

**NEWS TO KNOW**

A NEWSLETTER FOR THE UConn ECE COMMUNITY

WINTER 2016

UConn EARLY COLLEGE EXPERIENCE

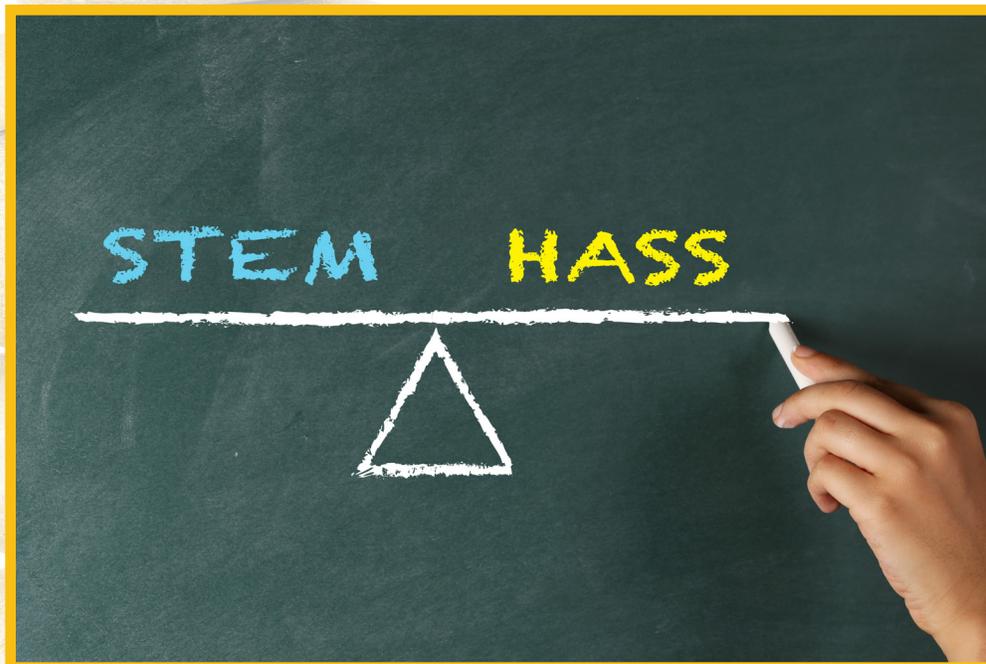
STEM, HASS, and Our Community of Education

by Brian A. Boecherer

When reading any newspaper or education journal these days, it is nearly impossible not to see an article on the importance of STEM education. A Google News search of STEM results in an average of 12.6 million news articles daily. This year alone, the Federal budget for STEM education was suggested to be \$2.9 billion, an increase of 3.7 percent. The acronym does not even need to be defined in the news, because it is now an established part of our lexicon.

Naturally, in so many ways, the emphasis on STEM education is essential to our present success and comfort as well as our future development and longevity. UConn ECE has worked for many years with the departments at UConn to establish diverse STEM offerings to our high school partners. We recently added engineering to our offerings, complementing our rich offerings in plant science, soil science, environmental science, math, biology, chemistry, physics, and other courses. On page 4 & 5 of the newsletter, you can see the breakdown of course offerings in these areas. We are proud of these offerings as they support a diverse education as well as a gateway into many STEM and non-STEM majors.

As we all push to strengthen the STEMs in the country, we must also not forget the importance of the Humanities, Arts, and Social Sciences (HASS). Education in these areas is just as important. And while the acronym invokes images of the avocado, the humanities, arts, and social sciences benefit both science and our society; inspiring creativity, developing our culture, and allowing science to be applied in beautiful, functional, and engaging ways. Indeed, Human Development and Family Studies is a required course for nursing majors. Likewise, math and science courses are required to graduate from the University.



UConn ECE offers many rich opportunities in all these areas. Moreover, UConn ECE supports small departments as well. This fall it was so much fun to attend the ECE Classics Workshop and listen to the dynamic conversations for Latin and Ancient Greek instructors. I learned that the Latin instructors were recruited as the first computer programmers due to their logic and eagle-eye precision. While our Italian offerings are at only 10 percent of partner high schools, it is also the second most popular second language spoken in Connecticut, and we enjoy supporting those communities.

In short, we like supporting the interests and passions of education; educators and students. Our micro programs are as vibrant as our large programs. All of our programs are communities and academic neighborhoods. Our advice is do not trade one for the other, but build a diverse UConn ECE program so all students are supported in multiple ways.



Overall, the course helped me find my niche, and if it wasn't for the hands-on career preparation and academic rigor of UConn's ECE courses, I would certainly have felt very lost with regards to my career interests upon entering college.

— Marissa Gannon
Bacon Academy, Class of 2015



Early College Experience

ece.uconn.edu • ece@uconn.edu • 860.486.1045



In my upcoming senior year I will be taking UConn ECE Courses in Physics, Calculus, Biotechnology, Latin, and English. I will be finishing my senior year with forty UConn ECE credits before starting my college career.

— Kara Heilemann
Woodstock Academy, Class of 2016





UConn Hosts Pre-College High School Students

by William Page and Neal Olderman

This past summer UConn hosted over 120 rising high school juniors and seniors providing them with an opportunity to explore their higher education options. During their stay, students lived on the Storrs campus in air-conditioned residential housing, shared meals at dining halls, and attended non-credit classes taught by UConn Faculty.

Choosing from 15 different academic areas, 2015 students were immersed in a college-level learning environment with other students who have similar academic interests. Small classes encouraged a one on one relationship with faculty. In addition to their academic cohorts, all students came together for skill-building workshops, including exploring the College Major Selection Process. "Students and parents report that the program answered many questions regarding planning for college and campus-life," says Program Director, Neal Olderman.

Makaila Cerrone, a Pre-College Summer student states, "...the small classroom size and opportunity to really talk and connect with the professor is not something you usually find at a big school. Being able to have this personal attention allowed us to go really in-depth on our subjects and made me realize a love I had for sociology that I never would have known about."

Pivotal to the success of the program are the Near-Peer Mentors, who also serve as residential staff. These high-achieving, college undergraduate, and graduate students are a source of support and information pertaining to college and campus life. Olderman states, "Many students enter college without a full understanding of what's expected of them. The Pre-College Summer at UConn program provides students with a taste of the challenges and rewarding experiences college-life has to offer, as well as, a strong peer group that participants can connect with long after the program ends."

Now entering its third year, UConn plans to expand this program to four one-week sessions offered during July and August of 2016.



Contact your School Counselor for registration information and course availability.

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WELCOME

to the Following Schools!

Academy of Aerospace
and Engineering High School
A. I. Prince Technical High School
E. C. Goodwin Technical High School
Easton Country Day School
Eli Whitney Technical High School
Grove School
High School, Inc.
The Master's School
Nonnewaug High School
Saint Thomas More School
East Granby High School
Franklin Academy
Henry Abbott Technical High School
Immaculate High School
Quinebaug Middle College
Simsbury High School
Woodland Regional High School

UConn PRE-COLLEGE SUMMER 2016

UConn's Pre-College Summer 2016 program is a high-quality, non-credit, academic program giving students a 360° experience of college-life on a large university campus. Students study, eat, sleep, and play on UConn's outstanding Storrs campus.

SESSION I: JULY 10-16

SESSION II: JULY 17-23

SESSION III: JULY 24-30

SESSION IV: JULY 31-AUGUST 6

Stay
up to
4
weeks!

To learn more visit PRECOLLEGE-SUMMER.UCONN.EDU
or call 860-486-0149.

Residential and commuter options available.

COURSE OFFERINGS

With an increased focus on STEM at the University of Connecticut, we are happy to report that for the 2015-2016 academic year we have 494 STEM class sections that are being offered through UConn Early College Experience. In addition, UConn ECE offers 696 class sections in the Humanities, for a total of 1,190 UConn ECE class sections offered for the 2015-2016 year.

With 10,812 participating high school students from 178 participating high schools across Connecticut we hope to continue to expand the diversity of UConn courses available to our high school population.

Are you planning a trip to campus with your UConn ECE students?



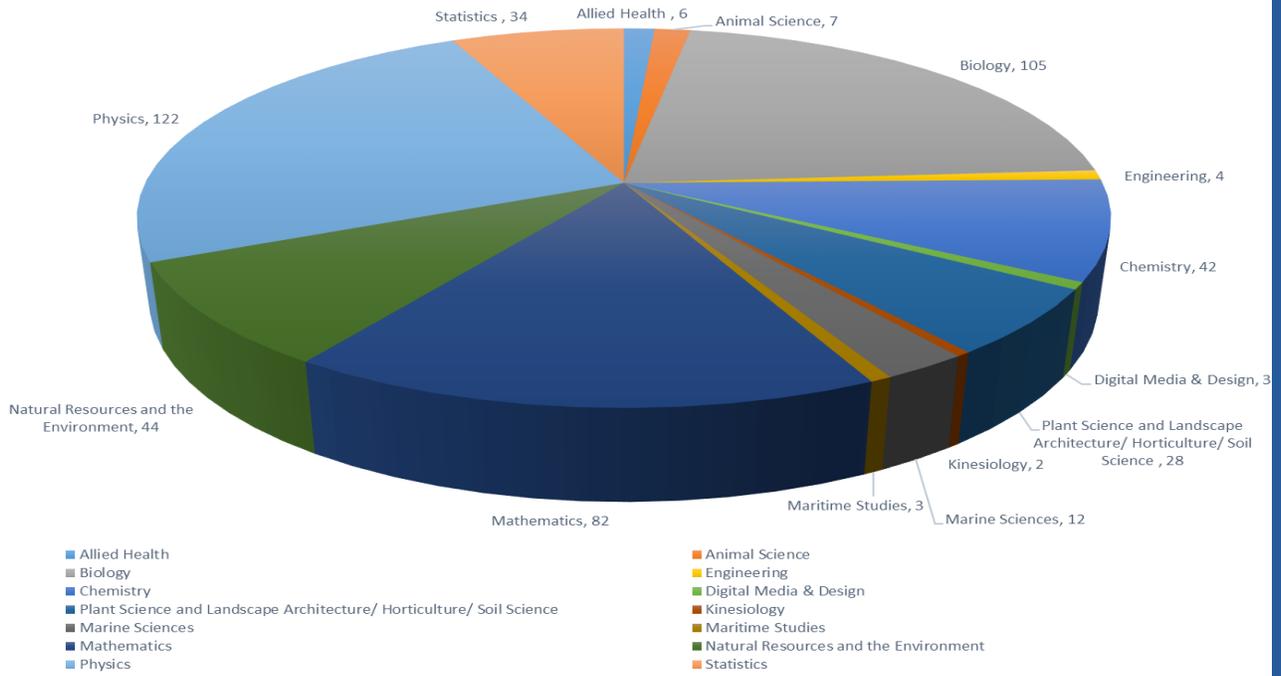
Let our office know. We would be happy to meet with you and the students here on campus. Our office has some goodies for the students as well. Let your students know they may appear on our Facebook page!

We enjoy sharing all that our schools and students are doing both here on campus and in the high school. Are there any events at your school, awards to teachers or students? Let us know as we would love to share the news. Please contact our office at ece@uconn.edu or by phone **860-486-1045**.

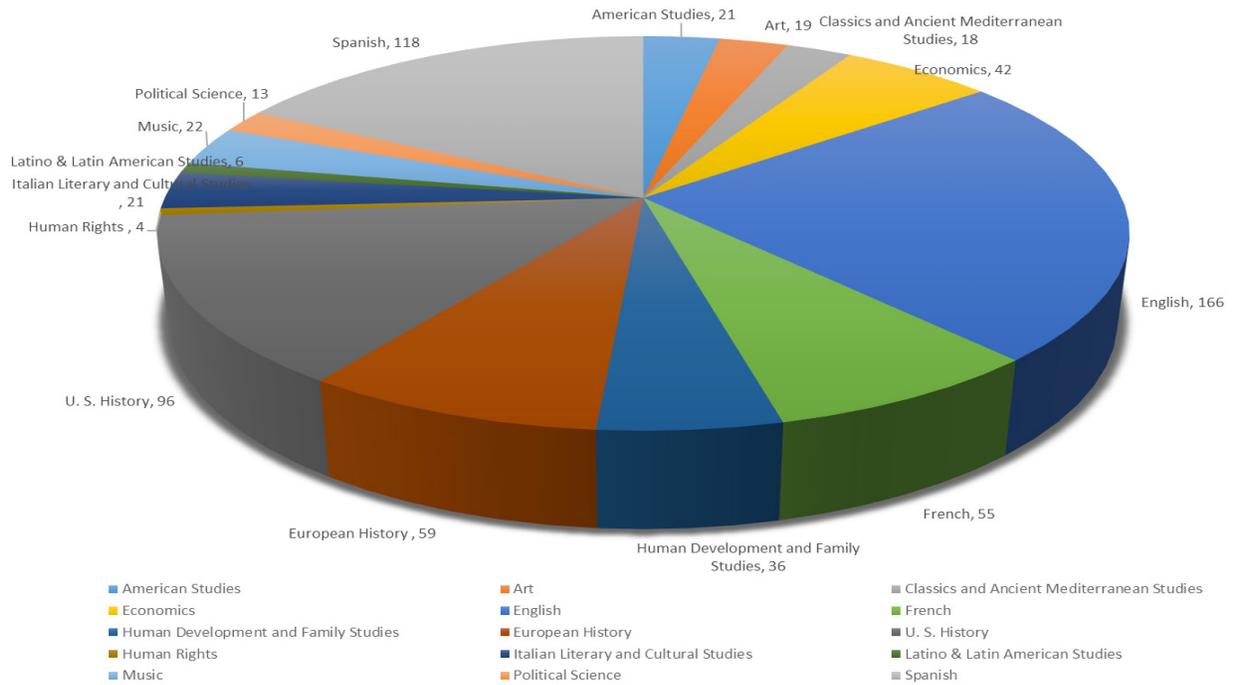
You can also join our mailing list directly from our website. Share the news with others!



UConn ECE 2015-2016 STEM Course Offerings



UConn ECE 2015-2016 Humanities Course Offerings



LEONARD CHIANG

Class of 2015 @ Tolland High School

1. What are your future plans for college and career?

Starting this autumn, I'll be an Engineering Physics major at Fordham University in the Bronx. Within the Engineering Physics program I'll be concentrating my studies on biomedical engineering; I hope my degree will get me a job in the corresponding field and will work hard to that end.

**2. What was your best experience/project/lesson in your UConn ECE Course(s)?**

I think the best lesson I drew from the ECE courses I took (Chemistry 1127 & 1128 and Physics 1201 & 1202) was how to strategically approach problems, gathering the relevant scientific and mathematical principles and equations before using my calculator to help fill in the blanks.

3. What would you recommend future UConn ECE students do to become successful?

The number one thing is to try to enjoy the course. As a big fan of science, I happened to be already pretty deeply invested in the subject matter. For any students out there who are finding themselves bored in the classroom, though: a positive outlook might not hurt, while a negative attitude will not help. Another thing to keep in mind is just to stay focused. You might have the distraction of stressful external events or of your crush being in the class (I actually had both problems concurrently), but remember that you, not just the teacher, need to put in the effort. Having a good set of lecture notes was critical to my success, and the same could very well go for you – or a good friend of yours who asks for an update after an absence. With the help of those notes, you can develop and maintain a good hold on the course material. Having a good working knowledge of “what’s going on” will give you confidence and allow you to stay relaxed and clear-minded even when facing difficult exams.

4. Any other comments about UConn ECE?

The Early College Experience was a wonderfully academically rigorous opportunity. Though I know my studies at Fordham will still pose challenges, I think the ECE program has provided both an excellent preview and unmatched preparation for college course-work. I'm very happy to have been part of the ECE program and wish current and prospective participants all the very best.

JULIA PROVENZANO

Class of 2015 Salutatorian @ Trumbull High School

1. What are your future plans for college and career?

I will be attending Rochester Institute of Technology in the fall to major in chemical engineering in the honors program. I am not exactly sure what I would like to do within chemical engineering as a profession, but definitely something with a focus on biology.

**2. What was your best experience/project/lesson in your UConn ECE Course(s)?**

For my Intro to Biotechnology ECE class we transformed E. coli to express a pGLO gene. The lab experience was one of a kind and it's pretty awesome to say that I've made bacteria glow. The lab format for college labs is very different than the ones I was used

to writing in high school, so having already written a college lab report will undoubtedly help me in the future.

3. What would you recommend future UConn ECE students do to become successful?

My biggest piece of advice: do not procrastinate! ECE courses are much more independent work. There are usually only a few tests but they are on a lot of material, so cramming the night before does you no good. If you study the material in increments, the subject matter becomes manageable.

4. Any other comments about UConn ECE?

Unlike AP courses, UConn ECE courses follow the same curriculum as the classes taught at UConn. I believe that my ECE experience has prepared me better for college than AP classes because they are actual college courses instead of “college level courses”.

TARYN WISNIEWSKI

Class of 2015 Salutorian @ Oxford High School

1. What are your future plans for college and career? Starting this fall, I will be attending the University of Connecticut as a Chemistry major. I plan to apply to the Neag School of Education at UConn for the IB/MA program to become a secondary-level chemistry teacher, meaning (if all goes according to plan) I will spend five years at UConn before entering the workforce. I have always dreamed of being a teacher, and I am excited to see how my years at UConn help me reach this goal.

2. What was your best experience/project/lesson in your UConn ECE Course(s)?

I took a UConn ECE course for Spanish, and I absolutely loved the opportunity to take a more sophisticated approach to the material, specifically the focus on culture. In previous Spanish classes I had taken, the curriculum was based on vocabulary and grammar, which were obviously important to setting a solid foundation in the language, but in the ECE course we were able to focus more on implementing the skills we had already acquired into more functional use and to learn more about the language through the culture of the people who speak it. This meant everything from watching modern statement films to performing comical skits for the class, and it was all part of what made the experience so positive for me.

3. What would you recommend future UConn ECE students do to become successful?

I would recommend that future UConn ECE students make sure to remember that this is a real college course and that they should therefore take it seriously and be committed to the work. It is an amazing opportunity to challenge oneself and reach beyond the limits of the normal high school experience, and so it deserves to be respected and appreciated. I greatly enjoyed the course I took, but it did require real focus and dedication to succeed.

4. Any other comments about UConn ECE?

The UConn ECE program, in my opinion, was completely worth the effort it required, and I would definitely make the same decision to take the class again were I given the opportunity. The courses are designed to engage you in a way that is deeper than you are used to seeing, and I was truly impressed by this. I am grateful to have gotten the opportunity to get a jump start on my college career through this course, and I would definitely recommend it to anyone who is considering it.



CALEB VETH

Class of 2015 Salutorian @ Daniel Hand High School

1. What are your future plans for college and career?

I am excited to say I will be attending Wheaton College in Illinois this fall, and will be studying mathematics and computer science. Post-college, I plan to pursue a career that allows me to combine my own interests and skills with the ability to help make peoples' lives better.

2. What was your best experience/project/lesson in your UConn ECE Course(s)?

I honestly cannot pick out one simple example that was "best," because that would not do the courses I would consequently not name justice. I thoroughly enjoyed each ECE course I took in high school for a variety of reasons; whether I was learning optimization in calculus, creating reactions in chemistry, or studying a cultural novel in Spanish, I enjoyed both being challenged and learning in differing academic areas.

3. What would you recommend future UConn ECE students do to become successful?

Work hard. Realize that in order to do well, you need to want to learn; you must allow yourself to enjoy working hard and seeing yourself succeed as a result of it. If you go into an ECE class with high expectations for yourself, and you work to exceed those expectations, you will not only be successful, but you will also find yourself enjoying the challenge.

4. Any other comments about UConn ECE?

Take as many UConn ECE classes as your school offers. The credits you can carry into college with you are invaluable! Plus, it is a good way to expose yourself to college level work as a high school student.



Events

5th annual UConn Avery Point Cardboard Boat Race

by Logan Irmischer, Class of '17

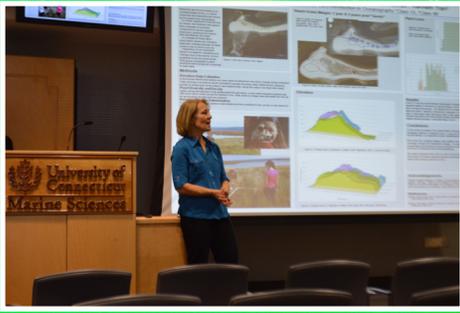
The 2015-2016 academic year is off to a strong start. On September 23, 2015, the ECE Marine Sciences and Maritime Studies students participated in the 5th annual UConn Avery Point Cardboard Boat Race. The event is always a fun and exciting time filled with lots of laughs. Participating in this year's event were seven partner high schools: Waterford High School, Marine Science Magnet High School, Science and Technology Magnet High School of Southeastern Connecticut, Manchester High School, South Windsor High School, University High School and Stonington High School. The team from Marine Science Magnet High School in Groton won first place in the UConn ECE Division, however they were defeated by the UConn student entry in the championship race.



French Immersion Day and Quiz Bowl Competition

by Alissa Lancia, UConn Class of '18

On November 5, 2015, UConn Early College Experience held this year's French Immersion Day and Quiz Bowl Competition. We enjoyed the company of Cheshire High School, Coventry High School, Glastonbury High School, Portland High School, RHAM High School, Southington High School, and Terryville High School ECE French students as they competed for Quiz Bowl Champion. Taking home first place in this year's Quiz Bowl Competition was RHAM High School, followed by Portland High School in second place, and Cheshire High School in third place. The competition put the knowledge of the French ECE students to the test, but they all performed well and showed their love for the course. Congratulations to all participants for taking on the challenge of broadening your French expertise.



UConn ECE Marine Sciences Symposium

by Anna Tworzyanski, Ledyard High School NOSB team member

At 8:30 AM, I and two of my fellow classmates pulled up to the UConn Avery Point Marine Sciences building overlooking a choppy Long Island Sound. When we entered, we were greeted with posters from other participating high schools covered with an array of research projects: everything from the relationship between temperature and jellyfish breeding to the use of a floating barge for passive desalination. Since the UConn ECE program assists in bridging the gap between learning basic skills and concepts in high school and solving real-life problems in higher education and beyond, it came as no surprise that that was also the focus of this conference.

My school, Ledyard High School, was the first to present on our research of the changing shape and topography of Bushy Point Beach with respect to Superstorm Sandy in 2012. Spending a day on the shore and relating our findings to an event that all of us had experienced was already a fun class project, but the opportunity to share our research with other high schools taking a UConn marine sciences course and those much farther ahead in their education made the experience even more fulfilling.

In the demonstrations that followed, each presenter displayed a lot of enthusiasm in sharing their work with us and made the material fairly easy to understand even though it required much more specific knowledge than what we've been exposed to in high school. One graduate student even allowed

us into his nearby lab to see his work environment. During the next presentation, a UConn undergraduate student informed us of his experiences in the Sea Education Association Semester and Research at Sea Program in which he spent several months on a boat in the South Pacific studying pteropod special distribution and shell condition with respect to pH. This practical knowledge ties in with the biological and chemical curricula we had in our class, especially in terms of the effect of global warming on the ocean. While it's no question that I and my classmates understand the importance of oceanic research and development, we don't all necessarily want to become oceanology majors. One of the most meaningful parts of what this student shared with us was that many of those in the program with him were pursuing other studies. It was intriguing to me that I could maintain some attachment to the ocean sciences field even while working towards a different degree. Continuing on that thread, was doctoral candidate, Steven Schmidt, who took the time to explain to us his unique path from earth and planetary sciences to meteorology to conducting research on stratification and hypoxia in Long Island Sound. It was inspiring and reassuring to hear that although our educational paths may not end up where we thought, we can still utilize elements of the different fields we are exposed to during our education.

A couple of hours before lunch, we had a break to look at the other posters and talk with the students who had

created them. The level of detail in the research and conducting of these high school experiments was impressive. I talked to one student from Bridgeport Regional Vocational Aquaculture Center who aspires to work with Doctors without Borders, an international medical humanitarian organization. She had read about the use of trehalose, a carbohydrate found in seaweed, to stabilize vaccines for transportation to developing countries. After learning about phycoerythrin in red algae in her marine science class, she decided to use trehalose to stabilize phycoerythrin in a solar cell and took that project all the way to the Intel Science Talent Search competition. Another student analyzed the feathers and feces of cormorants and other piscivorous birds for toxic heavy metals using a scanning electron microscope and a spectrophotometer. It was amazing to see students who are at the same point in their education as myself and my classmates, who are able to take on real-world problems like renewable energy and pollution.

The day culminated in the launching of a balloon to collect atmospheric data, making use of thermal updraft. We were first briefed on the physics of the balloon and the critical importance of atmospheric data in oceanology. Afterwards, a few students helped in inflating the balloon and releasing it into the air. Watching the balloon quickly drift past the nearby buildings was the perfect ending to the day; it reminded us that our marine science knowledge will take us as far as we want to go.



UConn ECE Surpasses 2013-14 Enrollment Record

In the 2013-14 academic year, UConn Early College Experience hit what we thought might be an enrollment plateau. We reached the record high of 10,000 students enrolled in ECE courses. We then faced the challenge of decreasing overall high school populations, and the new and unfamiliar online Compass registration system was launched. Taking these challenges into account, we were satisfied with only a slight dip in enrollments for the 2014-15 year, bringing in over 9,800 students.

Not ones to rest on our laurels, our 2015 strategic plan looked at ways to continue to grow our program faced with the challenges at hand. The quest became two-fold. First, we sought to rebuild relationships and recoup enrollments lost by the transition to online

registration. UConn ECE staff members made dozens of “house calls” this registration season to assist schools and students that were struggling with the new process. The second strategy was to grow course offerings by expanding existing programs, and by bringing new school partners into the ECE family.

The strategy worked! The 2015-16 academic year saw a record 10,812 students enroll in UConn ECE courses. Many schools have increased enrollments due a higher comfort level with the online registration system while other schools have added new courses. We also have seventeen new or returning high schools offering ECE courses this year.

With more and more focus on the benefits of dual and concurrent enrollment at the state and national level, we will continue to expand our relationships and make process improvements to insure continued growth and success for students for years to come.

UConn ECE's Top Ten Lists for 2015-16

Highest Number of Students Enrolled In ECE Courses

- 314 Norwich Free Academy
- 297 Glastonbury
- 232 E.O. Smith
- 226 Manchester
- 217 Fairchild Wheeler Magnet
- 205 Daniel Hand
- 192 Trumbull
- 192 William H. Hall
- 178 New Britain
- 178 Plainville

STUDENTS ENROLLED

Most ECE Credit Hours Taken

- 2619 Norwich Free Academy
- 2231 Glastonbury
- 2,109 E. O. Smith
- 1,813 Daniel Hand
- 1,631 New Britain
- 1,530 William H. Hall
- 1,463 Fairchild Wheeler
- 1,374 Woodstock Academy
- 1,301 Plainville
- 1,224 Conard

Highest Percent Enrollment Increase From 2014-15

- 467% Coginchaug Regional
- 250% HPHS Engr. & Green Tech
- 240% Housatonic Valley
- 220% RHAM
- 157% Bristol Central
- 136% Mark T. Sheehan
- 115% Fairchild Wheeler
- 106% Science & Tech Magnet
- 105% Brookfield
- 102% Plainville

ENROLLMENT INCREASE

TOP 10



National Alliance of Concurrent Enrollment Partnerships (NACEP) 2015 Conference

Reaching New Heights

By Melanie Ochoa, Program Assistant for Academic Standards



The 2015 NACEP Conference was held in the Mile High City – Denver, Colorado. With record-breaking attendance, this year 850 concurrent enrollment partners from 46 states and the District of Columbia attended the conference.

The three day conference, Reaching New Heights, featured over 60 sessions focusing on the introduction of new broad-reaching ideas and practices; reinforcing specific program effective practices, innovations, research, and policies; as well as facilitating open discussion-based sessions to allow participants to process information while engaging in conversations. The sessions offered a great value

by learning and sharing concurrent enrollment practices while meeting peers from across the nation.

Five UConn ECE staff members had the opportunity to attend the conference. Magdalena Narozniak, Program Coordinator for Research and Development, presented “NACEP Evaluation: Why and How” along with William Newell, Associate Director, from Syracuse University. This session targeted the NACEP Evaluation Standards by highlighting the challenge of why and how evaluations can spark meaningful change in a program from collected data. Brian Boecherer, Executive

Director, and Tim Stetter, Director and NACEP President-elect, held the “Sunrise, Sunset: Considerations for Piloting and Phasing out CEP Courses” session. Concurrent enrollment courses can come and go due to campus changes or high school requests, as these changes can be very difficult this session focused on key considerations and best practices for piloting new courses and phasing out current courses.

As always, we work together to ensure that our courses offered at the high schools are as rigorous as the courses taught at the University of Connecticut for student success.



Jessica Parker, Magdalena Narozniak, Brian Boecherer, Wendi Richardson, Melanie Ochoa and Gillian Thorne at the NACEP conference in Denver, CO.



Brian Boecherer, Executive Director

“Coming together is a beginning, keeping together is progress, and working together is success”

-Henry Ford

#4526160

UConn

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EXPERIENCE

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UConn Early College Experience
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UConn ECE Spring 2016 Workshop Dates

March 3, 2016
Italian Workshop
Oak Hall, Room 236

March 9, 2016
Spanish Workshop
Student Union Ballroom

March 17, 2016
Plant Science Workshop
Location TBD

March 23, 2016
**Environmental
Science Workshop**
Student Union Room 304C

March 24, 2016
Biology Workshop
Student Union Room 304B

April 1, 2016
English Workshop
Student Union Ballroom

April 29, 2016
French Workshop
Homer Babbidge Library,
Class of 1947
Room



May 12, 2016
Chemistry Workshop
Student Union, Room 104

May 16, 2016
Statistics Workshop
Bio-Physics Building
(BPB) 131

May 16, 2016
Math Workshop
Bio-Physics Building
(BPB) 131

June 3, 2016
**New Instructor
Orientation**
Student Union Ballroom

In an effort to keep UConn ECE instructors informed of upcoming events, we have provided a list of scheduled professional development opportunities and important deadlines. All events will take place on the UConn Storrs campus unless otherwise noted. Formal invitations and agendas will be sent to instructors approximately two months before the event date.

The UConn ECE Program Office staff looks forward to welcoming you to campus!

Please note all workshop and event dates are subject to change. Please see the "Events" section of the Early College Experience website at www.ece.uconn.edu for the most up-to-date schedule.

*Details for the 2016 Physics, Art, Medieval Studies, Latin American Studies, HDFS and Engineering Workshops are not yet finalized. As information becomes available messages will be sent to each listserv and formal invitations mailed to the high schools.