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Summary

Mission

Education is the key to a prosperous future for North Carolina. DELTA promotes the quality of education by extending the reach of the faculty, collaboratively applying expertise in technology and pedagogy in an efficient, effective, and service-oriented environment.

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.

Programs

DELTA’s program accomplishments—grouped by unit—represent changes in the scope of activities, changes in volume of activities, significant achievements, and special programs for FY 09/10.

Distance Education

DELTA’s Distance Education (DE) unit helps optimize NC State’s land grant mission by providing learning opportunities to students wherever they are located. Functions in support of this mission include enrollment planning, program planning and development, scheduling DE courses and sections, student advising, enrollment, and registration services, DE faculty and student support services, local and remote exam proctoring, assessment and diversity activities, and educational technology services. Ongoing collaboration with other DELTA units provides DE website support and publicity for learning opportunities available through NC State’s DE programs.

Enrollment growth in response to student need for education in preparation for new careers or additional skills was a primary DE focus for 2009-10. Four new online master’s degrees were launched: Environmental Assessment; Parks, Recreation and Tourism Management; Geospatial Information Science and Technology; and Instructional Technology. From the outset, student interest in these programs necessitated enrollment management instead of recruitment strategies. Three new DE undergraduate certificates also completed the review and approval processes and began admitting students: Feed Milling; Plant Pests, Pathogens and People; and Agronomic Crop Production.

Six DE-program planning and development proposals were funded for FY 09/10 to support the creation of new online degrees and certificates. An online MBA program will be fast-tracked for implementation in fall 2011, with course development support from DELTA’s ISS and DE Academic Technologies unit. Consultations and reviews of documents were provided for the university, UNC-GA, and SACS approval.
processes, including appendices preparation, budgets, projections, and program implementation strategies. The DE Planning and Development unit also administered the UNC-GA RFP request, collecting and reviewing proposals, and making recommendations for the awards made by the Provost and UNC-GA.

A corollary to unprecedented DE enrollment growth was significant expansion in the volume of student services, including registration, advising, and testing services. A Cox Hall space is undergoing renovation for use as an additional testing facility that will be jointly managed by PAMS and DELTA. Demand for online course delivery also prompted an accelerated deployment of rich media services in support of DE courses and programs. We participated in a study of UNC distance learning activities conducted by the Program Evaluation Division of the North Carolina General Assembly. Several DELTA units helped produce a sample of online course formats that were used by the General Assembly Program Division evaluators in the presentation of their findings to the legislative committees. Our responses, along with other UNC campuses, received commendation from UNC-GA for the “work that led to this being a very positive report.” The favorable report on Distance Education was a gratifying corroboration of our diligence and good stewardship of state resources to extend learning opportunities to students wherever they are located.

**Instructional Support Services**

DELTA Instructional Support Services (ISS) provides a wide range of training, consulting, production support and creative services for faculty, staff, and graduate students engaged in teaching and learning with technology (TLT) activities at North Carolina State University. Services include training and support (e.g. instructional house calls, regularly scheduled face-to-face and online workshops, seminars, custom training and help desk support), production services (instructional design, development, production, and project management), and instructional development (via a course redesign pilot program). DELTA ISS offers programs (Summer Institute, IDEA grants, and Large Course Redesign) for faculty, staff and graduate students engaged in TLT efforts. DELTA ISS also supports the development of instructional resources, establishes partnerships and collaborations to support numerous TLT efforts, and internal to DELTA, contributes to DELTA web communication and marketing initiatives. In addition, the DELTA ISS staff members provide leadership, support and training for campus Learning Management Systems (LMSs), including Elluminate, Vista, Moodle and WolfWare.

During FY 09/10, DELTA ISS offered 205 regularly scheduled workshop offerings consisting of 69 unique workshops, including 36 newly created workshops. In addition, we now offer 42 recorded, online workshops that were viewed 2,760+ times during the fiscal year (compared to 350+ views last year – Moodle, The Basics alone was viewed over 1,400 times). Also in FY 09/10, 5,574 e-mails, phone, and in-person help calls and consultations were documented, an increase of 30% from FY 08/09. A total of 5,209 Remedy calls and 365 Instructional House Calls were reported. The increase in Remedy calls was expected due to the first part of our transition from Blackboard Vista to Moodle. This year, the majority of resolved calls were associated with support for the following three services: Moodle (43%), Vista (25%) and Elluminate (12%). We also hosted the Summer Institute (SI), which had 48 regular participants. The
program was again highly rated by participants, with 100% of program survey respondents indicating they would recommend the program to a colleague for the twelfth year in a row.

We continue to see increased usage of our Learning Management Systems (LMS), Elluminate (our synchronous LMS), and Moodle. About 89% of all NC State students take at least one course that uses an LMS in support of instructional activities. LMS usage across all systems can be monitored at: http://raleigh.delta.ncsu.edu/lms_reports/index.php, and LMS Strategy viewed at: http://wikis.lib.ncsu.edu/index.php/LMS_Strategy.

In a production capacity during FY 08/09, the DELTA ISS staff provided services and support to faculty involved in five Large Course Redesign (LCR) projects, 30 major course production and redesign projects, and supported 32 Course Enhancement Packages. These projects were generated by the LCR program, the IDEA Grants program, DE programs that requested production support, other academic course production requests, and internal production requests. These projects have resulted in new materials being created for 19 new DE courses, and have supported the redesign of traditional courses in Mathematics and Engineering.

In FY 09/10 ISS participated in the creation, maintenance and support of instructional tools that we research, develop and implement as part of our instructional production process. Tools developed, maintained, and/or supported this year include college course templates, NC State Second Life, the Flash Video Tool, Moodle Template designs, WolfWare interface work, and the Flashcards Tool.

ISS marketing activities (creation of materials directed at potential NC State students to build awareness of DE program options) included a redesign of the Distance Education (DE) website, the DE iPhone Application, work on the NC State website’s DE page, work with the Graduate School, and a number of other marketing.

ISS staff also spent time in FY 09/10 in service and engagement projects (building and maintaining partnerships and relationships and communicating information between and among DELTA and the NC State community), and in research and exploration of emerging technologies and pedagogies. Research projects included exploring a 3D gaming engine for CSC 582, Unity 3D prototype, Serious Games initiative, Online Course Quality Review exploration, research into how social networking applies to courses, a Wordpress pilot, and other research. Research efforts feed directly into our training, support and production efforts.

**Educational Technology Services**

Although DELTA Educational Technology Services (ETS) has had significant diverse activities over the fiscal year, the activities have all shared a common theme: service to teaching and learning. While the various ETS groups are a diverse mix with different priorities, they also all share that common goal.

In fall 2009 the Applications Development group worked on development of our new LMS services offered under the WolfWare name. Most of the changes were released for production use after the fall
semester on December 21st. In addition to the LMS services, work continued on several support applications, including the Classroom Capture Tool (CCT), a new tool (reVamp) working with FacDev and Applications Support to help manage and automate the migration from Vista to Moodle. At the same time Applications Support transitioned Moodle into full production and rebranded it as WolfWare. They also upgraded Moodle to version 1.9.8+.

Also in fall 2009 DELTA kicked off the university-wide LMS governance oversight committees to provide meaningful feedback and direction from the campus community. They formed, and charged the LMS Best Practices, LMS College Needs and Policy, LMS Technical and LMS Steering committees. During this time, they coordinated and communicated the transition from Moodle Pilot to Moodle Enterprise-level service.

The DELTA Media Distribution Services Department sought to proactively identify and create avenues through which DELTA and the NC State community could be better served with the innovative application of distribution technologies. We continued to explore new media frontiers, incorporating into our mix of services when appropriate. We collaborated with DELTA and campus partners wherever and whenever possible, leveraging resources.

In the fall of 2009, DELTA’s Video Communication Services (VCS) continued its Rich Media integration program into all DELTA classrooms, significantly boosting the quality of video courses offered online. With the emergence of Rich Media applications that combine audio, video, and synchronized instructional content, as the preferred method of distance education delivery, DELTA is able to provide a richer, more dynamic experience for the growing number of students learning through distance education. In FY 09/10, VCS also relocated its base of operations to the new CCR Space and two VCS managers relocated to Parks Shops. Additionally, VCS reverted back to an internal method of charge backs for non-distance education funded services.

**Marketing and Partnership Development**

DELTA Marketing & Partnership Development (MPD) provides leadership and vision for NC State marketing and partnerships for distance education and learning technologies. MPD is responsible for: developing and implementing strategic marketing initiatives; market research/environmental scans to assess interest and need for new DE programs; and, building and supporting collaborative initiatives among all colleges and units on campus, other University of North Carolina institutions and with other key partners.

The MPD team’s main responsibilities include the development and implementation of strategic market research for the evaluation of new DE programs and market-share opportunities; establishing an attractive brand image for DELTA, built on the NCSU brand, specifically focused on generating interest in DELTA, Learning Technologies and increasing DE enrollments; and managing external strategic DE partnerships.
In spite of the ’09-10 budget reductions, the MPD team restructured the DE marketing campaign and projects to reflect the resource availability and changes and implemented new strategic tactics that are now models of efficiency for the University in marketing and website development.

MPD priorities, which include the following, were met for this fiscal year:

- Redefined strategic integrated online project management to execute marketing projects in a more productive, effective and efficient workflow process, integrating team members from ISS, DE and ETS.
- Designed and developed a new, high-performing DE website by implementing search engine optimization (SEO) keyword search strategies and analytic capabilities.
- Established new DE marketing partnerships that provide low/no cost marketing and promotion to increase DE enrollments with NCSU Graduate School (eliminate duplicate graduate marketing efforts and implement CRM student recruitment initiatives). Student recruitment partnerships include: BRAC RTF, NC Department of Commerce (WFD Boards, Rapid Response Teams, Job Link Centers), the NC eLearning Commission K20 ePortal, PipelineNC.com, Futures for Kids, and Alumni Association.
- Created DE student recruitment structure through new marketing technology capabilities for cost savings: SEO site capabilities.

**Business Office**

FY 09/10 was a challenging fiscal year for everyone at NC State. DELTA was required to implement permanent budget cuts, which resulted in positions being cut and abolished while remaining staff absorbed the workload without additional pay. The Finance and Business office had to be creative to keep up morale throughout DELTA, and did so with the “Shout Out” Program, which provided a sounding board for employee concerns.

DELTA’s total budget reduction for FY 09/10 was $1,408,788. DELTA abolished 5 positions of which, three were vacant positions, 1 retirement and 2 RIFs. In addition, 4 positions were reduced in FTE. One of the RIF’ed employees was the Administrative Support Specialist within the Finance and Business office. Due to this reduction the remaining staff was forced to take on the duties and responsibilities of this RIF’ed employee. Additionally, no travel was permitted unless directly related to student instruction, a reduction in temporary labor, and various strategic reductions.

**Research**

DELTA was engaged in a variety of research areas relating to rich media deployment, accessibility, innovations in student engagement and gaming, and DE website analytics and search engine optimization.
**Mediasite:** DELTA was charged with the task of campus-wide distribution and support of rich-media technologies in order to extend the university’s teaching and learning efficiency and effectiveness in a cost-effective, user-friendly format. A primary component of widespread access to quality instruction is the use of pedagogically-sound, computer-based technologies that enable faculty to develop and update course content in a timely and cost-effective manner. A Mediasite Solution working group that involved cross-DELTA collaboration examined how to establish a support and management structure for this campus-wide rich media deployment.

**Accessibility:** DELTA staff evaluated Moodle 1.9 for accessibility against the W3C Web Content Accessibility Guidelines (WCAG) 2.0 and developed the “Moodle Accessibility Report” for DELTA and OIT, which detailed issues with forms, headings, and navigation in Moodle. DELTA contracted Remote Learner to make several changes to Moodle which improve accessibility and usability. Staff led the Moodle Accessibility Work Group in developing plans for evaluating the accessibility of Moodle 2.0 as soon as it is available. DELTA staff has also evaluated various software for accessibility, including Elluminate, Adobe Connect, TC Web Conferencing, Second Life, Camtasia 6.0, Mediasite, and podcasting.

**Student Engagement and Serious Games:** DELTA staff has focused on innovative ways to enhance student engagement by investigating social media applications, mobile applications development, Serious Games for education, 3D game engine technologies and online virtual environments for teaching and learning. These technologies are being explored in partnership with CSC, Digital Games Research Center, Intellimedia, Entomology, USDA-APHIS and the College of Design’s Advanced Media Lab. We continue to consult with local game development studios on these efforts. Also, the IDEA Grants program supported Dr. Michael Young, associate professor in computer science, in developing teaching technologies that use a 3D game engine.

**Distance Education Website Search Engine Optimization (SEO), Analytics, and CRM tracking / student recruitment tools:** The research for the DE website redesign project sought to create a high-performing SEO, analytically-based site that would function as an online student recruitment tool. The website project research results indicate that the site revision elevates it to the top three rankings in the top three search engines over 80% of the time. Strategic research information resulted in the development of internal and external statewide partnerships that increase DE student recruitment capabilities, and CRM tracking to the site through SEO capabilities at a lower cost and higher return than previous traditional marketing initiatives.

**Staff**

**Changes**

As a result of budget reductions, two DELTA staff were RIF’d and duties were redistributed among remaining DELTA staff. Three vacant positions abolished and four positions were reduced in FTE. One DE staff member retired, and one Administrative Support Specialist was hired in DE Testing Support Services. All other staff remained the same.
Professional Development and Activities

Although some professional development was eliminated due to budget constraints, DELTA staff members from all units were active in professional development and committee service and outreach activities, both within and outside of the NC State community. Staff attended and presented at conferences including SIGGRAPH 2009, MoodleMoot, WWW2010 FutureWeb Conference, the North Carolina Distance Learning Association Virtual Conference, the UNC Teaching and Learning with Technology Online Conference, the Triangle Games Conference, Tri-IT (Triangle Instructional Technologists interest group) and many others. Six DELTA staff members also completed NC State Performance Leadership program.

Our staff served on committees, within and beyond the university, including the Board of Directors of the National College Testing Association (John Pugh); NC State Adviser Roundtable (Lynda Hambourger); Mediasite Campus Administrative Committee (Laura Stephenson); the University Standing Committee on Evaluation of Teaching (Donna Petherbridge); LMS College Needs and Policies Committee (Donna Petherbridge, co-chair); Academic IT Directors (Lou Harrison); LMS Technical Concerns Committee (Jeff Webster, co-chair); LMS Steering Committee (several DELTA representatives); NC eLearning Commission (Kay Zimmerman); Elearning Commission ePortal development project (Kay Zimmerman, co-lead) and University Courses and Curricula Committee, Substantive Change Review Team, SACS Assessment Committee, and Enrollment Planning Committee (Rebecca Swanson). See DELTA unit reports for a detailed list of conferences attended, papers presented, and committees served on.

Awards

DELTA staff members received the following recognition and awards in FY 2009/10:

- DELTA won the NCSU Fitness Fun Walk for the second time in the walk’s three year history (read the story).
- Larry Evans and Lynda Hambourger were honored at the 2010 University Awards for Excellence Reception as nominees for outstanding service to DELTA.
- Amanda Robertson received Gertrude Cox award (Innovative Excellence in Teaching & Learning with Technology) for ADN 219 - Digital Imaging https://wp.delta.ncsu.edu/digitalimaging (read the story).
- Laura Stephenson was honored at Sonic Foundry’s 2010 Rich Media Impact Awards ceremony as NC State’s representative for its winning of the Prolific Use Award. North Carolina State University was also named a finalist in the Excellence in Education Award (read the story).
- Lynda Hambourger, Drew Davidson, David Howard and Alexis Simison won the Pride of the Wolfpack award (read the story).
Diversity, Retention, and Staff Well-Being

Diversity

DELTA is committed to supporting diversity, both in DE programs and initiatives and in the workplace. To promote diversity in the workplace, DELTA works closely with NCSU Human Resources and NCSU Office of Economic Opportunity to ensure compliance when hiring DELTA staff. Additionally, every effort is taken to advertise open positions in diverse trade magazines, newspapers and websites to draw a wide diversity of candidates to apply for our positions.

To support and advance diversity throughout the university, DELTA has participated in the following projects and committees:

- Administered the DE student surveys in fall 2009 and spring 2010
- Provided consultation services and preparation for the Engineering Online student survey
- Participated in campus diversity groups and projects as diversity representative for Distance Education
- Lisa Fiedor served on the Staff Senate Diversity Committee. Fiedor, with assistance from Thelia Burrell from the Office of Contracts and Grants, planned, organized and produced, a Diversity Film Series. Fiedor enlisted the help of diversity experts across campus to facilitate the sessions. Fiedor also served as an SPA representative on the Council on the Status of Women, which is an advisory group to the Provost, and received a Certificate of Recognition at the NC State University Diversity Awards Ceremony.
- DELTA developed a marketing/student recruitment partnership with the NC State Graduate School. Dr. David Shafer, Assistant Dean of Outreach and Diversity, has approved the marketing partnership to include co-marketing campaigns and initiatives with DELTA MPD marketing for a wider student recruitment capability. MPD Team developed an online student recruitment and tracking tool that has been implemented by Brett Locklear, Graduate School Director of Marketing and Diversity Outreach.

Retention and Staff Well-Being

DELTA has experienced a turnover rate of less than 1% in FY 09/10. In an effort to retain high performing employees that are satisfied with the DELTA working environment, we developed an employee survey to determine why employees stay at DELTA. In turn, in FY 10/11, we will develop a retention plan based on these findings which defines areas that produce happy, motivated and empowered individuals. This resulting retention plan is aimed at promoting a work environment which fosters personal and professional growth, promotes harmony and encouragement on all levels.
Additionally, in trying to be consistent and fair with their employees, DELTA created a Matrix which addresses incremental increases in correlation with the SPA Career Banding Matrices. This will allow DELTA employees to receive an increase based on additional workload or increased competencies, when a position within a DELTA unit warrants it (pursuant to budget guidelines set by the state of NC).

We have instituted “Dessert Mondays” in the Venture II building where every Monday someone brings a dessert to share. This has happened nearly every Monday since September 2009. Our staff regularly participates in DELTA activity committee events and has representation on the committee.

**Concerns and Recommendations for the Future**

DELTA and its staff have been impacted this year by several long-held organizational and university-wide concerns. These include

- The DE/campus tuition differential, which places a financial burden on students and inhibits the optimization of course offerings and inter-institutional collaboration.
- A lack of personnel, brought about by budget limitations. Specifically, DELTA Applications Support and Applications Development groups have had challenges maintaining and supporting large, mission-critical systems for DELTA and the University. Combined with the loss of two unfilled positions the previous year a noticeable slowdown in development has occurred affecting both new applications and improvements for existing applications, this has included impact on the LMSs. DELTA has recognized the problem and has been working to restore one of the developer positions focused on the LMS.
- An overarching need for better project management across production efforts, as well as better communication and coordination (both internally and with external clients). Tied in with this is a need to balance multiple priorities, align priorities with DELTA goals and objectives, optimize the use of the resources we have across DELTA, and communicate our efforts with one DELTA voice.

For additional unit-specific concerns and recommendations, please see each unit report below.
Distance Education

Summary

DELTA’s Distance Education (DE) unit helps optimize NC State’s land grant mission by providing learning opportunities to students wherever they are located. Functions in support of this mission include enrollment planning, program planning and development, scheduling DE courses and sections, student advising, enrollment, and registration services, DE faculty and student support services, local and remote exam proctoring, assessment and diversity activities, and educational technology services. Ongoing collaboration with other DELTA units provides DE website support and publicity for learning opportunities available through NC State’s DE programs.

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Programs

Enrollment growth

During fiscal year 2009-10 13,942 students enrolled in 1,337 DE courses and sections taught by NC State faculty in 58 degree, certificate, and teacher licensure programs. A total of 27,400 enrollments and 78,728 student credit hours achieved an increase of 29% over 2008-09. The course and program options at both graduate and undergraduate levels provided learning opportunities to students affected by the economic downturn and helped currently enrolled students make progress towards their degrees.

Distance Education Administrative Services

Distance Education Administrative Services is a vital contributor to campus enrollment processes, and provides services throughout the semester for non-degree seeking students and international students. The unit streamlined several processes to better serve students and faculty and to accommodate increased demand for services. In collaboration with other DELTA units the DE student orientation began the transition to a Moodle course format, enabling students to test their preparedness for online learning through course samples, navigation guides, and strategies for success. Revisions to the data input for course detail sheets facilitates the entry of information and provides a course overview to prospective
students. Instructor videos are embedded on the page for faculty introductions to their courses. Course information was also prepared for airing on the CRC Education Channel. DE staff processed 3,300 admissions applicants in fiscal year 2009-10, responding to 4,750 enrollment transactions and 700 FAQ email inquiries. Advising services included 1,970 student contacts and participation in education fairs and the DELTA open house. DE testing services administered 14,838 local exams and made arrangements for 2,897 remote exams. DE staff participated in the DELTA Open House, providing orientation sessions, faculty-student interactions, and a tour of the testing facilities.

All 10 Colleges offered courses through Distance Education in 2009-10, involving more than 300 NC State faculty. Thirty new instructors offered 33 new courses through the Flexible Access program. Fifty-eight programs provided learning opportunities in a variety of disciplines, including 2 doctoral degrees, 28 master’s degrees, 3 undergraduate degree completion programs, 21 certificates, and 4 teacher licensure programs. Additionally, 11 DE degrees and certificates are in the planning and development phase. The current distribution of DE course and program SCHs by college is indicated on the following graph:
**Academic Technologies Coordination**

Academic Technologies Coordination supports the implementation of rich media recording environments for faculty to capture and deliver content to distance students. This versatile instructional resource available to both on-campus and DE faculty combines hardware and software delivery to provide just-in-time recordings needed for instruction, training, or other content which can be delivered via the internet.

The rich media mini studio in Venture II continued to receive very high accolades regarding use of the studio and the output of recorded material the studio provides. The studio provided us with a venue to demonstrate Mediasite to those who are not familiar with the technology and its use. During fiscal year 2009-10 we demonstrated the use of the rich media technology and studio capabilities with 53 faculty and staff. In addition, we met with several departments on campus to demonstrate rich media. The studio was used 1225 hours which resulted in a 255% increase in use as compared to fiscal year 2008-09. Twenty nine courses were recorded along with supplemental lectures for fifteen courses, and additional ad-hoc recordings.

Utilizing the Mediasite remote recorders, our unit captured 66 remote presentations and lectures and assisted with 11 event recordings for other departments on campus. With Mediasite’s live streaming capability, we were able to offer 29 live streamed events. We were excited to be able to offer live video coverage of Chancellor-elect Woodson’s Welcome Celebration to faculty, staff and the community who were unable to attend the special occasion in person. During this event, we saw our largest number of on-demand views to date. Statistics showed 874 viewers participated in the live event and 778 viewers were able to view the presentation within the days following the event. This totaled 1652 views for the presentation.

We continued to record Course Informational Videos for Distance Education courses being offered through the Distance Education unit. During this fiscal year we recorded an additional 35 videos and students have viewed all course information videos 4490 times. This represents a 116% increase in views from the previous fiscal year.

The unit has been involved in the creation of two video projects. For ARE 360 - Ag Business Law, Larry Evans produced “The Case of the Missing Laptop” and for Family Consumer Services he produced “Family Meeting Video.” Larry also invested approximately 148 hours of editing services to Distance Education courses and presentations recorded or supported by our department.

Academic Technologies Coordination is also responsible for the back-end interface for the DE FAQ system, managing updates to the DE website and serves as the liaison for UNC Online in managing updates to the program list for NC State.

Mediasite continues to gain popularity as a means to record lectures and other course uses. Beginning with a single Mediasite recorder in 2004, we have seen remarkable growth in the adoption of Mediasite on campus in subsequent years. We currently have 49 rack mounted recorders and eight mobile recorders.
connecting to the server. Mediasite is currently installed in over sixteen classrooms and six mini studios on campus. Our unit continues to be responsible for creating presentations, branding players, establishing security rights based on enrollment, creating lecture pages and editing presentations when requested for Distance Education courses.

During this fiscal year, NCSU recorded over 8300 lectures/presentations and experienced over 292,000 views. This was a 172% increase in recorded presentations and a 266% increase in the number of views since fiscal year 2008-09.

Our unit is also responsible for creating downloads of all lectures and making those available from the Wolfware course lockers. The lectures are provided to students who might not have adequate bandwidth to stream video or do not have access to the internet during the time needed to view their lecture. This semester we are testing a new feature in Mediasite where downloads are an option for the student and can be completed on the Mediasite server from the catalog page. We have not seen any issues with this process and plan to move to this method in the Spring semester instead of creating the downloads manually.

Future rich media implementation plans: Due to the success of the rich media studio and Mediasite on campus, several departments have invested in purchasing their own recorders, establishing mini-studios or outfitting their current classrooms with Mediasite. In addition to the four instances (DELTA and Engineering Online, Textiles, CHASS and the Industrial Extension Service) which currently exist on our high availability Mediasite service, we have created four new instances. These include CALS, College of Education, College of Veterinary Medicine and the McKimmon Center. We assisted these instances by establishing security and permissions within their instance, establishing baseline settings within the management portal, and providing support and training to Mediasite administrators responsible for each instance. We are excited that our current high availability server installation is able to handle the growth we are experiencing on campus and we will be adding two additional instances in FY 2010-11. We are currently working with OIT and the College of Management as they are outfitting many existing rooms with Mediasite.

**Research**

Collaborations included working with DELTA’s Application Development team, Jeff Webster, Drew Davidson and Jonathan Champ, to revise and implement an online template for gathering and presenting data. The new process requires less manual entry by faculty, enabling a more automated process and minimizing data entry errors.

Collaboration with DELTA’s Creative and Multimedia Production Services and Marketing & Partnership Development incorporated the new template process into online presentation more consistent with the DE website. Efforts have continued to increase course informational video availability on course detail sheets and to more consistently reference pertinent course information, including testing information, course materials information and additional information provided by the instructors.
DE Administrative Services partnered with DELTA’s Creative and Multimedia Production Services and Marketing and Partnership Development to revise the Virtual Orientation from pdf format to html format, consistent with the DE web site. Development was begun to transition the Virtual Orientation to a Moodle based course oriented orientation, anticipated ready date December 1, 2010.

DE Administrative Services worked with Creative and Multimedia Production to ensure optimal use of Time Warner Cable, Channel 18, to inform the viewing public of Distance Education course section availability.

Laura Stephenson participated in the Mediasite Solution working group that involved cross-DELTA collaboration to establish a support and management structure for rich media deployment to the campus.

**Staff**

**Changes**

Karen Moore was hired as an Administrative Support Specialist for DE Testing Support Services.

Michael Hoey, DE Coordinator, retired from DELTA, effective June 1, 2010.

**Professional Development and Activities**

**Professional Development**

Sharon Broere completed NC State’s Performance Leadership program.

Melissa Williford completed the Equal Opportunity Institute, attended sessions on Workplace Violence Prevention, Native American Ways of Knowing: Impacts Upon Teaching and Learning in Online Environments, Behavioral Based Interviewing, Diversity Film Series, Last Chance for Eden,” and attended the 2010 UNC TLT virtual conference.

Laura Stephenson completed the Performance Leadership Program at NC State, attended Mobile Learning 2.0: The Next Phase of Innovation in Mobility, a two-day virtual focus session, attended Search Engine Optimization (SEO) Training presented by Bold Interactive, attended UNLEASH, Mediasite User Conference, Supervisors Guide to Leave Program, Complying with the Revised 508 Guidelines, EEOI (Equal Employment Opportunity Institute) Training Program, and the Workplace Violence Prevention training session.

**Outreach Activities**

- DE staff provided representation for NC State’s DE learning opportunities at the following:
  - NC State’s Transfer Student Orientation
  - DELTA Open House
  - Joyner Visitor Center
Staff Presentations and Workshops

- Laura Stephenson, presentation to the faculty and administrators of the College of Veterinary Medicine: Overview of the Tools, Training, and Support Resources that DELTA Provides.

- Laura Stephenson taught “An Overview of the Mediasite Tool for Creating Online Content,” a DELTA ISS workshop.


- Rebecca Swanson gave a presentation, Distance Education @ NC State to visitors from the Republic of Moldova.

- Rebecca Swanson participated in a DELTA presentation to faculty and administration of the College of Veterinary Medicine, Overview of the Tools, Training, and Support Resources that DELTA Provides.

- Rebecca Swanson gave a presentation, Strategic Directions in DE Enrollment Planning, to the DELTA Advisory Committee.

Committee Assignments

DE staff members served on the following committees in FY 2009-10:

- Monica Price served on the African American Coordinating Committee and the University Assessment Work Group.
- Lynda Hambourger served as a member of the NC State Adviser Roundtable and as DE coordinator for the Focus on the Future Web Site.
- Sharon Broere served on SIS Admissions Advisory Board and as Functional Trainer for SIS Implementation.
- John Pugh was nominated to Board of Directors, National College Testing Association.
- Larry Evans served on the Mediasite User Group.
- Laura Stephenson served on the Mediasite Campus Administrative Committee, DELTA Manager Team, Focus on the Future, MCNC Capture Infrastructure Task Force, RightNow.
Implementation/Upgrade Team, LMS Strategy Committee, the Mediasite User Group, and the IDEA Grants Review Team.

- Melissa Williford served on the Study Abroad Scholarship Selection Committee, the IDEA Grants Review Team, DELTA Managers Team, Focus on the Future web team, and the Search Committee for the Director of Digital Scholarship and Publishing position.
- Rebecca Swanson served on the University Courses and Curricula Committee, Substantive Change Review Team, Enrollment Planning Committee, Admissions Background Review and Investigation Committee, SACS Assessment Committee, DELTA Advisory Committee, GIST Faculty Committee Ex Officio, the Non-Credit DE Ad Hoc Committee, IDEA Grants Review Team.

**Awards**

DE staff members received the following recognition and awards in FY 2009-10:

- Larry Evans was honored at the 2010 University Awards for Excellence Reception held on Friday, March 26 at the Talley Student Center Ballroom on NC State’s campus as a nominee for his outstanding service to DELTA.
- Laura Stephenson was honored at Sonic Foundry’s 2010 Rich Media Impact Awards ceremony as NC State’s representative for its winning of the Prolific Use Award. North Carolina State University was also named a finalist in the Excellence in Education Award.
- Lynda Hambourger was honored at the 2010 University Awards for Excellence Reception as a nominee for her outstanding service to NC State students.
- Lynda Hambourger was honored as a nominee for the Pride of the Wolfpack award.

**Diversity, Retention, and Staff Well-Being**

Distance Education’s Assessment and Diversity unit under the direction of Dr. Monica Price engaged in the following activities during 2009-10:

- Faculty survey
- DE student surveys fall 2009 and spring 2010
- Consultation services and preparation for the Engineering Online student survey
- Planning and development of possible Credit, College, and Careers program; in discussion with Southeast Raleigh High School
- Participation in campus diversity groups and projects as diversity representative for Distance Education
- Student and faculty evaluation of DE services provides input for planning new services and enhancement of existing services.
Concerns and Recommendations for the Future

- The DE/campus tuition differential places a financial burden on students and inhibits the optimization of course offerings and inter-institutional collaboration.

- An important priority is to develop military-friendly interfaces with DE programs, including procedural reviews, lead-in courses for degrees tailored to the needs of active duty military, a military-friendly web page, and streamlined advising and mentoring services.

- Encourage the development of undergraduate DE degrees and programs to enhance the number of underrepresented groups (African American, Native American, Latino) including 2+2 partnerships with community colleges.

- Focus on programs and services that address the digital divide.
Instructional Support Services

Annual Report for DELTA Instructional Support Services, FY 2010, contributions from Allie Giro, Stacy Gant, Traci Temple, Greg Kraus, Andy Click, David Howard, and Mike Cuales

Summary

DELTA Instructional Support Services (DELTA ISS) provides a wide range of training, consulting, production support and creative services for faculty, staff, and graduate students engaged in teaching and learning with technology (TLT) activities at North Carolina State University. Services include training and support (e.g. instructional house calls, regularly scheduled face-to-face and online workshops, seminars, custom training and help desk support), production services (instructional design, development, production, and project management), and instructional development (via a course redesign pilot program). DELTA ISS offers programs (Summer Institute, IDEA grants, and Large Course Redesign) for faculty, staff and graduate students engaged in TLT efforts. DELTA ISS also supports the development of instructional resources, establishes partnerships and collaborations to support numerous TLT efforts, and internal to DELTA, contributes to DELTA web communication and marketing initiatives. In addition, the DELTA ISS staff members provide leadership, support and training for campus Learning Management Systems (LMSs), including Elluminate, Vista, Moodle and WolfWare.

The DELTA ISS group is a unit within Distance Education and Learning Technology Applications (DELTA), with an Associate Vice Provost (AVP) reporting directly to the Vice Provost for DELTA. In FY 2010, DELTA ISS was comprised of twenty-two permanent staff positions and a number of students supporting a variety of activities.

During FY 2010, DELTA ISS offered 205 regularly scheduled workshop offerings consisting of 69 unique workshops, including 36 newly created workshops. We utilized 24 instructors, including our partners in the Library and colleagues from several colleges. We had 1,148 regular workshop enrollments, and a 15.54% increase in overall faculty enrollments (583 faculty enrollments, 211 unique faculty – highest faculty enrollment in five years, partially attributed to Moodle training). In addition, we now offer 42 recorded, online workshops that were viewed 2,760+ times during the fiscal year (compared to 350+ views last year – Moodle, The Basics alone was viewed over 1,400 times). The most popular topics this year were Moodle workshops, followed by seminars focused on synchronous learning, techniques for teaching online, and website/page development using various tools. Individuals from CALS and CHASS comprised the largest portion of our workshop audience. Around 95% of participants responding to workshop evaluation questions agreed or strongly agreed that our workshops and training sessions met their expectations, a statistic consistent over the past nine years. Custom training session requests increased 100% (34 offerings this year, 7 last year) as a way to deliver tailored training and support to various departments, with 286 participants (a 30% participation increase from FY 2009). The majority of participants were from CHASS, CALS, and PAMS, though every college was served by custom training
this year. Consistent with previous years, 98% of respondents of the custom training surveys indicated that the training met their expectations.

In FY 2010, 5,574 e-mails, phone, and in-person help calls and consultations were documented, an increase of 30% from FY 2009. A total of 5,209 Remedy calls and 365 Instructional House Calls were reported. The increase in Remedy calls was expected due to the first part of our transition from Blackboard Vista to Moodle. This year, the majority of resolved calls were associated with support for the following three services: Moodle (43%), Vista (25%) and Elluminate (12%). Consistently each year, noticeable spikes for service requests continue to occur prior to the start of each semester, spring, summer and fall. The colleges that regularly make the most use of our support services are CHASS (37% of our help calls) and CALS (23% of our help calls), followed by Education (11% of our help calls). 560 customer support surveys were returned this year, with 93% of respondents indicating that their support issue was resolved satisfactorily, a statistic consistent for the past two years. Only 3% of surveys indicated a support call was not satisfactorily resolved, and in each case, a supervisor was notified and followed up with the client.

The Summer Institute (SI) had 48 regular participants (14% increase from SI 2008, 7% increase from SI 2009). Ideal capacity for this event is 46-48 though up to 50 is possible. The Summer Institute once again included an open-enrollment elective day where faculty and staff not enrolled in the institute could attend, with 179 additional enrollments on that day (4% increase in faculty participation). The program was again highly rated by participants, with 100% of program survey respondents indicating they would recommend the program to a colleague for the twelfth year in a row.

We continue to see increased usage of our Learning Management Systems (LMS), Elluminate (our synchronous LMS), and Moodle. Moodle sections continued to increase (over 1,100 sections alone in spring 2010) with the planned move away from Blackboard Vista, and the number of Elluminate Moderator account requests more than doubled in the same timeframe: from 448 to 1,006. CALS continues to be the largest holder of moderator accounts in Elluminate (including moderator accounts for extension use), followed by Engineering. About 89% of all NC State students take at least one course that uses an LMS in support of instructional activities. LMS usage across all systems can be monitored at: http://raleigh.delta.ncsu.edu/lms_reports/index.php, and LMS Strategy viewed at: http://wikis.lib.ncsu.edu/index.php/LMS_Strategy.

In a production capacity during FY 2009, the DELTA ISS staff provided services and support to faculty involved in five Large Course Redesign (LCR) projects, 30 major course production and redesign projects, and supported 32 Course Enhancement Packages. These projects were generated by the LCR program, the IDEA Grants program, DE programs that requested production support, other academic course production requests, and internal production requests. These projects have resulted in new materials being created for 19 new DE courses, and have supported the redesign of traditional courses in Mathematics and Engineering.

Over 750 hours (a 25% increase in time from FY 2009) were dedicated in support of six on-campus, large enrollment courses targeted for LCR redesign, including new awards for Calculus I (MA 141), and Concepts of Financial Reporting (ACC210), continued funding for Engineering Statics (MAE 206);
Engineering Dynamics (MAE 208), and continued/wrap-up work on previously awarded projects: Precalculus I (MA 107), Precalculus Algebra and Trigonometry (MA 111) and Foundations of Graphics (GC 120). The efforts of the teaching assistant professor, Dr. Anna Howard, who redesigned MAE 206, led to her recognition via the Gertrude Cox Award for her Innovative Excellence in Teaching and Learning with Technology to honor her creativity in integrating new technologies into effective teaching strategies.

Initial data from several of the courses indicates LCR is having a positive impact on student performance:

- MA 111 course DFW rates dropped 10% compared to previous semesters
- ACC 210 showed an improvement in “A” and “B” grades
- With better averages on the final exam even in a combined, larger section, MAE 206 noted a 13.3% decrease in DWF rates
- GC 120 was able to grow enrollments 5.58% with no measurable negative effects on student outcomes

5,423 hours (around 24% of our time) were documented in support of major course production activities (including IDEA grants and other DE course production work). Major course production projects are highlighted in Table 13, with several course production spotlights (e.g. detailed course production project description and graphic samples) highlighted in the report. A recent survey of course production faculty we have worked with (55% response rate) provided helpful feedback as we continue to optimize our production efforts in support of our faculty. All respondents agreed (two respondents) or strongly agreed (10 respondents) that they would recommend working with our DELTA production team, and indicated that access to our staff and that training/funding are very valuable in their efforts to create instructional materials for distance education delivery.

2,737 hours (around 12% of our time) were documented in support of instructional tools production; that is, the creation, maintenance and support of instructional tools that we research, develop and implement as part of our instructional production process. Tools developed, maintained, and/or supported this year include college course templates, NC State Second Life, the Flash Video Tool, Moodle Template designs, WolfWare interface work, and the Flashcards Tool.

1,592 hours (around 7% of our time) were documented in support of marketing activities (creation of materials directed at potential NC State students to build awareness of DE program options). Marketing projects including a redesign of the Distance Education (DE) website (470 hours), the DE iPhone Application (210 hours), work on the NC State website’s DE page (154 hours), work with the Graduate School (102 hours), and a number of other marketing projects (photography related to marketing, digital media advertising, HTML email marketing, etc.).

1,864 hours (around 7% of our time) were documented in support of service and engagement projects (building and maintaining partnerships and relationships and communicating information between and among DELTA and the NC State community. Service and engagement projects included work on DELTAwire (376 hours), other communications, space design, general DELTA website production, LMS Coordination and Committee work and staff time in other university committees.
1,242 hours (around 5 – 10% of our time) was spent on research and exploration of emerging technologies and pedagogies. Research projects included exploring a 3D gaming engine for CSC 582, Unity 3D prototype, Serious Games initiative, Online Course Quality Review exploration, research into how social networking applies to courses, a Wordpress pilot, and other research. Research efforts feed directly into our training, support and production efforts.

DELTA ISS staff members are very active in their respective professional fields, attending conferences to stay abreast of emerging technology trends, giving presentations and papers at professional events, and engaging with their respective communities of practice through a variety of memberships. During FY 2010, ISS staff participated in a variety of professional development events, including the 2010 CHAT Festival, the 2010 Triangle Game Conference, the 2010 Event Apart Conference, and more. ISS staff members gave a number of presentations (see Table 19), and are actively immersed in their areas of expertise through a number of professional memberships in such organizations (see Table 20). In addition, ISS staff received several awards in FY 2010: Amanda Robertson received the Gertrude Cox Award for Innovative Excellence in Teaching & Learning with Technology for ADN 219 - Digital Imaging https://wp.delta.ncsu.edu/digitalimaging, and David Howard won a Pride of the Wolfpack Award.

In support of diversity, retention and staff well-being, DELTA ISS staff participated in the 2010 NC State Fun Run (which DELTA won), and actively support “Dessert Mondays” in the Venture II building. We also, as part of the larger DELTA organization, support a telecommuting policy and flexible work schedules that are supportive of a positive work/life balance for our staff.

Concerns and recommendations for the future for the DELTA ISS team include balancing course production workloads with time needed to explore new technologies and pedagogies, and accurately prioritizing efforts across marketing, research, outreach, course production and instructional tools development projects in line with DELTA goals. An overarching need for better project management across production efforts, as well as better communication and coordination (both internally and with external clients) are ongoing issues in trying to balance these multiple priorities, optimize the use of the resources we have across DELTA, and communicate our efforts with one DELTA voice.
Programs

Training and Support

Under the leadership of the Faculty Development and Support Services team in DELTA ISS, DELTA continues to offer workshops and seminars designed to educate faculty, staff and graduate students on teaching with technology. Our training program is a joint effort with other DELTA staff and partners within NCSU, and we teach classes on a wide range of technical and pedagogical topics. We also continue to provide individual consultations in the form of Instructional House Calls, as well as Custom Trainings, in which instruction is designed around a specific department’s needs. Annually we offer a certificate program called the Summer Institute, which is a weeklong series of workshops and seminars delivered in an accelerated form, focused on instructional technology tools and techniques that can be used to support teaching and learning at NC State.

Workshops and Seminars

This fiscal year, we offered 205 workshops and seminars and enrollment totaled 1148 (583 faculty, 342 staff, 188 graduate students, 2 undergraduates, and 33 other enrollments) (see Figure 1). There was a slight decline in overall enrollment from FY 2009 which can partly attributed to our inability to promote our fall workshops with a campus-wide brochure mailing, due to budget restrictions. In addition, the increase in availability of online recordings of our workshops and seminars has given the opportunity to faculty and staff to “attend” our workshops and seminars at their leisure. The numbers of views of our online offerings are not captured in our overall enrollment counts. On a positive note, our most popular workshops saw a higher total enrollment per offering this year. Among those, workshops focused on Moodle saw the highest attendance rate. We believe that this may be the result of this year’s announcement that the university is migrating from Vista to the Moodle learning management system. Therefore, in an effort to prepare faculty, staff and graduate students for a smooth transition from Blackboard Vista to Moodle, we offered many “Moodle based” workshops, and in turn saw the most attendance at these offerings.
Figure 1. Regular Workshop Enrollments: FY 2010

Although there was a slight decrease in enrollment for staff and graduate students, faculty enrollment increased 15.54% and was at its highest for the last five years (see Figure 2).
In addition to Moodle, other workshops and seminars which drew the most interest included those focused on synchronous learning, techniques for teaching online, web page development (including graphics creation) and techniques for engaging one’s audience when using PowerPoint (see Table 1).

Table 1. **Workshops & Seminars with Highest Attendance: FY 2010**

<table>
<thead>
<tr>
<th>Workshop Title</th>
<th>Total # of Offerings</th>
<th>Total # Attended</th>
<th>Average # of Enrollees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moodle: The Basics</td>
<td>12</td>
<td>135</td>
<td>11</td>
</tr>
<tr>
<td>Moodle Express: Top 5 Basics</td>
<td>6</td>
<td>49</td>
<td>8</td>
</tr>
<tr>
<td>Moodle Special Topics: Course Design Techniques</td>
<td>4</td>
<td>46</td>
<td>12</td>
</tr>
<tr>
<td>Moodle Special Topics: Tips for Using the Gradebook</td>
<td>5</td>
<td>39</td>
<td>8</td>
</tr>
<tr>
<td>PowerPoint: Moving Beyond Bullets</td>
<td>3</td>
<td>42</td>
<td>14</td>
</tr>
<tr>
<td>Creating Graphics and Web Pages with Adobe CS4</td>
<td>7</td>
<td>42</td>
<td>6</td>
</tr>
<tr>
<td>Elluminate Moderator Training I and II</td>
<td>15</td>
<td>69</td>
<td>5</td>
</tr>
<tr>
<td>Teaching An Online Course Part I, II &amp; III</td>
<td>6</td>
<td>37</td>
<td>6</td>
</tr>
<tr>
<td>TurningPoint Clickers I</td>
<td>6</td>
<td>29</td>
<td>5</td>
</tr>
</tbody>
</table>
Of the 205 total workshops and seminars taught, a total of 307 hours of instruction were facilitated by 24 instructors, noting that more workshops were conducted, with the use of fewer instructors than in FY 2009 (see Figure 3). Additionally, 36 of these classes were new and focused on techniques for teaching with Moodle, uses in multimedia, instructional design in online learning, and large course redesign.

Overall unique enrollment, in particular faculty, increased by 9.27% and was also at its highest for the last five years (see Figures 4 and 5). This is a result of more “repeat customers” taking advantage of our revamped or new offerings developed in FY 2010.
### Overall Unique Enrollments per Fiscal Year

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Percentage of Unique Enrollments</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY 2006</td>
<td>30.24%</td>
</tr>
<tr>
<td>FY 2007</td>
<td>36.53%</td>
</tr>
<tr>
<td>FY 2008</td>
<td>31.75%</td>
</tr>
<tr>
<td>FY 2009</td>
<td>29.14%</td>
</tr>
<tr>
<td>FY 2010</td>
<td>38.41%</td>
</tr>
</tbody>
</table>

Figure 4. *Overall Unique Enrollments per Fiscal Year*

### Unique Enrollments for Regular Workshops by Academic Rank FY 2010

- **Faculty**: 211 (48%)
- **Staff**: 148 (34%)
- **Graduate Students**: 73 (16%)
- **Undergraduate Students**: 2 (0%)
- **Other**: 7 (2%)

Figure 5. *Unique Enrollments for Regular Workshops by Academic Rank FY 2010*
College Participation

Workshops and seminars are offered to faculty & staff in all colleges at NCSU. In keeping with FY 2009 data, the most participation occurred from individuals in CALS and CHASS. This year we also saw a rise in participation from the College of Management (up 105%), First Year College (up 317%) and Design (up 12%) (see Figure 6). Other colleges experienced decreases in enrollment; however this is a result of an overall decrease in total enrollment.

![Workshop Attendees, by College FY 2010](image)

**Figure 6. Workshop Attendees, by College: FY 2010**

Participant Reaction to Workshops

In an effort to gage the effectiveness of our training program, identify any areas which might need improvement and explore additional training that our participants would find beneficial, we ask our participants to complete an online evaluation after each workshop and seminar. The total number of responses received for FY 2010 was 619 or a 63% response rate. Overall, 95% of attendees indicated that the ISS training program continues to meet their expectations; 98% agreed that the instructor was able to communicate subject matter effectively; 95% agreed that appropriate time was given to address their
questions and 94% indicated that the subject matter was appropriate and relevant to their needs and expectations.

In conjunction with closed-ended questions, participants are also given an opportunity to note any specific comments or suggestions regarding their experience with the workshop content and/or instructor. The following are responses received for FY 2010 that represent the majority opinion that our workshops are of high value to participants:

- “The workshop was great! It exceeded my expectations.”
- “Very informative. I learned a lot.”
- “Great course. I can’t wait to put these new skills to use!”
- “I so very much appreciate the technology and the help provided in this course. I feel much more comfortable.”
- “Great workshop, and the content was VERY useful. It was very helpful to see the examples and discuss how the various tools were implemented.”
- “I find these workshops so helpful as I switch from VISTA to MOODLE. Thank you for your help and for making these workshops hands-on and easy to follow.”

Additionally, we now have a total of 42 workshops and seminars available for online viewing via Mediasite including online versions of our Elluminate workshops (delivered via Elluminate). As with our face-to-face workshop and seminar offerings, participation in online viewing was greatest for topics related to Moodle, Elluminate Moderator Training I and II, Dreamweaver I: Creating and Publishing a Webpage, An Introduction to the Learning Technologies Toolkit at NC State, and PowerPoint: Moving Beyond Bullets.

We are confident that DELTA continues to offer important, and well delivered training and assistance in teaching and learning with technology to faculty, staff and graduate students across campus. And we are continually working to address the needs of our faculty in an effort to maximize their abilities to effectively teach with technology.

Custom Training

The DELTA ISS team provided NC State faculty, staff and graduate students with 34 custom workshops this year, in which training is tailored to meet the specific teaching need of a department. These custom trainings totaled 62 hours of teaching by our instructors and included a total of 286 participants. We saw a 100% increase in custom training requests from FY 2009 and overall the greatest number of custom trainings in the past five years (see Figure 7). This rise in custom workshops can be attributed again to the increasing need for Moodle-related training for faculty, as well as, the reVAMP program, which the Faculty Development team has coined its migration of courses from Blackboard Vista to Moodle.
Consistent with the large increase of custom workshop requests is the increase of enrollment by academic rank. This year saw a 241% increase in faculty participation, a 239% increase in staff participation and a 19% increase in graduate student participation (see Figure 8). Custom workshops continue to be a highly valued service provided to NC State faculty, staff and graduate students. Attendees value this service not just for the tailored instruction, but also for the convenience and flexibility in time and location.
College Participation

In keeping with previous years, the college’s which request the most custom training continues to be CHASS, CALS and PAMS. However, unlike FY 2009, in which we did not receive requests from CVM, The Graduate School or the College of Design, this year we did in fact have attendees from these colleges and saw an enrollment of 23 participants from CVM. (See Figures 9 and 10 for detailed information on colleges served by our custom training service.)

We continue to deliver this customized instruction to various departments across campus, including the Department of English, the Department of Social Work, and the Office of the Provost and Instructional Services, which frequent customers. However, this year we also had to opportunity to work with the COAT Program and 4-H Youth Development. Some of the class titles were:

- Web-Based Delivery Methods for Training
- Transitioning from Vista to Moodle
- Creating Video Podcasts
- Elluminate Moderator Training
- WordPress
- Moodle Plus
- Getting Started and Presenting in Second Life
- Teaching Online

Figure 9. **Custom Training Attendees, by College: FY 2010**
Participant Reaction to Custom Trainings

As with our regular workshops and seminars, we encourage attendees of custom trainings to complete the online evaluation, as well. This year we received 108 responses, equating to a 38% response rate. Overall satisfaction with our custom training delivery remains high, with 98% of participants agreeing that the instructor(s) were able to communicate the subject matter effectively; 96% agreeing that the workshop met their expectations; and 93% agreeing the training was clear and easy to follow. The following comments received, supported the high satisfaction rate, as well:

- Great resource on campus!
- I appreciated that the workshop was very well organized. Also, the instructor was very helpful.
- Excellent. You folks always do great--I’m ready to try Moodle for my course page.
- Both instructors were extremely knowledge and not only provided the ‘hows’ but also the ‘whys’ of several components of website building. I loved it (I love technology), so my favorite workshop yet!
- The workshop was helpful and informative.
- Great workshop! Every TA should take this!
- Just so incredibly helpful!

The custom training survey results and the continued use of this service support our belief that this program continues to meet the needs of our clients and is a valuable asset to the ISS training program.
Online Workshops & Seminars

As noted earlier, we have made many of our workshops and seminars available for viewing online, and continue to work to provide this alternate opportunity for training on our various teaching with technology topics. This fiscal year we were able to record an additional 10 workshops and seminars, including those on Moodle related topics, an instructional design in online learning series, best practices for teaching with Elluminate and large course redesign. During FY 2010, we saw a very high viewing rate for many of our online workshops and seminars. Among the most popular were Moodle: The Basics, Moodle Special Topics: Tips for Using the Gradebook, Moodle Express: Top Five Basics, An Introduction to the Learning Technologies Toolkit at NC State, PowerPoint: Moving Beyond Bullets, Elluminate Moderator Trainings I and II and Dreamweaver I – Creating and Publishing a Webpage (which most likely saw an increase in viewing, as we are currently not offering this via a face-to-face workshop (see Table 2).

Table 2. Online Workshops and Seminars Views: FY 2010

<table>
<thead>
<tr>
<th>Workshop/Seminar</th>
<th># of Views</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moodle: The Basics</td>
<td>1408</td>
</tr>
<tr>
<td>Moodle Special Topics: Tips for Using the Gradebook</td>
<td>276</td>
</tr>
<tr>
<td>Dreamweaver I: Creating and Publishing a Webpage</td>
<td>137</td>
</tr>
<tr>
<td>Moodle Express: Top 5 Basics</td>
<td>122</td>
</tr>
<tr>
<td>Moodle Special Topics: Course Design Techniques</td>
<td>61</td>
</tr>
<tr>
<td>Introduction to the Learning Technologies Toolkit at NC State</td>
<td>57</td>
</tr>
<tr>
<td>LecShare Pro: Adding Voice Narration to PowerPoint Presentations</td>
<td>53</td>
</tr>
<tr>
<td>PowerPoint: Moving Beyond Bullets</td>
<td>40</td>
</tr>
<tr>
<td>Elluminate Moderator Training I</td>
<td>86</td>
</tr>
<tr>
<td>Elluminate Moderator Training II</td>
<td>28</td>
</tr>
</tbody>
</table>
**Learning Management Systems**

During FY 2010 we changed the nomenclature of our enterprise-level learning technologies to use the term "WolfWare" to refer to the entire set of online tools we support. The new WolfWare consists of several systems: Blackboard Vista, Elluminate, and WolfWare Classic. This change necessitated changing the name of the older "WolfWare" to "WolfWare Classic."

All of the WolfWare systems saw increased usage during FY 2010, except for Blackboard Vista. As a result of the decision to replace Blackboard Vista with Moodle and other tools, Vista had its first decrease in usage, dropping from 1532 sections in Fall 2009 to 1102 sections in Spring 2010, a 28% decrease. Moodle had a corresponding rise in usage from 581 sections in Fall 2009 to 1,101 sections in Spring 2010, a 90% increase. WolfWare Classic usage stayed constant at an average of 1,328 sections each semester (see figure 11).

To handle the increased Moodle usage and training needs we continued to teach Moodle: The Basics and we created new workshops for Moodle Course Design Techniques, Moodle Gradebook, Migrating Content from Vista to Moodle, and Moodle Express. As an alternative to attending our face-to-face or recorded workshops online via Mediasite, which can be anywhere from one to three hours long, we developed short training videos called QuickTrainings. QuickTrainings range from five to 15 minutes in length and cover topics such as: A Vista User's Survival Guide to Moodle, Assignments in Moodle, Forums in Moodle, Glossaries in Moodle, Moodle and LaTeX, Moodle Course Settings, Quizzes in Moodle, Reopening a Quiz in Moodle for Specific Students, Uploading Content in Moodle.

For students we created an online Moodle Orientation as well as, established the Teaching with Moodle course as a resource for Instructors using Moodle.

![LMS Usage: FY 2010](image)

Figure 11. **LMS Usage: FY 2010**
Elluminate also saw significant usage over FY 2010. To help faculty get more data about their session attendance we created customized reports for all Elluminate meetings which includes participants, attendance times, and recording views. Additionally, we created a tool that allows moderators to convert Elluminate quizzes to a format that can be exported to more useful formats (see Table 3).

Table 3. **Elluminate Usage: FY 2010**

<table>
<thead>
<tr>
<th></th>
<th>FY 2010</th>
<th>FY 2009</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moderators</td>
<td>1385</td>
<td>1006</td>
<td>+38%</td>
</tr>
<tr>
<td>Meetings</td>
<td>6741</td>
<td>3880</td>
<td>+74%</td>
</tr>
<tr>
<td>Participants</td>
<td>44461</td>
<td>37064</td>
<td>+20%</td>
</tr>
<tr>
<td>Total Hours</td>
<td>16747</td>
<td>12126</td>
<td>+38%</td>
</tr>
<tr>
<td>Recordings Created</td>
<td>2725</td>
<td>1988</td>
<td>+37%</td>
</tr>
<tr>
<td>Recordings Viewed</td>
<td>21756</td>
<td>9545</td>
<td>+128%</td>
</tr>
</tbody>
</table>

**Instructional House Calls and Help Desk Support**

In addition to our services delivered via workshops, seminars and custom trainings, we continue to provide direct, individual assistance and instruction in the form of one-to-one consultations, called Instructional House Calls and help desk services provided via phone and e-mail. By using the Remedy system, we track each occurrence of requested assistance, and can usually resolve the issue immediately. When the need arises for more direct instruction or multiple, complex questions are asked, we arrange to meet with instructors face-to-face. The following data is based on the date range of July 1, 2009 through June 30, 2010.

During FY 2010, ISS staff resolved a total of 5,574 documented e-mails, phone, and in-person consultations. This is an overall increase of 30% from FY 2009 and historically the highest number of help calls resolved (see figure 12). A total of 5,209 Remedy calls and 365 Instructional House Calls were tracked. As previously mentioned, an LMS migration from Vista to Moodle, and the support needed to see a successful completion, has increased requests for both help calls and Instructional House Calls, and can be attributed to the high increase. We predict we will continue to see this increase in numbers in the next fiscal year.
Requests for Instructional House Calls saw a 30% increase this year, and overall we saw all colleges increase in requests, including Design, Management, CNR, PAMS and those colleges classified as Other (see figure 13). Some departments which fall within the category of Other, include the Libraries, the Institute for Non-Profits, the Office of the Provost, OIT, Army ROTC and Human Resources. The majority of requests continue to originate from CHASS (37%), CALS (23%) and Education (11%). Faculty within these three colleges continue to be among the highest population campus-wide, and therefore contribute to consistently high requests for support.
Figure 13. Instructional House Calls, by College: FY 2006-2010

<table>
<thead>
<tr>
<th>College</th>
<th>FY 2006</th>
<th>FY 2007</th>
<th>FY 2008</th>
<th>FY 2009</th>
<th>FY 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>CALS</td>
<td>79</td>
<td>66</td>
<td>66</td>
<td>77</td>
<td>85</td>
</tr>
<tr>
<td>Design</td>
<td>3</td>
<td>4</td>
<td>1</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>CED</td>
<td>47</td>
<td>21</td>
<td>30</td>
<td>30</td>
<td>38</td>
</tr>
<tr>
<td>Engr</td>
<td>14</td>
<td>7</td>
<td>11</td>
<td>10</td>
<td>12</td>
</tr>
<tr>
<td>FYC</td>
<td>1</td>
<td>1</td>
<td>9</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>Grad Schoo l</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>CHAS S</td>
<td>132</td>
<td>67</td>
<td>107</td>
<td>64</td>
<td>135</td>
</tr>
<tr>
<td>Mgt</td>
<td>21</td>
<td>18</td>
<td>8</td>
<td>8</td>
<td>22</td>
</tr>
<tr>
<td>CNR</td>
<td>27</td>
<td>11</td>
<td>9</td>
<td>5</td>
<td>15</td>
</tr>
<tr>
<td>PAMS</td>
<td>15</td>
<td>16</td>
<td>10</td>
<td>5</td>
<td>15</td>
</tr>
<tr>
<td>Textiles</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>5</td>
<td>3</td>
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<tr>
<td>CVM</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>4</td>
<td>2</td>
<td>5</td>
<td>3</td>
</tr>
</tbody>
</table>

Figure 14. Percentages of Instructional House Calls by College: FY 2010
We find that our system of tracking Remedy based and Instructional House Calls better prepares us for possible increased need for provided support, as well as the ability to predict possible increased request volumes around times of new technical implementations across campus and beginning of semester needs due to new faculty, which might be unfamiliar with NC State’s teaching technology. With Fall and Spring semesters being our longest, we continue to see the highest Remedy help call and Instructional House Call requests during the late Summer months and early Fall and Spring (see figure 15).

![Total House Calls: FY 2010](image)

*Figure 15. Total House Calls by Month: FY 2010*

![Total Help Calls: FY 2010](image)

*Figure 16. Total Help Calls by Month: FY 2010*

Of the 5,209 help calls received, many vary in their problem description. However the majority of resolved calls can be associated with support for the following three products: Moodle (43%), Vista (25%) and Elluminate (12%). Other help calls can be associated with a combination of training questions and web
development. The high percentage of Moodle related calls, can be attributed to the increased numbers of users across campus due to the migration of courses from Vista to Moodle and the subsequent need for user support. For this reason, Vista related calls dropped by 19% from 1630 to 1321 and Moodle calls increased 446% from 419 (FY 2009) to 2,247 (FY 2010) (see figure 17). Help calls related to the Elluminate product saw a decrease of 24% and although Elluminate tends to be one of our more popular training workshops, we believe that users are becoming more skilled in their usage of this product and are starting to require less day-to-day support.

![Remedy Product Usage: FY 2010](image)

**Figure 17. Remedy Product Usage: FY 2010**

At the completion of a help call (via phone or email), we offer our customers the opportunity to evaluate our service via an online survey. This fiscal year a total of 560 surveys were received, out of a total of 5,209 calls, which was an 11% increase from the previous year.

Positive response was overwhelming, and our customers reported that our staff is highly courteous, respectful, knowledgeable and quick to help solve their problems (see Figure 18). 93% of respondents said that their problem or issue was resolved to their satisfaction. Only 3% of surveys were submitted by clients who had an unsatisfactory experience.

By a slim margin, our third question had the highest "Neither agree nor disagree" value (Q3: You were kept informed of the progress towards resolving this issue), as well as the highest number of unanswered submissions, which suggests the question may be confusing to our respondents. We are working on rewording the question in order to aid understanding and allow for more relevant survey responses in the future.
Q1: The person assisting you was courteous and respectful.  
Q2: The response to your request was timely.  
Q3: You were kept informed of the progress towards resolving this issue.  
Q4: The person assisting you was knowledgeable about the subject area of your request or able to refer you to someone knowledgeable.  
Q5: The problem or request represented by this issue was resolved to your satisfaction.  
Q6: You believe that you contacted the correct support agency when you sought assistance with this issue.

**Remedy Survey Responses:**

![Remedy Survey Responses](image)

- **Strongly Agree**
- **Agree**
- **Neither Agree nor Disagree**
- **Disagree**
- **Strongly Disagree**
- **No Response**

**Figure 18. Remedy Survey Responses: FY 2010**

**Selected Survey Comments:**

- This is an extremely helpful service, and the individual helping me was excellent!
- Friendly and knowledgeable. Excellent experience.
- My request was handled promptly and professionally. I was thankful that it was such an easy process.
- What a great service! The university needs to keep this.
- Wish everything on this campus were as efficient and accessible as delta’s LearnTech!
- As always, efficient, good-natured interaction. Love dealing with you guys. Keep up the good work!
- Even at a busy time as the semester starts, the group was able to help me immediately. I don't know what our department would do without them.
**The Summer Institute 2010**

Once annually we offer our Summer Institute program to faculty and if opportunity allows, teaching assistants at NC State. By the completion of the Summer Institute, participants have the knowledge and skills needed to begin creating a web-enhanced or online course. In addition, participants become aware of other emerging instructional technologies used to support instruction and can better understand the issues involved in using technology to support teaching and learning. Demand for the Summer Institute remained high in FY 2010. Participants in our 2010 SI totaled 48, which resulted in a 7% increase from FY ’09. We are pleased that the participation continues to increase annually and that we are able to provide this experience to additional faculty with each consecutive year.

Of the total 48 participants who attended the 2010 SI, 45 of those were faculty members and three were teaching assistants. Initially there were 50 accepted faculty and teaching assistants, however the week prior to SI, two faculty members and one teaching assistant made the decision not to attend. We were able to fill one faculty seat with an individual on the waitlist. This is the third consecutive year, in which we saw the largest participation come from College of Humanities and Social Sciences. This lead was followed by the College of Agriculture and Life Sciences and the College of Education which had equal representation (see Figure 19).

![SI Program Participation by College: FY 2010](Figure 19)
Open Enrollment Elective Attendance:

Once again, we reserved the last day of SI as our Open Elective Day, in which we offered workshops and seminars on various teaching with technology topics, and we invited all NC State faculty, staff and graduate students to attend. This open elective day resulted in a total enrollment of 179. Although this is an overall slight decrease of 4% from prior year 2009, we experienced an increase of 4% in faculty participation, and an increase of 36% in graduate student participation (see Figure 20).

![SI Open Enrollment Elective Day Attendance: FY 2008-2010](image)

Of the 179 participants in open enrollment elective day, 55 of these were unique and of these, 44 were faculty. Additionally, there were 13 unique participants who attended open elective day, but were not part of the SI program this year.

A few of the electives which saw the most attendance were: Creating Narrated Presentations, Leveraging Teaching with Technology Experiences for Research and Publications, Mobile Computing, Now!, Creating a Custom Banner for Moodle and A Gertrude Cox Award Winner’s Journey in Teaching with Technology and Creating a Course Welcome Video.

In an effort to evaluate the effectiveness and quality of our Summer Institute program, a survey is sent to Summer Institute participants within a week of the end of the program. For FY 2010 and based on a response rate of 54% (26 participants), all respondents continued to be highly satisfied in the overall quality, content and instruction of the 2010 Summer Institute. With regard to their overall experience with SI, 73% found it to be an “Excellent” experience and 27% rated their experience as “Very Good”. When asked whether they would recommend the Summer Institute to a colleague, all respondents (100%) indicated they would. This statement continues to elicit 100% agreement year after year. Many
participants indicated that they believed the Summer Institute program was an important opportunity for faculty to gain the tools and skills they need to teach online, as well as acquire the confidence in which to use them. Some comments received when asked why they would recommend the Summer Institute were:

- “Very informative”
- “Practical”
- “A good opportunity to learn what’s available”
- “Informative, engaging, relevant content and presentations”
- “We need to optimize our use of technology in the classroom.”

More detailed information based on this year’s Summer Institute is available on the DELTA website at http://delta.ncsu.edu/docs/about/reports/si2010_report.pdf.

**revAMP Update**

To assist faculty with moving their online courses from Blackboard Vista to Moodle, we launched the Vista Assisted Migration Program (revAMP) in March 2010. The Faculty Development and Support Services team developed two migration methods: (1) migrate simple Vista courses to Moodle in-house and (2) outsource the migration of complex Vista sites to Remote Learner and refine the courses they process using their automated migration utility. This entails streamlining the layout of content, setting the standard NCSU theme, enabling the default Moodle blocks, etc. To manage the revAMP effort, we developed a web application in the spring 2010 semester, with the support of ETS [http://delta.ncsu.edu/apps/revamp.](http://delta.ncsu.edu/apps/revamp/) We also created an informational website [http://delta.ncsu.edu/lms_services/revamp](http://delta.ncsu.edu/lms_services/revamp) to share important news as well the link to an online application.

At the start of this project, a timeline was established by our team and we identified three “waves” to focus our revAMP energies. From March through July, our first wave targeted CHASS and the College of Management who together comprised 60% of the Vista usage the year prior. By June 30th we had received 291 migration requests from instructors, which resulted in nearly 200 hours of hands-on technical work by our staff. Of those 291 requests, 163 had been completed, with another 60 requests pending faculty approval. [63% of the courses were sent to Remote Learner for conversion, while the remaining sections were migrated in-house.] To help the instructors in CHASS and the College of Management learn to use their new Moodle sections, we delivered eight custom training sessions, resulting in 101 enrollments in the 2009-2010 academic year. Dozens of one-on-one instructional housecalls were also provided during this time period.

In addition to our migration work, the Faculty Development team created a number of support resources to help faculty learn to use Moodle, and if they wish, migrate their Vista sites independently. We introduced a 3-hour workshop in fall 2009 called “Moving Content, Quizzes and Activities from Blackboard Vista to Moodle,” which covered step-by-step directions as well as a feature comparison of the two LMSs. The class was recorded early on so that faculty can view the workshop outside of the six face-to-face offerings. A set of reference guides about Moodle (& how to migrate courses to this LMS) was
Large Course Redesign

Large Course Redesign (LCR) is an initiative to rethink and rebuild the delivery of large-enrollment, introductory courses to improve learning outcomes and to accommodate current and projected enrollment growth by incorporating instructional technology. These are often courses that have large lecture sections or large numbers of small sections.

North Carolina State University began studying Large Course Redesign and its potential impact on student learning in 2006. Established in 2007 as part of DELTA’s compact planning initiatives, the DELTA Large Course Redesign Pilot Grants program is providing monetary and staff resources (instructional design, instructional technology and instructional development support) for faculty who are redesigning the delivery of large-enrollment courses at the undergraduate-level. Through this competitive award program, we primarily seek to help faculty and staff achieve the redesign of large introductory courses that are among the top 25 percent in enrollment, the top 5 percent in enrollment in a college, and smaller critical path courses that serve as foundation studies for students to successfully transition to more advanced study.

Major Accomplishments

ISS staff spent over 750 hours dedicated to the LCR program in the FY 2010. ISS worked with the Registrar’s Office to identify high enrollment undergraduate level courses (200 level and below) that could benefit from the LCR initiative. Based on the analysis of grade distributions, drop, fail, withdrawal (DFW) rates and course repeats from the fall 2009 through spring 2010 semesters, and based on the willingness of the colleges and departments to consider course redesign, two courses were targeted for pilot redesign: Calculus I (MA 141) and Concepts of Financial Reporting (ACC 210). One professor received funding to continue the course redesign of Engineering Statics (MAE 206).

Faculty who received LCR Pilot Grant funding in FY 08/09 completed the first phase of course redesign: Foundation of Graphics (GC 120); Precalculus I (MA 107); Precalculus Algebra and Trigonometry (MA 111); and Engineering Statics (MAE 206). MA 107, MA 111, and MAE 206 were piloted in the fall 2009 and/or spring 2010 semesters. Survey data was collected and assessment reports were written for GC 120 and MA 111.
ISS staff and NC State faculty continued to disseminate information about LCR on our campus and across North Carolina. ISS staff presented two DELTA seminars to educate faculty about course redesign: *Transforming Your Course By Incorporating Technology* defined LCR, outlined the basic principles of course redesign, and presented examples of the six redesign models defined by The National Center for Academic Transformation (http://thencat.org/). In *Showcasing Large Course Redesign at NC State*, participants learned about the NC State’s LCR goals, planning and development of each course being redesigned, teaching and learning strategies, technology used and assessment data available thus far.

UNC-Charlotte, UNC-Chapel Hill, and Duke University contacted ISS to learn more about LCR at NC State. They sought information about the DELTA LCR Pilot Grants program, funded courses, teaching strategies, how we are measuring student success, if there is evidence of improvements in student learning outcomes, and lessons learned. In addition, three faculty from NC State were invited to share their knowledge and experience at the UNC-Charlotte *Summer Institute for Faculty on Large Course Redesign*. Two DELTA funded redesigned courses, GC 120 and MA 111, were presented at this workshop. The redesign of MAE 206 was presented to the North Carolina Community College System (UNC-NCCCS) working group considering Statics classes across the state at both the university and community college level, and at the 2010 DELTA Summer Institute.

The efforts of the teaching assistant professor who redesigned MAE 206 received recognition for her work. The Gertrude Cox Award was given to Dr. Anna Howard, Mechanical and Aerospace Engineering, for her Innovative Excellence in Teaching and Learning with Technology to honor her creative in integrating new technologies into effective teaching strategies.

**Calculus I (MA 141)**

Calculus I (MA 141) is a four credit hour course. It is the first semester of the three-semester Calculus sequence (141, 241, 242). The NC State Registrar’s office identified MA 141 as a high needs course due to the number of students enrolled, high DFW rates and notable course repeats. It is a required course for a majority of undergraduate majors at NC State. This is a “C wall” course. Students must get a C- or better to move on to the next course.

The annual enrollment is approximately 1500 students per year (6 sections spring semester; 14 sections fall semester). Up to 38% of enrolled students receive D and F grades. The DFW rates result in 150-200 students repeating the course each year. The LCR faculty team and ISS staff who redesigned *Precalculus: Algebra and Trigonometry* (MA 111) began building upon the LCR resources developed for MA 111 to start redesigning MA 141. The goals were to improve student learning, establish consistent content coverage across all sections, provide in-class and online student-centered learning activities, and improve student knowledge transfer by focusing on mastery learning. By successfully moving students through MA 141, the university could reduce the number of sections needed to teach students. These goals were attainable by combining effective blended and online teaching strategies and utilizing the instructional technology and staff resources currently available at NC State. Integration of instructional technology would increase student access to course materials using a learning management system (LMS); create in-depth learning during lecture by integrating activities using clickers; add out of class learning activities...
(i.e., group work using online resources and online study sessions); and automate assessment to reduce faculty load.

Following the teaching of the first piloted course, faculty involved in the redesign of MA 141 will collect assessment data to determine the impact of the course on DFW rates. Based on the data collected, the course redesign will continue to evolve and improve during the 2010-2011 AY. The redesign team will also gather and analyze the data from MA 141 for tracking student success in MA 111 and MA 141 as they complete Calculus 2 (MA 241).

Table 6 MA 141 Project Summary

<table>
<thead>
<tr>
<th>Faculty:</th>
<th>ISS Staff:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Brenda Burns-Williams, Ph.D.,</td>
<td>• Traci Temple, Ph.D.</td>
</tr>
<tr>
<td>Lecturer</td>
<td></td>
</tr>
<tr>
<td>Course:</td>
<td>Resources:</td>
</tr>
<tr>
<td>• MA 141: Calculus I</td>
<td>• 37 hours spent</td>
</tr>
<tr>
<td>College:</td>
<td>Status:</td>
</tr>
<tr>
<td>• College of Physical and</td>
<td>• Course materials continue to be</td>
</tr>
<tr>
<td>Mathematical Sciences</td>
<td>converted and edited for online</td>
</tr>
<tr>
<td></td>
<td>delivery using Moodle</td>
</tr>
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</table>

Precalculus: Algebra (MA 107) and Precalculus: Algebra and Trigonometry (MA 111)

In Precalculus: Algebra and Trigonometry (MA 111), students study real numbers, polynomial, rational, exponential, logarithmic, trigonometry functions and graphs, and analytic trigonometry. MA 111 imparts the following objectives as a GER mathematics course: students should improve and refine mathematical problem-solving skills and develop logical reasoning skills. By meeting these objectives, students will be able to analyze real-world problems by using mathematical models and select appropriate techniques to solve various types of equations.

The NC State Registrar's office identified MA 111 as a high-needs course because of the number of students enrolled, high drop, fail, withdrawal (DFW) rates, and notable course repeats. MA 111 fulfills NC State's general education requirement (GER) and prepares Engineering and Mathematical Sciences majors for Calculus I (MA 141). The average annual enrollment was 650 students in nine sections, with approximately 35% of these students receiving D and F grades. Starting in the fall 2009 semester, the multiple sections were combined into one large lecture class with approximately 250 students.

DELTA LCR Pilot Grant funding was awarded (2008-2009 AY) for the redesign of MA 111. A team of

---

1 Precalculus, Algebra (MA 107) was included in the redesign project because it shares the first eleven lectures with MA 111. It is the prerequisite for the biological science and business calculus sections. During the 2007-2008 academic year, seventeen sections of MA 107 were taught, with a total enrollment of approximately 1,000 students. In the fall, ten sections were taught with an average class size of 90 students. The focus of this survey was on student learning in MA 111 therefore students in the MA 107 course were not included in the focus groups.
mathematics faculty and DELTA staff collaborated on the redesign of these courses to achieve the following goals: reduce DFW rates; increase student retention; increase mastery of learning and successful transfer of knowledge and skills from MA 111 to MA 141 and higher-level courses; maintain faculty workload as enrollments increase and course structure changes; create peer-to-peer learning; reduce class meeting times; and spend no additional funds for instruction. The redesigned course was first piloted in fall 2009 and this is when the redesign team began to measure the impact of the project on student learning. DFW rates at the end of the fall 2009 semester when the MA 111 redesigned pilot course was offered had dropped when compared to previous fall 2007 semesters—down approximately 10%. The full preliminary assessment report can be found online at http://delta.ncsu.edu/teach/funding/lcrgrants/.

Table 7 MA 107 & MA 111 Project(s) Summary

<table>
<thead>
<tr>
<th>Faculty:</th>
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</thead>
<tbody>
<tr>
<td>• Brenda Burns-Williams. Ph.D., Lecturer, MA 111</td>
<td>• Traci Temple, Ph.D.</td>
</tr>
<tr>
<td>• Elizabeth Dempster, Lecturer, MA 107</td>
<td>• David Howard</td>
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<table>
<thead>
<tr>
<th>Course:</th>
<th>Resources:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• MA 111: Precalculus, Algebra and Trigonometry</td>
<td>• 262 hours spent</td>
</tr>
<tr>
<td>• MA 107: Precalculus, Algebra</td>
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</table>

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>• College of Physical &amp; Mathematical Sciences</td>
<td>• The first redesigned course was piloted in fall 2009; assessment data was gathered, analyzed and reported in fall 2009 and spring 2010; data gathered will be used to determine student success in MA 141 and 241</td>
</tr>
</tbody>
</table>

**Concepts of Financial Reporting (ACC 210)**

ACC 210 enrolls approximately 1,300 students from all majors annually. Prior to the fall 2009 semester, the course was divided into 31 sections. The multiple-section structure of ACC 210 was changed as a result of university budget reductions. The LCR goal was to accommodate two larger lecture classes (approximately 300 students per lecture) and one small lecture class (40 students) without the increase in faculty (2) and TA (9) resources or altering the quality of learning. To effectively deliver ACC 210 in a large lecture format, the use of instructional technology was integrated to increase active learning and student-to-instructor and student-to-content interaction. Faculty expanded the course web presence and developed a required fifty-minute problem lab, delivered by TAs, for students to attend once a week (25 students per lab). Clickers were used in the lectures to increase student engagement. Group problem-solving was added to the midterm exams to increase student preparation and performance. The LMS, CengageNOW, and its corresponding textbook were adopted for students to complete homework and lab assignments and for automating the grading of these assignments. A Mediasite® recording studio was installed in Nelson Hall for faculty to record their lectures and make them available online. The goal was
to provide supplemental materials for students to access for reviewing course content.

Initial assessment data collected after the first pilot courses were taught in fall 2009 and spring 2010 showed a positive correlation between the improvement in student attendance (recorded using clickers) and exam grades. The course redesign was used to identify course drift in the lab sections taught by graduate students. Weekly meetings with TAs were added to prepare them for determining consistent learning objectives, schedule of topics and accurate performance measures. Preliminary data showed improvement in A and B, and D and F grades, while the distribution of C grades were consistent with previous semesters. Grade averages on the fall 2009 common final exam indicated better averages than the previous two semesters (improvement of approximately two points). Close to 100% of the enrolled students spent 15% more time learning using the supplemental online material. Feedback from students and the increase in course grades showed that learning in the large lecture section was as good as the previous multi-section course structure.

<table>
<thead>
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<th>Faculty:</th>
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<tbody>
<tr>
<td>• John Giles, Lecturer</td>
<td>• Traci Temple, Ph.D.</td>
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<table>
<thead>
<tr>
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<tr>
<td>• Concepts of Financial Reporting (ACC 2010)</td>
<td>• 12 hours spent</td>
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<tbody>
<tr>
<td>• College of Management</td>
<td>• The first redesigned course was piloted in fall 2009; assessment data was gathered and reported in spring 2010; additional materials are being developed and changes are being made to the redesigned course; ISS will help faculty develop time efficient course management strategies</td>
</tr>
</tbody>
</table>

**Engineering Statics (MAE 206)**

MAE 206 is a critical-path course for the future of students’ study in Mechanical Engineering, Aerospace Engineering, and Biomedical Engineering; it is the first in a series of first engineering courses for many students, and a high level of understanding is required. Approximately 700 on-campus students take MAE 206 every year at NCSU. The course is made up of eight class sections annually (four fall sections, two spring sections, and two summer sections). MAE 206 is also offered through Engineering Online for the BS in Engineering programs at UNC Asheville (concentration in mechatronics) and in Havelock in partnership with Craven Community College (concentration in mechanical or aerospace). The 2+2 Pre-Engineering Transfer Program also includes these courses at UNC Wilmington, Lenoir Community College in Kinston, Craven Community College in Havelock, Johnston Community College in Smithfield, and at the Gateway Technology Center in Rocky Mount.
DELTA LCR Pilot Grant support was awarded for the continued development of MAE 206. The traditionally taught, lecture-based course has iteratively evolved into blended and online courses. The redesigned courses now include: prerequisite reviews of trigonometry and calculus example problems that allowed students to refresh their knowledge of key concepts in trigonometry and calculus; online quizzes for reading the textbook to reinforce the importance of the text; class notes available online for students to use for reviewing lecture material; video example problems for asynchronous viewing; computer-assessed homework quizzes and exams with immediate feedback to students and for faculty to measure student understanding of the material; expand the use of in-class quizzes using clickers to gauge student understanding and to give the students more opportunity to be involved; and the addition of a computerized design project in MATLAB where students work in teams to find solutions to project-based, open-ended questions.

The redesigned course was piloted in spring 2010. The class was organized into student groups and used current technology to optimize independent and collaborative learning—based on the Student-Centered Active Learning Environment for Undergraduate Programs model (SCALE-UP). A lecture course was taught simultaneously. Students enrolled in the lecture course had access to the same online learning resources as the students in the non-traditional pilot course. There was a 13.3% improvement in DFW rates\(^2\) in the piloted class (22.2% DFW) compared to the large lecture class (35.5%). The class average in the pilot course at the end of the semester was 77.9% compared to 76.1% for the lecture.

**Table 8 MAE 206 & MAE 208 Project(s) Summary**

<table>
<thead>
<tr>
<th>Faculty:</th>
<th>ISS Staff:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Anna Howard, Ph.D., Teaching Assistant Professor, MAE 206 Course Coordinator</td>
<td>• Traci Temple, Ph.D.</td>
</tr>
<tr>
<td></td>
<td>• Cleo Magnuson</td>
</tr>
<tr>
<td></td>
<td>• David Howard</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course:</th>
<th>Resources:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• MAE 206: Engineering Statics</td>
<td>• 30.5 hours spent</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>College:</th>
<th>Status:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• College of Engineering</td>
<td>• A second pilot course will be taught in the 2010-2011 AY; assessment data will continue to be gathered to determine impact on student learning</td>
</tr>
</tbody>
</table>

**Foundations of Graphics (GC 120)**

Foundations of Graphics (GC 120) is an introductory course providing orientation to the language of technical graphics for students in any major. The course is designed to help students develop and refine their ability to use this universal technical language within the context of the concurrent engineering

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\(^2\) DWF rates reported by the professor do not correspond to university rates. The professor wanted to limit the number of people who came into class and then switched out for some reason that was not relevant to the course material. She looked only at the people who took the first exam and then subsequently dropped, withdrew, or failed.
design process; as well as gain an understanding of how computer-aided design (CAD) is used to create objects that students use on a daily basis. The course serves over 850 students annually, and is divided into fifteen to seventeen sections in both the fall and spring semesters, and four to six sections during the summer. Sections are taught by five to seven faculty members and adjunct instructors, and one graduate teaching assistant.

DELTA Large Course Redesign (LCR) Pilot Grant funding was originally awarded to redesign GC 120 in the FY 2009. A course website was created using Moodle™ that contained learning materials for students to use outside of class: videos of sketching activities and SolidWorks™ modeling; synchronous online study sessions; and computer-based quizzes and exams with immediate feedback. Automated assessment for SolidWorks modeling assignments was programmed and added to the course. The redesign goals were to reduce faculty time required to grade assignments and exams (automated feedback for SolidWorks modeling assignments); increase the number of student enrollments per section; give students more control over their learning; provide students with individualized assistance; and create consistency of teaching and learning across sections. The number of weekly in-class meeting times was reduced from two days to one day, and the in-class meetings were replaced with online course materials.

The course redesign was finished in FY 2009. Quantitative and qualitative assessments to determine the impact on student learning and enrollments began in spring 2009 and into fall 2010 and were analyzed and reported in spring 2010 (FY 2010). Baseline data from the conventional course were compared to the redesigned course to begin measuring changes in enrollment, equal or improved learning outcomes based on quizzes and exams, sample project comparisons, and student attitude surveys. The initial survey data showed student learning in the blended course was equal to traditionally taught courses. The incorporation of instructional technology allowed faculty to increase student enrollments in three sections (fall 2009), which amounted to a course enrollment growth of 5.58% from spring 2008. The redesign team anticipated the continued increase in enrollments as the automated feedback for SolidWorks modeling was implemented in fall 2009 and spring 2010. The full preliminary assessment report can be found online at http://delta.ncsu.edu/teach/funding/lcrgrants/.

Table 9 GC 120 Project Summary

<table>
<thead>
<tr>
<th>Faculty:</th>
<th>ISS Staff:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Ted Branoff, Ph.D., Associate Professor</td>
<td>• Traci Temple, Ph.D.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course:</th>
<th>Resources:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• GC 120: Foundations of Graphics</td>
<td>• 48 hours spent</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>College:</th>
<th>Status:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• College of Education</td>
<td>• Completed</td>
</tr>
</tbody>
</table>

**LCR Future Plans**

ISS is continuing to collaborate with the Registrar’s Office, college and department administrators, and faculty to identify more undergraduate courses that can benefit from LCR as we learn from the piloted courses (previous and current) and engage others in this process. A new request for proposals was advertised in spring 2010. As a result, DELTA Large Course Redesign Pilot Grants program will provide
monetary and staff support to grow LCR from six to nine undergraduate courses. The courses receiving support continue to be identified as “high needs” as a result of high DFW rates and course repeats. What is changing is the increase in requests for support to help departments and faculty accommodate current and projected enrollment growth without the increase in instructional resources. DELTA ISS staff are working with faculty to incorporate effective pedagogical approaches and instructional technology to redesign large undergraduate course that will be available to more students. We will continue to assess if redesigning large lecture courses improves student learning, reduces the DFW rates and opens enrollments. In addition, we will work with faculty to track the impact of LCR on student learning in higher-level courses.

**Production**

**Summary**

The ISS Production team is made up of the Instructional Design and Course Production team and the Creative and Multimedia Production Services team. The core activities of the ISS Production team involve the production of instructional, marketing and engagement materials along with research, exploration, development and limited support of new instructional tools and methods. In this document we define nine broad categories of activities and spotlight major efforts in each category.

Of those nine, the Marketing Production, Course Production, Instructional Tools, Instructional Research and Service & Engagement activities are viewed as core to the mission of the production team. This full spectrum of core activities reflects a shift from the original purpose of Online Instructional Programs as a course development group and is a natural outgrowth of having an in-house design and production group within DELTA. While the division between the core activities changes from year to year, over the last four years it has been a relatively constant portion of our time, ranging between 55% and 60%.

Table 10: Production Team Hours for 2009-10 by Category

<table>
<thead>
<tr>
<th>Category</th>
<th>Instructional Design Team</th>
<th>Multimedia Team</th>
<th>Prod Team</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FT</td>
<td>PT</td>
<td>Total</td>
</tr>
<tr>
<td>ISS Management</td>
<td>2,789</td>
<td>0</td>
<td>2,789</td>
</tr>
<tr>
<td>Professional Development</td>
<td>980</td>
<td>0</td>
<td>980</td>
</tr>
<tr>
<td>Program Management</td>
<td>488</td>
<td>0</td>
<td>488</td>
</tr>
<tr>
<td>Training &amp; Support</td>
<td>509</td>
<td>0</td>
<td>509</td>
</tr>
<tr>
<td><strong>Core Activities</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service &amp; Outreach</td>
<td>1048</td>
<td>172</td>
<td>1,220</td>
</tr>
<tr>
<td>Instructional Research</td>
<td>381</td>
<td>104</td>
<td>485</td>
</tr>
<tr>
<td>Instructional Tools</td>
<td>45</td>
<td>42</td>
<td>87</td>
</tr>
<tr>
<td>Course Production</td>
<td>3,641</td>
<td>0</td>
<td>3,641</td>
</tr>
<tr>
<td>Marketing Production</td>
<td>107</td>
<td>16</td>
<td>123</td>
</tr>
</tbody>
</table>
Program Management and Support

Program Management is the set of activities that keep programs running and to ensure that they continue to respond to faculty needs. Managing programs requires communication, planning, writing, reporting, etc. There are meetings that are specific to the program, both internal and external. For ISS, the major programs include the IDEA Grants and Large Course Redesign Programs (strategic planning, writing and distributing the RFP, running the review process, reviewing grants, notification, consultations, etc.), the Helpdesk Program (writing and organizing solutions, training tier one students, coordinating with other help desks), the DELTA Training Program (planning the workshop schedule, preparing the training rooms, etc.), the reVAMP Program (organizing the reVAMP program, assigning projects to people, working with external vendors) and the Summer Institute Program (scheduling, securing lunches, manning the open labs, preparing the materials, delivering SI).

The ISS production team has a leadership role with the IDEA Grants program and provides outreach support to the DELTA Training program and the Summer Institute program. There is also some involvement in the Large Course Redesign program and hopefully that will grow over time. Major projects are listed individually in Table 1 and following that are spotlight descriptions of some of the main program management and support activities for the year.

Over the last four years, as the IDEA Grants program has become better defined and more stable, hours spent on Program Management has stabilized down to about 3% of our time.

Table 11: Major Program Management & Support Projects (>20 hours this FY)

<table>
<thead>
<tr>
<th>Program Management Projects</th>
<th>Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>IDEA Grants</td>
<td>478</td>
</tr>
<tr>
<td>DELTA Training Program</td>
<td>206</td>
</tr>
<tr>
<td>Summer Institute</td>
<td>78</td>
</tr>
<tr>
<td>Other Service &amp; Engagement</td>
<td>7</td>
</tr>
<tr>
<td><strong>4 projects</strong></td>
<td><strong>769</strong></td>
</tr>
</tbody>
</table>

Program Management & Support Spotlight: IDEA Grants Program

DELTA Innovation in Distributed Education Applications (IDEA) Grants are provided to promote innovation in the use of instructional technology in online distance teaching and learning, build expertise in this area, and enhance the technology-rich learning environment at North Carolina State University. Instructional Support Services is charged with administering and supporting the IDEA grants program, including the online submission and review system, the processes and procedures associated with
delivering grant-related services to faculty, consultations with potential applicants, and internal program management.

2009-10 Overview: In July 2009, fifteen grants were awarded out of the fifty-one reviewed for the 2009-10 IDEA Grant cycle. Details of many of these grant projects can be found on the spotlight descriptions in the Course Production section of this report. The total awarded for the 2009-10 cycle was $120,000.

IDEA Exploratory Grants are used to explore technologies in areas that have been identified as ripe for innovation and usefulness for Distance Education offerings. This year “Web 2.0” / cloud computing applications and Second Life were the targeted tools and technologies. Three Exploratory Grants were accepted this year.

Table 12: IDEA Grants Historical Award Summary

<table>
<thead>
<tr>
<th>Year</th>
<th># accepted</th>
<th>% accepted</th>
<th>Funds awarded</th>
<th>Staff time spent</th>
</tr>
</thead>
<tbody>
<tr>
<td>00-01</td>
<td>32 of 68</td>
<td>47%</td>
<td>$492,161</td>
<td>0 hrs (1)</td>
</tr>
<tr>
<td>01-02</td>
<td>39 of 49</td>
<td>80%</td>
<td>$1,012,085</td>
<td>1,210 hrs</td>
</tr>
<tr>
<td>02-03</td>
<td>31 of 77</td>
<td>40%</td>
<td>$220,790</td>
<td>852 hrs</td>
</tr>
<tr>
<td>03-04</td>
<td>16 of 55</td>
<td>29%</td>
<td>$118,753</td>
<td>2,178 hrs</td>
</tr>
<tr>
<td>04-05</td>
<td>23 of 36</td>
<td>64%</td>
<td>$191,569</td>
<td>2,850 hrs</td>
</tr>
<tr>
<td>05-06</td>
<td>11 of 18</td>
<td>61%</td>
<td>$104,955</td>
<td>5,734 hrs</td>
</tr>
<tr>
<td>06-07</td>
<td>13 of 33</td>
<td>39%</td>
<td>$104,955</td>
<td>5,547 hrs</td>
</tr>
<tr>
<td>07-08</td>
<td>13 of 22</td>
<td>59%</td>
<td>$115,141</td>
<td>3,125 hrs</td>
</tr>
<tr>
<td>08-09</td>
<td>15 of 29</td>
<td>52%</td>
<td>$120,000</td>
<td>4,549 hrs (3)</td>
</tr>
<tr>
<td>09-10</td>
<td>15 of 51</td>
<td>29%</td>
<td>$120,000</td>
<td>3,249 hrs (3)</td>
</tr>
</tbody>
</table>

| Totals | 208 of 438 | 48% | $2,599,865 | 29,294 hrs |

(1) The figures in this table do not include the 2nd and 3rd year of funding for multi-year grants. Multi-year grants were awarded in the first two cycles of the IDEA Grants program.

(2) In the first year of the IDEA Grants program, only funds were awarded. In the second year, DELTA staff started working on certain projects. After talking with recipients and hearing the benefit of skilled assistance, staff time was made a component of the grant program starting in 2002-03.

(3) There are still projects in progress from 2008-09 and 2009-10.

New this year were Course Enhancement Packages (CEPs). These were packages of help given to an additional thirty-two IDEA Grant non-recipients because of the large number of grants submitted this year and the need for some support to be offered to them. The package included approximately six hours of formal consultation and planning advice, a written Plan of Action document which laid out several approaches on the best way to proceed with their project (if applicable), helpful resources that they could access through DELTA, focused advice on finding and creating items that they needed for their project, and tutorials specific to their needs. There was no money associated with these CEP’s. Of the thirty-two awarded, thirty have been deemed completed – either with formal Work Plans, informal sharing of
resources, non-response from recipients after 3 attempts to contact, or refusal of the service by recipients, most often because of lack of time or money. Of the remaining two, they may be part of a workshop on game design planning, since each of their proposals involved the creation of some form of game.

2010-11 Planning: We are working on a new proposal review system in cooperation with ETS which will integrate with our current online proposal submission system. The review system will continue to facilitate reviews by department heads, college representatives and DELTA staff. Thirty-eight proposals were submitted by the May 27th deadline. These will be under review through the end of July and announcements of 2010-11 IDEA Grants will be made around August 1st.

Program Management & Support Spotlight: ISS Workshop Brochures
DELTA’s Faculty Development staff teaches a wide variety of workshops, for NCSU faculty, staff and graduate students, covering topics such as Moodle, Blackboard Vista, Elluminate, Adobe Dreamweaver, Fireworks and more. Promotional materials are designed to help inform faculty about these free services and create an general awareness about DELTA’s role on campus.

Course Production
DELTA provides assistance to NCSU faculty and staff in the form of funds and personnel to support planning, design and development of online and distance education courses and learning materials. ISS staff work on course production projects as part of IDEA Grants, in strategic and directed support of DE Programs and other DELTA initiatives, and as a result of ad hoc Online Course Production requests.

The Instructional Design team works with every instructor to understand and document the learning objectives and outcomes for their course. Then we collaborate with them to design and develop learning materials (including content, activities and assessments) that are effective and that are matched to the objectives. The Creative & Multimedia Production Team provides support for course development in the areas of graphic design, web design and development, animation, 3D design, motion graphics, video production, interface design, multimedia applications development and interactive design.

Recently we surveyed 22 of the faculty that we have worked with over the last two years whose projects are now completed and received twelve responses. The results tell us some interesting things about the instructors we work with and the experiences they have during course production projects.

- Many of our instructors are not experienced with Distance Education. Only 25% of them have developed a Distance Education course before and 25% have not even developed online materials to supplement a face-to-face course.
- Instructors do not understand the time commitment required of them for course development. While 11 of the 12 were satisfied with the length of time between project beginning and end, 8 of the 12 reported that the project took more of their time than they anticipated.
- Our support is valuable to the instructors we work with. 11 of the 12 stated that access to an instructional designer was valuable or very valuable. 10 of the 12 stated that multimedia
development services were valuable or very valuable. All 12 stated that funding and training on tools & technologies were valuable or very valuable.

- The instructors who work with us would recommend our services. Ten of the twelve instructors strongly agreed that they would recommend working with DELTA to a colleague and the other two agreed with the statement.

We also received both positive comments and recommendations for improvements to our process:

- “My project manager kept me on schedule in the development of the course. She also was instantly available to sort out problems for me and my TA after the course started. She offered lots of ideas, but when I was not comfortable with one of her suggestions, she quickly backed off, and I always felt I had control of the course content and delivery. She was very diplomatic and patient. I was also amazed at the depth and extent of resources available from DELTA.”

- One of the strengths of the DELTA project was “Going back to the beginning and prompting me to really look at a course that I had taught for the better part of 25 years. Of course the class had evolved over time but my instructional designer made me really think about what needed to be included. The resources are terrific - designers, software options, help using the software, all the workshops DELTA offers, and incredible tech support. Everyone is so positive and encouraging. As a novice with this, I especially appreciated the climate of support. And I think having the IDEA grants is wonderful - in fact it made our project possible and supported a grad student.”

- “A clear strength is the quality of all the different people working on the project. It’s a team with many strong individual players. They are very knowledgeable about the DE technology and also very knowledgeable about teaching resources available on the web. They are very willing to listen to feedback; flexible and adaptable as plans evolve and ideas change.”

- “The only weakness that I felt about the process was the slow start in the actual production work, due to the need to generate project management materials. I understand why these must be done, but would have preferred moving very quickly through this material and moving into production.”

- One of the weaknesses of the DELTA project was “Only a slight issue of timing came up since we couldn’t start last fall when the project was awarded due to spring course projects. However, the Delta team was very responsive and we got the project done; any delays that put the project closer to the first day of classes were my choices based on other responsibilities.”

- A change I would suggest is “Maybe a brief meeting with the entire team very early in the process -- just to introduce people and understand each person’s specific contribution to the project. Related to that, maybe a very general outline or overview describing the basic steps or time line involved in developing the DE course. Both suggestions would help the novice to see the ‘bigger picture.’”
• “Probably the most valuable thing I learned was how to ensure that what I am teaching is coming across effectively to students in the online environment. Creating online materials forces one to scrutinize how clearly ideas and facts are conveyed, and also to reassess frequently how well these ideas and facts are being understood. (You don’t have the typical avenues of in-person feedback.)”

The first result based on the survey responses is an orientation for IDEA Grant recipients at the beginning of the next cycle. In this orientation we will emphasize the amount of time that is required and give the instructors a clearer idea of our process and of what they should expect during various stages of the project.

During FY 2010 Instructional Support Services staff, with the support of others within DELTA, provided services and support to faculty involved in 24 major course production projects. ISS staff and other DELTA personnel spent approximately 5400 hours working on course production projects in FY 2010. Of the 24 major course production projects that were active during the year, 13 are completed in terms of ISS production. In the course of these projects, ISS staff members have worked with faculty to create online materials for 19 new distance education courses and five existing distance education courses. The projects are listed individually in Course Production has consistently been the major category of activity for the production team. Over the last two years we have decreased the percentage of our time spent on course production due to the addition of new responsibilities in marketing and outreach for DELTA and the growth in development and support of tools that benefit multiple courses and instructors. This year we spent 24% of our time on Course Production activities.

Table and following that are spotlight descriptions of some of our major course production projects for the year.

<table>
<thead>
<tr>
<th>Previous Cycle IDEA Grants</th>
<th>Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>FW 495 (complete)</td>
<td>Bob Brown</td>
</tr>
<tr>
<td>ENT 401</td>
<td>David Tarpy</td>
</tr>
<tr>
<td>ANT 253 (complete)</td>
<td>Scott Fitzpatrick</td>
</tr>
<tr>
<td>ECI 521 (complete)</td>
<td>Cris Crissman</td>
</tr>
<tr>
<td>WGS / STS 210 (complete)</td>
<td>Deena Murphy</td>
</tr>
<tr>
<td>ADN 414</td>
<td>Charles Joyner</td>
</tr>
<tr>
<td>HI 208 (complete)</td>
<td>Julie Mell</td>
</tr>
</tbody>
</table>
Course Production Spotlight: HI 208 - Medieval Origins of the Modern World

ISS staff worked with Dr. Julie Mell to create a new Distance Education (DE) version of an existing face-to-face course, HI 208. Julie’s primary goals were to create a quality, interactive course that:

- Introduces students both to the discipline of history and to the main currents of medieval history;
- Creates an environment that maximizes student interaction and collaboration;
- Meets multiple learning styles; and
- Allows students to work ahead, when desired.

Seventy-three students enrolled in two DE sections for fall 2009 and again in spring 2010. Julie was very pleased with the outcome of the course: “I'm happy with the wiki activity … Groups are clearly getting to know each other and working well in this online space. Good job,” Julie said.

**Technologies Used:** Moodle, WolfWare Classic, Articulate, Wetpaint

**Timeline:** January 2009 through May 2010
Course Development Team & Resources

- Julie Mell - Instructor, Subject Matter Expert
- Ruth Smith - Instructional Designer, Project Manager
- Leah Lawrence - Graphic Designer
- Mike Cuales - Videographer, Multimedia Developer
- Support of $8,000 and 697 hours (310 hours in FY 2009-10)

Deliverables

- Moodle: Structured the site around a course schedule that is embedded as an HTML table and links out to each corresponding web module. See Figure 1.
- Course Web Modules in WolfWare: Created 22 web page modules for the course.
- Course Wiki: Set up a private course wiki for students to post their interview assignments and their group projects. Students also worked in private wikis each week to collaborate on their final group project – a narrative of medieval history. See Figure 2.
- Narrated Presentations: Created 14 narrated presentations with interactive quizzes and annotations using Articulate. See Figure 3.
- E-Reserves: Created links to readings, films, and audio clips placed on e-reserves.
- Course Information Site: Created an informational site used to market the course.

Course Production Spotlight: ADN 411 - Digital Painting

DElTA staff worked with McArthur Freeman to create a hybrid offering of ADN 411, a new course on digital painting that will ultimately be offered as a Distance Education course in Spring 2011. McArthur’s primary goals were:

- To create content and demonstrations online that were easy to update and build upon, and
- To facilitate formal and informal group critique online in an asynchronous environment.

This evolved into the creation of two main course sites, one in WordPress where students can access course content (weekly lectures and assignments, projects, embedded video demonstrations,
announcements, etc.) and one in Ning where students can post their work, get to know one another, talk about their design process and receive critiques from their classmates.

**Technologies Used:** WordPress, Ning, reCAPTCHA, Twitter, RSS Feeds, Del.icio.us, Google Analytics, Moodle

**Timeline:** January 2009 to present

**Course Development Team & Resources**
- McArthur Freeman, Instructor, Subject Matter Expert
- Ruth Smith, Instructional Designer, Project Manager
- Amanda Robertson, Graphic Designer
- Jordan Deva, Video Editor
- Leah Lawrence & Shaade Oliveros, Graphic Designers
- Support of $8,000 and 547 hours (307 hours in FY 2009-10)

**Deliverables**
- **Course Web site.** This public WordPress site includes:
  - **Course Information:** About the Course, About the Instructor, Syllabus, and Resources.
  - **Course Content:** Lectures and Assignments (where each week’s lecture and assignments are posted), Glossary (of common design terms), In the News (design news, upcoming events, competitions, etc.), Featured Works (featured student projects and assignments), Announcements (reminders, notices and other important stuff).
  - **Feeds:** Instructor Twitter Feed, RSS Feeds for designLife News and the Advanced Media Lab, and a Del.icio.us Feed for useful course-related links.
  - **Wordpress Layout Interactive Graphic**
  - **Plugins:** Google Analytics tracks site usage and reCAPTCHA reduces spam.
- **Online Critique Space.** This password-protected Ning site includes:
  - **Individual Studio Space:** Each student has a profile page where they can share information about themselves, upload photos and videos of their projects and assignments, and post blogs about their process. Other students can leave threaded comments on their profile page or on individual items that they have posted.
  - **Main Course Studio Page:** The home page of the site aggregates content from each student’s individual studio space as it is posted and particular projects or assignments can be featured by the instructor to highlight best practices.
  - **Ning Layout Interactive Graphic**
Course Production Spotlight: WGS 210 - Women and Gender in Science and Technology

ISS staff worked with Professor Deena Murphy to create a new Distance Education (DE) version of an existing face-to-face course, WGS 210. Deena’s primary goals were to create a course that:

- Encourages intellectual discourse and a high-level of student participation, resulting in a shared sense of intellectual ownership and learning
- Provides a safe environment for expression in an on-line format
- Gives students an effective teamwork experience
- Delivers content in ways that meets multiple learning styles

Forty-nine students enrolled in the DE section for spring 2010, sixty in summer 2010, and sixty-nine in fall 2010. Deena was very pleased with the outcome of the course: “This course wouldn’t be possible without Ruth. She was very helpful throughout the entire process, and even now continues to be very supportive” and “Everyone at DELTA has been so supportive. I’ve met a lot of people other than Ruth and even though I wasn’t working with them one-on-one, they were always very informative and quick to help me with any problem.” The course was featured in the DELTAwire in February 2010.

Technologies Used: Moodle, VoiceThread, Articulate

Timeline: September 2009 to September 2010

Course Development Team & Resources

- Deena Murphy, Instructor, Subject Matter Expert
- Ruth Smith, Instructional Designer, Project Manager
- John Gordon, Videographer
- Ben Huckaby, Graphic Designer
- Mike Cuales, Multimedia Consultant
- Support of $8,000 and 363 hours

Deliverables

- Moodle: Structured course around 16 units, each with a content and assignments webpage and discussion board. See Figure 4.
Course Web Pages: Created 16 Web page modules for the course using a custom template developed in Dreamweaver.

VoiceThread: Created instructions for students on how to use VoiceThread, an online asynchronous discussion tool, to lead weekly discussions. See Figure 5.

Narrated Presentations: Created 16 narrated presentations using Articulate to introduce each unit.

Video and Audio Recordings: Captured two guest lecture videos, a video interview with the authors of the textbook, an audio recording of students performing a play, and a radio interview of the authors of the textbook.

Vuvox Timeline: Created a timeline of women Nobel prize winners using Vuvox. See Figure 6.

E-Reserves: Created links to readings, films, and audio clips placed on e-reserves.

Course Information Site: Created an informational site used to market the course.

Course Production Spotlight: ENT 495 - Insects and Human Disease

ISS staff worked with Dr. James Harper to create a new distance education course, ENT 495: Insects and Human Disease. James's primary goals were to create a course that:

- Presents the content in an engaging format using images and videos where appropriate
- Makes it easy to give students low stakes assessments or self-assessments
- Includes spaces for students to interact and discuss topics relating to insects and human disease

Technologies Used: Moodle, Articulate, Dipity, DELTA Flash Video Tool, DELTA Flashcards Tool

Timeline: January 2010 to present

Course Development Team & Resources

- James Harper, Instructor, Subject Matter Expert
- Ruth Smith, Instructional Designer, Project Manager
- David Tredwell, Graphic Designer, Multimedia Developer
- John Gordon, Videographer
- Mike Cuales, Videographer
- Mack Garrison, Graphic Designer
- Support of $8,000 and 289 hours so far

Deliverables
• **Moodle:** Structured course around 30 units, each with a content page, an assignments page, a discussion board, and a Moodle quiz. See Figure 9.

• **Content Pages:** Created 30 Moodle book modules for the course using chapter points and a custom CSS.

• **Narrated Presentations:** Created approximately 150 narrated presentations using Articulate Presenter.

• **Interactions:** Created a number of Articulate Engage Interactions including a “Sting Index” slideshow, an “Insects and Literature” timeline, and “Medically Important Insects” tab interaction. See Figure 7.

• **Flashcards:** Created flashcards with copyright free images for each unit of the course.

• **Video Interviews:** Collaborated with Video Communication Services to capture three video interviews with Entomology experts. These video segments incorporate the use of b-roll footage, graphics and animation to engage the viewer and provide additional insights from a variety of NCSU subject matter experts. Capturing these guest interviews also allows the faculty to reuse these elements and contribute to a growing library of online content. See Figure 10.

• **E-Reserves:** Worked with library to obtain permission on several films for the course.

**Course Production Spotlight: TMS 211 - Introduction to Fiber Sciences**

ISS staff worked with Dr. Shawn Dunning to create a Distance Education (DE) version of TMS 211. Shawn’s primary goals were to create a course that:

• Combines the lectures and the lab into one seamless course

• Includes opportunities for students to simulate working with a microscope in a virtual environment

• Uses media to better demonstrate detailed processes

This course will provide further opportunities for developing online laboratory solutions. This project involved significant time in course analysis to determine the course objectives and instructional
challenges from the perspective of several of the instructors currently teaching the laboratory and lecture sections. Labs and lectures will be merged into a single online course experience, blending the traditional laboratory content within the lecture content to provide a more relevant experience of the topics covered for students.

**Technologies Used:** Moodle, Articulate, Unity3D, Flash (for Virtual Microscope and several animations), Google Docs

**Timeline:** January 2010 to present

**Course Development Team & Resources**
- Shawn Dunning, Instructor, Subject Matter Expert
- Jon Rust, Instructor, Subject Matter Expert
- Ruth Smith, Instructional Designer, Project Manager
- David Tredwell, Multimedia Developer
- David Howard, Instructional Designer
- Ben Huckaby, Multimedia Developer
- Amanda Robertson, Multimedia Developer
- Support of $8,000 and 280 hours so far

**Deliverables**
- **Learning Outcomes:** Identified learning outcomes for lecture and lab and identified ways for students to observe, practice, and assess themselves on each objective.
- **Moodle:** Identified a structure for the Moodle site which includes 16 units each with a poll, a warm up activity, a content book, a case study, a discussion board, and a Moodle quiz.
- **Articulate:** Created Articulate template for warm up activities and case studies.
- **Virtual Microscope:** Created storyboards for a virtual microscope.
- **Videos and Animations:** Identified needs for videos and animations and began storyboarding.
- **Fiber Comparison Chart:** Set up a fiber comparison chart in a Google spreadsheet that students will work together in groups on to complete.

**Course Production Spotlight: EAC 786 - Teaching in College**

ISS staff worked with Dr. Pooneh Lari to create a new distance education (DE) version of an existing face-to-face course, EAC 786. Pooneh teaches several DE courses already, so she has her own style of presentation already established. Outcomes for the course include:

- Participants learn research-based principles and strategies for effective course design and teaching, and ground their

![Figure 11: EAC 786 Welcome Video (online site)](image-url)
philosophy of teaching on educational research about teaching and learning.

- Participants discuss transition of faculty members from traditional to online environments and how teaching and learning is affected through this transition.

- Participants introduced to online and face-to-face teaching methodologies, learner and instructor characteristics, online learning communities and presences, technologies, and online professional development.

**Technologies Used:** Moodle, Elluminate, Wetpaint Wiki, Google Docs, various e-portfolios

**Timeline:** September 2009 through March 2010

**Course Development Team & Resources**

- Pooneh Lari – Instructor, Subject Matter Expert
- Lee Ann Gillen – Project Manager, Instructional Designer
- Scott DuBois – Web Developer
- Support of $8,000 and 154 hours

**Deliverables**

- **Course Information Pages:** Set of pages to give potential students more information about the course. See Figure 11.
- **E-Portfolio Research:** Researched e-portfolios and summarized the information for the instructor. Provided example URLs to review.
- **Course Layout:** Designed course layout and discussed best presentation methods for course content. Consulted with Pooneh on the best format for her pages.
- **Discussion Boards:** Researched and discussed with Pooneh the best uses of Forums (discussion boards).
- **Wikis:** Discussed best practices for modeling Wikis based on current research and helped her troubleshoot wiki problems when PBWiki went commercial, right before school started.

**Course Production Spotlight: ST 508 - Statistics for the Behavioral Sciences II**

ISS staff worked with Dr. Kim Weems to create a new distance education (DE) version of an existing face-to-face course, ST 508, which partners with the existing DE class of ST 507 developed several years with DELTA and Dr. Roger Woodard.

The primary goal of ST 508 is to assist students with analyzing and interpreting results from data generated in the social sciences. Students learn several methods for determining relationships between variables, including multiple regression, analysis of variance, analysis of covariance and logistic regression. Vista is
presently used to provide course materials, such as note outlines, instructional objectives, homework problems, and mini-data analysis assignments. Data analysis is performed by using the web-based software package Statcrunch as well as SAS. A key component of this course is the literature review; students work in groups to prepare a written summary and an oral presentation based on current research related to their field of study.

**Technologies Used:** Vista, Statcrunch, Course Genie (Wimba Create)

**Timeline:** August 2009 – March 2010

**Course Development Team & Resources**
- Kim Weems – Instructor, Subject Matter Expert
- Lee Ann Gillen – Project Manager, Instructional Designer
- Darren Ley – Videographer
- Ben Huckaby – Web and Multimedia Developer
- Support of $8,000 and 97 hours

**Deliverables**
- **Course Information Pages:** Set of pages to give potential students more information about the course.
- **Course Layout:** Assisted with preparation of course for Vista. Developed layout for Vista.
- **Web Pages:** Developed a web page template and CSS styles for her mini-data analysis exercises.
- **Training:** Wrote instructions for her to use her Dreamweaver template to design exercises.

**Course Production Spotlight: PHI/STS 325 - Bio-medical Ethics**
DELTA staff worked with Karey Harwood to create a new DE version of an existing face-to-face course, PHI/STS 325, a bio-medical ethics course. The instructor relied heavily on discussion forums (small group and then reporting to the large group) to replicate the discussion component used in her face-to-face classroom. Each week the instructor provided a Content and Assignments page consisting of an Introduction, Objectives, Readings, Content, Assignments and a Summary. Content was provided in a number of formats which included lecture notes, Mediasite lecture captures, Articulate Engage interactive learning objects, a Flash based learning object, video streaming, and/or an Elluminate Live! session. As part of a final project, students worked as a group to create a Power Point presentation addressing background facts, major ethical issues, bioethical debate (different arguments), group recommendations and references. They then moderated the discussion board and finally provided a summary of
the discussion. Ten quizzes, a Midterm and a Final Exam were administered through Moodle’s quiz feature.

**Technologies Used:** Moodle, Mediasite, Articulate Engage, Elluminate Live!

**Timeline:** November 2008 – December 2009

**Course Development Team & Resources**

- Karey Harwood – Instructor, Subject Matter Expert
- Cleo Magnuson – Instructional Designer, Project Manager
- Shaade Oliveros – Graphic Designer
- Ben Huckaby – Multimedia Developer
- Laura Stephenson – Mediasite Coordinator
- Larry Evans – Videographer
- Support of $8,000 and 622 hours (197 hours in FY 2009-10)

**Deliverables**

- **Moodle Course Organizational Structure:** Weeks 1-16 and images folder, Dreamweaver HTML pages with CSS, quizzes and exams, e-mail civility document
- **Guest Lecture:** capture of a guest lecturer speaking in Karey’s Spring 2009 PHI 325 face-to-face course.
- **Informed Consent Roundtable Discussion Exercise:** Created using Articulate Engage and the Moodle discussion forums. Students were surveyed to assess effectiveness.
- **Peer- and Self-Review Form for Collaborative Group Work using Google docs:** Likert Scale form based on peer assessment rubric.
- **Visual Design:** course banner, splash site, PowerPoint template

**Course Production Spotlight: ENT 401 - Honey Bee Biology and Management**

DELTA collaborated with David Tarpy on the development of a new Distance Education offering of his existing face-to-face course, ENT 401/501 Advanced Beekeeping. The Moodle course site will incorporate weekly content divided into two parts: Honey Bee Biology and Honey Bee Management. A variety of active learning assignments will utilize Google documents, discussion boards and Moodle’s assignment tool. Additionally, there will be two quizzes and two midterms. Virtual Office hours will be conducted using Elluminate Live! A lab component will be incorporated with local students attending their lab at the NCSU Lake Wheeler Honey Bee Research Facility, whereas students at a distance will be working
with mentors (vetted by the instructor). Checklists for each lab will identify requirements for each lab. Four lab tracks (options) will be provided regarding the purchase or non-purchase of hives/bees.

Regular meetings were held with the instructor to develop the course organizational structure as well as the assignments. He then was scheduled to work independently on narrating his Power Points. Videotaping has been underway to capture “The Life of the Honey Bee”, a Flash based artifact.

A significant effort has been made with this project to incorporate new technology and design philosophies into production from the start. Rather than producing a long series of video, we chose to explore an interactive approach to further engage students and carry them through the cycle of honey bee management. The interactive application for the course will be developed in ActionScript 3, which will perform well with other systems and provide reusable components that can be used to develop other multimedia applications. We’ve also started talks as early as possible with regards to data tracking and analytics so that gathering useful information from the project will be easier later. This information can be used in evaluating our designs and has the potential to be presented among our professional peers as research. Along with this, the design of the application has been influenced by traditional game design techniques, which will augment the immersiveness of the project for students.

Technologies Used: Moodle, Flash / Flex, Google Docs, Elluminate Live!, Articulate Engage

Timeline: November 2009 – present

Course Development Team & Resources
- David Tarpy – Instructor, Subject Matter Expert
- Cleo Magnuson – Instructional Designer, Project Manager
- Mike Cuales – Videographer
- David Tredwell – Videographer, Multimedia Developer
- Mack Garrison – Video Editor
- Support of $8,000 and 423 hours

Deliverables
- Moodle Course structure and organization: Set up 16 week structure with placeholders for components that the instructor will create, Dreamweaver template .html page for each module, Getting Started module, Commitment Quiz; Consent and Waiver form (Quiz feature), Welcome Letter, Articulation Engage “Anatomy of the Bee” (self-test), concept map of course (overview).
- Video capture: for “Lifecycle of Honey Bee Management” interactive
- Assignments: Well Mated Queen: Parts 1-3, discussion board rubric, Diseases, Parasites and Disorders Parts 1-3, Parts 1-2 Pollination and Bee Botany (Google doc presentation and spreadsheet),
- E-Reserve: Facilitated contact with the librarian and instructor met with him to identify needs for the course
• **Visual Design**: a banner and PowerPoint template

**Course Production Spotlight: FW 495/595 - Wildlife Nutrition**

DELTA collaborated with Dean Robert Brown on the development of a new Distance Education offering of a new course, FW495/595: Wildlife Nutrition. The Moodle course site will incorporate weekly content divided into three phases. Closed captioned, narrated lectures with quiz questions were delivered using Camtasia with some support provided by Charlie Morris (CNR’s DE and Web Coordinator). Readings organized by week were provided by e-textbook and/or NCSU e-reserve. Assessments included five mini themes, proctored midterm and final exams and a term paper (for grad students only). Guest lectures were provided by Dr. Kimberly Ange, Dr. Jennifer Campbell and Dr. Jennifer Hurley-Sanders (who also served as the Teaching Assistant).

**Technologies Used**: Moodle, Camtasia

**Timeline**: August 2009 – April 2010

**Course Development Team & Resources**

- Robert Brown – Instructor, Subject Matter Expert
- Cleo Magnuson – Instructional Designer, Project Manager
- PJ Odom – Graphic Designer
- Amanda Robertston – Multimedia Developer
- David Howard – Instructional Designer
- David Tredwell – Multimedia Developer
- Support of $8,000 and 496 hours

**Deliverables**

- **Moodle Course structure and organization**: Set up 16 week structure, assignments, Getting Started module, Welcome Letter, Syllabus review, 1:1 Discussion boards
- **Narrated Presentations**: Reviewed and formatted Power Points and manipulated images using Illustrator and Photoshop, linked closed captioned videos, uploaded Dr. Ange’s videos
- **Rubric** for mini themes with a 20 point conversion scale
- **Welcome Video**
- **E-Reserve and e-textbook**: Facilitated contact with Karen Cicconne, Kim Duckett, Tripp Read
- **Visual Design**: 2 college-level course designs (banner, PowerPoint template, flier)
- **Tutorials**: Retrieving a student’s assignment in Moodle and 3 ways to provide feedback to students, Individual Communication (1:1 instructor-to-student communication using the discussion forum).

**Course Production Spotlight: ADN 414 - Color and Light**

DELTA collaborated with Charles Joyner on the development of a Distance Education offering of a new course, ADN 414: Color and Light. The Moodle course site will incorporate weekly content divided into two parts: The Study of Color and Designing with Color. Three demonstrations videos: *Mixing the Paint, Painting the Swatches* and *Mounting the Swatches* were videotaped with the instructor and linked from Moodle. Weekly course organization in Moodle consisted of: a poll (using the Choice feature in Moodle), assignments including readings, a lesson (using the book feature), a self-quiz and a project. This course incorporated a number of vocabulary items so a Glossary was created.

A critique feature was also included in the course. Students would be divided into small groups (4-5 students). The student would upload a digital version of his/her painted project first to the Assignment tool in Moodle and then to the group he/she was assigned to in VoiceThread. Each student would create a VoiceThread and critique his/her own work and the work of their peers based on instructor provided critique questions. Students will submit their Portfolio of painted projects once at Midterm and again at the end of the semester. Two exams will also be given (using the Quiz feature in Moodle).

**Technologies Used**: Moodle, VoiceThread, video

**Timeline**: September 2009 – present

**Course Development Team & Resources**

- Charles Joyner – Instructor, Subject Matter Expert
- Cleo Magnuson – Instructional Designer, Project Manager
- Ruth Smith – Instructional Designer, Project Manager
- Mack Garrison – Video Editor
- Amanda Robertson – Multimedia Developer, Videographer
- Mike Cuales – Videographer
- Support of $8,000 and 353 hours

**Deliverables**

- **Moodle Course structure and organization**: Important Course Documents (syllabus, Welcome Letter, Course Glossary – see Figure 19), 16 week structure focusing on weekly lessons with the following components: poll, assignments, lesson, self-quiz and the project assignment and critique
- **Getting Started Lesson**: course overview, textbook, materials, course technologies, critique guidelines, netiquette, assignment overview including portfolio reviews, exams and resources. See Figure 18.
Welcome Video

Demonstrations videos: three video segments demonstrating mixing paint, painting color swatches and mounting swatches on Bristol board. This is a challenging hands-on component of the course that requires a solid understanding of the process, technique and materials in use. The team used HD video to capture details and emphasis artifacts, such as brush stroke, that were important for successful project completion.

Visual Design: college level course design (banner), flier

Course Production Spotlight: PRT 595 - Applications of Tourism Management Practices

ISS staff worked with Samantha Rozier-Rich and Stacy Tomas to create a Distance Education (DE) version of a new course that will serve as a tourism-related elective for the new PRT Masters DE Program. Courses in this program are designed to fit into a seven-week session. One highlight of this IDEA Grant was the opportunity for cross-team collaboration between ISS and VCS. Video production included on-site interviews with experts and additional excursions to gather B-roll footage. Final videos were presented in the DELTA Video Player making use of section markers. Each player was incorporated into an information-filled Web page and displayed using HighSlide to bring focus to the video. Faculty hired a graduate student to develop the Moodle course site.

Primary objectives:

1. To establish a fully DE tourism course as a pilot for a future DE tourism certificate program.
2. To provide an opportunity for students to take a practical, hands-on tourism course regardless of geographic location.
3. To develop a high-quality, interactive, sustainable DE course that can be used as a template for future tourism-related DE courses and/or workshops.
4. To provide a means to disseminate knowledge about tourism and the tourism industry to students, professionals, and Extension faculty across North Carolina and beyond.

Technologies Used: Moodle, Final Cut Pro, Dreamweaver, DELTA Video Player, HighSlide

Timeline: January 2010 through December 2010

Course Development Team & Resources
Deliverables

- Moodle site
- Video about Nature-based Tourism: North Carolina Birding Trail. See Figure 20 and Figure 21.
- Video about Nature-based Tourism: Historic Yates Mill County Park
- Video about Festivals and Events: Historic Yates Mill

Course Production Spotlight: MA 105 - Mathematics of Finance

ISS staff worked with Marilyn McCollum to create a more interactive Distance Education (DE) version of MA 105. Previously this course was offered as a series of classroom-captured lectures on DVD. The web-based course was developed to be LMS-agnostic so it can easily move from VISTA into Moodle. The content was divided into topics divided into chunked information. Icons identified the various types of content that repeat throughout the course, guiding the student to read and study, watch and learn, noteworthy tips, check points for mastery, drill and practice, skills assessment, pause and reflect, and digging deeper. Livescribe pencasts provide the audio narration of the instructor's description of the step-by-step process for solving each sample problem while showing each step in that process. The student can replay from any point in the problem. The online course compliments the online course manual that was developed as a Word document and presented at no charge to students as a downloadable PDF file. Homework and testing is handled through WebAssign.

Primary objective: Develop a module-based version of MA 105 that is targeted to non-Math Majors and high school students enrolled in the Learn and Earn series.

Technologies Used: Blackboard Vista, Dreamweaver, Livescribe, Mediasite, DELTA Video Player, WebAssign

Timeline: January 2008 through June 2010
Course Development Team & Resources

- Marilyn McCollum – Instructor, Subject Matter Expert
- Cathi Phillips – Instructional Designer, Project Manager
- Lee Ann Gillen – Instructional Designer
- Kim Rothwell – Instructional Designer
- David Howard – Instructional Designer
- Leah Lawrence – Graphic Designer
- Support of 554 hours (151 in FY 2009-10)

Deliverables

- **Course Website:** Blackboard VISTA site, requires permission to access. See Figure 22.
- **Course Manual (PDF):** Revised existing course manual as Word Document file for easy editing; created time diagram illustrations, charts, and tables; course manual is provided free as a downloadable PDF file for students and instructors; This manual is used by all sections of MA 105.
- **Livescribe Pencasts:** Time Diagrams and Sample Problems are presented as audio-visuals with controls for the learner to move through the example, listening to the instructor describe each step in the problem solution. See Figure 24.
- **Unit-level Introductory Videos:** Mediasite recordings were presented in the DELTA Video Player embedded directly in the course content

Course Production Spotlight: ADN 219 - Digital Imaging

ISS staff worked with Pat FitzGerald and Amanda Robertson to create a Distance Education (DE) version of ADN 219 that provides the presentation and critique experiences of a face-to-face studio course in an online collaborative environment. This course covers a wide range of concepts, theories and skills through a variety of industry-standard software applications. It is a freshman course required of all majors in the Department of Art + Design, yet has attracted students of all majors, classes and disciplines across NC State. To assist freshmen with time management, we created a course timeline and structure that builds technical and design skills in a step-by-step process. Each assignment builds on previous assignments. Scaffolding concepts are built into the course providing support throughout the semester.

Highlights:

- Based on this exemplary course, Amanda Robertson received the 2010 Gertrude Cox Award for innovative
excellence in teaching and learning with technology, http://www.ncsu.edu/gertrudecox/winners/

- During the development of this course, which requires extensive use of social media, ISS staff worked with NC State Legal to develop a Modular Course Consent and Waiver Form that could be delivered as a Moodle Quiz.
- This course was featured in the “The Zen Garden Approach to Course Design: Creating Balance Through Social Media” presentations by Robertson, Phillips, and Crissman in Second Life at the TLT Conference, 2010, as well as face-to-face at the 7th Annual Elon Teaching and Learning Conference, 2010.
- Primary objective: Create an online critique-based course that encourages community and collaboration. Explore various technologies and strategies for conducting presentations, peer reviews, and critiques in an online environment.

**Technologies Used:** Moodle, WordPress, Ning, Second Life, VoiceThread, Elluminate, Twitter, Google Calendar, YouTube, ScreenFlow, DELTA Video Player, Lynda.com

**Timeline:** July 2008 through June 2010 (Hybrid course - Spring 2009, DE course – Fall 2009, Spring 2010, Fall 2010)

**Course Development Team & Resources**
- Amanda Robertson – Instructor, Subject Matter Expert, Multimedia Developer
- Cathi Phillips – Instructional Designer, Project Manager
- Leah Lawrence – Graphic Designer
- Ben Huckaby – Multimedia Developer
- Mike Cuales – Multimedia Developer, Subject-Matter Expert, Videographer
- Jordan Deva – Video Editor
- Pat Fitzgerald – Subject Matter Expert
- Support of $8,000 and 660 hours (222 hours in FY 2009-10)

**Deliverables**
- **Course Websites:**
  - Moodle site, see Figure 25
    - Consent and Waiver Form (FERPA)
  - WordPress site, see Figure 26
    - Course Content, Schedule, Syllabus
    - Announcements (via Twitter)
    - Assignments
    - Resource Hub
    - Public Gallery
    - Public Blogs – Design, Exhibits and Lectures, Design News
  - Ning site, see Figure 27
- Students' Studio Spaces
- Peer Review
- Buddies
- Groups

- Peer Review and Critique:
  o Ning – individual student design studios with peer review in threaded discussion format
  o Moodle – discussion forums for peer review and critique (Hybrid course – Fall 2009, DE course adopted Ning in place of Moodle Discussion Forums)
  o VoiceThread – critique via audio or text with ability to add markings to artwork or video
  o Second Life – synchronous presentation and critique in virtual world with back channel. See Figure 28.

- Student survey:
  o Surveyed hybrid course to determine student preferences for critique platform; Results indicated that students liked all platforms and preferred to keep all three options in the course

- Tutorials:
  o ScreenFlow – faculty generated screen capture videos with voice-over narration
  o DELTA Video Player – Screenflow tutorials were presented with chapter points in player
  o Lynda.com – faculty selected technology-specific tutorials for students to review

Course Production Spotlight: ANT 253 - Unearthing the Past: Introduction to World Archaeology

ISS staff worked with Dr. Fitzpatrick to create a DE version of ANT 253. This would be his first foray into developing and teaching a fully online course. The ultimate goal of this IDEA Grant is to fuel student interest in archaeology by helping undergraduates discover the techniques and theories that archaeologists use for understanding the past. To meet this goal, we incorporated an inquiry-guided approach that requires students to ask questions, investigate solutions, create new knowledge as they gather information, discuss their discoveries and
experiences, and reflect on how their new-found knowledge can deepen appreciation for how societies developed through time. We developed ANT 253 (601) as a Moodle course designed around topic-based units. Key deliverables included narrated presentations and an online learning environment that would encourage students to engage in conversations around the course content. Dr. Fitzpatrick created PowerPoint slide shows with narrations and animations, incorporating the new templates created by Multimedia Specialist Ben Huckaby and including transcripts. We also published the narrations as audio-only files. Each Articulate presentation was uploaded to Moodle as a SCORM learning object to allow the faculty to track each student’s viewing of the presentation. Discussion forums with prompts based on these presentations provide the online community space for students to discuss responses and exchange ideas. Other course activities include a web-based interactive learning module as well as a full set of learning modules, *Revealing Archaeology*.

Primary objective: "The ultimate goal of this project is to fuel student interest in archaeology by helping undergraduates discover the techniques and theories that archaeologists use for understanding the past. "
– Scott Fitzpatrick, IDEA Grant Proposal 2008-09

**Technologies Used:** Moodle, Articulate Presenter, PowerPoint, DELTA Flashcard Tool

**Timeline:** December 2008 through June 2010
(DE Course – Fall 2009, DE Course adapted for Summer 2, 2010)

**Course Development Team & Resources**

- Scott Fitzpatrick – Instructor, Subject-Matter Expert
- Cathi Phillips – Instructional Designer, Project Manager
- Ben Huckaby – Graphic Designer
- Support of $8,000 and 755 hours (389 in FY 2009-10)

**Deliverables**

- **Course Website:** Moodle site. See Figure 30.
- **Course Information Website.** See Figure 29.
- **Flashcards:** built using the DELTA Flashcard tool, these study objects allowed students to review definitions and audio pronunciations of the terms. See Figure 32.
- **Reusable Multimedia Templates:** created full set of CHASS templates for multimedia, including PPT master slide set, course information website, course flier, Mediasite and Moodle banners
- **Narrated Presentations:** used Articulate Presenter to combine PPT slides with animation, audio, and searchable transcripts; provided downloadable PDF for each presentation. See Figure 31.
- **Films:** worked with Kim Duckett, Principal Librarian for Digital Technologies and Learning, to locate and purchase films and set up access for DE students
- **Online Exams:** converted midterm and final exams from paper-based to online Moodle exams
- **Instructor Notes:** provided instruction for future course delivery and maintenance
Course Production Spotlight: ECI 521 - Teaching Young Adult Literature

ISS staff worked with Cris Crissman to create a Distance Education (DE) version of ECI 521 Teaching Literature for Young Adults. This is a graduate-level course directed to middle-school teachers and MAT graduate students. Course development included creating a matrix aligning course outcomes with educational standards established by NC Department of Public Instruction, NC State College of Education LEAD & SERVE, National Council of the Teachers of English, NCDPI Teacher Education Specialty Area Standard – Middle School English Language Arts and High School English, National Education Technology Standards for Teachers (2008), and National Board Certification of Teachers. The course integrates a wide variety of social media and networking sites to enhance online collaboration and community. The Moodle site is structured in topic-based sessions. The Homepage includes links to the course Framework that includes the syllabus and standards-based outcomes, a Toolbox with links to all social media and technologies with course-specific help pages, and Projects with deep links into course project pages. Second Life provides a location for synchronous sessions that include guest lectures, project presentations, and group meetings.

Primary objectives: Model teaching with technologies for adoption by teachers in Middle School classrooms; Link state and national education standards to course learning outcomes; Create an interactive online community

Technologies Used: Moodle, Dipity Interactive Timeline, Google Docs, Second Life, Ning, VoiceTHread, YouTube, Diigo

Timeline: May 2009 through June 2010 (DE Course offered Spring 2010; adapted for Summer 1, 2010)

Course Development Team & Resources

- Cris Crissman – Instructor, Subject Matter Expert
- Cathi Phillips – Instructional Designer, Project Manager
- Amanda Robertson – Multimedia Developer, Second Life Developer
- Ben Huckaby – Multimedia Developer, Graphic Designer
- Spencer Strombotne – Second Life Programmer
- David Drews – Second Life Developer
• Support of $8,000 and 398 hours (387 in FY 2009-10)

**Deliverables**

• **Moodle site.** See Figure 33.
• **Course Information Site**
• **Bookhenge YouTube site**
  o Publish bookcast videos to YouTube Bookhenge channel
• **Ning Bookhenge:**
  o Genre bookclubs discuss and manage group projects
• **Bookhenge, Second Life:** See Figure 36.
  o Guest lectures
  o Synchronous sessions
  o Group meetings
  o Joint event with Eva Perry Teen Bookclub

**Instructional Tools Production**

Instructional Tools Production is the **creation, maintenance and limited support of instructional tools that serve multiple instructors** beyond those involved in course production projects. Some of the tools that we work on have grown directly out of a specific deliverable for a course production project (Flashcards Tool), some are results of observing a need across multiple course production projects (DELTA College Course Templates, Flash Video Tool), some emerge after a period of research and pilot testing from instructional research projects (NCSU Second Life) and some are requested by other units within DELTA or the University (WolfWare). Major projects are listed individually in Table and following that are spotlight descriptions of some of our major instructional tools production projects for the year.

Instructional Tools Production is a new category of activity over the last two years as we have increasingly taken tools that were initially developed for a single course or were the subject of a research or pilot project and expanded them into resources for instructors across campus. This year we spent 12% of our time in this category.

<table>
<thead>
<tr>
<th>Instructional Tools Projects</th>
<th>Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>DELTA College Course Templates</td>
<td>1,026</td>
</tr>
<tr>
<td>NCSU Second Life</td>
<td>544</td>
</tr>
<tr>
<td>Flash Video Tool</td>
<td>464</td>
</tr>
<tr>
<td>Moodle Template Design</td>
<td>267</td>
</tr>
<tr>
<td>WolfWare</td>
<td>243</td>
</tr>
<tr>
<td>Flashcards Tool</td>
<td>178</td>
</tr>
</tbody>
</table>
Instructional Tools Spotlight: DELTA College Course Templates

College Course Templates provide a visual solution to aid instructors in branding their course through the use of a graphic design package for the tools and technologies they use most to teach and to market their courses. Packages include solutions for use with Moodle, PowerPoint, Media Site, a course information website, and a course marketing flier. By streamlining our processes so that our solutions are developed to be college-specific rather than course-specific, we are able to design solutions for our IDEA Grant courses so that they can be used by any faculty or staff on campus. There are over 40 solutions available for free download on the DELTA web site (http://delta.ncsu.edu/cct).

Instructional Tools Spotlight: Second Life

Provided ongoing updates to NCSU Wolflands which included development of new instructional tools and spaces, and creation of marketing kiosks for each college. The ISS Team provided campus support for this year’s TLT Conference, entirely held in Second Life and hosted by UNC Pembroke, for NCSU participating faculty presenting on the NC State Wolflands islands.

Instructional Tools Spotlight: WolfWare

Facilitated the redesign of WolfWare (http://wolfware.ncsu.edu/), a single point of entry for NCSU faculty and students to gain access to their online course materials. Both on campus and Distance Education students rely on this site for access to NCSU’s Learning Management Systems such as Moodle, Vista, Elluminate and WolfWare Classic. The redesign effort made significant enhancements to the user interface and improved overall user experience.

Instructional Tools Spotlight: Moodle Themes

Moodle Theme Design has been a coordinated effort across multiple units within DELTA and the campus. It represents a body of work that will position NC State University as one of the leaders in innovative and strategic Moodle theme development in higher education. The 43 themes developed help to maintain brand consistency while providing our faculty audience with the design flexibility to customize their course. This impacts the end-user experience and provides a foundation for which future enhancements can be made. The initiative involved establishing objectives for the initial NCSU theme creation as well as the custom banner themes to aid in development of standards in template design and management. This effort involved many DELTA team members and worked through the LMS Best Practices Committee, the College LMS Policy Committee, and the LMS Steering Committee.

Instructional Tools Spotlight: Flashcard Study Tool

The Flashcards system has seen significant changes in the past year, not the least of which includes making the Flash-based application accessible to screen reading equipment and keyboard-only interaction (a first for DELTA). The system is also undergoing a great deal of work behind the scenes to increase its efficiency and speed by an order of magnitude and to make it scalable to a number of different devices and
venues. This potential reaches beyond the original concept of the project, enabling DELTA to provide online flash cards to mobile devices, touchscreens, and other emerging technologies. There are currently 13 unique courses using the Flashcard Study Tool.

**Instructional Tools Spotlight: Flash Video Tool**

As MDS transitioned away from DVD production, the internally developed Flash Video Tool provided an accessible and highly automated way to distribute classroom lectures online. This project was an excellent example of cross-team collaboration, as it involved close work between MM and MDS to establish the needs and work flow that online lecture videos require. Also, work with ETS yielded a way to dynamically fill in information about the course and its faculty, which DE helped craft. There are currently 39 courses offered online using this tool, each instance taking as little as 1 minute to setup.

**Instructional Tools Spotlight: Modular Course Consent and Waiver Form**

DELTA worked with Campus Legal to create a form that covered some of the most common situations where an instructor needs students to waive their rights or to consent to certain activities. These situations might include using student work in future classes, having students create public materials as a class assignment, having students provide information that is protected by FERPA, or taking photos or videos of students. Then DELTA established an acceptable, legal and feasible method to gain student “signatures” using the quizzing tool in Moodle was developed.

**Marketing**

Marketing activities are the creation of materials directed at potential NC State students to build awareness of the Distance Education options and of the University as a major provider of DE courses and programs. The ISS Production Team provides support for the Marketing & Partnership Development Unit and is responsible for brand management, design and production support, marketing and advertising for all DELTA sub-units including Distance Education, as well as support for individual NCSU courses and programs. Our in-house team is responsible for maintaining NCSU brand consistency as well as building brand recognition for Distance Education and other departments or units across the university in support of student recruitment. The Creative & Multimedia Production team works closely with all DELTA units to ensure proper branding and to help identify further opportunities to promote NCSU and Distance Education. Major marketing projects for 2009-10 are listed individually in Table and following that are spotlight descriptions of some of them.

Time spent on marketing projects peaked at about 17% in 2008-09 and has decreased to 7% this year.

<table>
<thead>
<tr>
<th>Table 15: Major Marketing Projects (&gt;20 hours this FY)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Marketing Projects</strong></td>
</tr>
<tr>
<td>Distance Education website</td>
</tr>
<tr>
<td>DE iPhone Application</td>
</tr>
<tr>
<td>NCSU Website DE page</td>
</tr>
</tbody>
</table>
Photography 150
Graduate School Partnership 102
Digital Media Advertising 90
HTML E-mail Marketing 54
Food Safety Marketing 49
Wolfpack Sports Marketing 47
T & OD Moodle Graphics 30
PRTM Marketing 18
Other Marketing 218

11 projects 1,592

Marketing Spotlight: Distance Education Website (distance.ncsu.edu)

The Distance Education Website was updated to align with NCSU brand standards and reflect the most recent web practices in standards-based web design, code, and user interface development. Updated Search Engine Optimization was implemented to gain user analytics, allowing us to make informed decisions in the growth and implementation of future updates. Enhancements are made based on these parameters as our in-house team continues to build upon this framework. A major component of this initiative was continuing our working relationship with Bold Interactive. We were able to leverage the expertise of this online marketing agency to further extend the capabilities of our team and provide base line metrics assessment strategies to the Master of Geographic Information Systems (GIS) and Parks, Recreation & Tourism Management (PRTM) distance education programs.

Major accomplishments included:

- **Apply & Enroll Section** - Text and graphical user interface updates were made to refine and simplify the overall processes around Classification, Apply, and Enroll sections. Advanced Analytics were also applied to allow detailed tracking of users in this section.

- **Course Details Section** - Graphical user interface updates were made to refine and simplify display of information into an organized hierarchical manner. Care was taken to prepare for growth into our next phase of development. Analytics were applied to allow tracking and gain knowledge of users interested in applying and enrolling.

- "**Apply, Enroll, Get Help**" Header Update - Set of heading button updates to allow the user to choose an important point of action (Apply, Enroll, Get Help) at any point in the website. Analytics tracking was implemented to gain information of apply, enroll, and get help user funnels.

- **Partners Page** - This page was created to showcase distance education's partner organizations in the NC area.
• Continued SEO integration - Continued updates to Search Engine Optimization allow us to effectively determine target market usage areas and make informed decisions based on the data trends from our established analytics framework.

Marketing Spotlight: PipelineNC.com
The Marketing team consulted with Futures Inc. to integrate NCSU Distance Education program information into the new PipelineNC website. The website provides users with current job postings, career planning and portfolio tools as well as access to educational institutes and degree programs required for a given career path. One of the products of this partnership was a comprehensive listing of career and job titles that relate to our 58+ distance education degree programs. This listing will inform prospective students of possible career opportunities for a given program of interest.

Marketing Spotlight: NCSU Website - Distance Education Landing Page
The Distance Education landing page within the NCSU Website was identified as a key referring page for distance.ncsu.edu. On average, over 4000 people visit this page each month. We developed new content, a rich-media area and Google Analytics to help better identify the audience and take advantage of key communication opportunities. Our team worked with University Communications (formerly Creative Services) and further established the working relationship with our campus partners.

Marketing Spotlight: The Graduate School
This year, DELTA helped the Graduate School’s recruiting initiatives by transforming their pen and paper approach at recruiting events into an online, automated format. This not only sped up the input from prospective graduate students, but also reduced many of the errors seen by prospectors and immediately entered the students’ information into a tracking system. Beyond the efficiency improvements, the collaboration allowed DELTA to poll all prospects at recruiting events about their interest in distance education and about what their primary motivations are. A portable point-of-purchase display was designed to further accommodate NCSU staff during recruiting events.

Marketing Spotlight: Photography
Photography is an important aspect of marketing as it helps to recruit new students, promote Distance Education faculty and programs on/off campus, and share personal stories that others can relate to such as student testimonials. Getting the right image to fit the design is hard when searching through stock photography sources. Building photography expertise in-house allows our designers to find the most effective composition. The use of good photography improves branding and identity, print and web creative services, integrated marketing campaigns, and web development. Photography is also used within DELTA facilities to further brand the space and promote an engaging work environment for staff, students and faculty.

Marketing Spotlight: WolfMatch iPhone / iPad App
As part of a student recruitment effort, the ISS Production Team worked with Spark Plug Games to develop a branded game for the iPhone and iPad. WolfMatch, a match-3 style casual game, was developed to promote NCSU, Distance Education and engage a broad mobile audience with a fun and
interactive experience. The game is freely available through the NCSU iTunes Store and has been downloaded over 700 times. Process, strategies and expertise gained from this experience will directly impact future efforts to develop mobile applications in support of course delivery. DELTA worked closely within the newly formed NCSU Mobile Initiatives Group to ensure proper branding, trademark and development standards.

Marketing Spotlight: Advertising - Distance Education Fall Campaign

The intent of our Fall campaign was to generate brand awareness for NC State Distance Education and drive traffic to http://distance.ncsu.edu. Unlike previous acquisition campaigns, this branding initiative targeted a broad audience and pushed into new test markets to identify future opportunities and further inform creative decisions. Creative for the campaign was developed by our in-house team and incorporated graphic design work done by our student interns. The framework that was developed for the Distance Education website will help to assess conversions and transform raw data into actionable items for the team. One of the elements of this campaign was the production and distribution of an NCSU mobile application. This branded iPhone game, WolfMatch, was also a research effort developed in partnership with Spark Plug Games, a local game development studio, and the newly formed NCSU Mobile Initiatives Group. The campaign included the following elements:

- Gopack.com banner ads
- Sponsored PackTalk series feature on the NCSU jumbotron
- Local radio spots
- PackTracks e-mail newsletter ads
- WolfMatch iPhone Branded Game
- DE Website WolfMatch landing page
- DE Website rich-media content (home page)
- Alumni Magazine ad
- NY Times Advertorial
- SEANC Ad
- NCSU Billboard System

Service, Engagement & Outreach

Service activities are those done for the good of the University or a unit or group within the University (including DELTA) like participating on Committees (NCSU Committee Meetings, LMS Coordination & Committees, Search Committees) or helping DELTA or other units with our professional expertise (Gertrude Cox Website, T&OD Orientation, DELTA Space Design). Engagement and outreach activities are building and maintaining partnerships and relationships and communicating information between DELTA and the rest of NC State (DELTAwire, DELTA Communications, DELTA Website, DELTA Open House), interest groups and special interest communities (IDIG Coordination) and strategic partners (Partnership Dev (NCSU, UNC Sys, etc.)). Jessica Krywosa, writing in .eduGuru, defines engagement as “not only putting information out there in a way that is palatable to your audience, after research and segmentation, but also listening to what is being said (and not only in your predefined
spaces). It’s listening and talking in a pre-developed brand voice where appropriate, while taking action on sentiments privately where you can.” Engagement is a connection to our university, an ongoing, growing conversation. Major projects are listed individually in Table and following that are spotlight descriptions of some of our major service, engagement and outreach projects for the year.

Service, Outreach & Engagement used to be about 15% - 20% of our time during the years when LITRE and SLIC were active and when we were doing exploration, management and support of Centra and then Elluminate. In the last three years this has dwindled to about 7% of our time. Recently, more of what we do in Service & Engagement is strengthening DELTA engagement with the University community and less is performing service activities for other units.

### Table 16: Major DELTA Service & Engagement Projects (>20 hours this FY)

<table>
<thead>
<tr>
<th>DELTA Service, Engagement &amp; Outreach Projects</th>
<th>Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>DELTAwire</td>
<td>376</td>
</tr>
<tr>
<td>DELTA Space Design</td>
<td>263</td>
</tr>
<tr>
<td>DELTA Communications</td>
<td>199</td>
</tr>
<tr>
<td>DELTA Website Production</td>
<td>192</td>
</tr>
<tr>
<td>DELTA Open House</td>
<td>154</td>
</tr>
<tr>
<td>LMS Coordination &amp; Committees</td>
<td>124</td>
</tr>
<tr>
<td>DELTA Holiday Card</td>
<td>75</td>
</tr>
<tr>
<td>NCSU Committees</td>
<td>61</td>
</tr>
<tr>
<td>Project Management Systems</td>
<td>45</td>
</tr>
<tr>
<td>Shared Resources</td>
<td>33</td>
</tr>
<tr>
<td>DELTA Branding Initiative</td>
<td>30</td>
</tr>
<tr>
<td>Other Service &amp; Engagement</td>
<td>312</td>
</tr>
<tr>
<td><strong>8 projects</strong></td>
<td><strong>1,864</strong></td>
</tr>
</tbody>
</table>

Service, Engagement & Outreach Spotlight: DELTAwire

DELTAwire is DELTA’s outlet for sharing news and information, perspectives, wisdom, and expertise with the community. With all DELTA staff members as authors, DELTAwire is a collaborative space for posting timely information about learning technologies and distance education. Since the site’s launch in September 2009, DELTAwire has had an audience of over 3,700 unique viewers, totaling 12,000 page views. Staff members have used DELTAwire to announce significant news and programs such as College Course Templates, the winter break LMS outage, IDEA Grants, Summer Institute, DELTA Open House, strategies for flu-proofing a course, and the DELTA victory at the Annual Fun Walk.

Service, Engagement & Outreach Spotlight: DELTA Communications

ISS provides writing, editing and production services for communication projects initiated by DELTA senior management and other DELTA staff. This year we assisted with several significant presentations and documents, with a focus on presenting information in an effective, creative, and clear manner that is
consistent with DELTA and NC State style, message and brand. We provided writing, editing and video production for Michelle Beck from UNC-GA for her presentation to the state legislature regarding distance education at NC State. We provided editorial support for Moodle press releases, DELTA’s pandemic/socially-distancing event plan, several DELTA presentations, and the DELTA annual report. Finally, we assisted DELTA staff with editorial and design support for small projects (marketing materials, papers, Web content, instructional content) that reach a public audience.

Service, Engagement & Outreach Spotlight: DELTA Space Design
After DELTA’s move to its new home in Venture II, there are still tweaks and improvements to space design being made to improve our work environment and campus presence. This past year, we redesigned the reception and testing services area to accommodate the increased student traffic. The process involved assessing problem areas, conceptualizing and vetting potential solutions, and finally fabricating and constructing the new space. Major enhancements included a consolidation to a single guest services desk, creation of a guest waiting area in both the reception and lobby area and various wayfinding and branding elements. Overall, this has improved the traffic flow for students and guests, making our reception area much more suited for the volume of visitors we have.

Service, Engagement & Outreach Spotlight: DELTA Open House
Each year, DELTA hosts an open house for NCSU faculty, staff and students to visit our offices and connect with our team. The open house features demonstrations, mini-workshops, informal discussions and a chance for Distance Education students to meet their faculty and advisors. Instructional Support Services coordinates promotions, logistics and training for the event.

Service, Engagement & Outreach Spotlight: Project Management Systems
DELTA has engaged in ongoing efforts to improve our project management process and systems. A large portion of the ISS Production Team currently uses Base Camp to facilitate project management and communication across projects. A concentrated effort was made this year to explore alternative systems and tools that will better support our diverse production environment. A better project management system will allow for accurate reporting, improved resource management and will provided visibility across teams will facilitating collaboration.

Service, Engagement & Outreach Spotlight: DELTA Branding & Communications
The ISS Team is responsible for generating awareness of DELTA’s function and services across campus. Managing the DELTA sub-brand is an effort that is shared across the organization and involves several initiatives throughout a given year:

- **HTML E-mail** - Ongoing exploration of digital communication tools to improve our ability to engage faculty, staff and students. The use of Mail Chimp provides an alternative to print materials and presents a measurable channel for future eMarketing initiatives. Applications such as Mail Chimp and Bronto comply with current e-mail and anti-spam standards and allow for tracking and analytics to improve our services and communication channels.
• **Billboard Marketing Campus System** - an easy to use, web-based management system used for controlling digital signage. Used throughout NC State University, it is the primary management system for web-enabled digital signs across campus. DELTA has made extensive use of these systems to inform students and faculty of important services.

### Research

This is research and exploration into emerging technologies, techniques or processes that we believe may be useful for teaching and learning using technology. This involves exploring and learning, small pilot projects, specific research projects, and doing some work to determine how the use of the technology, technique or process might be taught and/or managed. Most research projects have no specific client, but many IDEA Grant Exploratory projects end up in this category and those do involve working with faculty. Most of the Other Research project is similar to this although there is some activity that is doing journal research and writing grants. Note that there is a lot of research and exploration that takes place in the context of Course Production projects. In these cases, the research and exploration is in direct support of creating an engaging and effective online class, although it may expand beyond this after the project (for example, use of Livescribe).

The growing use of Second Life and the tools we have developed for it (polling tool, teaching spaces, video player, etc.) are a direct outgrowth of a research project. As use of a technology or technique grows, these projects can become Instructional Tools Production projects or Program Management projects or get folded into regular Training & Support channels.

MM research efforts focus on innovative ways to enhance student engagement by investigating social media applications, mobile applications development, Serious Games for education, 3D game engine technologies and online virtual environments for teaching and learning. These technologies are being explored in partnership with CSC, Digital Games Research Center, Intellimedia, Entomology, USDA-APHIS and the College of Design’s Advanced Media Lab. We continue to consult with local game development studios on these efforts.

Major projects are listed individually in Table 1 and following that are spotlight descriptions of some of our major instructional research efforts for the year.

Across the production team, though not for every individual, Instructional Research is routinely between 5% and 10% of our time.

<table>
<thead>
<tr>
<th>Instructional Research Projects</th>
<th>Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSC 582</td>
<td>425</td>
</tr>
<tr>
<td>Unity3D Prototype</td>
<td>182</td>
</tr>
<tr>
<td>Serious Games Initiative</td>
<td>126</td>
</tr>
<tr>
<td>Online Course Quality Review</td>
<td>35</td>
</tr>
</tbody>
</table>
Instructional Research Spotlight: CSC 582

This past year has marked the first IDEA Grant to develop teaching technologies that use a 3D game engine. The goal of Dr. Michael Young's Project Red is to develop a real-time 3D authoring tools that will produce a machinima based on a simple script provided by the user (faculty). Thanks to our prior research efforts into the Unity 3D game engine (which is quickly becoming an industry standard) we were perfectly positioned to not only contribute to this project, but even to help in the R&D of system components and features. We have already received additional interest in games as course supplements since the onset of this project, which is a very encouraging sign for the future of this initiative. The DELTA production staff is providing coordination, project management, interface design, 3D asset development including character animation and prop design.

Instructional Research Spotlight: Serious Games Development & Unity 3D

Almost four years ago, our in-house team started looking into developing serious games to augment online instruction at NCSU. Over the past year we have made significant progress in game development and the production of advanced interactive applications. We have provided consulting to the USDA-APHIS and continue to engage local studios such as Vizuron Entertainment, Spark Plug Games and Insomniac Games on production strategies, game development ideas and grant opportunities.

Instructional Research Spotlight: Accessibility

In 2009-2010, accessibility issues surfaced in Moodle 1.9 due to a complaint from a student with blindness and his frustration with its lack of usability and accessibility. Lisa Fiedor and Greg Kraus evaluated Moodle 1.9 for accessibility against the W3C Web Content Accessibility Guidelines (WCAG) 2.0 and developed the “Moodle Accessibility Report” for DELTA and OIT which detailed issues with forms, headings, and navigation in Moodle. DELTA contracted Remote Learner to make several changes to Moodle which improve accessibility and usability. Kraus worked with the company to scope out the problem and test their solution. In the end, not all issues were addressed due to funding resources available. Most notably, they did not fix any of the forms issues. Lee Ann Gillen led the Moodle Accessibility Work Group in developing plans for evaluating the accessibility of Moodle 2.0 as soon as it is available.

Lisa Fiedor and Beth Shepherd evaluated several online synchronous tools for accessibility, including Elluminate, Adobe Connect, TC Web Conferencing, and Second Life, and gave a UNC TLT Conference presentation, "Embracing Change for All: Addressing Accessibility in Online Synchronous Teaching Technologies." In addition, Fiedor evaluated other software for accessibility, e.g., Camtasia 6.0 for the
DELTA Quick Training initiative, Mediasite, and podcasting. Fiedor evaluated the WolfWare home page for usability and accessibility, and gave feedback to the developers.

**DELTA ISS Staff**

**Changes**

There have been no changes in permanent staff this Fiscal Year.

**Current Staff**

Yiling Chappelow, Instructional Technologist  
Andy Click, Technology Support Technician  
Michael Cuales, Associate Director of Creative & Multimedia Production Services  
Scott DuBois, Multimedia Specialist  
Lisa Fiedor, Technology Support Specialist  
Stacy Smith Gant, Associate Director of Faculty Development & Support  
Lee Ann Gillen, Instructional Designer  
Allie Giro, Administrative Support Specialist  
David Howard, Associate Director of Development & Course Production  
Benjamin Huckaby, Multimedia Specialist  
Greg Kraus, Senior Instructional Technologist  
Cleo Magnuson, Instructional Designer  
Samantha McCuen, Administrative Support Specialist  
Patrick Odom, Media Specialist  
Donna Petherbridge, Associate Vice Provost for Instructional Support Services  
Cathi Phillips, Instructional Designer  
Amanda Robertson, Senior Multimedia Specialist  
Beth Shepherd, Instructional Technologist  
Ruth Smith, Instructional Designer  
Traci Temple, Assistant Director of Instructional Development  
David Tredwell, Multimedia Specialist  
Alyson Tuck, Information Specialist

**Part-time Staff**

DELTA ISS employs a staff of NC State students to leverage our internal capabilities in developing multimedia solutions to support course delivery and instruction, to assist with writing for course production and outreach, to market courses and programs, and to provide support for our help desk. Students from Design and Computer Science assist on various development efforts such as designing mobile applications, developing Second Life teaching solutions, editing location video, developing animations and interactive media, creating signage and way-finding materials for the Distance Education space, and creating 3D animation and graphics in support of virtual lab environments. Students from Technical Writing and Education provide support for researching and writing DELTAwire stories,
making changes to the DELTA web sites, proofreading and editing various written materials, writing instructions for instructional technologies, researching best practices in teaching and learning with technology and writing course content using the instructor as a subject-matter expert. Students working on our help desk come from a variety of backgrounds, from communications to computer science, where they use effective communication skills to help us manage first-tier calls on our help desk.

Employing students not only extends our reach, it allows us to design and develop better solutions to reach our target audience by working directly with them. In addition, these opportunities give students authentic experiences where they can develop applied skills in designing solutions for and learning to effectively communicate with real clients. Even in this challenging job market, our interns and graduates continue to be placed in high-profile positions at distinguished companies such as IBM, Phoenix University, Centerline Productions, Disney, PixelDust Studios, Capstrat, d:e Creative and Immersion Media, and some even find permanent jobs at NC State.

Professional Development and Activities

Professional development includes activities related to making individuals better at their jobs. Attending and preparing to attend conferences, workshops, and courses, whether in person or online, is one way to do so (Conferences, Workshops, Seminars, Courses) and preparing and delivering presentations and publications is another specific task (Presentations Given & Publications). Conferences, training, and other professional development activities are crucial to the advancement of our staff. This benefits the University as we are kept aware of what the latest technologies and techniques are and how others are using them both in and outside of education. Then we bring this knowledge back to the University for creating innovative and cutting-edge solutions. Other professional development tasks include reading journals and talking to colleagues about best practices (Other Professional Development). We also learn about new technologies and best practices when working on projects and that time is credited to those projects.

Across DELTA ISS, though not for every individual, Professional Development is routinely around 10% of our time.

While the team attended a wide variety of online and face-to-face events, conferences, and training seminars over the past year there were a few in particular that really stood out to us.

Professional Development Spotlight: 2010 CHAT Festival, Chapel Hill, NC

The first CHAT Festival (http://www.chatfestival2010.com/) took place from February 16-20 at UNC-Chapel Hill and saw an interesting collection of folks involved in digital media gathering together for a few days of idea, technique, and technology sharing. Everyone from the ISS Production team was at the festival for at least an afternoon and we put together a DELTAWire post about what we learned. View at https://deltawire.delta.ncsu.edu/conferences/2010-chat-festival-a-group-perspective/.
Professional Development Spotlight: 2010 Triangle Game Conference, Raleigh NC

The Triangle Games Conference, or TGC, features talks and demonstrations from some of the top game developers in the nation (many of which are based in this region) as well as presentations from smaller studios and educators who are using games to supplement their course content. Some of the key take-aways from this year’s conference were:

- “Creativity is a contact sport” - it’s extremely important to bounce ideas off of colleagues. Feedback should be actionable and dispassionate (no blaming)
- Culture is important internally (team) and externally (organization, PR)
- Unity3D is getting major attention from small entrepreneurial groups as well as larger entities
- Immersion is key to users getting the most out of your game. A player’s perception is reality to them. (This is hugely important in creating really effective educational games.)
- Branded games are a great way to bring attention to your organization and/or any specific services you provide and want people to be aware of.
- A social media presence is becoming a critical need for any organization and should be approached as a managed initiative to engage your existing and prospective users.

Professional Development Spotlight: 2010 WordCamp

Wordcamp is a conference for WordPress users, designers, and developers with various speakers on a range of topics including how-to’s, marketing strategies and proper development strategies for the WordPress blog and publishing platform.

Professional Development Spotlight: An Event Apart

An Event Apart is a two-day conference for passionate practitioners in standards-based web design. Industry leaders present valuable insights on new web standards in code, content, usability and design. It was founded by web visionaries Eric Meyer and Jeffrey Zeldman and is dedicated to the proposition that the creators of great web experiences deserve a great learning experience.

Professional Development Listing – Attendance

Attendance at a number of selected professional development opportunities and events are listed in Table 1.

Table 18: Attendance at Professional Development Events

- 2010 Triangle Games Conference (Creative & Multimedia team)
- 2010 WordCamp Raleigh (Cathi, PJ, Scott)
- 2010 C.H.A.T. Festival (entire production team)
- AACE Social Media: Trends and Implications for Learning (Ruth, Cathi)
- ACC Teaching Scholar Seminar: Ways of Understanding Teaching (Lee Ann)
- An Event Apart Conference (Scott)
• Assessing Administrative and Support Areas, May 5, 2010, McKimmon Center (Donna).
• ASTD Workshop: Evidence-Based Training (David H., Lee Ann, Cleo)
• EEOI Training (Mike, David H.)
• ELI Fall 2009 Focus Session: Flattening the Classroom (Ruth, Cathi, Cleo, Lee Ann)
• ELI Spring 2010 Focus Session: Mobile Learning 2.0 (Mike (facilitator), David T., Scott, Cathi, Lee Ann)
• ELI Webinars:
  o Teaching Without Walls: Life Beyond the Lecture (Cleo, Ruth, Cathi, Lee Ann)
  o Team-Based Learning: Small Group Learning’s Next Big Step (Lee Ann, Cathi)
  o On Social Learning, Sensemaking Capacity, and Collective Intelligence (Cathi)
• Excel I, II, & III Training (Sam)
• How to Communicate, Influence & Negotiate in Project Management (Scott)
• Innovations in Instruction 2009 (Cleo, Cathi)
• International Online Conference for Teaching and Learning (Lee Ann)
• JavaScript Training (David T., Scott, Ben)
• Lodestone Adobe Flex training (David T., Ben)
• Magna Online Seminars:
  o How Quality Matters’ Updated Standards Improve Online Courses (Cleo, Cathi)
  o How Can Document Sharing Tools Help Students Collaborate? (Instructional Design team)
  o How Do I Create Engaging Threaded Discussion Questions? (Cathi, Lee Ann, Ruth, Cleo, Alyson)
• Marketplace Training (Sam)
• Moodle Moot and Sloan-C conference (David H.)
• NCSU Mobile Initiatives Group (Mike, PJ, Scott)
• NCSU Communicators Group (Mike, Alyson)
• NCSU HR Time Management Course (PJ)
• NCSU HR Performance Leadership Program (Mike)
• NCSU Web Developers Meetings
  o Search Engine Optimization Training for Online Content Producers (Mike, Scott, PJ, Alyson, Lee Ann, Cathi)
  o Changes to the 508 Guidelines for Web Accessibility (Cathi, David H., Scott)
  o The Secrets to Making Your Pages Load Faster (Cathi)
  o Adobe Day: Creative Suite 5 Seminar (Cathi)
• NCSU Teaching & Learning with Technology Roundtable: 2010 Horizon Report (Cathi, Lee Ann)
• NCDLA 2010 Blended Conference (Cathi, Lee Ann, Donna)
• New Media Online Consortium: Symposium on New Media and Learning (Lee Ann, Cleo, Cathi, Ruth)
• OIT Lunch and Learn Series:
  o Web Hosting (Cathi)
  o Get Started with Mobile Web Applications (Cathi, Lee Ann)
• Open Course in Education Futures (Cathi, Lee Ann, Ruth)
• Purchasing Card Training (Sam)
• Tri-IT (Triangle Instructional Technologists interest group)
  o Tri-IT Spring 2010 Meeting (David H.)
  o Tri-IT Fall 2009 Meeting (Cleo, Cathi, Donna)
• Travel Systems Training (Sam)
• UNC TLT Conference (most of the DELTA ISS staff)
• WWW2010 FutureWeb Conference, April 28 – 30, Raleigh, NC (David H., Cathi, Ruth, Lee Ann, Alyson, Mike, Amanda, PJ, Ben, David T., Scott, Donna)
• WWW2010 WebScience Conference (Cleo)
• WolfWise Training (Sam)
• XHTML with CSS 2 OIT Training (PJ)

**Professional Development Listing – Presentations Given, Professional Reviews, and Courses Taught**

Presentations given at selected professional development events, and participation in conference/journal reviews, are listed in Table 1. In addition, several of our staff also teach courses at the University, and these are included as well.

*Table 19: Presentations, Reviews, and Courses Taught*

• Petherbridge, Donna. Reviewer for Vol. 29 of *To Improve the Academy* (Professional and Organizational Development Network (POD), January 2010.

• Petherbridge, Donna. & Robertson, Amanda. (April 1, 2010). *Tips for Teaching Online*. Special invitation seminar at Wake Technical Community College on April 1, 2010 for their annual Faculty Development conference.


• Petherbridge, Donna. Taught Instructional Systems Design, EAC 580, for the Training & Development Program in the Department of Educational Leadership, Policy, Adult & Higher Education in the College of Education, in both fall 2009 and spring 2010 semesters.

**Professional Memberships**
Memberships in selected professional organizations that our staff are active in as part of their participation in their professional communities of expertise are listed in Table 20.

**Table 20: Professional Memberships**
- American Society of Training and Development, Research Triangle Chapter (ASTD-RTA)
- New Media Consortium (NMC)
- Instructional Technology Forum (ITFORUM)
- EDUCAUSE
- EDUCUASE Learning Initiative, ELI
- Triangle Instructional Technologists (Tri-IT)

**Awards**
Production team members received the following recognition and awards in FY 09-10:
- Amanda Robertson received Gertrude Cox award (*Innovative Excellence in Teaching & Learning with Technology*) for ADN 219 - Digital Imaging [https://wp.delta.ncsu.edu/digitalimaging](https://wp.delta.ncsu.edu/digitalimaging)
- David Howard won a Pride of the Wolfpack Award.
- NCSU Fitness Fun Walk - Winner!!!

**Diversity, Retention, and Staff Well-Being**

**Diversity**
Lisa Fiedor was elected to the Staff Senate for the Provost’s Office, serving on the Staff Senate Diversity Committee. Fiedor, with assistance from Thelia Burrell from the Office of Contracts and Grants, planned, organized and produced, a Diversity Film Series, which showed three films in six sessions focusing on different diversity issues. The sessions were conducted in a DELTA classroom, and were recorded and broadcast in Mediasite to remote viewers. Viewers at a distance could email Fiedor to interject questions.
or comments into the facilitated session. Fiedor enlisted the help of diversity experts across campus to facilitate the sessions, including Dr. Monica Price, DELTA, Drs. Betsy Taylor and Allen Cannedy, CVM, and Carson Cook, OEO. The sessions were well-attended with 181 attendances for the sessions.

Fiedor also serves as an SPA representative on the Council on the Status of Women, which is an advisory group to the Provost, and received a Certificate of Recognition at the NC State University Diversity Awards Ceremony on 4/14/2010. Lastly, she served as a member on the Disability Compliance Advisory Team (DCAT) for Disability Services Office (DSO), and on the Search Committee for the Assistant Director Coordinator of Assistive Technology position in DSO.

**Accessibility**

DELTA has participated in national accessibility initiatives. Lisa Fiedor and Beth Shepherd participated in the Elluminate Accessibility Task Force, which is comprised of several individuals from Elluminate, representatives from other universities, and participants with blindness, who could provide expert screen reader feedback. Similarly, Fiedor also participated in the Blackboard Accessibility Interest Group which partnered with Blackboard to make their Next Generation learning management system accessible. In particular, Fiedor served as Chair of the Documentation Subgroup to assist Blackboard with appropriate help documentation for users with disabilities. Fiedor is the voting member for NC State’s University membership in the Assistive Technologists Higher Education Network Professional Association. In addition, Fiedor has also participated in planning for the IT Accessibility Center at the EDUCAUSE Conference 2010 with representatives of EDUCAUSE, accessibility specialists from universities across the country, and representatives from industry.

Fiedor also serves as co-chair of the IT Accessibility Advisory Working Group (IT AAWG), which is a subcommittee of the University Information Technology Committee. Greg Kraus also serves as a member of the committee. For this committee, Fiedor evaluated several accessibility validation tools, and recommended the University purchase several copies of SortSite for individual use, and installation on the Virtual Computing Lab (VCL).

**Staff Well-Being**

We have instituted “Dessert Mondays” in the Venture II building where every Monday someone brings a dessert to share. This has happened nearly every Monday since September 2009. Our staff regularly participates in DELTA activity committee events and has representation on the committee.

**Concerns and Recommendations for the Future**

**Time for Instructional Design Research and Exploration**

Course production projects are approached as a partnership between the Instructional Design team...
and the Multimedia team with additional assistance from and collaboration with Video Communications Services, Academic Technology Services and Faculty Development Services along with other DELTA units. Over the last four years, the amount of time spent on course production projects by the ISS Production team has remained relatively constant at about 5400 hours. However, in the same time span, the percentage of that time spent by the instructional design team has grown from 35% to 67% (see Figure 37). One large factor in this growth is the growth of the Instructional Design team from two full-time IDs to four. Another large factor in the change is the expansion of services the Multimedia team provides to other units within DELTA with marketing and outreach activities.

The role that the instructional designers play in course production projects is also changing. As they work with more instructors who are new to DE (see survey results in Course Production section), the instructional designers take on more of the responsibility to get the course to the point that it is deliverable as a Distance Education course. The instructional designers are making more and more use of tried and true techniques. In contrast, when working with experienced instructors on the improvement of an existing course, instructional designers are able to focus on individual learning materials that meet challenging learning objectives and demand creative and innovative solutions. In the past, these types of projects have provided opportunities to research and explore new technologies and new teaching strategies, to create materials that are useful in multiple courses and to develop new skills and knowledge.

The troubling result of these two trends has been that the amount of time available to do instructional design research and exploration, professional development and creation of reusable instructional materials has been squeezed out due to increased course production duties. Two possible approaches to improving this situation are to recognize the research and development that is being done already and to find ways to do projects that allow for more opportunities.

- Exploration of VoiceThread as a way to promote different styles of student discussion and critique, creation of self-tests and interactive learning materials using Articulate Engage, use of timelines both as learning tools and as a way to communicate course structure, and development of interactive maps using common Google tools are all examples of creative and innovative work that instructional designers have led in the past year. These efforts need to be shared and celebrated with colleagues in DELTA, across the University and with the broader community of educational professionals in order to raise morale and help the team realize that they are already engaged in activities that are exciting and rewarding.

- In the past year we have started to work on course production projects that require less time from the production team and use more existing resources. This has happened as a necessary consequence of a large number of applicants in the 2008-09 IDEA Grant cycle and is planned for the 2009-10 IDEA Grant cycle because we need to devote time to course and program development for the Online MBA program. This practice should continue in the future and with the time that is released we should actively look for projects that will allow us to explore new technologies and practices. This process will be even more successful if we specifically target instructors we have previously worked with that are good development partners. One exciting
possibility would be to solicit proposals from partnerships of ISS production staff and instructors that target a specific problem. The proposals that we then choose to pursue will provide dedicated project time to opportunities for innovation and creativity in the area of instructional design.

Alignment between Time Spent and DELTA Goals

Over the years, the percentage of time spent by the production team in various areas has changed. Over the last four years, this is most evident in the growth of time spent on Instructional Tools and the reduction of time spent in Course Production. Other trends and anomalies are also evident. It is increasingly difficult to prioritize marketing, research, outreach, course production and instructional tools projects against each other across the production team. It would be helpful to have someone look at these patterns, ask questions about them and then give us feedback about whether our allocation of our time is in line with DELTA goals and objectives.

This is an area that demonstrates the overarching need for project management resources. There needs to be a continuing cycle of prioritizing efforts based on DELTA Goals and resources available and then re-assessing and re-prioritizing when new opportunities arise, new resources become available or when projects change in scope or complexity. ISS staff consistently make these decisions in the areas of video production (in consultation with VCS and Academic Technologies), web development (in consultation with the DELTAweb Steering Committee, course development vs. reusable tools and materials development vs. research, and many other areas.

Figure 38: Percent of Production Team Time Spent by Major Activity Category
Coordination of DELTA Communications

DELTA communications come from all of the units in the organization and there is no obvious ultimate responsible person or team. This leads to a fractured voice and message and also contributes to both missed opportunities and overlap of efforts. In the last two years, Alyson Tuck has built bridges between her position and all DELTA units that have allowed her to improve DELTA writing and communication. Others within DELTA now seek her out and work with her in an open and collaborative way. We have also seen increased collaboration and communication between the Marketing and Partnership Development unit and the marketing and outreach efforts of Instructional Support Services. There are several possible next steps that can help to consolidate DELTA communications:

• Ensure that Alyson is involved in the early stages of communications projects, whether those are marketing, outreach or instructional. While this has become more standard, it still often happens at the last minute when decisions have been made, copy is nearly final, and the deadline is near. She will be of greater value when involved from the planning stages forward.

• Work with the Marketing and Partnership Development team to establish a dedicated communications liaison between DELTA and other university departments and offices. This will allow us to develop contacts within organizations like University News Services to promote sharing of stories between the DELTAwire and the NC State homepage and also in the colleges to better promote the efforts of Distance Education faculty and teaching and learning with technology efforts within the colleges.

• Discuss and codify the scope of DELTA Communications and roles and responsibilities for them. As we have done with the DELTA brand, emphasize to DELTA the importance of consistency in communication and ensure that everyone is aware of how to get assistance of various kinds, including editorial help, templates and other communications resources.

• Establish, manage and advocate for effective internal communication channels in partnership with University Communications. DELTA provides a variety of services to our campus community. At times, it is very challenging to engage our faculty and student audience about relevant events, course offerings, announcements, etc. A single point of contact for DELTA communications and dedicated time to manage communications, cultivate contacts and strategically plan new communications channels would reduce overlap, ensure consistent brand and messaging, manage effective communications systems and provide solutions that can be extended to other departments and units by sharing process, templates and tools.

Project Management

For the past several years, there has been an increasing need to improve Project Management practices and support within DELTA. The Production Team is tasked with providing services for our NCSU faculty and campus partners in addition to having to produce and maintain DELTA infrastructure, communications and branding initiatives. While many of our production staff have project management
responsibilities for individual projects they are working on, there is only one Administrative Assistant that functions as a Project Manager for Marketing and Communications projects. This arrangement has been very successful, but cannot expand without additional staff or organizational changes. The Creative & Multimedia Production Team in particular is required to manage a large number of requests from all Units within DELTA. This sometimes results in conflicting priorities, communications issues, resource gaps, increased overhead and overall reduction in quality of service. Dedicated administrative and project management support is needed to assist the production team and DELTA with tracking, planning, project priorities, resource visibility, process and workflow and tracking. There is a specific need for a Project Manager/Coordinator position at the Assistant Director level that could facilitate communication between all DELTA units and external clients. A large portion of the Production Team makes use of Basecamp for project communication. A key function of a Project Manager and/or Project Coordinator would be to assist with the migration to a new system that would accommodate additional teams, facilitate planning and reporting and reinforce our process and workflow.
Larger Screen Captures

Figure 39: Narrated Presentation for HI 208
Figure 40: Course Schedule for HI 208 in Moodle
Figure 41: Group Project Wiki for HI 208
Figure 42: Course Layout in Moodle for WGS 210
Watching the video it made me realize that they also needed help to get where they are today. They listed several of their favorite scientists and how they inspired them. Then when you listen to the radio interview I notice now they are being “giants” and giving back to the community and helping young girls to dream and become the next big scientist.

Figure 43: VoiceThread discussions for WGS 210
Figure 44: Interactive Timeline of Important Women in Science developed using Vuvox for WGS 210
Figure 45: Narrated Presentation with Embedded Timeline

Aristotle--famed Greek philosopher
Mentions most of the common ectoparasitic pests of man in his writings.
Extremely knowledgeable in many fields, including biology & zoology.
Much of his biological observations have proven accurate to the present time.
Figure 46: Interactive Timeline of News about Insects for ENT 495
Figure 47: Moodle Layout for ENT 495
Figure 48: Interviews with Entomologists for ENT 495
Chapter 9: Linear Regression and Correlation

The data below represent the percentage of low birth weight infants (Y) and the high-risk fertility rate (X). [The high-risk fertility rate is based on females whose ages are less than 17 or greater than 35. These data are taken from a health study in Vermont.]

| Low Birth Wt. vs. High-Risk Fertility Rate |
|---|---|
| Y  | X  |
| 6.1 | 43.0 |
| 7.1 | 55.3 |
| 7.4 | 48.5 |
| 6.3 | 38.8 |
| 6.5 | 46.2 |
| 5.7 | 39.9 |
| 6.6 | 43.1 |
| 8.1 | 48.5 |
| 6.3 | 40  |
| 6.9 | 56.7 |

Consider the following scatter plot:

Examine this scatter plot. What is your guess of the correlation?

Figure 49: Data Analysis Exercise for ST 508
important for physicians to encourage choices that enable patients to be benefited as much as possible and harmed as little as possible. Likewise, it is important for researchers to take steps to ensure that their research subjects are not unnecessarily harmed and that they can benefit whenever possible.

Image Source: Angela’s Children.jpg, Retrieved 9/30/09 from http://commons.wikimedia.org/wiki/File:Angela%C2%B4s_Children.jpg

**Figure 50: Learning Module on Informed Consent in Articulate Engage for PHI 325**
Which of the following is required in order for consent to be valid for a patient:

- The patient must freely give consent and fully understand the treatment's risks and benefits.
- The patient must only understand the purpose of the treatment.
- The patient must understand both the benefits and potential risks before receiving treatment.
- The patient must only understand the potential benefits of the treatment.
Figure 51: Informed Consent Quiz in Articulate for PHI 325
Figure 52: Getting Started Module for ADN 414

Figure 53: Moodle Glossary Entry on Hues for ADN 414
Click on the number that matches the **compound eye**.

*Figure 54: "Anatomy of a Bee" Exercise in Articulate using the Hot Spot Question Type for ENT 401*
Unit 1. Learning Objectives

• The student will:
  – define wildlife nutrition and understand why it is important to study.
  – relate why the study of wildlife nutrition differs from that of domestic animals, pet and human nutrition.
  – explain the 7 classes of nutrients and the 3 nutritional classes of animals.
  – explain basic concepts of nutritional theory.

Figure 55: Narrated Presentation with Captions for FW 495
Nature-Based Tourism: North Carolina Birding Trail

The North Carolina Birding Trail (NCBT) is the first state-wide effort to link great birding sites with communities, businesses and other historical and educational attractions in North Carolina. The initiative, which started in 2003, was completed in 2009, consists of three regional trails: the coastal plain, piedmont and mountains. The mission of the NCBT is “to conserve and enhance North Carolina’s bird habitat by promoting sustainable bird watching activities, economic opportunities and conservation education.” The trail consists of 310 bird watching sites. The NCBT initiative is a great example of collaboration among six state agencies to develop and promote nature-based tourism. If developed correctly, nature-based tourism can be a useful economic development strategy for communities, as it requires little capital or infrastructure and can capitalize on the natural assets available in a community.

For more information:
- North Carolina Birding Trail Website
- North Carolina Birding Trail Facebook
- NCBT Trail Guide Series, UNC Press
- NCBT Bird-friendly Business and Community Training Program: Training Syllabus and Resources (124, PDF)

Please watch the video and listen as Lena Gallitano shares the story of the NCBT’s development and implementation as well as why nature-based tourists, particularly birders, can be a lucrative travel market.

Click the following image to open video in a new window.

Lena Gallitano is an avid birder. She has been instrumental in creating the North Carolina Birding Trail and the NCBT Trail Guide Series.

Figure 56: North Carolina Birding Trail Information-Rich Web Page
Nature-Based Tourism: North Carolina Birding Trail

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For more information:
North Carolina Birding Trail Website
North Carolina Birding Trail Facebook
NCBT Trail Guide Series, UNC Press
NCBT Bird-Friendly Business and Community Training Program - Training Sympoas and Resources (612K PDF)

Figure 57: Nature-Based Tourism Video Shown in DELTA Video Player with HighSlide
Figure 58: Course Homepage in Blackboard Vista for MA 105
Special Features

This site complements your manual *MA 105: Mathematics of Finance* with the following special features.

- **Read and Study** directs you to relevant content in your manual.
- **Watch and Learn** are video demonstrations that directly relate to your manual.
- **Noteworthy Tips** help you to note and remember key points.
- **Check Points for Mastery** identify important concepts that you must learn.
- **Drill and Practice** are problems that give you the opportunity to practice the skills you are learning in the manual.
- **Skills Assessment** tests your ability to work problems.
- **Pause and Reflect** guides you to think about what you are learning.
- **Digging Deeper** shows you ways to apply your learning in daily life.
Figure 59: Icons for Different Learning Materials in MA 105
There are three formulas that you must memorize to succeed in this course. These are the formulas to calculate simple interest, future value, and present value. This section introduces each of these formulas with video clips and sample problems with solutions for you to study.

**Simple Interest Formula**

\[ I = PV * r * t \] or \[ I = Prt \]

Read this formula as follows:

Simple interest is equal to the present value (or principal) times the simple interest rate times the time expressed in terms of years.

**Watch and Learn**

**Video: Simple Interest** (4 minutes)

**Drill and Practice**

Study the example and work through it on your own in order to get the most from this exercise. Supplemental information in the form of a video is provided.

**Sample Problem 1.3(a):** Find the simple interest on an investment of $500 for three years at a simple interest rate of 8.25%.

**Answer:** The full solution is provided in your manual.

*Figure 60: Sample Unit Page for MA 105*
Figure 61: Course Homepage with Course Consent and Waiver Form for ADN 219
Figure 62: Ning Studio Space for ADN 219
Figure 63: Student Exhibition and Critique Session in Second Life for ADN 219
Figure 64: Homepage in Moodle for ANT 253
Figure 65: Narrated Presentation for ANT 253
Figure 66: Course Homepage in Moodle for ECI 521
The real journey of discovery begins not in seeing new landscapes but in having new eyes. — Marcel Proust

Journey Books
ECI 521 2010

Figure 67: VoiceThread Discussions for ECI 521
Figure 68: Timeline with Book Discussion Sessions
Figure 69: Book Discussion Group in Bookhenge in Second Life

“The future belongs to a different kind of person...”
—Daniel Pink
Educational Technology Services

Summary
Although DELTA Educational Technology Services (ETS) has had significant diverse activities over the fiscal year, the activities have all shared a common theme: service to teaching and learning. While the various ETS groups are a diverse mix with different priorities, they also all share that common goal. Please read below to see the individual accomplishments of the groups.

Programs

Applications Development (AD):

LMS Development
Most of fall 2009 was spent working on developing our new LMS services offered under the WolfWare name. Most of the changes were released for production use after the fall semester on December 21st. These included:

- Renaming the existing WolfWare to WolfWare Classic. This involved some text and image changes on the websites and documentation to reflect the new name as well as changing the main URL from wolfware.ncsu.edu to classic.wolfware.ncsu.edu.
- Launching a new wolfware.ncsu.edu website which serves as a central place for students and instructors to find their on-line courses and on-line course tools.
- Assisting DELTA AppsSupport with the migration to a new production Moodle environment including a transition from the name moodlepilot.ncsu.edu to moodle.wolfware.ncsu.edu.
- Working with DELTA Multimedia Production (MPD) deploying four NCSU branded themes for Moodle.
- In spring 2010 most development effort was focused on enhancing the LMS.
- Added “My Courses” functionality to the WolfWare website, May 2010.
- Multiple fixes/enhancements for Moodle were developed/located, tested and moved to production.

Support Tools Development
In addition to the LMS services, work continued on several support applications:
• The Classroom Capture Tool (CCT) was deployed in January 2010 for use in the spring semester. CCT assists DELTA-DE and EOL in managing the new Mediasite recordings being produced in the VCS classrooms by automating the creation of course/section folders and scheduling the recordings based on data from SIS.
• Developed a new tool working with FacDev and AppsSupport to help manage and automate the migration from Vista to Moodle. The tool and the migration effort are called reVAMP.
• Small development efforts continued with the DE website.
• Developed a new administrative reporting tool for building the DE twelve-cell report as well as other DE enrollment figures. This tool automated the calculations and provides the options of selecting the set of semesters to report on as well as the data view to use (census, end of term, or live).
• Additional enhancements to the DE Proctoring admin tool.
• Initial discussions on possible development of a replacement for the current externally hosted DE Exam Scheduling tool used by students.

Application Support (AS):

System administration tasks
• Renamed all of our systems to follow a consistent naming scheme.
• Created a well-defined process to allow automatic, easy maintenance and deployment of firewalls across all Linux servers in our environment.
• Created an automatic process for configuring and maintaining our Nagios monitoring system.

Moodle
• Moodle went into full production and was rebranded to be part of WolfWare.
• Upgraded Moodle to 1.9.8+.
• Created a streamlined installation process for Moodle including all of the NCSU customizations made to Moodle thus far.
• Deployed 2 additional web servers into our Moodle cluster.
• Added a real-time report server to allow reports on Moodle to be run and not affect production system performance.
• Deployed new themes and integrations code.
• Changed configuration of Moodle Apache logs to get actual usernames in weblogs.
• Deployed new language packs for Moodle.
• Backup/restore process was completely overhauled to allow restoration of the Moodle database and/or file system for a particular day to a restoration server, to support ISS in assisting instructors with tasks such as retrieving lost content.
• Consolidated Moodle system cron jobs to run on single box in the cluster.

**Elluminate**
Upgraded Elluminate to 9.6.

**LMS Coordination:**

• In the fall 2009 we kicked off the university wide LMS governance oversight committees to provide meaningful feedback and direction from the campus community.
• Formed, and charged the LMS Best Practices, LMS College Needs and Policy, LMS Technical and LMS Steering committees.
• Coordinated and communicated transition from Moodle Pilot to Moodle Enterprise level service in Dec. 2009
• Coordinated with Creative and Multimedia Production Services, Faculty Development and Support Services, AD and AS to rebrand LMS tools and upgrade the visual appearance and usability of Moodle
• Worked with Faculty Development and Support Services to improve accessibility of Moodle.
• Coordinated with various stakeholders across campus to address specific LMS needs for special projects or curriculum requirements.

**Media Distribution (MDS):**

**Development of Media Distribution Services Capabilities**

In 2009-2010 the DELTA Media Distribution Services Department sought to proactively identify and create avenues through which DELTA and the NC State community could be better served with the innovative application of distribution technologies. We continued to explore new media frontiers, incorporating into our mix of services when appropriate. We collaborated with DELTA and campus partners wherever and whenever possible, leveraging resources and forming alliances.

• **Major Project:** Development and deployment of Flash Player with David Tredwell; Mike Cuales’s group.
- **Major Transition**: Delivery of DVD materials maintained through Fall 2009, transition to complete online delivery accomplished in Spring 2010.
- **Major Project**: Researched, purchased and tested Docsoft Speech-to-text captioning system.
- **Ongoing technology activities**: Creation of podcast files for DE classes: Transcoding files, uploading podcasts, monitoring quality, providing support and troubleshooting problems.
- **New Service**: Provided DVD archival services for MediaSite files – copies for instructors and archives.
- **Research**: Research throughout year on portable media devices and delivery parameters, format requirements, production methods & sustainability, quality and practicality of final product.

**Improvement of Department Technology and CRC Channel 18**

This year we found ways to improve department and channel 18 efficiency and quality without significant funding expenditures.

- **Google Analytics**: Implementation and extensive use of Google Analytics. Considered advanced training but did not follow through due to cost and need for more solid SMT policy on use of Google Analytics. We found that we could capture a wide range of interesting and informative data, but in order to be useful, said data needs to inform decisions and actions across DELTA.
- **Channel 18**: Collaborated with Mike Cuales group, updating channel 18 DE notices.
- **Equipment upgrade**: Recommended upgrade of CRC employee Kristin Kauffman’s computer equipment to enable remote access to channel 18 (and thereby lessen impact on departmental resources). Specified computer parameters (CRC purchased) and trained Kristin in its use. Continued to work with Kristin over the course of the year with computer use.
- **Equipment upgrade/increased production capacity**: Acquired two production MacPro desktop computers to increase production capacity. These systems have created channel 18 materials using Final Cut Pro; been used for Docsoft text editing, and in fact are now used for all digital media production.
- **Equipment upgrade**: Increased capacity of department digital storage systems, to accommodate increased volume of digital media materials.
- **System upgrade**: Improved department file transcoding systems by reactivating and upgrading Grab Networks Agility Workgroup system (formerly Anystream).
- **Major Acquisition**: Docsoft speech-to-text captioning system was acquired and tested, investigated for proof of concept.
- **Software upgrades**: Production software suites were upgraded as new versions were made available: Apple X-serve; Final Cut Pro; Adobe Creative Suite 4.
• **Facility improvement Channel 18 Master Control:** Construction project was initiated this year to improve the channel 18 Master Control room and provide better distribution of departmental equipment. The project continues into the 2010-2011 fiscal year.

### Activities to Keep Current with Technology

Because Professional Development funding was not readily available in 2009-2010, we attempted to maintain awareness of industry trends and technology innovations through personal study; trade publications; Lynda.com online software training; local special interest groups and local trade shows.

- **iTunes:** Became part of iTunes U. Affinity Group (hosted at MCNC).
- **Trade show/seminars:** Attended Whitlock trade show September 2009
- **Research:** Evaluated UNC system online video products/Learning technology etc., via personal research.
- **Conference/seminars:** Attended NC REN Day in Durham, Apple & MediaSite briefings panel discussions.
- **Research:** Investigated open source lecture capture via consultations with UC Berkeley Matterhorn project director.
- **Research:** Investigated open courseware initiative via consultations with MIT Open Courseware Director.
- **Seminar:** Attended Tri-IT at Duke.
- **Training:** DELTA Search Engine Optimization training.
- **Research:** Ongoing education with trade publications and webinars.
- **Training:** Lynda.com software training for self and staff.
- **Research:** Dragon Natural Speaking and other speech to text software.

### Additional achievements and activities

- **Presentation:** Participated in presentation for North Carolina General Assembly program evaluators; worked with program evaluator and DELTA colleagues on program evaluators presentation to legislative committee
- **Project Management:** Participated with Mike Cuales group in evaluation of Project Management software
- **iTunes U:** Had Will Hooker HS 432 class uploaded class to iTunes U.
- **YouTube:** Investigated NCSU YouTube as distribution avenue for DE classes
- **VCS support:** Provided support for VCS on a number of projects
• **Large Course Redesign**: Provided services for Traci Temple on the Large Course Redesign project
• **Transcoding Services**: Provided video file conversion service in support of ISS
• **Podcasts, DVD Masters**: Ongoing creation of podcasts and DVD masters for DE courses produced in multiple camera VCS classrooms staffed with VCS operators.

**Video Communication Services (VCS)**

**Classroom Capture Systems**
In the fall of 2009, VCS continued its Rich Media integration program into all DELTA classrooms, significantly boosting the quality of video courses offered online. With the emergence of Rich Media applications that combine audio, video, and synchronized instructional content, as the preferred method of distance education delivery, DELTA is able to provide a richer, more dynamic experience for the growing number of students learning through distance education.

**Day-to-Day Operations**
A significant portion of VCS staff time and funding is devoted to providing assistance and keeping classroom systems, applications and systems running on a daily basis. Every member of the team dedicates time to operating, updating and communicating about our services and their status. We include everything from running DELTA classrooms and production systems, to ensuring a robust media production environment. VCS offers services that administrators, faculty, and staff rely on every day. Much of this work is routine, but it is essential to the distance educational mission of the DELTA.

**Customer-Facing Operations**
For many on our campus, the VCS Web site provides their initial contact with the services, products and information provided by our department. Faculty and staff also interact directly with VCS personnel whenever they enter a DELTA classroom, Video conference room, or attend a classroom orientation and or SMART training course from our training team.

**Behind-the-Scenes Operations**
Whether it is in the classroom, in the field, setting up video conferences, or other essential services, VCS has a team member that attends to it. Our hard-working, dedicated staff implements, runs, monitors and plans for the future of media based applications in DELTA. Comments from faculty and staff provided later in this report clearly suggest that our reputation for providing the best customer service available is what we aim for. Our Media technicians group is responsible for the operations of all classrooms and video conference rooms. Since last June, this group has spent most of its time keeping services running at
an acceptable level of performance. A major emphasis for this team is ensuring scores of classroom lectures are uploaded minutes after each session is recorded. The Production group supported the University and DELTA in the development, creation, and implementation of media programs and applications.

The following accomplishments were completed in FY 09/10:

Operational Statistics:
- Provided production services to 78 campus departments and state agencies through our comprehensive suite of services: consultations, video conferences and multimedia projects. This reflects a 30% increase in departments utilizing our services over last year.
- Supported the university through the booking of 5,121 work orders totaling 6,952 hours of services.
- 4,658 of those hours were directly related to Distance Education courses produced in our Media-Rich classrooms.
- 67 classroom hours were utilized for non-Distance Educations activities.
- 1,270 hours transmitted via H.323 to various interactive classrooms and sites off campus, including 881 hours transmitted for the Engineering 2+2 and BSE programs.
- 167 hours of Interactive Video Conferencing supported and produced in our video conference rooms.
- 2 Rich Media portable capture systems (Mediasite) were integrated into our services.
- 402 hours of Producer Planning, Video Editing, and Field Shooting provided to various departments.

Upgrades/Modifications
- The Polycom RMX 2000 MCU was upgraded in November 2009 to provide 40 additional resources for video conferencing.
- Mann Hall 406 was upgraded with LCD displays and new Creston control system.
- Enhancements made to the control system in Park Shops 130.
- New SMART Boards where installed in Winston 132, Daniels 327, 331, and EBII 1230.
- 16x9 SMART Podium display was added to Park Shops 130.
- Hot spares were purchased to provide back redundancy for the Mediasite capture stations.
- Lighting grid and fixtures were installed in the Park Shops studio.
- Workstations and monitors were installed in the Central Control Room Space.

New Business Communications, Processes and Systems
VCS continued its implementation of new business communications, processes and systems over the past year to improve transparency and collaboration within the department and with other DELTA units.

**Major Accomplishments and Challenges**

Construction on the new CCR (Central Control Room) in Ricks Annex wrapped up in spring 2010. Soon after, Video Communication Services relocated its base of operations to the new CCR Space and two VCS managers relocated to Parks Shops.

VCS reverted back to an internal method of charge backs for non-distance education funded services.

**Video Engineering and Classroom Technical Support**

**Rich Media Project**

- DELTA/ETS will support the deployment of 80 new Mediasite recorders purchased by OIT, CHASS and Management. Enhanced operations support for existing recorders will be offered to CALS, Education, IES, McKimmon Center, Textiles and Vet Med.
- DELTA computers are being upgraded to Microsoft Windows 7 and moved to the campus Active Directory domain (WolfTech). The VCS classroom computers were the first to receive the upgrades.
- Facilities Projects
- The new Central Control Room Facility in Ricks Hall is complete and offices have been occupied by VCS. Meetings with integrators/vendors to equip the facility are ongoing.
- The 406 Mann Hall DELTA classroom renovation is complete and the facility has been in use for the fall 2010 semester.
- Preliminary meetings with Facilities/Construction Services have started to discuss the renovation of the DELTA classroom in 202 Poe Hall.

**Research**

**Applications Development**

During FY 2009/2010 the primary research areas for AppsDev were new technologies and depth of knowledge. Staff spent time reviewing and planning for HTML5 and CSS3. In addition time was spent increasing knowledge of Moodle as well as available PHP and JavaScript libraries that could be used to speed development efforts.

**Applications Support**
• MySQL performance tuning
• System virtualization using Xen and Solaris containers
• ZFS administration including snapshots and remote backup

**Media Distribution Services (MDS)**

- **Mobile Distribution**: Continued research throughout year on portable media devices and delivery parameters, format requirements, production methods & sustainability, quality and practicality of final product.
- **Google Analytics**: Implementation and extensive use of Google Analytics. Considered advanced training but did not follow through due to cost and need for more solid SMT policy on use of Google Analytics. We found that we could capture a wide range of interesting and informative data, but in order to be useful, said data needs to inform decisions and actions across DELTA.
- **UNC Online**: Evaluated UNC system online video products/Learning technology etc.
- **NCREN**: Attended NCREN Day in Durham, Apple & MediaSite briefings panel discussions.
- **Matterhorn**: Investigated open source lecture capture via consultations with UC Berkeley Matterhorn project director.
- **MIT Open Courseware**: Investigated open courseware initiative via consultations with MIT Open Courseware Director.
- **Best Practices**: Attended Tri-IT at Duke.
- **SEO**: DELTA Search Engine Optimization training.
- **Media Industry**: Ongoing education with trade publications and webinars.
- **Software**: Lynda.com software training for self and staff.
- **Speech-to-Text**: Dragon Natural Speaking and other speech to text software.
- **Speech-to-Text**: Docsoft system - extensive research and testing

**Staff**

**Changes**

As part of budget reductions Applications Development eliminated one large project and RIFed the associated staff member in September 2009.

**Professional Development and Activities**

Members of the ETS staff served on the following committees:

- IAM Service Team (Jeff Webster)
- IAM Shibboleth-Federation Working Group (Jeff Webster)
- IAM Account Management and Authentication WG (Jeff Webster - chair)
• IAM Enterprise Directory Services WG (Jeff Webster)
• Messaging Technical Oversight Committee (Jeff Webster)
• LMS Technical Concerns Committee (Jeff Webster - co-chair)
• Jeff Webster led the DELTA Managers Team
• Academic IT Directors (Lou Harrison)
• Campus IT Directors (Lou Harrison)
• University IT Committee (Lou Harrison)
• Messaging Technical Oversight Committee (Lou Harrison)
• IAM Oversight Committee (Lou Harrison)
• ETFAT (Lou Harrison)
• LMS Steering (Lou Harrison, Martin Dulberg, Jeff Webster)
• MCNC Collaborative Service WG (Lou Harrison)
• MCNC Capture Task Force (Lou Harrison, Joe Gray)
• MCNC LMS Task Force (Martin Dulberg)
• Mediasite Committee: Attended “retreat” April 19, served on Mediasite Committee, which is ongoing (Peter Watson, Martin Dulberg).
• DELTA Manager’s Committee: (Peter Watson)
• DELTA Retreat Planning and Presentation: (Peter Watson, Martin Dulberg)
• Storage Management File System Team (Daniel L’Hommedieu)

Various members of the DELTA ETS staff have participated in the following selected conferences/seminars/professional meetings/professional development during FY 08/09:

• Lou Harrison attended SIGGRAPH 2009 in New Orleans.
• Lou Harrison, Martin Dulberg, Jonathan Champ and Jeff Webster attended MoodleMoot (and co-located SLOAN-C Conference), October 2009 in Orlando.
  o Jeff Webster was one of three speakers in the Featured Session - Taking Ownership of Moodle
  o Lou Harrison and Martin Dulberg presented "Free like puppies not like beer: Our journey from a commercial LMS to an open learning environment"
  o Lou Harrison was a speaker in the featured talk “What LMS Selection Committees Should Know”
  o Lou Harrison was a speaker in the SLOAN-C talk “The Open Source in the Enterprise: the process of selecting Moodle as a Learning Management System”
• Jonathan Champ and Jeff Webster participated in the NCSU WebDevelopers group.
• Lou Harrison continued in his role as chair of the ACM SIGGRAPH Student Services Committee.
• NCREN: Attended NCREN Day in Durham, Apple & MediaSite briefings panel discussions (Entire MDS staff).
• **iTunes**: Became part of iTunes U. Affinity Group (Peter Watson).
• **Trade show/seminars**: Attended Whitlock trade show September 2009 (Entire MDS staff).
• **TRI-IT**: Attended Tri-IT at Duke (Peter Watson).
• **Training**: DELTA Search Engine Optimization training (Entire MDS staff).
• **GA Presentation**: Participated in presentation for North Carolina General Assembly program evaluators; worked with program evaluator and DELTA colleagues on program evaluators presentation to legislative committee (Peter Watson).
• **Project Management**: Participated with Mike Cuales group in evaluation of Project Management software (Peter Watson).
• **Training**: DELTA Search Engine Optimization training. (Entire MDS staff)
• **Training**: Ongoing education with trade publications and webinars. (Entire MDS staff, VCS Staff)
• **Training**: Ongoing Lynda.com software training for entire staff. (Entire MDS staff, VCS Staff)
• **Membership**: Joined Society for Applied Learning Technologies (SALT) (Peter Watson)
• **Membership**: Joined Consortium of College and University Media Centers (Peter Watson)
• **DeltaWire story**: Media Distribution was featured in a DELTAWire Story(Peter Watson)
Daniel L’Hommedieu obtained his RHCT in January ’10
• Bill Hicks attended Performance Leadership from the Training and Development group
• Most professional development was eliminated due to budget constraints.

**Concerns and Recommendations for the Future**

As part of the budget reductions, the decision was made to eliminate one of the large non-core web development projects and RIF the associated staff member. While most of the work of this staff member was eliminated some smaller tasks were reassigned to the remaining three developers. In addition to an increase in individual workload the group has lost some flexibility in responding to priority requests. Combined with the loss of two unfilled positions the previous year a noticeable slowdown in development has occurred affecting both new applications and improvements for existing applications, this has included impact on the LMS’s. DELTA has recognized the problem and has been working to restore one of the developer positions that was focused on the LMS.

DELTA Media Distribution dealt with a number of challenges this year in positive ways, and concluded the year looking forward to new things in store. The primary concern of MDS staff has been that podcast distribution might fall by the wayside in favor of Mediasite. The formation of the DELTA Mediasite Committee allayed concerns regarding continued employment, as MDS staff anticipate a strong supporting role in expanded Mediasite production at NCSU. With that in mind, interest in continued podcast production by MDS is that students have every possible means of accessing content. Advancements in the Mediasite software may give us the best of both worlds; only future releases will tell.
Application Support has had several challenges supporting existing systems this year, including a lack of personnel. This group is responsible for maintaining and supporting large, mission-critical systems for DELTA and the University as a whole and has done a good job with the limited resources available. A large amount of assistance came from the AppDev group by sharing the Linux expertise of several people in that group.
Marketing and Partnership Development

Summary

DELTA Marketing & Partnership Development (MPD) provides leadership and vision for NC State marketing and partnerships for distance education and learning technologies. MPD is responsible for:

- developing and implementing strategic marketing initiatives,
- market research/environmental scans to assess interest and need for new DE programs, and
- building and supporting collaborative initiatives among all colleges and units on campus, other University of North Carolina institutions and with other key partners.

The MPD team’s main responsibilities include:

- the development and implementation of strategic market research for the evaluation of new DE programs and market-share opportunities,
- establishing an attractive brand image for DELTA, built on the NCSU brand, specifically focused on generating interest in DELTA, Learning Technologies and increasing DE enrollments, and
- managing external strategic DE partnerships.

MPD is a unit within DELTA comprised of members from three teams (ISS, MPD, DE). The integration of this exceptional talent and group of resources is an efficient and strategic team process, providing the opportunity to execute the highest quality marketing and partnership products to serve NC State. In spite of the ‘09-10 budget reductions, the MPD team restructured the DE marketing campaign and projects to reflect the resource availability and changes and implemented new strategic tactics that are now models of efficiency for the University in marketing and website development.

Programs

2009-10 MPD continued to identify strategic priorities that have the greatest and most efficient use of technology and maintain day-to-day services at a high standard. These priorities include:

- Redefine strategic integrated online project management to execute marketing projects in a more productive, effective and efficient workflow process, integrating team members from ISS, DE and ETS.
- Design and develop new high performing DE web site by implementing SEO (Search Engine Optimization) keyword search strategies and analytic capabilities. This strategic initiative has become a model for the university and is being shared through workshops and training sessions.
• Establish new DE marketing partnerships that provide low/no cost marketing and promotion to increase DE enrollments with NCSU Graduate School (eliminate duplicate graduate marketing efforts and implement CRM student recruitment initiatives). Student recruitment partnerships include: BRAC RTF, NC Department of Commerce (WFD Boards, Rapid Response Teams, Job Link Centers), the NC eLearning Commission K20 ePortal, PipelineNC.com, Futures for Kids, and Alumni Association.

• Create DE student recruitment structure through new marketing technology capabilities for cost savings: SEO site capabilities.

• The budget reduction resulted in the elimination of the majority of the DE online marketing campaigns.

The key priorities of MPD were achieved and day-to-day functions were carried out according to plan. The budget for '09-10 was met and balanced.

Objectives:

• Implement online project management systems within the MPD team and execute strategic marketing / DE student recruitment initiatives through the development and use of a high performing DE Web site.

• Publicize and market DE academic programs through strategic partnerships with the development of the DELTA MPD / Graduate School online student recruitment/tracking tool.

• Coordinate and streamline internal and external student recruitment marketing initiatives with DE program partners: PRTM, GIST, Food Safety and LPS through the development of online student recruitment tools and high performing Web sites.

• Implement strategic environmental scans to assess the need for new DE programs at the college level.

Key Tasks:

• Changes in scope of activities include partnership implementation of SEO, keyword and analytic marketing strategies with DE Web site, PRTM, Food Safety and GIST partnerships that publicize and promote all the DE academic programs – cross program recruitment - to both undergraduate and graduate prospective students to increase DE enrollments.

• Establish and implement new online tracking system to measure marketing campaign results, identify and track prospective students’ intent to apply (27,936 click thru) and enroll (25,415 click thru).

• Implemented R&D marketing initiative for the development of iPhone/iPad apps to reach new prospective DE student audience.

Distance Education Integrated Interactive Marketing Initiatives '09-10
Goals

- Develop new high performing SEO Web site and drive traffic to the site where users are encouraged to instantly download the PDF brochure, search for their DE program of interest and move towards inquiry about the DE program of interest with the Director of the DE program. The Recruit and Direct site marketing strategy has also saved over $20,000 print cost savings of the DE brochure.

Outcomes:

- Increased student recruitment through SEO strategies:
- As reported in the DE Assessment and Diversity Spring 2010 report: 80.1% of the students responding used Google search engine, 8% Yahoo, to search for online programs.
- Lowered the PPC campaign to the lowest level in nine years of marketing DE programs.
- Yielded high returns on DE Web site functionality SEO capabilities, tracking prospective students and CRM tactics implementation through the recruitment and conversion process.

MPD Projects 2009-10, top projects but not limited to:

- GIST SEO Project
- DE Brochure Redesign
- DE Virtual Orientation
- DELTA Holiday Card
- DELTA Open House
- Fall Workshop Brochure
- FOF Materials
- GIS Marketing
- ISS Workshop Brochure
- NY Times Ad
- PRTM Marketing materials
- Print ads creative and placement
- DE iPhone App
- DE Website (Phase 2)
- Graduate School Partnership
- HTML Email Marketing
- NCSU Website DE Page
- DE Photography
- Wolfpack Sports Marketing
- DELTA Space Design
• DELTAWire
• Workshop Brochure Design

Research

SEO, Analytics, and CRM tracking / student recruitment tools

The research for the DE Web site redesign project sought to create a high performing SEO, analytically based site that would function as an online student recruitment tool. The web site project research results indicate that the site revision elevates it to the top three rankings in the top three search engines over 80% of the time.

Strategic research information resulted in the development of internal and external statewide partnerships that increase DE student recruitment capabilities, and CRM tracking to the site through SEO capabilities at a lower cost and higher return than previous traditional marketing initiatives.

The iPhone/iPad application research project supports the SEO marketing initiative and reaches a new prospective student audience. The development of the app will be integrated into ’10-11 marketing and DE student recruitment campaigns.

Staff

Changes

2009-10 had no MPD staff or position changes.

Professional Development and Activities

Kay Zimmerman, Associate Vice Provost MPD was appointed to the NC eLearning Commission and served as the co-lead for the development of the NC eLC K20 ePortal project under the leadership of the Lt. Governor; completed Performance Leadership Program and Center for Creative Leadership Women’s Leadership Program; participated in multiple professional development initiatives – AMA, CCL and NCDLA; served in leadership capacity for NCDLA as Past President for the two conferences (virtual and f2f) and presented at two virtual conferences.

Heather Barbour, MPD Administrative Support Specialist, completed her Project Management (PM) Certificate and is now pursuing a PM graduate degree from Western Carolina University, online.

Awards

Kay Zimmerman was appointed to the NC eLearning Commission and also served as co-lead for the eLC K20 ePortal development project; appointed by the Lt. Governor.
Diversity, Retention, and Staff Well-Being

MPD has developed a marketing/student recruitment partnership with the NC State Graduate School. Dr. David Shafer, Assistant Dean of Outreach and Diversity, has approved the marketing partnership to include co-marketing campaigns and initiatives with DELTA MPD marketing for a wider student recruitment capability and eliminate duplication of marketing efforts. MPD Team developed online student recruitment and tracking tool that has been implemented by Brett Locklear, Graduate School Director of Marketing and Diversity Outreach.

Retention and Staff Well-being: MPD has expanded partnership teamwork relationships that increased project management responsibilities, while increasing productivity. Heather Barbour assumed additional project management responsibilities within her work plan and is now completing her graduate degree through the WCU Project Management (PM) online program. She has expressed great satisfaction and has had success with the PM course of study integrating with PM work responsibilities. This has added to Heather’s job satisfaction, contentment with the added responsibilities, and contentment with her future career opportunities in DELTA. Kay Zimmerman has benefited from the university and statewide leadership opportunities and enjoyed the leadership professional development experiences.

Concerns and Recommendations for the Future

Issues to consider for 2009-2010:

- Expand the development and integration of project management support through clarification of roles, responsibilities, processes and procedures for measurable outcomes within all participating DELTA units.
- Increase management of DELTA projects on the Basecamp project management system that provides up-to-date project status reports.
- Implement the next level of strategic partnerships for DE program PRTM, College of Education, LPS and GIST that includes SEO marketing strategies.
- Establish a measurable capability to identify and track the marketing campaign results that directly relate to student enrollment coordinating the project with DE to identify enrollment trends for the DE program partnerships initiatives.
Finance and Business

Summary

2009-2010 was a challenging fiscal year for everyone at NC State. DELTA was required to implement permanent budget cuts, which resulted in positions being cut and abolished while remaining staff absorbed the workload without additional pay. The F&B office had to be creative to keep up morale throughout DELTA, and did so with the “Shout Out” Program, which provided a sounding board for employee concerns.

Programs

DELTA’s total budget reduction for fiscal year 2009-2010 was $1,408,788. DELTA abolished 5 positions of which, 3 were vacant positions, 1 retirement and 2 RIFs. In addition, 4 positions were reduced in FTE. One of the RIF’ed employees was the Administrative Support Specialist within the F&B office. Due to this reduction the remaining staff was forced to take on the duties and responsibilities of this RIF’ed employee. Additionally, no travel was permitted unless directly related to student instruction, a reduction in temporary labor, and various strategic reductions.

Staff

Changes

This fiscal year, the Administrative Support Specialist with the F&B office was RIF’d due to budget cuts. Position duties were distributed among the remaining staff.

Professional Development and Activities

Brenda Conover continues to serve on DELTA’s Activities Committee. Both she and Alexis Simison are members of the DELTA Manager’s Meetings.

Awards

Finance and Business staff members received the following recognition and awards in FY 2009-2010:

- Alexis Simison was one of DELTA’s Pride of the WolfPack award winners. She was nominated by her supervisor, Christine Hare, and was chosen by a committee of her peers. Her nomination read: Since joining DELTA just over a year ago, Alexis has accomplished the following: Increased moral during a tough budget year: Alexis created the “Shout Out” program internal to DELTA
that requires no monetary cost, but is rather a feel-good program. This program allows fellow coworkers/staff/supervisors the ability to recognize someone for a job well done, nice deed, etc. This program has boosted moral and has really taken off in DELTA. We have a cork board in the break-room that displays all of the Shout Outs and we will soon have it on line for everyone to view. Customer Service: Alexis has strengthened and established relationships within DELTA by providing excellent customer service as DELTA’s personnel representative. Alexis is always willing to take the time to work through any personnel issue or questions that may arise. Alexis’ door is always open and inviting (and she always has some good candy). Innovative Ideas: Alexis has wonderful innovative ideas and processes that she has incorporated into the personnel side of the business office. Alexis is in the early stages of creating a DELTA ToolKit, which will allow DELTA employees a more intuitive way of finding out “how to……..?” pertaining to personnel questions. All around, Alexis Simison, has been a wonderful asset to the business office, as well as to DELTA.

Diversity, Retention, and Staff Well-Being

DELTA works closely with NCSU Human Resources and NCSU Office of Economic Opportunity to ensure compliance when hiring DELTA staff. Additionally, every effort is taken to advertise open positions in diverse trade magazines, newspapers and websites to draw a wide diversity of candidates to apply for our positions.

DELTA has experienced a turnover rate of less than 1% in 2009-2010. In an effort to retain high performing employees that are satisfied with the DELTA working environment, we developed an employee survey to determine why employees stay at DELTA. In turn, in 2010-2011, we will develop a retention plan based on these findings which defines areas that produce happy, motivated and empowered individuals. This resulting retention plan is aimed at promoting a work environment which fosters personal and professional growth, promotes harmony and encouragement on all levels.

Additionally, in trying to be consistent and fair with their employees, DELTA created a Matrix which addresses incremental increases in correlation with the SPA Career Banding Matrices. This will allow DELTA employees to receive an increase based on additional workload or increased competencies, when a position within a DELTA unit warrants it (pursuant to budget guidelines set by the state of NC).