

UConn Early College Experience

MAGAZINE

A PUBLICATION FOR THE UCONN ECE COMMUNITY



Transitioning to College
Passion, Learning, and
Leadership (see page 8)



SUMMER 2019
VOLUME 3

CONTENTS SUMMER 2019

Inside this issue:

- 3 The Director's Thoughts
- 4 UConn ECE Science Days
- 6 Professional Development Awards
- 7 Student Registration
- 8 Transitioning to College
- 10 UConn Pre-College Summer
- 12 Professional Development Events
- 13 Get Social!
- 14 Student Scholarships

On the cover:

2019 UConn ECE Marine
Science Research Symposium
UConn Avery Point



Congratulations to (from left to right) Amealia Maynard, Kelly Gifford, and Abigail Bar from Edwin O. Smith High School, and to Geoff Kern (left), their UConn ECE Statistics Instructor, for their prize winning poster, "The Possible Factors for Increasing Future Success". The poster won the third place prize in the American Statistical Association's National Data Visualization Poster Competition in the Grades 10-12 category.

Photo includes: Nalini Ravishanker, UConn ECE Statistics Faculty Coordinator & Professor of Statistics, UConn (far left) and Haim Bar, Associate Professor of Statistics UConn (far right)

Acknowledgments

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The Director's Thoughts

The summer is upon us, and for many in the UConn ECE Community of Instructors, Administrators, and Faculty Coordinators, we can finally relax after a long and productive academic year. We hope you are enjoying your break and feeding the mind, body, and soul. For the staff of Pre-College Summer (the other definitive half of the Office of Early College Programs), however, they are in full swing as they open the doors of UConn to approximately 450 high school students who are exploring an academic major and/or career path through our hands-on non-credit academic program. It is an exciting time for the students as well as the staff who have been planning all year for these four weeks of programming. While you soak in the summer (and soon the fall), we hope you can find time to thumb through the Summer Issue of the UConn ECE Magazine. You will notice that it is also a little more relaxed than the Winter Issue, while still highlighting the energy, successes, and celebrations that marked the end of the academic year.

Enjoy!

Brian A. Boecherer

UConn ECE SCIENCE DAYS



UConn ECE students touring the lab of Dr. Rouge Assistant Professor, Department of Chemistry

by Kathrine Grant & Dr. Fatma Selampinar

UConn Early College Experience collaborated with Chemistry Faculty Coordinator Dr. Fatma Selampinar (UConn ECE) and other department faculty to host two Science Activity Days at UConn Storrs. On April 25 and May 17, UConn opened its doors to over 100 high school students from The Woodstock Academy and Berlin, O. H. Platt, Daniel Hand, and Watertown High Schools for a day of science lectures, demonstrations, and hands-on laboratory activities.

The April 25th Science Activity Day was coordinated by the UConn Early College Experience Program Office and Dr. Selampinar, with science activities hosted by Dr. Rouge and Dr. Ung and their graduate students (Alyssa H., Saketh G., Mark T., Kaitlynn A., Erin B., Nishya M., and Rebecca F.). To kick off

the day's events, the high school students learned about how an interest in chemistry can prepare them for a variety of job paths, including working in a lab as a researcher someday. In the afternoon the students broke into two sections to learn about molecules that can fluoresce and about biomacromolecules that can build structures at the nanoscale. During Dr. Ung's activities, students were taught an overview of the principles of fluorescence and how light interacts with molecules. They made glow sticks and were exposed to scientific thinking. The students were asked to determine why molecules glowed and made simple hypotheses that they verified experimentally. Later, the students gathered and shared the results of their experiments to conclude the relationship between chemical structure and a molecule's ability to glow.

During Dr. Rouge's lab activities, students learned about how polar charged molecules interact differently with DNA than hydrophobic molecules and that hydrophobic dyes can be chemically tailored to dock into DNA for tracking in a variety of applications. After learning the basic properties of DNA, the students were asked to predict what would happen to DNA when subjected to various conditions, including when DNA is assembled on a nanoparticle. At the end of the activity students were able to interpret their own data and compare their results to other groups.



The May 17 Science Activity Day was also coordinated by the UConn ECE Program Office and Dr. Selampinar, with science activities hosted by Dr. Adamson, Dr. Kumar, Dr. Lin, and Dr. Zhao and their students (Megan P., Ankarao K., Jean B., Mansi M., Stephen K., Arlene B., Elizabeth B., Prabodha A. and Deepthi V.). The morning started with the presentations given by Dr. Adamson, Dr. Benson, and Dr. Lin. After a series of presentations, the students broke into four sections in which they learned about nanoparticles. In Dr. Kumar's workshop on nanomaterials, the lab group presented the synthesis of protein-based nanoparticles and the use of dynamic light scattering to determine their sizes. The students were able to discover and learn about how nanoparticles are formed, how they are characterized, and the possible uses of nanomaterials as opposed to bulk materials.

Drs. Lin and Zhao's activities involved synthesizing gold nanoparticles and testing the nanoparticles obtained to see whether their color changes when salt or sugar is added to the solution. In this experiment, students learned that noble metal nanoparticles exhibit unique optical properties compared to the bulk material. In other words, the color of the nanoparticles are different from the bulk. For example, a solution of gold nanoparticles may look red instead of yellow. The students were also able to visualize individual gold nanoparticles with a state-of-the-art optical microscope.

Dr. Adamson's activities involved methods for exfoliating (or unstacking) both graphite and boron nitride without resorting to harsh chemical treatments or added stabilizers. In this experiment, two-dimensional sheets, each a single atom thick, are stacked up like a deck of cards to form materials such as graphite and boron nitride. Unstacking these decks of cards is difficult but would provide very high surface area materials with uses as

conductive transparent films or nano-fillers for polymer composites. Students learned about how these processes rely on an interfacial kinetic trapping technique that takes advantage of mismatches in solvent surface tensions and results in a dramatic climbing phenomenon of single sheets of material on glass slides.

Since the Chemistry Department and UConn ECE started hosting these Science Days filled with hands-on activities, demonstrations, and lectures, the interest from high schools and high school students has increased. These kinds of activities spark the students' interest in chemistry as they are seeing the real face of chemistry in a laboratory setting as well as learning what it means to study the subject at the collegiate level. After beginning these Days, the department has begun receiving e-mails from students interested in doing research in a lab over the summer or in joining a research group when they come to UConn.



2018-2019 UConn ECE



PROFESSIONAL DEVELOPMENT AWARDS *by Jessica Dunn*

This year there were many outstanding nominees, reflecting the high enthusiasm and support the UConn Early College Experience community has for one another and the program. UConn ECE Instructors and Administrators were nominated by their colleagues and students for their exemplary instruction and management of the UConn ECE program. This year nine Professional Development Award winners were selected, across six different award categories, which only happens every few years. We typically present awards in five different categories, but were privileged this year to present a well-deserved Award for Outstanding Research in the Field of Concurrent Enrollment to Kathrine Grant, a UConn undergraduate. Kathrine is only the second person in UConn ECE's history to be presented with this award.

We recognized all award winners at our annual Awards Ceremony in April, presenting them with a

plaque and a monetary award over a celebratory dinner with family, friends, and colleagues. It was a night full of admiration and appreciation for the dedication each award winner displays day in and out for their high schools and their students. All award winners have exceeded the program expectations and excelled in preparing their students for the next level in their education.

The UConn Early College Experience program would not be successful without passionate and dedicated Instructors and Administrators. It is a true honor to work alongside such enthusiastic educators who go above and beyond program expectations and work tirelessly for the well-being and success of their students. On behalf of all of us at UConn ECE, we applaud our Instructors and Administrators from across the state for their hard work and dedication to the program, and we are forever grateful for you.

We are pleased to announce our 2018-2019 UConn ECE Professional Development Award winners:

Thomas E. Recchio Faculty Coordinator Award for Academic Leadership

Nalini Ravishanker, Statistics

Site Representative Award for Excellence in Program Administration

Seth Korn, Newington High School

Principal Award for Program Support and Advocacy

Mary Kay Tshonas, Quinebaug Middle College

Instructor Award for Excellence in Course Instruction

Alina Britchi, Physics - Westbrook High School

J. Mark Peters, European History - Shepaug Valley High School

Peter Vermilyea, U.S. History - Housatonic Valley Regional High School

Sara Dziedzic, Human Rights & Political Science - The Woodstock Academy

"Rookie of the Year" Award for Excellence in First-Year Course Instruction

Kristina Sluzewski, Human Development and Family Studies - Wilton High School

Award for Outstanding Research in the Field of Concurrent Enrollment

Kathrine Grant, UConn Undergraduate



2019-2020 REGISTRATION

11,859 APPLICATIONS

by Todd Blodgett

Congratulations to our UConn ECE Students in the class of 2019 who recently graduated this June! They were a part of the largest UConn ECE cohort our program has ever had. This year we had roughly 13,500 Students across 206 partner schools register to take at least one UConn ECE course. With registration opening for the 2019-2020 academic year, Students will now have the opportunity to apply to the UConn ECE program and activate their University NetID. Many schools

have expanded their course offerings, and Students should meet with their Site Representative or school counselor to see which course(s) fit their academic plan. Students will be working with their school counselors and Instructors in the Fall to enroll in their UConn ECE courses. Stay tuned to our social media pages for registration tips and deadlines that can assist you with completing the registration process. With 11,859 students already applied, we are anticipating another successful year of UConn ECE!

REGISTRATION DATES & DEADLINES

April 30, 2019	Registration opens
June 7, 2019	Application deadline
*August 15, 2019	Enrollment and late application opens
*September 16, 2019	Late application deadline
September 30, 2019	Enrollment deadline

**Additional \$25 administrative fee for late applications is applied*

Transitioning to College

Passion, Learning, and Leadership

An article for Students and Teachers

by Brian Boecherer

Passion is something we tend to avoid talking about in modern society. Perhaps we feel that when we express our pure excitement about something, we leave ourselves vulnerable to criticism or embarrassment. This is especially true when we are passionate about something that we are not yet an expert on. As students we are often excited by what we are learning, not knowing all the possibilities or implications of this new exploration. Yet I have found with my own students that they are reticent to share their thoughts on these passions. My sense is that they don't want to be asked any questions because they are at the beginning stages of a great exploration and would rather protect their excitement than risk feeling like "a student".

Being a student is an important role and a title that is central to my identity. I love learning and the longer I have been a student, the clearer it becomes that sharing my thoughts and passions on what I read is central to being a great student. We should always be considering and reevaluating our academic passions, as well as sharing our thoughts with important people around us. When I graduated high school I had pretty clear ideas on what I wanted to study but not very clear ideas on how I was going to use it. I loved foreign languages and politics. I was lucky to have studied Russian throughout my four years in high school and was very excited to

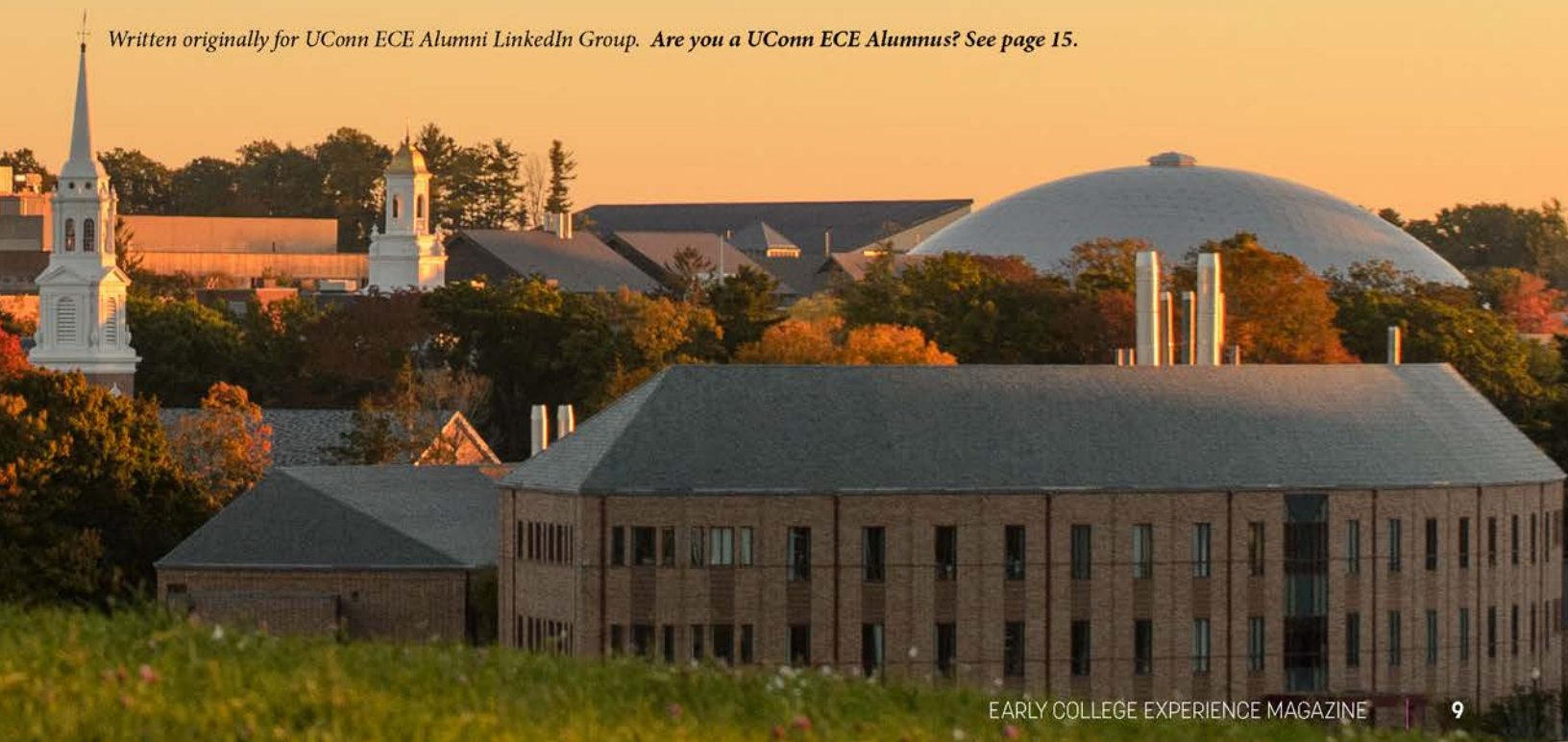


continue learning Russian and start learning German at UConn. Some people encouraged me to go into international business, because, that's where the money is. Luckily I was surrounded by people who supported my interests and allowed me to focus my passions without monetizing them. It made my studies and self-discovery that much more enriching. I did not go into business; rather, I stayed at the interesting crossroads of language, culture, and politics. True to a liberal arts education, my degree prepared me to do a broad array of things because I learned how to analyze and problem-solve and was practiced at applying rigorous methodologies of inquiry. All of these skills have benefitted the Office of Early College Programs and allowed me to do interesting things with my life.

During my doctoral work in political science, I started to study the relationship between people and government, and especially the hidden nature of hierarchies. People at the top of the hierarchy seldom realize that a hierarchy exists and also do not always realize how their actions influence others in relationship to them. This dynamic of power is important to consider as we make big transitions in our life – from high school to college, college to the job market, and new employee to leadership. As our relationships change, so do our positions in the hierarchy. As we leave high school it becomes more apparent that we fill several roles at the same time – as a leader and a role model for those in high school, and a novice and aspirant in the environment of higher education. Yet we are all part of this fluid continuum.

Finding one's academic passions may be easy or difficult, but it is made easier by sharing our interests with those around us. We learn from each other all the time. Taking a moment to talk to your professors is the single most important thing a student can do. Starting a conversation is easier than one may think. Visit the office hours on the third or fourth week of the semester and express your thoughts on the readings and the class. I have made lasting relationships with professors by visiting their offices and expressing an interest in discussing the topic deeper or asking where my interests may lead me professionally. Additionally, start to see yourself as a leader. In that role, make time for others. Ask questions about their interests and contribute your thoughts. Higher education is still about learning and while gainful employment is the ultimate goal, our application of education makes that final connection. Your knowledge, networks, and passions will lead you in directions where job opportunities exist. The more we reach out to support each other, the richer our lives and community will be.

Written originally for UConn ECE Alumni LinkedIn Group. Are you a UConn ECE Alumnus? See page 15.





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STUDENT FEEDBACK



*Katiya P., PCS student
Doral, Florida*

It was an easy decision for me and my family. After reviewing the curriculum for the Pre-Vet program, the

campus environment and the access to Avery Point for the lab and dissection we were convinced we were making the right choice. UConn promised a hands on experience and they delivered. There were hands on experiences at the Avery Campus almost every day.

The well-structured schedule worked well for me! It started with a healthy breakfast with other students from around the country. Each day I attended lectures on medical and animal science topics. On select days, a comfy bus took us to Avery Point where we would discuss topics, perform labs, perform dissection and interact with marine animals in their habitat; all while enjoying each other and the experience. At the end of the day we enjoyed a variety of dinner choices and an array of activities to suit everyone's social needs. I loved the choices of activities and the game room!

My advice is what I told myself before I left to the program. Don't be afraid to try new things, to lead a discussion or to attend a program far from home. By pushing my boundaries and comfort zone in the subject I love I was able to participate in a program that was rewarding and life changing!

EXPLORE YOUR INTERESTS AT UCONN



WE HAVE A SUMMER IN STORRS FOR YOU

by Melanie Banks & Nella Quasnitschka

A Premier Summer Program for High School Students

UConn Pre-College Summer provides high school students the opportunity to live and learn at a nationally ranked public university campus through four challenging and intensive one-week sessions. At Pre-College Summer, part of our mission is to provide an exploratory experience in which students gain an understanding of the college classroom. Students work with and learn from University faculty while exploring the nuances of college life. Interacting with peers in the residence halls and faculty in the classroom provide students the opportunity to create individual successes. We consider a student successful in Pre-College Summer if they use the opportunity to learn more about their future aspirations, find that the course they enrolled in is a good (or bad) fit to pursue as a potential college major, or feel better prepared for learning and growing in a college or university setting.

Through supportive and caring faculty members, our students are able to feel a sense of pride and accomplishment while attending Pre-College Summer. This relates to students' readiness to learn in a college setting and the ability to see how their passions may transform into a college major. Dr. Kimberly Bergendahl, Assistant Professor in Residence from the Political Science Department and Pre-College Summer faculty of the Pre-Law course, has had wonderful experiences with Pre-College Summer students, both during and after their time at UConn Pre-College Summer. Dr. Bergendahl has connected with students during their time in the program and is currently working with a former PCS student, now a UConn honors student, studying political science and conducting undergraduate research. This continued collaboration is an example of how our faculty members can foster incredibly transformative learning experiences through the Pre-College Summer Program that help students build connections and guide them toward a path to success.

Interested in joining us? Join our mailing list at pcs.uconn.edu to learn more. Summer 2020 applications will open in December, 2019.

Spring Professional Development Events 2019

by Stefanie Malinoski

UConn Early College Experience Faculty Coordinators offer annual professional development workshops for their Instructors. This spring, we hosted UConn ECE Instructors from eighteen different departments on campus. Highlights from some of the most exciting events are below:

Animal Science: Our certified Animal Science Instructors along with Faculty Coordinators Dr. Jenifer Nadeu and Dr. Amy Safran met with Dr. Julia Wilkinson from Tufts Veterinary Field Service to learn about equine aging and dentistry in a hands on science lab. The group of 12 certified Animal Science Instructors were able to tour the horse barns and observe Dr. Wilkinson floating a horse's teeth. This routine procedure involves filing a horse's teeth to make the chewing surfaces relatively flat or smooth as a part of overall equine health.

Biology: Dr. Thomas Abbott, Faculty Coordinator for UConn ECE Biology, and a group of fifty certified instructors discussed all things insects. Special guest speaker, from UConn's EEB department, Professor David L. Wagner shared his research on caterpillars with the group in an interactive presentation during the morning. In the afternoon, Instructors were able to tour UConn's Research Greenhouses under guidance by Living Plant Collections Manager, Clinton Morse. Instructors walked through each zone getting to take a close look at the thousands of plants thriving in the greenhouses. Later groups of Instructors were able to visit the Biodiversity Research Collections with Dr. Sarah Taylor and Dr. Jane O'Donnell who shared a variety of samples from the Collections with the Instructors.

Art: Along with UConn ECE Faculty Coordinator, Cora Lynn Deibler, certified UConn ECE ART 1030: Drawing I Instructors were able to visit the Thomas J. Dodd Center on the Storrs campus to take a firsthand look at the Maurice Sendak archives. Recently, the Maurice Sendak Foundation chose to share Sendak's archives with the University of Connecticut who are now housing and stewarding the Collection. Project Archivist, Carla Nguyen shared her knowledge with the group who were able to learn more about Sendak's life, and view his original artwork, sketches, books and other materials.

Spanish: Faculty Coordinators for Spanish Dr. Ana Maria Marcos-Diaz and Dr. Eduardo Urios-Aparisi invited special guest Dr. Ángel Rivera, Associate Professor of Spanish and International Studies at Worcester Polytechnic University to campus for the event. Dr. Rivera presented his research titled: "Un acercamiento teórico a la naturaleza del horror, la ciencia ficción y los monstruos en la literatura del Caribe" (A theoretical nature of horror, science fiction and monsters in Caribbean literature). Later in the day, UConn ECE Instructors competed in groups writing their own short stories to share. Winners were awarded UConn ECE prize packs.



Left to Right: Rachel Giovoto (Glastonbury), Robert Davidson (NFA), Rebecca Lacey Aubin (Bethel), Alison Blair (Coventry), Nancy Bennett Morganstern (Ansonia), Gina Ritchie (Terryville), Patrick Butler (UConn Libraries), Ian Pawluk (NFA), and Carla Nguyen (UConn's Project Archivist for the Maurice Sendak Collection)

GET SOCIAL!

Follow us on Facebook, Twitter, and Instagram to stay up to date on

ALL THINGS UConn ECE



Students from The Morgan School's Human Development and Family Studies class came to campus for a visit in late May.



We're so glad to partner with Putnam High School/ Town of Putnam. In the 2019-2020 school year, Putnam High will offer ECON 1000 and MATH 1131Q at the high school for UConn credit. What a great opportunity for students!



Marine Science Symposium. May 23, 2019, UConn Avery Point. Students from across the state submit posters focusing on the research and learning they have completed throughout their course.

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We Present to You the 2019 UConn Early College Experience Student Scholarship Winners!

by Jessica Dunn

This year we received about 200 applications, each one telling a different story of a UConn ECE Student's journey through their high school education. The high quality of the applications made it very difficult for the review committees to choose only six winners. Each applicant clearly demonstrated high academic achievement and a potential for future accomplishments in their chosen field, but there were six applications that stood out amongst the rest.

We are honored to have such amazing students in the program this year and are proud of their dedication to their future education. Award recipients received a certificate of accomplishment along with a \$500 monetary award to use towards post-secondary education expenses. UConn Early College Experience (ECE) is pleased to announce the 2019 student scholarship winners to the UConn ECE community.

And the winners are...

Excellence in Arts, Humanities or Social Sciences

Hebatalla Mohamed, Rockville High School

Chloe Veth, Daniel Hand High School

Excellence in Science, Technology, Engineering or Mathematics

Nicholas Nguyen, Sport & Medical Sciences Academy

Edgar Dias, Manchester High School

Excellence in Civic and Community Engagement

Sonya Hadley, Middletown High School

Skylar Haines, RHAM High School

We wish you well in your future endeavors. Congratulations!

Applications for the 2020 Student Scholarships will open in January 2020. Scholarship details and application requirements can be found on our website at ece.uconn.edu.

Join the Group

To facilitate learning, knowledge, and opportunities by connecting UConn ECE Students with UConn ECE Alumni



Join the UConn ECE Alumni Group on LinkedIn at bit.ly/UConnECEAlumni



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UConn ECE Upcoming Events and Deadlines

August 15, 2019
UConn ECE enrollment open

August 15, 2019
UConn ECE late applications
open

September 6, 2019
UConn ECE PHIL workshop

September 12, 2019
UConn ECE SPSS workshop

September 13, 2019
UConn ECE U.S. History workshop

September 16, 2019
UConn ECE late applications close

September 18, 2019
Cardboard Boat Race

September 25, 2019
UConn ECE NRE Workshop

September 30, 2019
UConn ECE enrollment closes

November 13, 2019
French Quiz Bowl

November 14, 2019
UConn ECE German Day



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professional development workshop dates*

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