,000 was awarded to 40 deserving students.

For Duke Energy, the scholarships are designed to help develop a future workforce, not just for Duke but for businesses within the areas served by the company.

"Recognizing our workforce is more diverse today than ever before, we approach diversity and inclusion as a strategy for business success. We execute that strategy through our philanthropy by helping to provide access to post-secondary education for under-represented populations as well as first-generation college students," says Debbie Clements, government and community relations manager for Duke Energy. "Given the fact that women are still largely under-represented in the engineering field and Valencia has proven success in serving a very diverse population, our grant to the college aligns perfectly with those things most important to Duke Energy."



Shakira Cummings

Photo courtesy of Maryam Atallah

VALENCIACOLLEGE

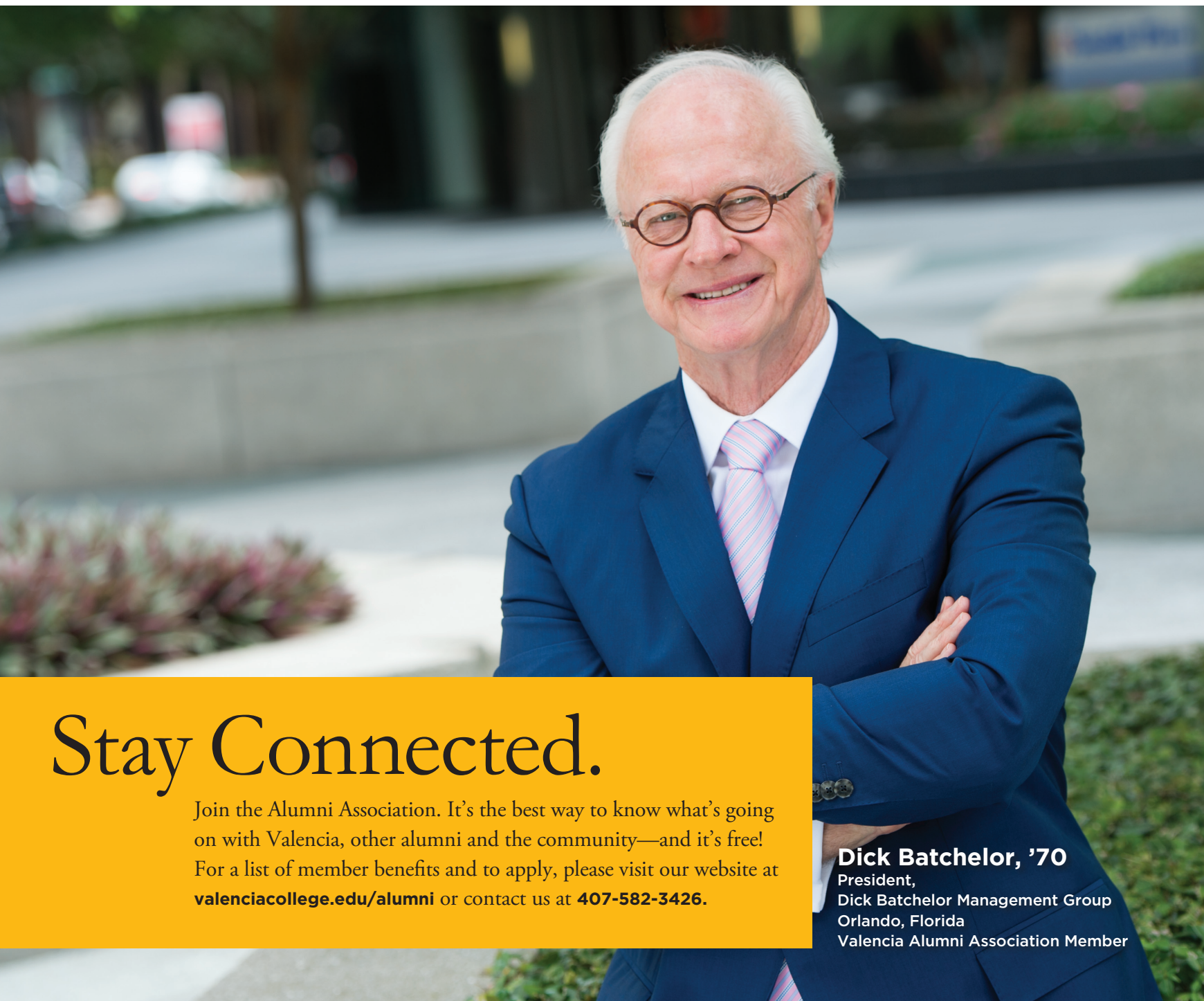
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Dick Batchelor, '70
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