



# Engage

College of DuPage—  
your community college  
Vol. 1, No. 1



## From COD to Harvard

Marsela Jorgolli is developing  
new therapies for people with  
serious illnesses





## A Message from the President

Welcome to the first issue of *Engage*.

Whether you are a district resident, business owner or community leader; a graduate, patron, benefactor or beneficiary of our programs; or a student, alumnus, faculty or staff member of our college, your engagement with this institution is important to us.

Through taxes or tuition, talent or philanthropy, you have made an investment in College of DuPage. And to that I want to personally say: Thank you! But we also owe you a periodic report on what a difference you have made—to demonstrate your return on investment.

Through stories of students and alumni, teachers and programs, community initiatives and opportunities, each issue of *Engage* will show how you are making a difference through College of DuPage.

In this inaugural issue, we consider the national shortage of STEM (science,

technology, engineering and math) talent, and various ways that the College is helping to address that issue.

Among other stories, you will learn about:

A College of DuPage alumna/PhD scientist who is developing new therapies for people with serious illnesses.

An alumna whose Argonne National Laboratory internship led to a full-time job and a chance to hire more College of DuPage students.

A program that combines high-school education with professional certification in high-demand professions.

Ever grateful, we hope you enjoy this inside look at the benefits that your engagement makes possible through College of DuPage.

—Ann Rondeau is president of College of DuPage.

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## Look Great and Save Money at the Addison Center Salon

Salon services can be expensive, but College of DuPage offers a way around much of that cost with a program offered at its Addison Center location. Reduced-cost salon services at Addison are available by appointment or walk-in. Under the supervision of licensed instructors, students perform a full range of beauty services including cuts, styling, color, manicures, pedicures, skin services, facial waxing and much more.

“Our salon is for all ages and is extremely beneficial for student training,” said COD Program Support Specialist Anna Gay. Cosmetology Program Director Mia Boyd adds, “I love helping our students discover their talents and strengths, and I encourage them to enjoy their craft. It’s a business that can be life altering for them, as well as for their clients.”

In addition to its regular salon hours at the Addison Center, COD Cosmetology students celebrate Beauty Week in April by providing services on the Glen Ellyn



campus, including consultations, manicures and skin mapping, as well as a variety of hair techniques for men and women.

The Addison Center Salon is located at 301 S. Swift Road in Addison. To make an appointment, call (630) 942-4400. More information is available at [cod.edu/cosmetology](http://cod.edu/cosmetology).

# For the Community...

## Free Filing Service Makes Tax Time Less Daunting

With tax anxiety ramping up before the April 17 filing deadline, COD students and faculty are here to help community members file their state and local taxes—for free! This year is the 25th that College of DuPage has offered free tax filing help for the College district. Last year COD accounting student volunteers, under the close supervision of instructors, helped with 755 returns.

“Students not only get real tax preparation experience, but they learn to interact with customers, greeting them and using their soft skills as well as their knowledge gained in the classroom. That is so valuable to students,” said Bev Carlson, a program support specialist in COD’s Business and Technology division.

Approximately 24 students enrolled in two sections of Accounting 2200 offer their time and assistance, and a faculty team led by Rob Budney and Mark Yahoudy check every return. A new wrinkle this year: It’s by appointment only, but the College will still try to accommodate those with special requests.

“Our goal is to alleviate some of the wait times we’ve had in the past, and the appointments should help keep things flowing smoothly,” Carlson said.

To make an appointment, visit [cod.edu/accounting](http://cod.edu/accounting). For more information, call (630) 942-3450 or email [taxprep@cod.edu](mailto:taxprep@cod.edu).





Photos of Marsela Jorgolli by Tori Soper/special to College of DuPage

# From COD to Harvard

by way of  
University of Chicago,  
NASA and Fermilab

Marsela Jorgolli graduated from high school as valedictorian of her class.

Wanting to take advantage of the American higher education system, Marsela's parents made the difficult decision to move their family from Albania to Villa Park, which would give their academically gifted daughter more opportunities to pursue a career in physics and chemistry. Marsela had dreams of applying to Northwestern University, but the move occurred during the summer, and the admissions period for Northwestern—as well as other major four-year institutions—had closed.

With few options, Marsela enrolled at College of DuPage. Her outlook was not a happy one.

“When I came to COD, it was a big disappointment during the first few weeks,” she said. “But one of the biggest lessons I learned and that I use every day is one that I learned at College of DuPage: Anything is possible. Sometimes things are hidden and we have to search for them.”

What Marsela discovered at COD was a vast array of opportunities that led to a distinguished academic career. She then transferred to the University of Chicago for her bachelor's degree and then to Harvard, where she continued to amass achievements while pursuing doctoral and post-doctoral studies.

Marsela currently works at Amgen as a scientist in the department of Hybrid Modality Engineering. She is on the leading edge of research and a role model for women in science.

Her accomplishments don't surprise Tom Carter, Professor of Physics at College of DuPage and her mentor.

“She would have succeeded no matter where you put her,” he said. “She was an outstanding student and is an outstanding human being. I think it speaks highly of

Marsela that at this early point in her career, she has a long list of credentials and honors.”

When Tom first met Marsela, he was immediately impressed by her abilities.

“From the moment she joined my class, she was eager to learn and was always asking questions,” he said. “It was clear that she would go far with her career.”

As a freshman at COD, Marsela was selected for the inaugural meeting of the Center for Gravitational

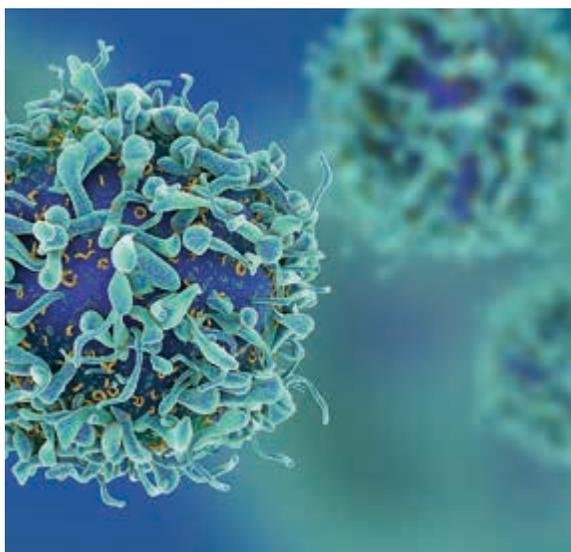
Wave Astronomy (CWGA) at the University of Texas at Brownsville and was the only community college representative selected to attend opening celebrations for the NASA University Research Center at UT.

She also received funding to complete several NASA and National Science Foundation research projects, rare for community college students, and was a summer intern at Columbia University in the Xenon High-Energy Particle Astrophysics Project. In addition, Marsela worked as an undergraduate research assistant at Fermi National Accelerator Laboratory and presented a poster at Argonne National Laboratory.

To cap off her time at College of DuPage, Marsela became the first COD student to receive the Barry

M. Goldwater Scholarship, a premier national honor for students pursuing careers in mathematics, science and engineering. She also was named to the All-USA Community College Academic First Team.

After College of DuPage, Marsela transferred to the University of Chicago and began taking classes at the junior level. She earned her bachelor's degree in Physics and immediately applied to doctoral programs, deciding that Harvard was the best place to spend the next phase of her academic life. After initially taking



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**“Anything is possible. Sometimes things are hidden and we have to search for them.”**

—COD alumna Marsela Jorgolli

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*(continued on page 5)*



***Clockwise from top:***

Marsela Jorgolli speaks during a Women in STEM conference at COD; Marsela and her mentor, Professor Tom Carter; Marsela accepting her College of DuPage Distinguished Alumni Award.



# “I love contributing to the development of new tools that will better our society, tools that were once thought of as impossible.”

classes, Marsela became a member of the Park Research Group, led by renowned Professor Hongkun Park.

Her team’s accomplishments are many, including their first measurement of cellular membrane changes using nano-diamonds and the submission of several patents based upon their development of new technologies.

“We developed nanotechnology tools to study complex biological systems,” she said. “Our focus was to develop large-scale, solid-state devices interfacing neurological networks to both measure and stimulate their activity toward the discovery of functional connectivity.”

In 2014, Jorgolli was selected to attend the GapSummit at the University of Cambridge in the United Kingdom. It was the first international and inter-generational gathering that focused on inspiring and engaging the next generation of biotechnology leaders, and she was one of only 100 people worldwide invited to participate.

Now at Amgen, Marsela continues to enjoy her research focused on developing and implementing complex, integrated, nano- and micro-scale platforms.

“It’s important to determine a better way to monitor how biological and chemical structures interact with high resolution and throughput. Our work on the



**“I think it speaks highly of Marsela that at this early point in her career, she has a long list of credentials and honors.”**

—**Professor Tom Carter, Ph.D.,  
College of DuPage**

implementation of novel technology can lead to fast and efficient development of new drugs to fight disease,” she said. “The work is very satisfying, and we’ve already developed the first generation of complex assays at single cells resolution.”

Considering her success, Marsela continues to return to College of DuPage, the place where she started on her career path. In 2017, she was a panelist during the Women in STEM Career Day at COD that gave local freshman and sophomore high school students a chance to interact with female role models like Marsela.

Also in 2017, Jorgolli was named a Distinguished Alumni by the College’s Foundation, a testament to her success.

“When I came to the U.S., I wanted to attend a great university, but College of DuPage ended up as the best route for me,” she said. “I learned so much from my mentors, specifically Professor Carter, and we continue to have many discussions.

“The community I found at College of DuPage provided me with so much. As long as you want something and identify a path to follow, you will find mentors and be surrounded by people who want you to succeed. And then everything will fall into place.”



Photos of Felix Davis by Art Carrillo/  
special to College of DuPage

# Getting Technical

## COD professor stumbled into IT so students don't have to

For students seeking been-there, done-that information technology training, COD's Felix Davis is the certified Wizard of Glen Ellyn.

To be specific, the associate professor and coordinator of COD's Computer and Internetworking Technologies program has nine different professional certifications. That's in addition to his bachelor's in telecommunication engineering/management, master's in project management, doctorate in education—and nearly 30 years in the IT business.

Not bad for a guy who “stumbled” into his profession.

Davis' K-12 education included no formal IT training, but he did have a knack for electronics.

“Even at a very young age,” said Davis, “I was known for taking apart my electronic toys and putting them back together.”

Davis' IT “stumble” came courtesy of Uncle Sam.

“I went into the military because I couldn't afford college,” said Davis. “I was going to go on the G.I. Bill and become an electrical engineer. But they said, ‘Hey, we've got this new job setting up multiple wireless secure networks.’ And I said, ‘Okay, I'll take it. Can I get on the G.I. Bill?’ And they said, ‘Yes.’ So I kind of back-doored my way into this IT career.”

After 20+ years in the field, including work for the U.S. Army, AT&T, IBM, Tellabs and more, Davis became a full-time COD faculty member in 2013.

“Teaching is a way to stay engaged with cutting-edge technologies and embrace inevitable change, while giving back to future generations,” said Davis.

Giving back is important to Davis. In addition to his faculty duties, he speaks to business groups, leads panel

discussions of industry leaders, and serves as chief information officer for a faith-based Chicago nonprofit, Charity In The Community, which offers IT training for inner-city community residents.

Davis' real-world experience also provides practical lessons for his students.

During a “TechTalk” event at COD last March, Davis discussed the importance of finding one's niche.

“A lot of times, you ask students about their passion and they'll tell you, ‘My passion is money,’ and they're not too concerned about which area of IT to dive into,” said Davis. Instead, he said, “It's best that they find what they're good at, and that typically becomes their passion.”

Davis is also an advocate of combining tech skills with people skills.

“When I was young, I was working as a technical support engineer. I was very technical,” said Davis. “One day, I was on the phone with a customer who didn't have a clue. I politely put my phone on mute and told my senior manager, ‘Hey, this guy doesn't have a clue.’ Unfortunately, the phone wasn't on mute. So people skills go along with it. Fortunately, they didn't unemploy me.”

Today, Davis' teaching, tech savvy and, yes, people skills are making a big difference.

“I hope my students take away an interactive learning experience with a real-world understanding of how technology works and impacts the everyday life of everyone,” said Davis.

It's a certified formula for success.



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**“Teaching is a way to stay engaged with cutting-edge technologies and embrace inevitable change, while giving back to future generations.”**

**—Associate Professor Felix Davis, Computer and Internetworking Technologies**

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Imagine the benefits if some local citizens—in as little as one year—could earn their high school-equivalency degree, 18 hours of college credit and certification in computer networking—all for free.

# Opportunity, Accelerated.

Now, imagine the benefits if some of those local citizens—in as little as one year—could earn their high school-equivalency degree, 18 hours of college credit and certification in computer networking—all for free.

Would we help fill that workforce need and provide self-

Here's the dilemma.

On the one hand, employers are hard pressed to find the skilled employees they need to build and manage vital computer networks—networks that drive businesses, networks that connect home computers, printers, scanners, telephones, etc.

How many jobs are we talking? The Bureau of Labor Statistics projects that by 2022, there will be 1.6 million new jobs—well-paying jobs—in this field. Remarkably, two thirds of those jobs are projected to go unfilled.

On the other hand, there are adults in our community who are unemployed or underemployed: some who never finished high school; some who've been out of the workforce for so long that their skills are out of date; some with language barriers; many who never expected to earn more than minimum wage (if that) for the rest of their working lives.

How many potential workers might be available? Data from the U.S. Census Bureau shows that more than 75,000 residents of Community College District 502—home to College of DuPage—have less than a 12th-grade education.

sufficient, middle-class family incomes? Absolutely.

In a nutshell, that's the concept behind COD's variation on a state program called ICAPS (Integrated Career and Academic Preparation System), which, in turn, is part of a federal program called Accelerating Opportunities.

The state's ICAPS website explains the program this way:

“In 2011, Illinois became one of 11 states to receive funding for the design phase of the Accelerating Opportunity: A Breaking Through Initiative. The Accelerating Opportunity initiative is designed to fundamentally change the way adult basic education is delivered, moving from a system focusing on attainment of the GED or equivalency to one that transitions students to post-secondary education credentialed programs. The initiative is based upon the belief that post-secondary credentials are the gateway to family supporting wages.”

Each community college selected to participate in ICAPS bases its program on current and anticipated

community workforce needs. In District 502, information technology rose to the top. Some skilled manufacturing roles—such as welding—finished a close second.

So College of DuPage is now training its second cohort of computer networking students. In an accelerated program (as little as one year), these students may earn their GED (high school general equivalency diploma), 18 hours of college credit, and one of three computer networking certifications.

Then, depending on the certification, successful program graduates might expect to earn between \$30,000 and \$50,000, said Dan Deasy, Manager, Continuing Education Operations and Grant Compliance.

And the best news for students, said Deasy, is that a combination of state, federal and private funding means this entire opportunity is free.

One interesting outcome of COD's program is a significant number of women students.

"The perception is that it's a man's field," said Mary Clare Sullivan, who co-teaches the ICAPS networking program with COD Associate Professor Felix Davis. "If you look at the statistics, women are very underrepresented in this field...but to see these women tackle networking and overcome their insecurities is really, really encouraging. I hope that some day, I can use them as examples to encourage other women to study information technology."

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**“The initiative is based upon the belief that post-secondary credentials are the gateway to family supporting wages.”**

—Source: *State of Illinois ICAPS website*

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Davis says men and women alike have great job prospects if they complete the program successfully.

"The IT network field is in high demand," said Davis. "Statistics have shown that it's one of the growing opportunities for the next 10 years, so there's a lot of opportunities out there. That's why we targeted this audience and focused on networking skills."

Now that the IT networking program is up and running, COD is working with local employers to prepare for and launch a manufacturing skills program that will follow in the future.

For more information, visit [cod.edu/icaps](http://cod.edu/icaps)

Or contact:

College of DuPage Adult Education  
425 Fawell Blvd, Glen Ellyn, IL 60137  
Student Resource Center (SRC), Room 1110  
(630) 942-3697, [GED@cod.edu](mailto:GED@cod.edu)



Above left: Co-instructor Mary Clare Sullivan advises Solomon Abrar on the ICAPS program. At top: Mikhail Roufail and Ram Sey collaborate on a networking solution. Above: Dawn Hayes is one of a growing number of female students entering the computer networking field. Photos by Art Carrillo, special to College of DuPage.



Erna Gevondyan, Energy Systems Risk Analyst at Argonne National Laboratory, with Josie Suter and Nicole Amon. Josie and Nicole gained crucial real-world skills while serving an internship at Argonne.

# Paying it Forward ▶▶

## COD alum bridges learning with real-world experiences

Erna Gevondyan owes her success, in part, to a friendly game of bridge.

As it turns out, luck was on her side all along.

COD Physics Professor Tom Carter encouraged Erna to apply for the plum intern assignment at Argonne National Laboratory. Learning a new card game was a bonus for the young, energetic intern who volunteered to take a seat at the lunchtime bridge table when the regulars were on vacation.

Soon Argonne invited Erna to play on—and work on—as a coop student while completing her studies at COD, where she earned two associate degrees, in both arts and science, as well as a certificate in graphic design. Erna continued her coop work at Argonne while she completed her undergraduate work at Illinois Institute of Technology, earning a bachelor's degree in computer science in 2015.

That's when Argonne extended an even better offer, inviting Erna to join its Strategic Alliance for Global Energy Solutions (SAGES) team as a full-time energy systems risk analyst.

"My wishful thinking was, of course, like wow, this is a great place. I sure would like to work here," said Erna, who never imagined this would be her dream job as a young girl growing up in the Eastern European country

of Georgia. "Just as much as I feel I got the first initial internship out of sheer luck, my continuation was even more so the case. I got offered this position through a game of bridge, of all things."

Every year, high-caliber students from big-name engineering schools across the country—Georgia Tech,



Photo provided courtesy of Argonne National Laboratory.

MIT, Texas A&M, University of California-Berkeley—vie for Argonne placements through many programs including the Summer Undergraduate Laboratory Internship (SULI) program, the same way Erna did.

After she landed her permanent position, Erna wanted to tap into another impressive pool, creating a new internship program for the SAGES team and providing opportunities for rising COD students.



Photo by Diane Smutny/special to College of DuPage

“I thought ‘I’m going to make my own program, and I’m going to select students that I know are strong because I’ve been through it myself,’” said Erna. “COD’s requirements are rather rigorous, to be in Physics 2111 and 2112 and to have good grades in it. I proposed to my supervisor to take students from COD, and of course the first person I contacted was my very same physics professor.”

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**“...I’m going to select students that I know are strong because I’ve been through it myself.”**

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Erna paid her good luck forward in 2017, welcoming COD students Nicole Amon and Josie Suter as summer interns in the new program. They were selected from a pool of about a dozen COD students. Erna was so impressed by their resumes and cover letter that she wished she could hire them all.

“I am really grateful for this opportunity. We were able to work in the field we’re interested in,” said

Josie, who is currently enrolled in COD’s Engineering Pathways program. She plans to graduate in May with an Associate in Engineering degree then pursue her bachelor’s degree in mechanical engineering at University of Illinois Urbana-Champaign.

Likewise, Nicole is set to graduate in May with an Associate in Engineering degree, pursue her bachelor’s degree in mechanical engineering and eventually earn a Ph.D. She, too, appreciates the hands-on aspect of the Argonne internship.

“When I first started, I was nervous and afraid I would mess up,” said Nicole. “All of our supervisors were very supportive and set such an example that we wanted to be the best for them. With their guidance, I was always where I needed to be and they have truly helped me grow as an individual in the professional environment.”

Like Erna, Josie and Nicole are now co-op students at Argonne, working with the SAGES team while they finish their studies at COD.

If they’re lucky, Erna may just teach Josie and Nicole to play bridge.

# Taking the Lead

## Inspiring the STEM Workforce of Tomorrow

College of DuPage is playing a lead role in the state and among community college across the nation in STEM education, and its outreach activities are motivating and encouraging current and future COD students to seriously consider careers in STEM fields.

“We’re trying to reach students 8th grade and older—and high school students in particular—but we’re also closely involved with students now attending COD,” said STEM Outreach Coordinator Sara Spaniol. “We’re working hard on the community level to make people aware of STEM educational pathways.”

According to the U.S. Department of Education, STEM “is becoming increasingly recognized as a key driver of opportunity...and the need for STEM knowledge and skills will grow and continue into the future.”

The high quality of COD’s many and varied STEM-related programs, events, competitions, scholarships and internship opportunities is attracting the attention of young people and their parents throughout the College district.

For students interested in engineering, COD’s Engineering Club holds an annual Explore Engineering Night, and COD’s Engineering Pathways partnership with the University of Illinois at Urbana-Champaign provides guaranteed admission to U of I’s College of Engineering for COD students who meet the requirements.

“We have great programs for engineering, but STEM is much broader than that, especially on the tech side. Computer science is huge right now,” Spaniol said

Another successful initiative is STEM-CON, an annual, interactive, family-based celebration at COD of all things STEM. Last year it drew 2,500 people to the campus, and Spaniol is confident of continued growth at this year’s April 28 event, both in attendance and in the number of exhibitors.

Women in STEM Career Day provides high school freshmen and sophomore girls with the opportunity to participate in hands-on activities, including discussions

with women in STEM fields and tours of COD’s facilities. The annual event gives young women a great chance to interact with positive role models.

The STEMinar Series, consisting of talks by top scientists and experts in fields related to science, technology, engineering and/or mathematics, are free and open to the public and take place throughout the fall and spring semesters.

STEM-CTE Showcase highlights STEM as well as COD’s Career and Technical Education departments, programs and student clubs.

The STEM Professional Development Conference features events designed for high school STEM educators that target specific areas of need.

The STEM Student Success Scholarship program, funded by a grant from the National Science Foundation,

recruits and retains students in the targeted areas of physics, chemistry and engineering. The scholarship covers tuition and books for a year and may be renewed for an additional year if the applicant meets the scholarship eligibility and recipient obligations.

College of DuPage, working in partnership with Fermilab in Batavia and Argonne National Laboratory in Lemont, offers internships to those well-known research

institutions that have led to valuable real-world experiences for COD students.

In addition, each year COD plays host to a regional Science Olympiad on the Glen Ellyn campus, and the College also offers summer camps and other STEM opportunities through its Continuing Education program.

In these and many other ways, COD is bringing the world of STEM to students of all ages.

To learn more about all the exciting STEM happenings at College of DuPage and in the community, visit [cod.edu/stem](http://cod.edu/stem) or contact:

Sara Spaniol, Ed.D., STEM Outreach Coordinator  
(630) 942-3021, [mccubbinss@cod.edu](mailto:mccubbinss@cod.edu)



Attendees use coding to create personalized badges for Women in STEM Career Day..



STEM-CON is an annual, interactive, family-based celebration at College of DuPage of all things STEM.

**At right:** COD partners with institutions such as Fermilab and Argonne to offer internships that have led to valuable experiences for students.

**Below:** The STEMinar Series features experts such as Angel Price of Disney's Animal Kingdom, and the STEM Professional Development Conference features events designed for high school STEM educators.





Astronomy Club events such as a public viewing of a lunar eclipse on campus have motivated students to pursue careers in science.

# A Skilled Approach

## STEM in High Demand Across all Job Sectors

“The STEM movement is the result of two trends,” said M. Ahmad Chaudhry, Ph.D., the College’s dean of Biology and Health Sciences. “One is the increasing importance of science and technology in modern society, and the second is the decline in performance by American students in math and science compared to the rest of the developed world.”

Investing in the education of a highly skilled STEM workforce is likely to increase the competitiveness of the United States in the global economy, and lead to an improved standard of living for workers in STEM fields. U.S. Department of Labor statistics have consistently shown that wages in STEM fields are much higher than in non-STEM employment, and that 99 percent of STEM employment opportunities are in occupations that require post-secondary education for entry.

Unfortunately, Department of Labor data also shows that although demand for STEM-related employment is expected to grow by 14 percent in the decade leading up to 2020, at least three million of those jobs will go unfilled unless more is done to educate potential workers.

COD is doing its part to bridge the gap, and Dean Chaudhry points out that COD’s labs and other facilities in STEM fields are second to none.

“To give just one example, for anatomy and physiology we have an extensive collection of models that provide hands-on learning for our students. We also have the Anatomage [3D medical imaging] table that provides amazing images of sections of the human body. The cadaver lab renovation that was just completed gives our students hands-on experience with real human structures,” he said.

Joseph DalSanto, assistant professor of Earth Science, said, “We continue to develop and implement new activities in our classes, improving the experience and motivating students to continue their studies in the sciences.

“Indoor astronomical observing can now be experienced by connecting to and controlling remote telescopes from our astronomy lab. This gives students a taste of how professional astronomers work and has already motivated some students to pursue careers in science. Outdoor astronomical observing using COD telescopes at local forest preserves gives students experience in observing the night sky for themselves. They develop a familiarity with the sky that can last a lifetime.”

Physics Professor Tom Carter appreciates COD’s strong commitment to STEM education.

“The college is well-positioned to answer the need for an increased emphasis on STEM. From physics to biology, we have modern, well-equipped labs and an excellent faculty,” Carter said. “A unique feature that COD has that most four-year schools do not is excellent interplay between the technical and career sides of the school. COD’s robotics team has access to equipment in the machine shop that many larger universities can only dream of.”

DalSanto also mentioned other aspects of STEM at COD, including its extensive

Field and Experiential Learning programs, and its student clubs. Field study offers students the chance to visit countries all over the globe to combine classroom work with empirical field experiences, and clubs provide a connection with academic programs, social interaction, and a chance to practice skills outside the classroom.

“For example, field study trips in geology take students to Iceland and other volcanic spots. These classes provide first-hand experience that can lead to careers in geology,” DalSanto said.

“In our Astronomy and Environmental clubs, students can visit astronomical observatories and planetariums, actively restore public areas and attend environmental fairs. The Astronomy Club has hosted



Karan Oliver-Tucci, assistant professor of Biology at COD, instructs students in the anatomy and physiology lab.

*(continued on page 16)*



**Above:** Alumna Julianne Fernandez visits COD's Hydrology and Oceanography lab. **Below:** A unique feature of COD is its excellent interplay between the technical and career sides of the school. Engineering Club members can access equipment in the Manufacturing Technology program that is unavailable at many larger universities.



public viewing of lunar and solar eclipses on campus, drawing hundreds from the community, which promotes our STEM courses to a very wide audience.”

In emphasizing the importance of STEM education, the U.S. Department of Education stresses that “the complexity of today’s world requires all people to be equipped with a new set of core knowledge and skills to solve difficult problems, gather and evaluate evidence, and make sense of information they receive from varied print and, increasingly, digital media.”

Professor Carter expands on that by giving two reasons why a knowledge of STEM is crucial not only to COD’s students, but to the world population in general.

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**“The college is well-positioned to answer the need for an increased emphasis on STEM. From physics to biology, we have modern, well-equipped labs and an excellent faculty.”**

**—Professor Tom Carter, Physics**

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“First, a knowledge of science has always been part of a well-rounded liberal arts education. In the past, many of the great scientists were also artists or philosophers. Citizen scientists just naturally curious about the world around them did much of the research involved in the scientific revolution. Students should have a knowledge of the scientific method for the same reason they should have a knowledge of art.

“A second and more recent reason is that as the world gets more technologically advanced, a knowledge of science becomes more important in making decisions as parents and citizens. What to do about many of these issues is a personal choice, but to make a well-grounded decision, every college sophomore should have an understanding of the science behind concepts from climate change to genetically modified foods.”

Carolyn England, COD professor of Computer Information Systems, seconds her colleague’s opinion by saying, “I believe students should be exposed to STEM as part of their ongoing education. This includes the introduction and application of STEM concepts during the middle and high school years to inspire young people about the significance of STEM careers.

“As technology becomes a more integral part of our lives—from wearable technology to automated vehicles—it is important to appreciate the foundation STEM education provides in understanding, applying and evaluating its impact.”

For more information on all STEM-related academic programs and events at College of DuPage, visit [cod.edu/stem](http://cod.edu/stem).



# STEM at COD

## College of DuPage offers a wide variety of STEM areas of study:



Animation/Motion Graphics/  
Film and Video

Anthropology

Architecture

Astronomy

Biology

Botany

Chemistry

Clinical Laboratory Science

Cognitive Science

Computed Tomography

Computer and Internetworking  
Technologies

Computer Information Systems

Computer Programming

Cybersecurity and Defense

Dental Hygiene

Diagnostic Medical Imaging

Earth Science

Ecology

Electro-Mechanical Technology

Electronics Technology

Engineering

Environmental Science

Fire Science

Game Design and Development

Geography

Geology

Health Information Technology

Health Sciences

Heating, Ventilation, Air

Conditioning and Refrigeration

Hydrology and Oceanography

Manufacturing Technology

Mathematics

Meteorology

MRI Technology

Nursing

Physics

Pre-Dentistry

Pre-Medicine

Pre-Pharmacy

Pre-Physical Therapy

Pre-Veterinary

Radiography

Robotics

Web Development

Welding

Wildlife Biology

Zoology

Visit [cod.edu/stem](http://cod.edu/stem) for more information on all STEM-related academic programs at College of DuPage.

# ECRWSEDDM

Residential Customer



Associate Professor Felix Davis of COD's Computer and Internetworking Technologies program provides both real-world experience and practical lessons for his students. See page 7 for more.

## Engage

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