

NC STATE
UNIVERSITY

DELTA

Annual Report
2014-15



Letter from the Vice Provost 3

Championing DELTA 4-5

WolfWare Expands 6-7

SMART Videos 8-9

Launching a DE Program 10-11

Student Workers Share Talents 12-13

By the Numbers 14-16

Staff Accolades

see online: <http://go.ncsu.edu/staffacolades>

DELTA Vision

We seek to improve the quality of education by harnessing technology to provide ready access for all learners. In this way we hope to meet the challenges of a changing society.

DELTA Mission

Transformative educational experiences benefit a complex, global society and are key to a quality future. DELTA collaboratively applies expertise in innovative technologies and pedagogies to solve instructional challenges in an efficient, effective and service-oriented environment, with the overarching goal of helping faculty build student success.



Letter from the Vice Provost

Last year I wrote about how DELTA's collaborative partnerships with campus stakeholders exemplified NC State's mantra of "think and do," but extended it further to "listen, think and do." In reflecting over our activities and accomplishments of the past year, I could easily repeat that theme because it very much still holds true. However, repeating myself wouldn't make interesting reading, would it? So, what I'll do instead is to look at the work of our talented team of DELToids from another perspective—the cookbook. Cookbooks can apply to more than just culinary creations. Fundamentally, a cookbook is a collection of recipes. Recipes start with a list of ingredients and then outline a detailed process for transforming those ingredients into a delectable concoction that hungry consumers just can't wait to sink their teeth into. Everyone who has ever spent any time in the kitchen knows that getting both parts—the ingredients and the process—exactly right is the secret to success. Leave out an ingredient, measure wrong, or cook too long and your creation goes from delightful to frightful. This year's report is going to give you a glimpse of some innovative recipes that we've been working on with our faculty, staff and student colleagues. I'm going to call it the *Sustainable Success Cookbook*. Here are some previews:

Perfect Program Pie

Ingredients: minimum one faculty champion, a large portion of subject matter expertise distributed among willing faculty colleagues, a spoonful of instructional design and technology help, a plan built upon market assessment and fiscal feasibility, and a supportive administration. Two stories in this year's report articulate the recipes that were crafted by faculty champions, Dr. Michael Kaners and Dr. Elizabeth Nichols, working with DELTA to design and build sustainable online programs to address the needs of learner communities in their respective areas of expertise.

Savvy Students' Soufflé

Ingredients: "digital natives" who understand from personal experience how this generation of students learn, mentors with a mission, a creative environment, and a proper set of tools for content creation. How many times have you said, "I wish we'd had that when I was a student!" We have incredibly smart and talented students at NC State. It's not difficult to imagine that they might have great ideas about how to make learning more fun and effective for their fellow students, given the tools and support to make it happen. Two of the stories in this report detail how our students are contributing to the success of other students through their work as DELTA interns and through the SMART Videos project led by Dr. Maria Gallardo-Williams.

WolfWare Outreach Ice Cream

Ingredients: outreach programs organically grown at a top-tier, land-grant university, a well-oiled enterprise learning technology infrastructure, a large audience of digital consumers, and a sustainable financial model. The story on WolfWare Outreach provides a recipe which puts the ice cream on the cake in supporting NC State's mission of outreach and engagement, extending the reach of our non-credit programming and taking it to new levels with digital delivery.

I hope you'll enjoy reading the recipes in our *Sustainable Success Cookbook*. We're always looking for new recipes to add!

Dr. Tom Miller
Vice Provost, DELTA



Championing DELTA: A Faculty Perspective

DELTA turned 15 this year and while the organization has grown and changed over the years, supporting faculty has always been the goal. Professor Michael Kanter, Ph.D., first encountered DELTA in its inception, through a call for grant proposals designed to convert classes into an online format.

Kanter, who had grown frustrated with teaching in the traditional face-to-face environment, was looking for another way. He applied for and received a DELTA grant, which changed his teaching style completely.

“This was exactly what I needed at that stage of my career. I have not been back in the classroom for more than 10 years,” said Kanter, who now exclusively teaches online in the Department of Parks, Recreation and Tourism Management (PRTM) in the College of Natural Resources.

With the original funding from DELTA, Kanter was able to hire a staff member to develop a course website and create their own learning management platform. DELTA also assisted him by recording his lectures.

Eager to produce videos on his own for use in the online platform, the self-proclaimed “Mac guy” used some of the DELTA funding to purchase an Apple laptop and the software needed to make it happen.

“It worked really well,” said Kanter. “We put the recorded lectures on the website. We built in some assignments. A discussion forum option came later, but that was my first foray into delivering online material,” he recalled.

There were some rough patches at first for both Kanter and his students while adjusting to the new delivery method. He diligently searched for new technologies to benefit online learning and to make the transition from a traditional classroom easier.

During those first years, Kanter attended DELTA workshops and used its help desk for troubleshooting. He became quite the advocate for distance education, and he worked to recruit other faculty to teaching online.

Leading the Online Effort

Kanter and his fellow faculty knew there was a need in their industry—parks, recreation, sport and tourism—for an advanced degree aimed at working professionals who did not have time to come to campus. They were enrolling three to five students in the Professional Master’s of Parks, Recreation and Tourism Management (PRTM) program each year and needed to make the program sustainable.

Having taught online for several years, Kanter led the effort to revamp the program into an online model. He incorporated some best practices to convert the master’s program to fully online and DELTA provided the funding and instructional design expertise. DELTA program development funding supported an extensive market analysis that generated overwhelmingly positive results.

The online program, which may be completed in less than two years, includes a cohort model to facilitate team building paired with a prescribed sequence of accelerated courses.

“We have been graduating more than 80 percent of the students who enter the program. Our enrollment has gone from three to five to consistently 30 students per year, which is our maximum,” said Kanter.

Armed with funding and support from DELTA, it didn’t take Kanter long to spread his enthusiasm for online teaching among the PRTM faculty. Initiating the move to distance education required a lot of time and planning on Kanter’s part. His goal was to make the process as easy as possible for his colleagues.

Among the first faculty to use Moodle, Kanters set up the Moodle site using a course template designed by DELTA. "I wanted the course structure to look the same as students were going from one course to another," he said. It also made new course development easier by allowing faculty to focus more on course content and learning objectives than course delivery and layout," he said.

"I had a photographer friend who taught me how he captured video and produced it," said Kanters. He used two cameras, separate audio and incorporated PowerPoint slides and pictures into the final videos, which allowed for different angles and variety in the 15- to 20-minute lectures.

At first faculty had a hard time adjusting, but after Kanters described how much time was actually spent teaching in face-to-face classes, they were more willing to try. He also encouraged faculty to move from behind the podium, to go outside, interview professionals and generally think outside the box to relay the key attributes of the class material.

Kanters made it happen and is reaping the rewards. Online students are very comfortable in the virtual environment.

"We are constantly listening to our students and looking for ways to improve delivery. Having the funds to hire a full-time instructional technologist, Erin Adair, has made all the difference for us," said Kanters. Adair now records and produces the videos, and provides technical support to faculty and students, which takes a lot off Kanters' plate.

In addition to the online lectures, students are required to attend a weekly interactive Collaborate session. Adair attends the sessions to manage tech issues while teacher assistants monitor chat channels as well as provide a summary of everything that happened. "Competent, engaged faculty are the only way this program is a success. It is critical to me that we continue to provide support to the faculty," added Kanters.

DELTA's Impact

Kanters has continued to explore ways to make the online programs successful and sustainable. He has seen DELTA morph from online course development into doing other things that would be more supportive of delivery, looking at ways to enhance the technology so it improves the experience for the student and for the faculty.

DELTA takes on new initiatives and explores new ways of doing things and testing them. According to Kanters, when PRTM hires new faculty, they are provided a list of DELTA workshops and are strongly encouraged to attend. Faculty assigned to teach in the online program then work side-by-side with Kanters and Adair to develop and deliver their classes.

"Every time I interact with different people at DELTA on various projects and initiatives, I come away excited." — Dr. Michael Kanters

"I think the key part here is the people at DELTA. I truly have enjoyed over the years working with everyone here. It is an exciting, innovative, people-centered operation. Every time I interact with different people at DELTA on various projects and initiatives, I come away excited. They are big thinkers. They are creative-minded. It has been really exciting," said Kanters.

Read DELTA Celebrates 15 Years

<https://delta.ncsu.edu/deltawire/delta-means-change-for-15-years/>

See DELTA's Timeline

<https://delta.ncsu.edu/about-delta/delta-history/>

Learn More about DELTA Grants

<https://delta.ncsu.edu/course-planning/delta-grants/>

Visit the Professional Master's of Parks, Recreation and Tourism Management Site

<https://cnr.ncsu.edu/prtm/online-masters-degree/>

Further Reading on Creating and Managing a Moodle Space

<https://delta.ncsu.edu/knowledgebase/using-moodle-with-wolfware/>



WolfWare Expands: DELTA now Hosting an Enterprise Moodle Server Supporting Non-Credit Course Offerings

As part of its land-grant mission, NC State reaches out beyond its campus borders. With the outreach and extension areas of campus growing, a comprehensive collection of services supporting non-credit online offerings was needed.

For years, the College of Textiles hosted a non-credit Moodle server used by Textiles Extension, Industry Expansion Solutions (IES), and the College of Agriculture and Life Sciences.

According to Director of Educational Technology Services Lou Harrison, DELTA had plans to offer an enterprise-level server when the university settled on a common registration and billing system. Due to shifting priorities at the College of Textiles and College of Agriculture and Life Sciences, the Extension server needed to be retired; so DELTA accelerated the timeline to provide a Moodle server dedicated to the delivery of non-credit courses. After partnering with Textiles, DELTA developed a plan to stand up an enterprise service ahead of the scheduled deployment of a registration system to help fill the void.

The new service, called WolfWare Outreach, extends the enterprise services DELTA was already supporting to include non-credit fee-based offerings. Initially, partners are using a manual enrollment process and limited scope of overall services. This endeavor looks toward a future with streamlined enrollments and non-credit access to the entire suite of WolfWare tools, DELTA's enterprise suite of academic technologies and tools in a cohesive online environment.

"It doesn't make sense for another organization on campus to host a non-credit Moodle server if DELTA can do it at an incremental cost along with the other enterprise systems we are hosting," said Jeff Webster, senior associate director for Applications Development.

In support of the university's goals to both enhance organizational excellence and to enhance local and global engagement combined with DELTA's own goal to leverage technologies to support Extension, Outreach and Engagement activities, this was a match that made sense.

In planning for the WolfWare Outreach service, DELTA had to understand the differences between credit and non-credit course offerings. Non-credit classes are not offered on a semester schedule and are available for a broad range of audiences everywhere. Many offerings may be traditional courses, while others may be modules with a certificate awarded after completion, although not for academic credit. "Some modules may be bundled or co-branded and sold to other universities or developed with corporate partnerships or federal contracts," said Associate Vice Provost for Marketing and Partnership Development Kay Zimmerman.

In planning for the transition from the Extension Moodle server to a limited enterprise service, in August 2013, a group of extension and non-credit thought leaders gathered to discuss, evaluate and recommend how to proceed with a holistic, sustainable model for the online delivery of non-credit courses. Members of the Critical Thought Leaders Group, which eventually became the WolfWare Outreach Steering Committee (WWOSC), consisted of stakeholders from the Extension server, the Office of Information Technology, faculty members already using the server to deliver non-credit course offerings, and others.

The WWOSC considered if a non-credit, online course delivery market existed to the extent that offering a service was warranted, and what a future market might look like for non-credit offerings. Since university departments are seeking alternative revenue-generated income,

non-credit online classes could become a large market for NC State, and a way for our university to fulfill the outreach and extension components of our land-grant mission.

During the 2014-15 academic year, DELTA completed the first year of a two-year pilot established to determine if offering this service would be sustainable. According to Zimmerman, DELTA staff forecasted the total cost of ownership for WolfWare Outreach and maintenance of the non-credit server, the equipment needed and the staff required to support this endeavor.

“We worked very hard to develop a cost recovery model that is simple, transparent and equitable. The model is accountable and financially reasonable,” said DELTA Assistant Vice Provost for Business Operations Jessie Sova.

Since non-credit classes are a revenue-generating opportunity and not funded in the same manner as the courses DELTA supports for academic credit, DELTA will charge clients to recoup the costs to remain revenue neutral.

A Phased Approach

The first phase of the transition was quietly conducted in Fall 2014. Courses hosted on the Extension Moodle server began migration to the new DELTA server. By January 2015, all courses had been moved to the new non-credit Moodle enterprise server, with proposed new courses beginning to use the server as well.

Zimmerman works with interested faculty who wish to offer non-credit fee-based online courses. She assists with identifying target markets and shared opportunities. She can work with faculty who want to take their current credit classes and move them to offer in non-credit modules.

As for longtime Extension server user Wendy Laing, director of Industry Expansion Solutions (IES) Professional Learning, she said, “We had a wonderful transition and I appreciate the College of Textiles’ and DELTA staff that facilitated the process with us.”

Several clients using the server now include:

- College of Agriculture and Life Sciences
- College of Natural Resources
- College of Textiles
- Industry Expansion Solutions
- Institute for Transportation Research and Education
- Poole College of Management, and
- The McKimmon Center for Extension & Continuing Education
 - Office of Professional Development
 - Technology Training Solutions.

Laing said, “I got involved with the WolfWare Outreach project in the Spring of 2016 but became very active working with the transition of the Extension Moodle server to DELTA in June 2014. I served in the capacity of business user for IES and subsequently became a WolfWare Outreach Coordinator for IES.”

“I believe we will continue to find opportunities to grow non-credit offerings on the WolfWare Outreach Server. I’m looking forward to increased partnerships with O&E [Outreach and Engagement] units coming on board,” added Laing.

What’s Next?

Moving forward, each college/unit can establish a WolfWare Outreach Coordinator (WOC) who signs a service-level agreement (SLA) with DELTA to offer non-credit online courses for a fee. The WOCs for each college (or in some cases, units) have a responsibility for the overall SLA support for the non-credit offerings in their areas. More integration with the current WolfWare platform will be

“We worked very hard to develop a cost recovery model that is simple, transparent and equitable. The model is accountable and financially reasonable.” — Jessie Sova

coming. This fall, DELTA will begin shadow billing partners for using the WolfWare Outreach server with actual billing to begin spring 2016.

And soon, the new non-credit registration system will be folded into the mix to make the service universal. Dr. Terri Helmlinger Ratcliff, Vice Provost for Outreach and Engagement and executive director of IES, is leading the effort to secure the Activity Information Management System (AIMS).

The system will track all NC State outreach and engagement activity for mandatory reporting to UNC General Administration. The side benefit to the WolfWare Outreach service is the automatic student course enrollments with a planned integration to begin implementation by Spring 2016.

Related Links

Visit the Moodle Outreach Server
<https://moodle-outreach.wolfware.ncsu.edu/>

NC State Engagement and Outreach
<http://oe.ncsu.edu/>



SMART Videos by Students for Students

A new video component has brought more consistency, safety and success to NC State organic chemistry labs. These improvements are thanks to a novel approach to video instruction funded by a DELTA grant received by faculty member Dr. Maria Gallardo-Williams during the 2014-15 cycle. With more than 3,000 students enrolled in Chemistry CH222 and CH224 labs each year, the implementation of the video component in these courses had a widespread impact.

Gallardo-Williams, director of the organic chemistry teaching laboratories, wanted to improve the way teaching assistants presented the lab experiments to their students. She saw using video demonstrations as an efficient and effective solution, but she wanted to make the videos as short and appealing as possible. Her solution was to involve students in the creation of the videos, and the result was a pretty unique set of educational materials.

The student-generated and guided short videos—explaining techniques, instrumentation, calculations, demonstrations and safety—present the information in a simple and direct way, which serves to better prepare the students for the lab experience. Making these videos available before and during labs allows students to become comfortable with techniques and procedures, enabling them to focus on the experiment and practice critical thinking skills during the lab.

“The challenge is to find the right balance of technical information and facts framed so that students feel they are finding a solution to the experiment,” said Gallardo-Williams.

After creating a series of test videos, Gallardo-Williams was certain student-generated videos would be a great pedagogical asset to her students of all disciplines across the university.

According to Gallardo-Williams, many lab programs in the U.S. use videos as a supplement to lab briefings. What makes the videos used at NC State different from those available on the web is that they are generated from scripts written by students, who know first-hand what

needs to be emphasized. The students involved dubbed their creations “SMART” videos, short for Student-Made Audiovisuals Reinforcing Techniques. The DELTA Exploratory Grant allowed her to make the most of the SMART videos, allowing her access to both professional production and integration into an online component that students may access at their convenience.

“Engaging students in activities that foster their critical thinking skills and preparing them for real problem solving in their chosen career path is the ultimate goal,” she said.

Teaming Up

In Fall 2014 Gallardo-Williams received an exploratory grant that was increased to a large course redesign grant because of the sheer number of NC State students who would benefit. Work began and the DELTA team, led by instructional designer Cathi Dunnagan, which was tasked with developing 22 videos in a very short time.

This project required the coordination of more than 20 students, the DELTA team and Gallardo-Williams in labs that are booked solid most of the week. Filming in the labs could happen only on Fridays. Other demonstration videos were shot in a DELTA studio in Park Shops.

Keeping the element of student-written scripts for the videos was critical to Gallardo-Williams’ mission. The videos benefit from having the expertise of a professional DELTA instructional designer editing the scripts to ensure sound pedagogy was used. The scripts provided closed captioning for all videos.

DELTA video producer John Gordon decided the project team should create a set of three videos as a pilot. These prototypes informed the four distinct groups working on their segments of the full set of videos to be produced.

Gordon said, “I will personally always argue for a pilot when there is this much work and questions. And we purposefully did a different genre of

videos so we could test all three techniques. We were refining during the whole process.”

Each video was organized into teams—each team handing off to the other as work progressed. There was an instructional design/writing team, field production team, a graphic design team and a post-production team. Constant communication was crucial to keep each aspect of the project moving through its phases on time.

An Evolving Process

The logistics of keeping people working on their specific tasks in a timely manner was critical to the project's success. The initial project coordinator, Katrina Lamberto Elsheimer, devised a spreadsheet that would prove essential to the evolving process. This allowed team members to look at any moment and see where videos, scripts, edits, etc., were in the schedule so they could plan their work accordingly.

“The process after the script had gone through those three steps (students write, Maria checks, Cathi rewrites) was to take the scripts into the lab, do the experiments and set up video shots. We were taking notes and in the process we were rewriting the script for it to make sense in the video realm,” Gordon said.

“To me the magic of this project is not so much the video—it's the scripting. There was a lot of diligent effort put into making sure the script made sense to the student learning this complicated material for the first time. So that was the theory behind the students writing the scripts—to use the language of a young person,” added Gordon.

The synergy of the project team was evident in the final result. The first set of three videos was implemented into the course during Spring 2014.

Clinton Cherry, graduate student and lab teaching assistant (TA) for the past two years, contributed to the project by writing scripts, handling audio and serving as an actor.

“The videos help the students by being able to visualize what they need to do rather than trying to imagine what they need to do when the TA explains it. Our research showed that with the instructional videos the labs typically ran much faster and the students seemed to reflect a better understanding of what was going on in the lab,” said Cherry.

Beyond the Videos

DELTA large course redesign grants require evaluation. For the CH222 and CH224 labs Operation Evaluation Observation (OEO), DELTA video recorded students in each of the six different labs during a two-week period. In each lab Go-Pro cameras were set-up to record in both the lab room and the instrument room. Additionally, a set of six Go-Pro cameras recorded 360° video in the lab room. These videos, along with audio transcripts, questionnaires and survey responses, comprised the data collected for the OEO.

“To me the magic of this project is not so much the video—it's the scripting. There was a lot of diligent effort put into making sure the script made sense to the student learning this complicated material for the first time.” — John Gordon

Working with Gallardo-Williams and her research team, students mined the collected data and generated a SMART videos research poster presented at the 14th Annual NC State Summer Undergraduate Research Symposium.

Regarding the preliminary findings, Gallardo-Williams stated “Analysis of the questionnaires administered during the lab shows significant improvement after watching the videos provided. The questionnaire was broken down by category relating to each of the videos watched. Three categories of videos were introduced to students: technique, instrumentation and calculation. The questionnaire results show that students who watched the instrumentation video had a significant improvement in their understanding of the different aspects of their lab. The largest effect size was calculated for the instrumentation video, but we found positive effects in the three categories of videos that were assessed in the OEO.”

Gallardo-Williams continues to work with the data collected from this research by conducting content analyses on the audio transcripts and analyzing the OEO laboratory videos. The research team plans to set up additional observations to see how the different kinds of videos are used by the students. All of this information will be recorded this fall and spring 2016. Gallardo-Williams is attending the “Open Education Resource Conference” in November where she will present the preliminary findings.

Related Links

Visit the Undergraduate Organic Chemistry Teaching Laboratories website

<http://www.ncsu.edu/chemistry/octl/index.html>

SMART Videos Research Poster

CH222-OEO-Poster-Summer-2015.pdf



Launching a Distance Education Program

Written by Laura Oldham, communications intern

Development of a Distance Education (DE) program has much in common with a rocket launch. Success is contingent on vision, leadership, expertise and careful planning from concept to reality.

Dr. Elizabeth Nichols, associate professor in the College of Natural Resources, along with professors at Elizabeth City State University (ECSU) and Cape Fear Community College (CFCC), teamed together to create the Online Undergraduate Renewable Energy Assessment (REA) Certificate. As an expert in Environmental Technology and Management, Nichols serves as program director for NC State. The other institutions and North Carolina's Clean Energy Technology Center (NCCETC) also contributed to the program's creation and curriculum. Through the collaboration of these educators and support from various DELTA staff members, the certificate became reality: an invaluable resource for students seeking academic credentialing in this emerging field of knowledge and practice.

DE program launches are beneficial for a number of reasons. They provide opportunities for students to advance their education in concentrated areas. They provide access to education and new workforce development opportunities for students who are unable to attend classes on campus. Online and blended learning courses provide flexibility for students with work commitments and other life responsibilities.

Sometimes the hard work poured into the creation of these programs is overlooked. But this is a different story.

From the Ground Up

By 2010 student interest in renewable energy technologies was evident, but existing courses were mostly limited to engineering courses for renewable materials and power management processes. While department faculty recognized the increased demand for additional content area, they also knew additional resources to develop and teach these courses were limited.

The solution? Develop an undergraduate online program for students to earn certification in renewable energy. The certificate is based on a combination of courses from NC State and sister schools. In order to accomplish such a large task, smaller steps were required to reach the final goal.

Faculty from NC State, ECSU and CFCC met to discuss how student demand for sustainable energy production could be met. They also consulted with colleagues at NC State's NCCETC (formerly the Solar Center) to include expanded content in the developing curriculum. During the next two years, through workshops and sharing of syllabi, faculty developed a curriculum suited to the learning objectives of the program.

Countdown to Launch

Because each DE program is unique, its creation process is also one of a kind. However, there are certain steps that guide a successful DE program launch. According to Dr. Rebecca Swanson, associate vice provost of Distance and Distributed Education, "DE programs are typically initiated by a single faculty member or small group of faculty who champion a particular initiative. The impetus for a new program is typically in response to an unmet need. This may come from interested students, an economic sector, or emerging local, state, and national career opportunities."

After a faculty champion for the new initiative steps forward to lead the program, needs assessments are put in place to gauge the viability of the program and to avoid duplication with programs elsewhere. A proposal is developed. Faculty members raise questions such as 'Who is the target audience?' 'What is the best course delivery method for the prospective student?' and 'Are resources available to make the program sustainable?' The answers to these questions are informed by the feasibility study, which determines how programs are created, identifies student constituencies, addresses potential barriers, and

helps faculty develop a curriculum that meets the desired outcomes. Knowing who the students are and what they're interested in can "help faculty calibrate the way the program is developed," stated Swanson.

DELTA lends support with a planning and development budget and providing support throughout the approval processes. Criteria for program establishment and assessment as established by NC State, UNC General Administration and the Southern Association of Colleges and Schools Commission on Colleges are incorporated into the program proposal.

DELTA's marketing support includes commissioning of feasibility studies, along with competitive and trend analysis. Assistance is also available to build a website that targets student recruitment, supported by strategic online marketing, etc.

Concurrent with the program approval processes the next steps involve multiple parties, including faculty, DELTA staff who worked with course production, and marketing support for student recruitment leading to the planned program launch.

While reaching this stage in the course design process is a milestone in itself, the program would be nothing without the students taking the course. Because of this, the target audiences and potential students discovered through prior feasibility studies and environmental scans must be considered. In the case of the REA Online Certification, the College of Natural Resources and DELTA were aware that military students comprised a significant student constituency. Thus, student recruitment for the program specifically targeted military students and their families along with other potential students, and the certificate was launched.

Although there is no set way to develop a distance education program, Swanson said the "key" to any successful DE program is ensuring full faculty support. This support is crucial as the program goes through an approval process lasting approximately two years. Department support staff are also crucial in ensuring optimum student recruitment and retention. With all hands on deck in the College of Natural Resources, as well as those at ECSU and CFCC, the team was fully engaged. Based on student interest, faculty project the REA online certificate to eventually graduate 30 students each year. In its first year three

students already completed their certificates, and that number is expected to continue to grow in the coming years.

About the Certificate

With each educational partner committed to providing one or more classes, a total of five courses are offered in the REA Online Certificate program. Each student must successfully complete four courses to earn the certificate. Because not all courses are offered at each school, one major success of the program is the curriculum's availability to enroll students statewide through NC State's DE program.

With DELTA's assistance, students have not only been able to complete a unified program consisting of curriculum from multiple schools, but they have also been given the opportunity to witness what the skills look like in the field.

Bert French, part-time videographer in DELTA's Video Communications Services, shot and edited video footage of a field trip in Eastern N.C. French also shot segments on biofuel processes, grass stock storage and a tour of bioenergy feedstock in N.C. The videos are incorporated into the certificate's online courses so students can visualize information discussed in class.

"DE programs are typically initiated by a single faculty member or small group of faculty who champion a particular initiative." — Dr. Rebecca Swanson

"The central outcome of the curriculum is for students to develop the knowledge and skills to assess lands and facilities for renewable energy production in wind, solar, solar-thermal, geothermal and biomass technologies," said Nichols. Now, thanks to the help of contributing sister schools and NC State's Distance Education services, students from all backgrounds are able to learn on their schedule from this combined curriculum and receive a certification, giving them a competitive advantage in an increasingly green economy.

Related Links

Learn More About the DE Program Planning Process and Resources

<https://delta.ncsu.edu/program-planning-and-development/program-planning/>

Read About the NC State Renewable Energy Assessment Certificate

<http://rea.cnr.ncsu.edu/>



Student Workers Share Talents with DELTA

Written by Robbie Corrigan, communications intern | Photographed by Katie Harris, new media intern

When students log onto Moodle, Mediasite, Wolfware Classic, etc., they do not realize the hard work that goes into the production and maintenance of these sites.

Student Success

Many of the items seen in classes using Moodle have been created or edited by students. "I didn't know how much DELTA was involved until I started working here and it is kind of mind-blowing; all the things we do for only having six interns" said Sarah Anderson, multimedia intern for the New Media Development team at DELTA.

Students are vital to DELTA's success. DELTA employed more than 20 students during the 2014-15 fiscal year with majors ranging from Design to Mechanical Engineering.

DELTA hires students in the hopes of teaching them valuable skills in their respective fields while letting them build their own professional portfolios and contributing to a variety of projects. The student workers apply the knowledge they have learned in their studies at NC State to the projects they work on for DELTA. Each student has gained insight and experience from the staff that works here.

"DELTA is awesome! They are fantastic individuals who really care about student workers and their success," said Lauren Hirsh, a digital teaching and learning analyst at DELTA. Currently, her primary focus is to collect, analyze and interpret data to assess student learning as a result of course redesign. She also assists in reporting on what is learned from this research.

DELTA strives to provide students with opportunities to work on-campus doing a job they enjoy and can learn from.

"NC State student employees are an essential part of the DELTA team and help us extend the reach of our services. Students bring important user perspectives for the academic technologies that we

deploy, present us with engaging ideas on what should happen with teaching innovations, and they contribute fresh perspectives with amazing, creative talent to our daily work. They are the embodiment of "think and do" at DELTA, and we are happy that we are able to provide students with a real-world, hands-on work experience while they are at NC State," said Associate Vice Provost for Instructional Technology Support and Development Donna Petherbridge.

Student Roles

"I like working for DELTA because NC State does actually really care about their students," said Anderson.

Anderson, an art + design major focusing in new media and animation, has been interning for DELTA for three years. She began working on 360° video production and virtual reality for a DELTA Grant project with the College of Natural Resources called eFire. Anderson credits DELTA for exposing her to many new multimedia technologies.

Each multimedia intern has a major, minor and learning project. Anderson's favorite project is one for the College of Textiles. Anderson and other interns created animations of all of the machines that the students work with in their lab. They visited the lab and studied the inside of the machines, conducted research and designed 3-D animations for the students so that they could understand how the machines they commonly work with actually function.

"You always hope people appreciate what you are doing and luckily this job tends to come with a lot of gratitude, so it is very fulfilling" said Scott Gainer, an industrial design major.

Gainer is a space designer at DELTA. He develops structural art pieces for DELTA and the NC State community. Gainer hopes the NC State community will be a little more cognizant of DELTA, the employees and all the work they do.



Sarah Anderson



Lauren Hirsh



Scott Gainer

Gainer’s most notable project was the “face-lift” he gave to the Shelton Leadership Group in the McKimmon Center. He painted the walls and trim, printed a mission statement in vinyl and cut artwork onto canvases. “Seeing how people react to small, little adjustments that I’ll make, just those little things that you don’t realize that people actually notice, they are coming back and saying ‘this is great.’ It was more rewarding than I imagined,” said Gainer.

Lucas assisted The Graduate School with their Moodle site development and management for their fall and spring student orientations offered each year.

Henry Havey, also an instructional technology consultant who is majoring in Nutrition Science, described following his older brother Joe into

“DELTA is such an innovative environment, and the folks who work here are just really wonderful people. They are not only a lot of fun but also really good at what they do,” said Hirsh.

“DELTA is such an innovative environment, and the folks who work here are just really wonderful people. They are not only a lot of fun but also really good at what they do.” — Lauren Hirsh

With rapidly evolving technology, DELTA is using innovation, grants and collaboration to bridge that gap. Hirsh spearheaded the DE proctoring student services survey project. From the beginning to end, she wrote and submitted applications, wrote survey tools, collected data, analyzed the data and provided the DE Testing Center with feedback from the surveys.

the job. He likes the problem solving components of the help desk as well as being able to work with a skilled team to progress technology in education.

“I’d say the best part of what I am doing is working on student success-related outcomes, as that is what I am really all about. I am passionate about education and love technology. There is a lot we can do to leverage technology to increase student retention and success,” said Hirsh.

Serving on a panel presented to NC State faculty during Summer Shorts, Harvey said, “I enjoyed Summer Shorts by providing feedback on online courses from a student perspective. It was beneficial because I was able to present the undergraduate perspective on DE courses.”

Cultivating Talent

For McLean Lucas, an instructional technology consultant at the help desk, having the opportunity to work on campus and assist faculty with technology has been rewarding. A public relations major, Lucas said, “DELTA is helping to change the way we look at education here at NC State. The incredible opportunity for online learning at this university is only made possible by the efforts of those who have worked before me.”

With the increase of students on campus, the benefits of working for their institution are more evident now than ever before. Not only does being a student employee benefit the student, it helps the supervisors as well.

“You really get the feeling that you are contributing not only to the office but to the university community as a whole,” said Hirsh.

Related Links

About DELTA
<https://delta.ncsu.edu/about-delta/>

Explore Job Opportunities on Campus
<http://careers.ncsu.edu/getting-experience/campus-jobs/>

By the Numbers

DELTA significantly impacts the NC State community.

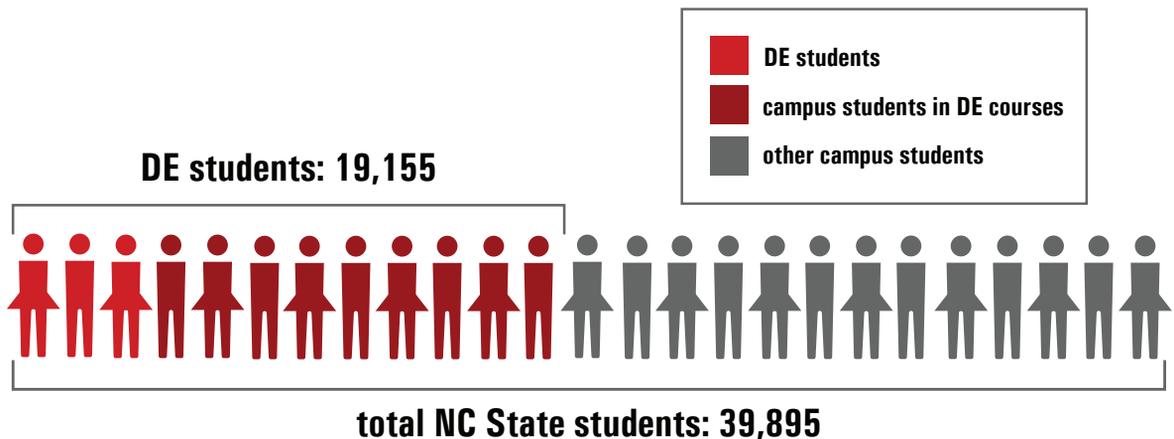
Distance Education (DE) at NC State



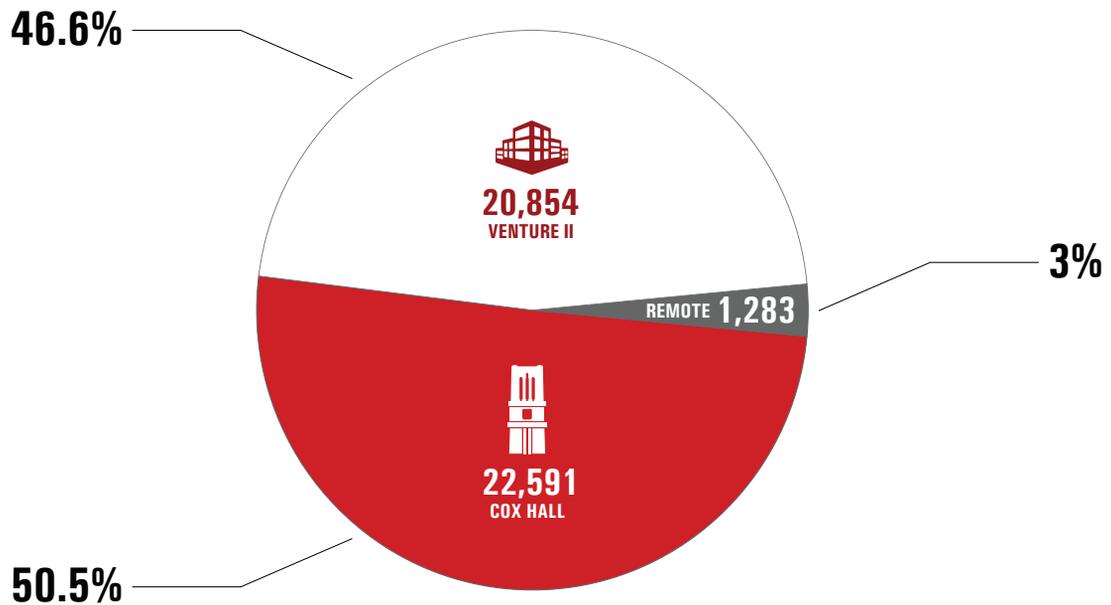
DE Overview



Student Population FY 2014–15



Proctored Exams



Instructional Support



4,640
LearnTech
help desk calls



150
instructional
consultations

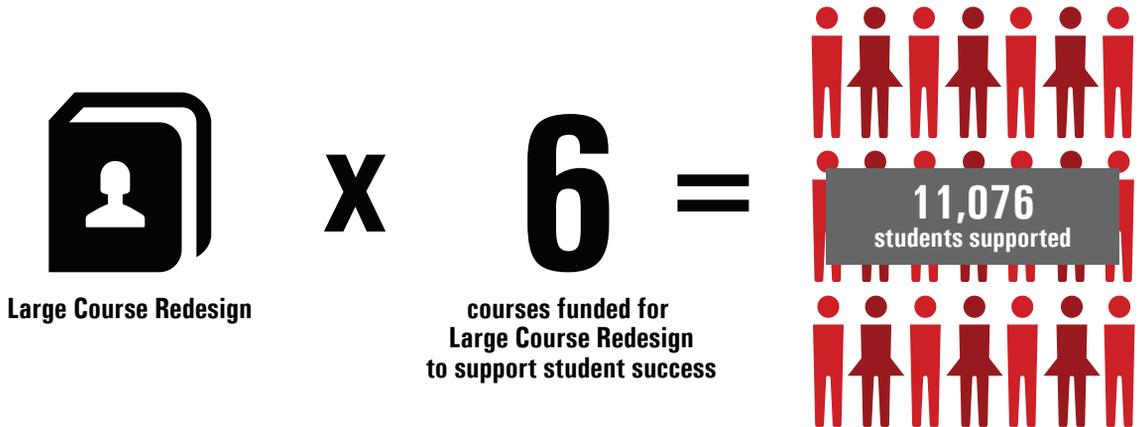


886
workshop
enrollments

1,022
Mediasite
help desk calls

92
workshops
taught

Instructional Production

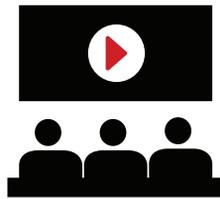


More than **32** courses received **8,606** hours of production support or consultations

Video Communication Services



4,944
classroom hours



3,350
hours monitored
in central control room



1,525
hours of interactive
synchronous learning

164
video conferencing
sessions outside
the classroom

131
videos
produced

42
departments/clients
supported

W

91.5%

of NC State students
use at least one of our
learning management systems

m

7,811

course sections
use moodle

WWc

2,168

course sections
use WolfWare Classic



150

instructors using
classroom capture

mediasite[®]
by sonicfoundry



1,697,916

Mediasite recording views



188

courses supported
by Mediasite lecture capture