Collaboration is the most important service we provide.
Dear members of the Davidson College community,

Every day at Davidson I have the joy and privilege of working with extraordinary people: students, faculty, administrators, alumni, donors, and trustees. Though interests vary from one constituency to another, what defines them all is remarkably similar: passion, intelligence, and tenacity.

This is what the mission of Information Technology Services is all about. ITS provides ideas and technology resources that support passion, intelligence, and tenacity.

Across the five teams within the department, ITS staff members work every day to help members of the Davidson College community develop new capabilities and explore new ideas. In an increasingly interconnected world, we offer students current and emerging technologies that encourage them to become self-learners and open up opportunities for more collaboration in the classroom. We leverage resources outside of Davidson to create large-scale benefits. We play an active role in planning for the future through initiatives like digital studies and the Integrated Academic Neighborhood. Above all, we work to supply tools that enable every member of the Davidson community make critical local, global, and transdisciplinary connections.

In 2012 ITS was on-site in The Center for Teaching and Learning, in the trenches at the Athienou Archaeological Project in Cyprus, in the classroom with Moodle, and on every desktop with Crash Plan. We were embedded in...

The heaviest use of the campus network is between 10:00 pm and 2:00 am.

136 Students, 61 Faculty and 112 Staff are active subscribers to our online courses and topics in digital media via lynda.davidson.edu.

Our Internet bandwidth has increased 200 MB to 475 MB.

campus offices throughout the year — Dean Rusk International Studies and the Residence Life Office, Admission and Financial Aid, the Registrar’s Office and Human Resources — training and implementing new systems.

I am pleased to share a selection of the collaborative successes of 2012 and to offer a look ahead at some far-reaching ITS initiatives that will continue to help Davidson College realize its highest aspiration: to develop individuals who are prepared to “exert a disproportionate impact for good in the world.”

Best regards,

[Signature]

Mur Muchane
Executive Director, Information Technology Services
Think technology is only recently a topic of conversation at Davidson?

Consider the humble telephone.
"Will wonders never cease? The latest is to know that Davidson is actually to be in hearing distance of all the large towns of this State and others. The Long Distance Telephone Company is now putting up wires from Charlotte to Statesville, and of course Davidson will be allowed a voice."

Photos and documents courtesy of Davidson College Archives.
1957

Memorandum to: Dr. J.R. Cunningham  
From: D. Grier Martin  
Subject: Visit with Telephone Officials

“...when this cable is installed underground they could put sufficient wires in the cable so that they could add the service at Davidson for about one-third the additional cost they had estimated for us before. This would probably not be over $1.50 to $1.75 per month for business phones...”

1966

Memorandum to: Dr. Martin  
From: R.A. Currie  
Subject: SWITCHBOARD STUDY

"We all agree it would be a big morale boost for each faculty member to have a telephone..."

1978

WATS Line Reference Sheet

“Seven minutes after your conversation has begun, you will be signaled by a tone as a reminder of the time-cost factor involved in the charging of the long-distance calls.”

Sam Spencer, Davidson College President 1968 – 1983, conducting business on his rotary dial phone.
1980
Mid-1980 was about the time Davidson’s current telephone system, the Nortel 81C Private Branch Exchange, was developed. It was, by all accounts, state-of-the-art.
Needless to say, a lot can change in a few decades. Today, communication technology is a critical part of the infrastructure of a twenty-first century academic campus. And for the past five years, it’s been a major priority for ITS.

By far the most critical component of Davidson’s communication technology, the college’s Nortel system was installed long before vital communication expanded beyond voice to include data and video. In 2009 the Nortel Corporation went out of business, and, without a service agreement or reliable source for replacement parts and equipment, the cost of maintaining the aging system began to increase dramatically.

To address this, ITS started by replacing forty-year-old copper cabling (which had become prone to widespread failure during heavy rain) with fiber-optic cable. In 2010 we further upgraded network gear and the cabling to accommodate data, voice, and video.

In 2011 ITS began to investigate peer campuses with integrated communication systems and to request proposals from vendors who offered technology we had identified as state-of-the-art.

NWN Corporation provided the best solution: A Cisco Unified Communication system that enables the secure combination of voice, video, data, and mobility.
“Globalization and technological advances have changed the context in which colleges work. It’s easier to communicate across cultures, distance and even language — and information is more easily accessible… This changed context creates an opportunity for Davidson to create for this new century an unsurpassed education that efficiently uses resources and produces graduates who exert a disproportionate impact for good in an interconnected world.”

— Carol Quillen
Davidson College President

What will the new unified system do?
Provide reliable phone service all over campus and:

Make everyday collaboration with outside experts possible

Make campus resources accessible to students studying abroad, including Davidson library resources, faculty advisors, and fellow students

Untether the Davidson community from their desks, making it possible for faculty, staff, and students to work efficiently from any location on campus and greatly enhancing opportunities for collaboration

Ease and enhance communication between Davidson’s emergency management team and the campus community, making the Davidson campus even more secure
Streamlined connections at home and abroad.

How paperless technology stacks up for Davidson.
Until Fall 2011, studying abroad from Davidson involved a whole lot of paper. That’s because the International Studies team has always been committed to helping students identify the best programs, weigh every option, and have an unforgettable experience abroad.

So they offered twice-weekly student information sessions, where they gave out information. Lots of information. 18 sheets of information, in fact.


Each year, about 300 Davidson students study abroad.

Over time it became apparent to International Studies staff members that technology could ease the burden of paper and open more opportunities for students by making information about available programs more accessible. Working together, ITS and International Studies staff members identified Studio Abroad, a website that works seamlessly with existing campus systems. The site lets students access information, compare programs, build a personal profile, watch for deadlines and even view instructional videos about things like where to go for a passport photo.
Even better, Studio Abroad lets staff members manage the nuts and bolts of the experience — inquiry to re-entry — in far less time. “And that,” says Charles Murray, Director of Administrative Systems, “gives the Study Abroad staff more time for what they do so well; meeting with students and working one-on-one to advise, encourage, and plan.”

“I have time I just didn’t have before to help each student plot out this fantastic once-in-a-lifetime experience,” says Jessica Williams, Counselor for Study Abroad. “We’re spending more time on pre-departure and re-entry events. We’re even working on a ‘Going Abroad Green’ program. These are things we’ve wanted to do for years, and thanks to Studio Abroad we can.”

It takes a village: The Study Abroad Office of the Dean Rusk International Studies Program identified Studio Abroad as a possible innovation for their program. Information Technology researched the vendor, asked technical questions, negotiated the contract, and integrated the site with Davidson systems. College Communications made the site look like pages on a Davidson site and created the instructional videos.
Residence Life is another department that wants to safeguard what Associate Director Donny Edwards calls "Davidson’s high-touch tradition."

"By design," he says, "we want our students to have a sense of the very human judgment that goes into making their dorm experience great."

Assignment is a complicated business, and so is keeping up with critical student information like hall rosters, roommates, and parent contact information. First-year assignments are made by staff members who use student responses to match personalities and interests. Everyone else is assigned a lottery number that determines his or her eligibility for requested housing.

For many years, all that information was coordinated and tracked on spreadsheets, a labor-intensive process that made changes difficult and real-time information hard to capture. The assignment method had already come a long way from the days when lottery numbers were handed out on slips of paper, but there was a clear opportunity to use technology to simplify and safeguard the process.

Knowing that software would create efficiencies for both departments, ITS was eager to help. Together, Residence Life and ITS explored software options and eventually chose The Housing Director, another program that interfaces directly with Banner, the college’s enterprise-wide system. ITS negotiated the
contract and helped put the technology into practice. Now lottery numbers are generated by The Housing Director and emailed to students. Up-to-the-minute rosters are available to Resident Advisors and staff members. Residence Life can track critical numbers with greater accuracy: How many students applied for housing in a given year? How many received their first choices? Projections for future housing are possible in a whole new way, as is planning for specialized housing such as substance-free dorms and The Eco-House.

The best part? From the student perspective, the whole process has remained virtually the same. Lottery night still takes place once a year, and staff members are there to greet students and receive their requests. Roommate disputes are still resolved in person by Resident Advisors. Parent phone calls are still returned by Residence Life staff members. The difference is that all those staff members have less paperwork to keep up with and more time to spend helping students and their families. One-on-one. “High-touch.”
Transforming the ways information is given, received, stored, and created.

ITS helps find new methods for teaching and learning.
As Davidson plans for the future, Studio D is a technological crystal ball.
EDUCATIONAL TECHNOLOGY: STUDIO D

Studio D is a flexible teaching laboratory located in The Center for Teaching and Learning. This is where faculty members come to use innovative technologies and to practice forward-thinking teaching methods. The studio houses a wide variety of resources including MacBook Pros, wall-to-wall whiteboards, video conferencing, and lecture capture, a technology that can be used to record classroom activity and lectures.

Kristen Eshleman and Kyosung Koo are ITS Instructional Technologists housed in the Center for Teaching and Learning. Along with Paul Brantley and the ITS fellow, they serve as consultants to faculty who want to experiment with pedagogical ideas, using the flexible learning space in Studio D. Instructors identify learning outcomes for the semester and, with the help of technologists and others in the CTL, conduct studies to determine if those goals were supported by time spent in the Studio. All of this information — what went right and what went wrong — helps create a plan for future learning space design and the use of technology in teaching at Davidson.
Pat Sellers teaches "Methods in Statistics and Political Science" in Studio D with fellow faculty members Graham Bullock and Andrew O’Geen. There is no textbook for the course; the syllabus contains links to required reading and videos, and students are expected to take weekly online quizzes on what they read and watch before class. Class time in Studio D is spent practicing concepts and testing for comprehension using instant electronic surveys. "Everybody gets a laptop and a clicker," says Pat. "If 70% of the class surveys as getting the concept, we move on. If less than 70%, we stop and they take a few minutes to talk it out. It’s a great way to introduce complex ideas because we can know in real time whether or not our students understand them."
“Moodle is an ideal platform for blended learning because it allows us to deliver in-class and out-of-class interactive curricular material on a single platform. Because Moodle is open source, we have been able to develop a Moodle plug-in that allows us to integrate Open Source Physics simulations into our course material.”

Wolfgang Christian
Department Chair and Brown Professor of Physics at Davidson College

Trading one funny name for another

In the fall of 2010, ITS launched a pilot program with a small group of faculty to explore the possibility of migrating from the learning management system Blackboard to the open source system Moodle.

Moodle’s roots began in higher education, developed by Martin Dougiamas to support his Ph.D. research on the intersection of “open source” technology and social constructivism in learning. The term open source refers to software that is available with source code and other rights that are normally available only to copyright holders. Because it can be changed and improved by its users, open source software is developed in a public, collaborative way. It often develops rapidly because many users are working on it at the same time. Because there are no licensing fees, open source software is more cost effective. Most important, open source software creates the opportunity for users to contribute to its innovation and improvement, making it a philosophical fit for higher education, where it has become an important movement.

Moodle (which stands for “Modular Object Oriented Dynamic Learning Environment”) offers a wide range of tools and resources for instructors, including areas for assignments, grade books, and syllabi. It can be used to build collaborative learning around a subject through online discussion,
content upload, and databases, or simply to deliver content like assignments and quizzes. It even offers the capacity to conduct courses fully online.

Science Instructional Technologist Paul Brantley managed the transition.

“Among the pilot program faculty, just under half used Moodle for the academic year, another group used Blackboard, and a brave few used both. The pilot faculty and their students were surveyed twice during the year to assess and compare the effectiveness of the two alternatives.”

Brantley found that a majority of users in the pilot team found Moodle more flexible and easy for students and faculty to use. They also praised the system for offering opportunities for innovation and collaboration. And because it is an open source product, it is significantly less expensive.

Based on the pilot team’s recommendation, Moodle was implemented during the summer of 2011. For a transition period that lasted through the 2011-2012 academic year, both Blackboard and Moodle remained available and ITS staff members worked with faculty to migrate course material and become familiar with the new system.

“The response has been overwhelmingly positive,” reports Brantley. “Faculty and staff members continue to find innovative ways to use the system and to work collaboratively across their respective disciplines. In fact, some of Moodle’s most enthusiastic users are instructors who are new to using learning management systems. Moodle is definitely a tool that supports the kind of collaborative teaching strategies that will distinguish Davidson College in the future.”

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**Pilot team recommendations:**

Moodle was found by the majority of users to be better adapted to the needs of faculty and students by virtue of its ease of use and inherent flexibility.

As an open source product, Moodle was significantly less expensive per year for the College.

Moodle innovation and collaboration opportunities were judged to be excellent going forward.

Open source software first came to Davidson by way of WordPress, a program used to create web sites and blogs.

“The idea of an open source project at Davidson was important,” says Rob Smith, Director of Systems and Networks, “and Instructional Technology was working to put a blogging platform in place. WordPress provided exactly what they needed and gave us the opportunity to successfully support an open source project using our existing expertise.”

Faculty and students at Davidson use WordPress for a wide variety of purposes, from presenting research to communicating ideas to chronicling their movement around the planet.

*Photo by Chai Lu Bohannon*
Chai Lu Bohannon is a junior Environmental Studies Major. She is also pursuing a Minor in Economics. Chai spent Fall 2012 abroad, a member of the Davidson in Shanghai Study Abroad Program. Her site not only chronicles her extraordinary experiences, it serves as a growing digital resume for future graduate programs and employers.

http://sites.davidson.edu/chailubohannan/
The Index of Modernist Magazines is an online reference guide compiled by undergraduates at Davidson College under the direction of Suzanne W. Churchill, Associate Professor of English. The project gives students enrolled in ENG473 a significant opportunity to do upper level academic research.

http://sites.davidson.edu/littlemagazines/
The Sustainability Scholars at Davidson are a community of students who live together in Davidson’s Eco-House. These students share a commitment to sustainability and work together to explore cross-sector partnerships and practice an ecological lifestyle.

http://sites.davidson.edu/sustainability scholars/the-eco-house/
Bringing technology to the trench

Dr. Kyosung Koo, ITS Instructional Technologist, on site at the Athienou Archaeological Project.
In the summers of 2011 and 2012, Kyosung Koo, Instructional Technologist in Languages at Davidson, traveled to south-central Cyprus to assess an aging database in use at the Athienou Archaeological Project.

The multidisciplinary project, which is sponsored by Davidson College and directed by Michael Toumazou, is located at a site in Cyprus that was occupied for nearly 2500 years. Its diverse history and long period of use make the site a perfect training ground for students of archeology — one that is extremely rich in artifacts.

When an artifact is found at Athienou, every detail of the discovery is carefully recorded. Notes are made about where the object was found, when it was found, what was found nearby. All of this data is painstakingly catalogued and protected for future research.

When Kyo began his work in 2011, much of the data was still recorded by hand and stored in binders at the site. His mission was to create a safeguard for the data by designing a new database that would make information easier to record and simpler to retrieve.

Kyo started by thoroughly assessing the data: What is being collected? How is it being collected? Then he assessed the users – from the project directors to the supervisors, conservators, and students. The resulting database was constructed using existing software and then converted to a general web site that makes the information far more accessible to team members from any location.
Tracking a Discovery at Athienou:

One. An artifact is discovered.

Two. The discovery is reported to the supervisor on site.

Three. The Lab Director assigns the object a number and a three-word description.

Four. The Conservator cleans and measures the object.

Five. The photographer captures an image of the object.

Six. The object is packaged and submitted to the museum.
“In the first year, I used FileMaker Pro — the existing software — to update the database. The following year I created a PHP web site that visitors can use to access the database using a web browser. It all sounds very technical, but the simple result is that we can access the database right on site in the trench — which is now a hotspot — using just an iPad with Internet access.”

— Kyosung Koo
Michael Toumazou and Davidson students on location at Athienou.

The Athienou Archaeological Project is sponsored by Davidson College and directed by Michael K. Toumazou, Professor of Classics. He is assisted by P. Nick Kardulia (College of Wooster) and Derek B. Counts (University of Wisconsin-Milwaukee.)

http://sites.davidson.edu/aap
A critical connection.

ITS in the right place at the right time.
Early in 2011 Davidson College Executive Director of Information Technology Services Mur Muchane was in Raleigh for a meeting and decided to pay a call on his colleagues at the Microelectronic Center of North Carolina.

His visit turned out to be incredibly well timed.
The Microelectronics Center of North Carolina was created in 1980 to serve as an economic catalyst for businesses and institutions all across North Carolina. At the time, it was the only two-way interactive, multi-point video and audio network in the United States. Over time, that network has evolved into the extremely high-speed network that serves North Carolina today.

That day Mur learned Microelectronics Center of North Carolina (MCNC) had received funding to help connect North Carolina K-12 schools and foundations to its high-speed network – a network that already served most of North Carolina’s academic institutions, including Davidson College. Almost at the end of their successful project to add these additional users, MCNC still had funding available.

Davidson’s current connection to the MCNC Network is completed by leased space on a fiber optic network that bridges a gap between the Davidson campus and the North Charlotte location of the network.

**A direct connection would mean:**

- **Significant savings**
- **More bandwidth for faculty whose research and instruction require large amounts for complex data**
- **Faster, more reliable access to Davidson resources for students who are studying abroad**
- **More opportunities for Davidson Faculty, many of them foremost experts in their field, to provide commentary and interviews as world events unfold**
In the end, Information Technology Services partnered with the North Carolina Research and Education Network (NCREN) and successfully secured approximately $500,000 in funding to make the direct connection. Basic engineering work began in late 2012, and the connection is expected to be live by summer 2013.

Since its inception, MCNC has remained at the forefront of available technology, always ready to make the best possible use of every technological advance. This direct connection makes Davidson ready too, for whatever opportunities the future brings.
Making the most of every resource.

A tale of three tiers — the story of tag #8021.
The life cycle of a Davidson computer begins with consultation: A team led by Lydia Lorenzin, Director of Technology Help Services, works with staff and faculty to put the most useful technology possible in place, one unique user at a time.

The result? Tier One: a new computer configured to meet the exact needs of its user. That computer arrives and receives a tag number. That’s how we keep track of it as it moves through our master replacement cycle. A computer at Davidson

Tag Number 8021’s Tier One Home:
The Dell Optiplex 745 was purchased in August 2007 for the Football Office in the Athletics Department.
typically stays in place 3 - 4 years before it’s considered too old to keep up with its primary function.

Then it’s on to Tier Two: a computer too old to be reliable in a critical function, but still perfectly fine for a secondary job like word processing or checking email.

As new computers are purchased over time, Tier Two computers are eventually replaced — though many still have plenty of use left in them. These become Tier Threes: computers that have served several purposes at Davidson and are ready to leave campus.

**Where do they go?**
First they come back to ITS. Mary Jones, Operations and Administrative Services Manager, keeps careful track of every component

*Tag Number 8021’s Tier Two Home: It was replaced in 2011 and became a supervisor station in Dining Services.*
to make sure that A: all hard drives are erased and B: equipment leaving Davidson, wherever it goes, will be easy on the environment.

Lots of the third tier components are made available to students, faculty, and staff. If you qualify, you can even purchase “the best of the worst” at Wildcat Bytes.

http://wildcatbytes.davidson.edu

Some components are sold to asset buyers and generate revenue for new computers and equipment. And some are donated, either to Goodwill or to area schools and nonprofits, helping Davidson make a significant connection to the community around us.

What can we do for you?

Davidson Information Technology Services

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