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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

A number of years ago I remember listening to Governor Jim Hunt ("THE Governor," as everyone but the newest of newcomers to North Carolina knows) make the opening remarks at the Emerging Issues Forum. He was explaining how the research, meetings, focus groups and other activities that had led up to the Forum would not stop there. We would take what we learned, and translate it into tangible actions to benefit North Carolina and its people. "The Institute for Emerging Issues," he said, "is not just a think tank, it's a think and do tank." Well said, Governor Hunt!

The Governor's "Think and Do" tagline for the Institute for Emerging Issues (IEI) resonated with many at NC State who recognized that it really describes the culture of our university. Years later, that tagline is core to NC State's brand. It certainly resonates with me, and speaks to the culture we have built in DELTA. The stories featured in this annual report are great examples of how we "think and do" in partnership with our colleagues and stakeholders across the university.

One great example of a "Think and Do" partnership was the collaborative effort with Dr. Clint Stevenson in the Department of Food Science to develop a new online Food Safety Manager's Certificate program. NC State is well known for its expertise in this area, and Dr. Stevenson realized that there was a critical need for food safety education and training, delivered electronically, to meet the needs of the industry. To build an online program that was innovative, engaging and of highest quality, he looked to DELTA for help. Read the story to learn how the team came together to turn thoughts into actions, resulting in the successful launch of this new program.

Taking this theme one step further to "Listen, Think, and Do" is the story about improvements to Wolf-Ware. Through the WolfWare feature request form, stakeholders from across the university submit requests for new features and suggestions to improve the WolfWare environment. The DELTA staff

"The stories featured in this annual report are great examples of how we 'think and do' in partnership with our colleagues and stakeholders across the university."

-Dr. Tom Miller

thoughtfully considers each request, evaluates the cost, feasibility and impact, and implements those that rise to the top. This is one of the ways in which DELTA strives to "create a culture of constant improvement" as embodied in Goal 4 of The Pathway to the Future.

The above are but two examples of how DELTA is working with our partners across the university. Take the time to read the stories in this report and learn about DELTA's collaborative efforts to facilitate the success of our students through educational innovation.

Sincerely,

Dr. Tom Miller Vice Provost, DELTA



Team Up for Food Safety

Don't underestimate the value of food safety managers. When you pour milk over your Cheerios, you appreciate the peace of mind of knowing someone is looking out for the quality of that milk. But a shortage of trained workers, combined with new legislation that increased regulations in food manufacturing, created a significant demand in qualified food safety managers in the US.

"We have a food manufacturing workforce capacity problem in our country," said Dr. Clint Stevenson, assistant professor and distance education coordinator for NC State's Department of Food, Bioprocessing and Nutrition Sciences (FBNS). "We don't have enough people qualified out there who know what they're doing."

Stevenson set out to change that, leading the charge for NC State by streamlining an online program, the Food Safety Manager's Certificate. With this three-course, fully-online program, just about anyone in the world can learn the basics of food safety, quality control and operations management.

Building the Right Team

Before coming to NC State, as quality supervisor at a large food manufacturing plant, Stevenson learned the importance of a highly qualified team. So when he prepared to revamp the certificate program, he knew to team up with the right people. Stevenson approached DELTA about forming a unique relationship between his department and DELTA by hiring a joint DELTA-FBNS instructional designer to assist with developing certificate and other online efforts.

"Instructional designers bring much more value than you'll ever realize," said Stevenson. "A good instructional designer will make you more studentcentered and help you to focus on remaining a subject matter expert while improving your effectiveness as a teacher."

DELTA welcomed the partnership and together they hired Brook Corwin to serve as an instructional

designer and liaison between DELTA and FBNS. Stevenson and Corwin dove into the subject matter, and the vision for creating an exceptional learning experience began to grow. So did their team.

Stevenson involved his teaching assistant to represent the student perspective. Corwin provided a bridge into other DELTA services, and soon members of DELTA's Video Communication Services, Marketing and Partnership Development and Instructional Innovation Services jumped on board to offer video production, marketing, design and course production services.

"I found how valuable building the right team is."

-Dr. Clint Stevenson

"From the beginning, Clint had such a clear idea of what students should gain from completing the certificate," said Corwin. "Plus, he was eager and willing to engage learners through multimedia and interactive content. That made for a natural connection to the talent and creativity in abundance at DELTA. The learning goals of the project were very well defined, so all members of the team could contribute their expertise while still maintaining a coherent experience for students."

Read more about the Howling Cow Case Study created by the team and watch the videos they made at delta.ncsu.edu/annualreport.



Making Plans

They were asked to develop NC State's first Information Technology Strategic Plan. They were asked to provide a vision and framework for how the IT environment could strengthen the university. They were asked to facilitate, guide and collaborate. They did all that and more.

When DELTA's Dr. Donna Petherbridge and her six colleagues on the IT Strategic Planning Process Steering team kicked off in January 2013, they faced a mountain of challenges. For years, IT pockets across campus had worked independently, with little sharing of resources, direction or any knowledge of each other. The IT Strategic Plan set out to change all that. But first, the Process team had to build a sense of community.

Let's Get Together

During the 18-month planning process, the Process team brought together more than 500 stakeholders across campus in focus groups, large-scale planning sessions, committee meetings and presentations. They sought ideas and feedback from faculty, staff, administrators and students. They leaned on existing IT governance committees and subcommittees for themes, goals and strategies and tactics.

"The organizations across campus are struggling with similar issues," said Petherbridge, DELTA's associate vice provost for Instructional Technology Support and Development. "No single group owns an issue. We have a lot more common ground than we realize sometimes."

Stan North Martin, director of OIT Outreach, Communications and Consulting and member of the Process team, saw a remarkable shift in NC State's IT community during the planning process.

"There has been a coming together of IT folks on campus to say we have to do a better job of sharing our resources, collaborating more effectively, and leveraging the incredible intelligence and value that different groups on campus bring to the mission of the university," said Martin.

The Process team led the IT community in identifying a set of guiding principles, which would serve as a guide to everyone at NC State making IT decisions. These principles, Petherbridge said, are the philosophy behind how IT staff should work together and they should be clear in every project that they do. They speak to collaboration, transparency, innovation and efficiency, to name a few. Petherbridge has been a vocal champion for the collaboration focus of the plan.

"The process is the product. You have to go through the process of getting people to think together, and that doesn't mean that they think alike. You need different ideas and views to help guide the collective journey."

-Dr. Donna Petherbridge

"Collaboration is not an easy thing to do if you do it right," said Petherbridge. "Collaboration is about wrestling with ideas and talking to people and going back and forth. It's not easy, but it's worth it."

Common themes began to emerge, and from those themes the Process team pulled out strategic goals, which they grouped into three main areas: innovate, manage, collaborate. Those goals led to strategies, ranging from deploying tools in data analysis to creating IT spaces that inspire innovation.

Read more about DELTA's role and the final results of the IT planning process at delta.ncsu.edu/annualreport.



Technically Speaking

Moodle users, have you tried NanoGong yet? If you haven't, you've probably seen it and wondered what that new little speaker button in the Moodle editor is. That's NanoGong, a voice recorder plug in that allows students and instructors to record themselves and easily insert this recording into a Moodle activity, quiz, lesson or assignment.

DELTA added NanoGong to Moodle in fall 2013, initiated as a feature request from the CHASS information technology department. Instructors in CHASS's Department of Foreign Languages and Literatures had been using a different voice recording tool for speaking activities and pronunciation assignments, but they wanted a tool that was integrated into Moodle. DELTA assessed the options and agreed with CHASS's NanoGong recommendation. They determined that DELTA support for this plug in would benefit Moodle users. Plus, for CHASS, it would free up staff time, systems support and money that they had been spending on a software license.

"This has been a tool that people have really made use of," said Bob Kadle, CHASS instructional technology support analyst. "The integration in Moodle made it much easier for students to do their assignments and for faculty to track their activities. It has been a success."

NanoGong's value practically speaks for itself. In it's first year in Moodle, students in 29 course sections used NanoGong, and it rose to the top 10 percent in usage of Moodle plug ins.

We're Listening

NanoGong was just one of the many feature requests that DELTA received, evaluated and implemented last year. DELTA encouraged feedback through an easy, transparent feedback request system linked from the bottom of every WolfWare page. Here, our users (anyone with a Unity ID) made recommendations for new or improved functionality in WolfWare tools, other users voted in agreement, and DELTA staff indicated status or responded to the request.

The feature request system is one way that DELTA works to maintain a culture of constant improvement.

"The whole team of people working on WolfWare strive to always make it better," said Dr. Marty Dulberg, senior LMS coordinator. "We want it to meet the needs of faculty and students and provide new, innovative tools and techniques."

"The whole team of people working on WolfWare strive to always make it better."

-Dr. Martin Dulberg

Other significant items completed from last year's feature request list included:

- WeBWorK, an open-source alternative to WebAssign
- improvements to the TurningPoint clickers module
- new Moodle formatting options
- Open University (OU) date report module, which saves instructors time in rolling over Moodle courses to a new semester

Read more about updates to NC State's enterprise learning technologies at delta.ncsu.edu/annualreport.



On the Flip Side

Though it has gotten a lot of hype in the last few years, course flipping is nothing new. Some of the technologies we're using to make it happen may be new, but engaging students, getting them to think creatively and critically, and making the best use of class time are strategies that have surrounded education for hundreds of years.

When instructors approach DELTA staff for help with course flipping, they're often surprised that the conversation is more about sound teaching principles and less about technology.

"Course flipping is a way of using technology tools outside of the classroom to support a more engaging atmosphere inside the classroom," said Daniel Davis, DELTA's associate director of Instructional Design and Development. "So instead of familiarizing themselves with the content during lecture and applying it by themselves outside the classroom, we are switching the narrative. Once prepared, students can enter the classroom to conduct hands-on learning. Except now, they're engaging other students, TAs, and faculty and the learning is more effective," said Davis.

Last year, DELTA helped dozens of instructors across campus to boost engagement in their courses. Whether the instructor initially asked for a course flip or for some help putting course materials online, DELTA offered a solution. Through instructional consultations, workshops, seminars and course grants, DELTA staff helped out. Some were whole-course projects; some were whole-lesson projects. They all had a dedication to learning objectives and student success at the core.

"Many instructors, when they hear flipped classroom, only think about the video portion, but it is much more than that," said Emily Ligon, lead instructional designer. "It's about figuring out ways to make the face-to-face section more interactive, where students are doing things and working through the materials, whether that's problem sessions, case studies or applied learning. Your prep work and your post work are not necessarily

going to be videos, but anything that support the applied learning in the classroom."

Think and Do

Some people would say that Chris McKittrick flipped his course, but McKittrick doesn't care for that buzzword. Over the last year, McKittrick, lecturer in the accounting department, worked intently with Ligon to improve learning outcomes in ACC 200: Introduction to Managerial Accounting. This 300-person-per-section lecture course, which presents accounting through a business lens, serves as a gateway course for many majors in several colleges. Historically, it has been a challenge for many students.

"I see more faces lighting up each day we take this approach. I sense my students are saying, 'Hey, I'm starting to get this. I think I can figure this stuff out on my own now.'"

-Chris McKittrick

"I want to create an interactive environment, to engage the students, and make them feel that they need to come to class and work, and can see the benefits of doing so," said McKittrick.

Read more about the changes that McKittrick made to his class at delta.ncsu.edu/annualreport.



The Short of IT

At DELTA's Summer Shorts in Instructional Technologies, the shorts are optional, but an open, summer state of mind is required. Before jumping back into the semester's frenzy, faculty members and instructional staff gathered in early August to step back from their disciplines and focus on becoming better teachers.

"Hearing how other instructors solved similar problems was inspiring; it sparked new ideas for my classes."

-Etta Barksdale

In this week-long workshop and seminar series devoted to teaching with instructional technologies, nearly 100 participants attended 16 sessions and an open lab taught by DELTA staff, partners and instructors. The topics ranged from WolfWare to gamification to educational infographics. With a balance of workshops and seminars, this diverse group honed in on the "why" and the "how" of using technology in teaching.

Putting Heads Together

In a break from the department-centered world in which most faculty members live, Summer Shorts was a forum for being inspired by colleagues from every college at NC State.

"One of the benefits of the seminars is that it puts DELTA in the role of facilitating conversations," said Ashley Grantham, associate director for DELTA's Instructional Technology Training. "You get something extra from the face-to-face interaction. In this setting people feel safe to share their challenges and offer suggestions."

Built into some of the seminars were opportunities for faculty to break into groups, compare strategies, share real life scenarios and learn from each other's successes and mistakes. "It's always beneficial and healthy to compare with others in your academic discipline," said Patrice Nealon, lecturer in Poole College of Management, who attended eight Summer Shorts sessions. "It can be equally rewarding to share outside my academic discipline. Even though course content may vary, we all adapt our content to similar pedagogies."

On Track

For a new spin on this year's Summer Shorts, participants looking for a particular concentration could select offerings from three distinct tracks: Online Group Work, WolfWare Fundamentals, and Innovative Instruction. Though not restricted to a track, many used the tracks as a way to solve a particular teaching challenge.

Etta Barksdale, senior lecturer in the Department of English, signed up for Summer Shorts looking for some fresh ideas in online group work activities and to learn about new technologies.

"Hearing how other instructors solved similar problems was inspiring," said Barksdale. "It sparked new ideas for my classes."

After attending four of the online group work sessions, Barksdale left Summer Shorts with some new strategies for handling groups in her English courses, such as requiring students to use Google Apps for collaboration and incorporating a progress report into her group project as a formative assessment.

"My students will be using activities that have been proven effective by other instructors," said Barksdale.



Shoot & Share

When snow and ice forced NC State to close in January 2014, instructors welcomed the breakthe first time. Then as icy weather shut down the university again and again, they grew frustrated and anxious, slipping behind as the semester marched on. Several instructors found a way to show up for lecture, from the comfort of their home office. The solution: an easy, new tool called My Mediasite.

"My Mediasite empowers instructors to deliver information to their students in a way that allows them to be freed from a specific room when needed," said Leisa Bolles, director of DELTA's Media Production Services.

Expanding the Toolbox

With My Mediasite-a suite of desktop recording and media management tools-an instructor can record a lecture on any device, upload it to a Web portal, edit it using simple Web-based tools, and share it with his students. This service, which DELTA piloted with over 100 instructors and staff in spring 2014, makes content delivery a snap.

"It's another tool in the toolbox to get information to the students in a rich media format, in a way that the on-demand, click-a-button, instant-access society wants to be able to reach things," said Bolles.

My Mediasite didn't replace NC State's classroom capture tool, Mediasite, but offered instructors a flexible set of tools aimed at user-generated content. My Mediasite solved two key problems instructors faced: storage and security. With the upload feature, instructors no longer needed to turn to solutions like YouTube to hold large media files. And My Mediasite's secure access, with the default limited to individuals with a Unity ID and the link to the file, removed concerns about securely distributing media to only those who need it.

Case in Point

For Dr. Greg Byrd, professor and associate department head of Electrical and Computer Engineering (ECE), My Mediasite launched at just the right time. Byrd volunteered to teach ECE 109, Introduction to Computer Systems, at the last minute because the scheduled instructor was suddenly unable to teach that semester. However, he knew that some planned travel on department business would cause him to miss a number of class sessions. He signed up for the My Mediasite pilot, hoping it would solve his problem.

"I can create videos anywhere, any time, without having to schedule anything, and it's easy"

-Dr. Greg Byrd

Over the course of the semester Byrd created about ten short videos, six to ten minutes in length. Some, which were a lecture-like explanation of course concepts, served as a replacement for lecture. For other videos Byrd recorded screen capture demonstrations of circuit simulations, which served as supplemental resources for the students.

Byrd was impressed by just how easy and straightforward it was to record, upload and share video using My Mediasite. With a little instruction from DELTA's online training videos, he was up and running with My Mediasite very quickly.

Read more about Byrd's experiences and the outcome of the My Mediasite pilot at delta.ncsu.edu/annualreport.



Statistically Significant

With all the buzz about big data and data science, have you wondered who is out there crunching all those numbers? Professionals in a broad range of fields, from marketing to education to programming, are finding themselves short on statistics training and needing help, stat. These mid-career adults can't abandon their jobs and go back to school, so they seek a more practical route: online education. The newest certificate programs from NC State Distance Education are just what they need to move up the career ladder.

"This is such a success story. It focuses on the best of collaboration between an academic department and DELTA."

-Dr. Rebecca Swanson

When two new online certificate programs from the Department of Statistics officially launch in spring 2015, professionals locally and around the globe will have some new options. The first, a graduate certificate in Applied Statistics and Data Management will give a broad audience a deeper understanding of statistical methods and statistical programming techniques. The second, a graduate certificate in Statistical Education will give statistics teachers a strong foundation in statistical concepts and how to teach introductory statistics.

These 12-hour programs, which will take roughly four semesters to complete, are fully online, yet they provide students with the same instruction, assignments and quality professors as their campus-based peers.

Bringing Experience to the Table

Dr. Webster West, professor and director of online programs in the Department of Statistics, knows what it takes to launch a successful online statistics program. West, who has been teaching statistics online for over a decade, helped launch the online

statistics program at Texas A&M University and saw staggering demand for the program. Now in his second year at NC State, West understands the unique nature of mature students who come into the program with specific applications and professional goals.

"I'm eager for our faculty to see the value that these people bring to the table," said West. "These students have work experience, recognize that they need to know statistics, and have very specific goals in mind with our discipline. They're much more motivated and have a very different perspective on the discipline, and it's a healthy one."

The Department of Statistics, ranked #15 nationally for their graduate statistics program, has a strong history of graduate education. But this new program offers a more professional, applied focus than the academic nature of their traditional master's program. And while they've started small with certificates, they're adding more courses to create a fully online master's degree in 2015.

Equation for Success

Launching a certificate is no easy task. In this case, the right people in the room, plus a strong commitment to a good idea, equaled a smooth and efficient process. At this project's inception, Statistics partnered with DELTA, relying on them to shepherd the department through the process.

"This is such a success story," said Dr. Rebecca Swanson, DELTA's associate vice provost of Distance and Distributed Education. "It focuses on the best of collaboration between an academic department and DELTA. We worked seamlessly together to get an initiative launched from start to finish, with good dialogue and communications. It showed the maturity of DELTA's engagement in program development."

Read more about the collaboration between DELTA and Statistics at delta.ncsu.edu/annualreport.

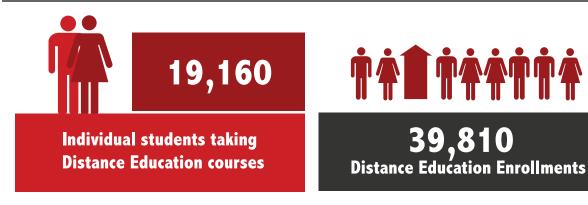
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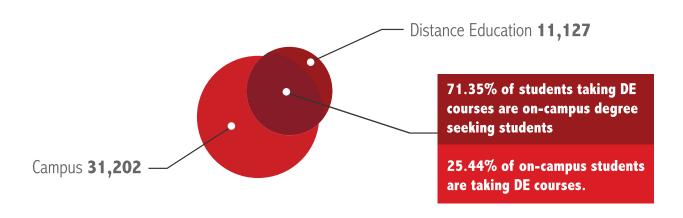
By The Numbers

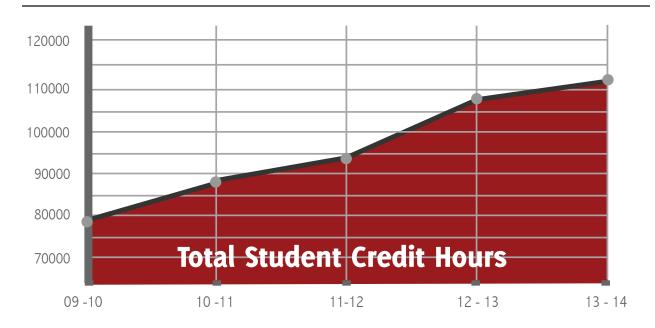
DELTA's wide range of services impacts more and more NC State faculty members, staff and students each year. A quick glance at our FY 2013-14 stats demonstrates the scale of our services in distance education, instructional support and production, and enterprise learning technologies.

Distance Education at NC State



Distance Education Student Population (Based on Fall 2013 Census)

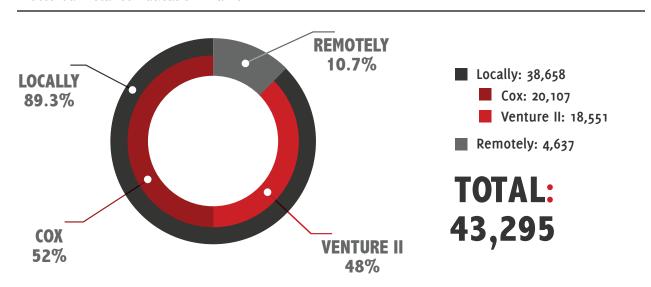




In 2013, NC State Distance Education had grown to...



Proctored Distance Education Exams





5,843
LearnTech help desk calls



154
Instructional consultations



638
Workshop & seminar participants

Instructional Production



x7=

7 courses funded for Large Course Redesign supported 4,726 students



- 31 DE courses received production support or consultations
- **7,650** Student enrollments supported by DELTA video production
- 9,797 Hours of professionally-recorded classroom instruction

Video Communication Services



5,250 Classroom Hours



2,347
of hours monitored from Central Control Room

1550 hours of interactive

syncronous learning

hours of video conferencing outside of the classroom

165

tments/clients



91.5%

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

1,093,250

views of recordings through



7,644 course sections use



5,479 virtual meetings held in





increase in courses supported from FY12-13



Instructors Using Opt-In Portal



Courses supported by Mediasite lecture capture (in Classtech, PCoM and CALS rooms)



Put to the Test

In a single day during fall 2013 finals, 1,026 students took exams through DELTA Testing Services. Given the 38,658 exams that Testing Services administered in 2013-14, that day was just a drop in the bucket.

DELTA Testing Services isn't hurting for business. With an average of 24 percent growth in the last five years, this small staff serves more and more faculty members and students every year, but with constrained resources. To keep up with the demand of offering testing for nearly 600 courses, while maintaining a secure testing experience, DELTA had to get creative.

Testing Efficiency

During finals two years ago, walking through the DELTA lobby in Venture II was a challenge. Students filled every available seat, sprawled studying on the floor, and lined the hallways waiting for their turn to take a test in the Testing Center. Because of the efficiency measures DELTA Testing Services implemented, spring 2014 finals was a different picture entirely.

"I am so grateful to the DELTA testing center for allowing me to use them. They have been super helpful, quick to address concerns, issues and glitches, and very respectful." - Dr. Kay Sandberg

Testing Services extended testing center hours in their two primary locations in Cox Hall and Venture II. To move beyond their 70-carrel capacity, they rented overflow space in Talley Student Center and in D.H. Hill Library and used conference rooms in DELTA's Venture II space.

They also boosted efficiency through collaboration within DELTA. WaitTime, an app developed by DELTA's Applications Development team, helped students estimate when the centers were less crowded and plan accordingly. Applications Development also created a proctoring administration tool, which provided Testing Center staff with details for hundreds of course tests at their fingertips, making it quicker to hand out tests.

"The efficiency of the testing environment increased dramatically," said Rebecca Swanson, DELTA's associate vice provost for Distance and Distributed Education. "We were able to drastically reduce the wait time for students, and frankly, to alleviate the burden on faculty. Who wants to grade 300 exams the last day of the final exam period? This really helped us to facilitate exams as expeditiously as possible."

"I am so grateful to the DELTA testing center for allowing me to use them. They have been super helpful, quick to address concerns, issues and glitches, and very respectful."

-Dr. Kay Sandberg

Serving Instructors

From an instructor's perspective, DELTA Testing Services does everything but write the test and grade it. Dr. Kay Sandberg, teaching professor in the Department of Chemistry, has used DELTA Testing Services to administer all of her DE tests for as long as she can remember. Thanks to a partnership between DELTA and the College of Sciences, Sandberg also used Testing Services for her face-to-face classes last year. All total, DELTA administered more than 1,600 tests for Sandberg in one semester.

Read more about Sandberg's experiences with Testing Services at delta.ncsu.edu/annualreport.

Distance Education and Learning Technology Applications North Carolina State University delta.ncsu.edu

