Student E-mail Upgrade Nearing Completion

By Dr. Philip Baczewski, Senior Director of Academic Computing and User Services and Deputy Chief Information Officer for University Information Technology

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Read more

Information Technology Resources at UNT - Finding Your Way Around

By Claudia Lynch, Benchmarks Online Editor

Welcome, or welcome back, to UNT! If you’re new, or if you’ve just been away for a while, it is our hope that this article will serve as a handy starting point to get you acquainted (or re-acquainted) with the resources that are available to you here at the University.

Read more

General Access Computer Labs Gear Up for the Fall Semester

By Dr. Elizabeth Hinkle-Turner, Director - Academic Computing Technical Services

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Read more
The Class of 2017

By Claudia Lynch, Benchmarks Online Editor

Every August since 1998, Beloit College in Beloit, Wisconsin has released a summary of characteristics typical of incoming freshman. This year’s list emphasizes that the Class of 2017, most of them born in 1995, have totally embraced technology.

End of Summer Hours

By Claudia Lynch, Benchmarks Online Editor

Summer school is over and fall classes are set to start at the end of the month. Many computer labs use this time to close and take care of various computer upgrades and other maintenance issues before the fall semester starts. The University is officially closed on Monday, September 2 for Labor Day.

Click on the link above for an information age laugh.
Student E-mail Upgrade Nearing Completion

By Dr. Philip Baczewski, Senior Director of Academic Computing and User Services and Deputy Chief Information Officer for University Information Technology

The EagleConnect student e-mail system update that began in July is expected to be fully completed starting on August 23, 2013.

In July, all EagleConnect accounts were migrated by Microsoft from their "Live@edu" service to their Office 365 offering. This next phase of the update will apply Microsoft's "Wave 15" upgrade to EagleConnect and is expected to provide access to online Office applications as well as Skydrive Pro. More details on using the new features will be forthcoming in future issues of Benchmarks.

Latest Information

For the latest information regarding the upgrade, check the eagleconnect.unt.edu page. News about the upgrade is posted on the UIT Helpdesk website also. For additional help, please contact the UIT Helpdesk at 940-565-2324 or helpdesk@unt.edu.

Friday, August 23, 2013 -- The upgrade for the student accounts to Wave 15, which was announced to be this weekend, is NOT going to take place. The date for the upgrade is currently unknown.

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Welcome, or welcome back, to UNT! If you're new, or if you've just been away for a while, it is our hope that this article will serve as a handy starting point to get you acquainted (or re-acquainted) with the resources that are available to you here at the University.

Students, faculty and/or staff members should all benefit from the information that follows.

Many IT services at UNT are brought to you by University Information Technology (UIT). UIT consists of local IT services associated with the UNT flagship campus. These are Academic Computing and User Services (ACUS), Administrative Information Technology Services (AITS), Classroom Support Services (CSS), and Microcomputer Maintenance Services (MMS). System-wide IT services are provided by Information Technology Shared Services (ITSS). These areas were all part of the Computing and Information Technology Center (CITC) until last year and because of that you may still see that name in documentation and be referred to parts of the CITC website until new online resources have been created.

When all else fails ...

If you have an IT question and/or problem and can't think of who to contact or where to look for a solution, just remember this: Contact the Helpdesk

The University Information Technology (UIT) Helpdesk is located in room 130 of Sage Hall. Their hours are listed on the Helpdesk website: http://helpdesk.unt.edu/. Besides stopping by or searching for answers on the website, you can call the Helpdesk at 940-565-2324 or send mail to helpdesk@unt.edu.

Speaking of the Helpdesk, Benchmarks Online, publishes a column each month called "Helpdesk FYI." This month's article is Zip-File Attachment Quarantine. Following is a selection of articles published within the past year. Perhaps one of these topics is something you've been wondering about:

- UNT Bulk Mail Message Type
- Be Safe Out There
- Filtering your UNT Email
- UNT wireless network connection
- Setting up Outlook 2010 or 2013 on Windows 8

Also, you can look back through the Benchmarks Online archives for more articles that may be of interest to you.

We hope that new students are familiar with the Student Tour of Computing Services at UNT. There are lots of topics touched on that are of interest to non-students also. For Example, in the Documents About Student Computing Services area are PDF files of things like a Computer Security brochure and a General Access Computer Lab brochure. Check out the complete website: it.unt.edu/studenttechtour

General Access Computer Lab System

The UNT General Access Computer Lab System is a collection of 14 computer labs spread across the UNT Denton campus. They have been set up to provide computing to the University community. The GA CL website states:
The labs are intended to meet the general academic computing needs of UNT students. These labs are supported and maintained primarily through a portion of the Technology Use Fee.

Students with a valid UNT photo ID card may use any General Access Lab except where noted.

A list of labs and their locations and operating hours is available from the GACL website. The lab in SYMR 104 is an Adaptive Lab. As the website states:

The University of North Texas Academic Computing Services General Access Lab is located in Sycamore Hall, Room 104. The mission of this lab is to provide general services to the UNT community with an emphasis on the special features that Academic Computing Services has to offer including helpdesk support and research assistance. Additionally the ACS lab is the designated adaptive lab on campus providing state-of-the-art adaptive equipment for those who need it. For more information about adaptive services on the UNT campus visit the Office of Disability Accommodation at http://www.unt.edu/oda.

NOTE: All labs will be closed on September 2 (Labor Day) except 24 Center, located in the Willis Library - http://www.library.unt.edu/24-center

Computer Based Training

Rising costs of training, shrinking budgets and changing technology have contributed to changes in computer-based training offerings at UNT over the last several years. The Computer-Based Training website has a list of training resources currently available to the UNT community. The Microsoft IT Academy is a program that provides all students, faculty and staff of the UNT System -- UNT, UNT Health Science Center, and UNT Dallas -- access to online learning. Additionally, the Business Service Center Training & Development area provides a link to download Office 2010 training (in PowerPoint 2010 format). Contact Claudia Lynch if you have questions or need more information about these resources.

Online Learning

For students, a good starting place is found on the student tour. Faculty will want to visit the Center for Learning Enhancement, Assessment, and Redesign (CLEAR) website and/or the Center itself.

Other Items of Interest

- **Online Student Health Portal (OSH)** -- OSH is a web-based portal connecting students to the Student Health and Wellness Center (SHWC) 24 hours a day, 7 days a week. See the Benchmarks Online article "Just in time for the fall semester: an Online Student Health Portal" for further information.

- **Videoconferencing** -- Videoconference Technology allows you to meet with your colleagues on campus, at the Dallas and Ft. Worth campuses, or almost anywhere in the world. See the Benchmarks Online article "Save Time, Money, and Avoid Parking Frustrations Using Videoconference Technology" for further information.

- **Ask Us** - The UNT Libraries' virtual/online help services; they're available from your computer 24/7.

- **Info~Tech** -- Info-Tech Research Group (Info~Tech) is the Information Technology (IT) research partner for the UNT System. All faculty, staff, and students system-wide have access to Info-Tech research at: www.infotech.unt.edu (select the UNT System name to login).

- **Campus Subscription to Higher Education Newsletters**-- UNT has negotiated a group online subscription allowing campus members free access to the Online Classroom & The Teaching Professor higher education newsletters produced by Magna Publications. To access these publications, go to http://www.magnapubs.com/publications/newsletters/ and click on the appropriate icon. No password is necessary to access either publication from a campus computer. Click on the "Access my Subscription" button and you will be taken to the current newsletter. If you wish to access from off campus or if you would like to receive an email message each time a new issue is posted, you will need to register and enter a campus voucher code and pin number. Please email jane.himmel@unt.edu to obtain this information.

- **Statistical and Research Support Services** -- "The mission of the Research and Statistical Support (RSS) group at the University of North Texas (UNT) is to facilitate access to current research tools and statistical methodologies and to promote these methods to the research, instructional, and administrative communities at UNT; to encourage a collaborative research environment for researchers through the development and use of innovative computing technologies; to provide training and consultation in the appropriate use of statistical methodologies and computer software; and to facilitate access to data collection and data management technologies." [From the Research and Statistical Support website]. The RSS Group publishes a monthly column in Benchmarks Online. You can find their brochure here: https://it.unt.edu/sites/default/files/rssbrochFall2013.pdf
• **LISTSERV.UNT.EDU** -- Listserv web interface makes it much easier to manage your listserv lists. See this past *Benchmarks Online* article for more information.

• **Data Management Services** - Location: Sage Hall, Room 336, near to the Sage Hall elevator. For more information contact: Joann.Luksich@unt.edu 940.369.7416 **Services include:**

  | Exam Grading and Analysis |
  | Research Projects - Data Collection |
  | Scannable Survey Design |

  **Faculty Evaluation Processing:** Scan, edit and process UNT departmental faculty evaluations. Standardized reports provided: Department Overall, By Instructor-Course-Section, and By Instructor. An Excel data file will be provided to run any customized reports desired. See *Faculty Evaluation Processing Tips* for more information.

• **High-Performance Computing Initiative** - The High-Performance Computing Initiative is available for use by UNT researchers whose research or scholarship requires use of computationally-intensive applications. Visit the HPD website for further information. The *North Texan* had a nice "Parting Shot" of the HPC Talon this past December.

• **Information Security** -- "The Information Security Team helps protect UNT Information Technology assets from misuse, abuse, and unauthorized access. The mission of the Information Security Team is to assist and collaborate with UNT administrative, academic, and student communities to help assess, implement, and maintain information security needs." [From the *Information Security Website*]. Links and further information can be found at that site. **UNT Faculty, Staff, and Students are required to read the Security Handbook.** The latest Information Security brochure is here: [https://it.unt.edu/sites/default/files/2013Information%20Security%20Brochures.pdf](https://it.unt.edu/sites/default/files/2013Information%20Security%20Brochures.pdf)

  Information Security has an announcement board on UNTRANET to post important security updates/alerts as an additional security resource. See this past *Benchmarks Online* article for further information on the announcement board.

• **Managing Spam** -- Actively manage e-mail that is sent to your campus e-mail address. See the article *Managing Your Spam* for more information.

• **Campus VPN** -- The Campus VPN is an interface that will allow you to connect remotely to on-campus resources. For more information click here.

• **Free or cheap software**

  • **McAfee VirusScan 8.8i** -- Free download.

  • **Free Office Live Applications** -- Microsoft now includes Office Live applications in EagleConnect. Office Live applications are web-based (cloud) versions of *MS Word*, *Excel*, *Powerpoint*, and *OneNote* which provide the full functionality of their Office Suite installed counterparts. Further information can be found here.

  • **Microsoft Campus Agreement** -- UNT has had an agreement with Microsoft for a number of years that allows us to distribute various Microsoft products to employees of the University. According to the agreement, you can "use the software for school-related purposes on a personally-owned computer or an institution-owned computer designated for your exclusive use" and you must remove the software from your home machine if you leave UNT. **This agreement does not cover students unless those students are also UNT employees.** UNT Health Science Center employees CAN purchase their software on the HSC campus via the ITS Helpdesk. Employees wishing to install these products on University-owned computers should contact their Network Manager for further instructions.
- **The Microsoft Home Use Program** -- Reduced price software for faculty/staff home use. Visit the Home Use Program [website](http://it.unt.edu/benchmarks/issues/2013/08/information-technology-resources-unt-finding-your-way-around) to participate in the program. If you are unable to order the software from there, contact Claudia Lynch, at [lynch@unt.edu](mailto:lynch@unt.edu).

- **Adobe’s “Master Collection” and “Design & Web Premium”** suites are now available for faculty and staff use at home via a “work at home” license agreement negotiated between UNT and Adobe. See this recent [Benchmarks Online article](http://it.unt.edu/benchmarks/issues/2013/08/information-technology-resources-unt-finding-your-way-around) for more information.

- **DreamSpark** -- UNT students can take advantage of DreamSpark, Microsoft’s program that provides free development software to students. Click [here](http://it.unt.edu/benchmarks/issues/2013/08/information-technology-resources-unt-finding-your-way-around) for more information.

- **Free/Open Source software** -- Two articles on that topic from the RSS staff:

  1. [Free ! = Cheap](http://it.unt.edu/benchmarks/issues/2013/08/information-technology-resources-unt-finding-your-way-around): Open Source and/or Free Alternatives in Statistical Analysis.

  2. [Free your research](http://it.unt.edu/benchmarks/issues/2013/08/information-technology-resources-unt-finding-your-way-around): Open source and other alternatives to cut your costs and improve productivity as a graduate student.

*Various versions of this article are published each semester. -- Ed.*

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General Access Computer Labs Gear Up for the Fall Semester

By Dr. Elizabeth Hinkle-Turner, Director - Academic Computing Technical Services

Just because the majority of the UNT Denton student body goes away for the summer (or - at the very least - is not taking formal classes) much activity occurs and much change can happen. This summer was particularly noteworthy for change.

Construction, Construction, Construction

Returning students will notice a whole lot of blue and white fence barriers and machinery around as the construction of the new Union (after demolition of the old Union!) commences. Students are buying their books at the Barnes and Noble temporary campus bookstore location (it's that big white "tent-like thing" over by Bruce Hall if you hadn't noticed!) and speaking of Bruce Hall, that dorm will soon feature a greatly expanded dining area for the UNT community.

EagleConnect Upgrade

If students haven't looked at their EagleConnect email recently (ahem! Why NOT?), they will notice that its interface has changed slightly as it moves towards the Office 365 format (discussed in this Benchmarks article in May). That migration (including new Office 365 features) is expected to be completed in the opening weeks of the semester (see more details in this issue of Benchmarks Online and at the helpdesk.unt.edu website as they become available.) The Tour of Student Computing Services at UNT has been moved and updated to reflect these changes and new features as well.

Social Media Outreach

University community members are also encouraged to Like us on Facebook and/or Follow us on Twitter to stay abreast of all the breaking news from student information technology services.

General Access Computer Labs

The staffs of the 14 General Access Computer Labs (GACLs) have also taken advantage of summertime's slower pace to clean up, clear out, update and improve their facilities as needed. Some of these changes have been substantial and as always, are geared towards continuing to provide outstanding service to our students and to assist them in achieving success here at UNT.

Starting with the largest GACL (if by "largest" you mean the ENTIRE LIBRARY!) the computing facilities in Willis Library have significantly expanded their offerings. Judy Hunter - Director of Front End Support, Helpdesk, and Student Computing Center for the library - shares that they have added keyboard stations and music-specific applications (including Finale) on the fourth floor. They also have two StarBoard smartboards in the back room to allow for group work. Wireless accessories for these smartboards are available for checkout at the SCC desk. Their windows desktops are 64-bit and they have added EndNote to their software package and Office 2013 is now on their workstations. Web-printing has been rolled out for the Willis printers.
Students can get help with all Willis Library technology at their front desk

Other Willis service enhancements include having reservations.library.unt.edu available for students to be able to reserve their study spaces/group rooms (they consistently have 3 rooms available for reserving and a 4th that comes available after 7pm). Twelve additional workstations will be added to the first floor and they have added 16 additional flatbed scanners. They are also working on adding printing stations to the second floor of the library.

The College of Education GACL located in Matthews Hall has all new hardware. Their machines are still running Windows 7. They have enabled web printing to their hall printers and the print release stations in the lab. They have implemented document queue management and their printing is limited to one double-sided copy.

The College of Arts and Sciences (CAS) is doing a complete refresh of their Windows computers. They are installing new Dell Optiplex 9010 machines with the Windows 7 64-bit OS. All LCD monitors are being replaced with new Dell 24-inch LCDs with USB ports on the monitor frame to quickly connect USB flash drives.

To make room for the new coffee shop that will be opening on the GAB second floor, the computer kiosks located there will be moved to the third floor commons area. James Strawn, manager of the CAS labs, also notes that additional wireless access points are being installed so students can "sip and surf" in the area between classes!

Willis Library is not the only lab facility with collaborative project spaces. In the Chilton Hall atriums two additional student group collaboration areas have been created. PACS IT operations manager, Jackie Thames, also shares that the GACL in Chilton Hall now has tables with electrical and USB outlets for students’ personal devices.
The GACL in the College of Music has a recording studio for student use.

Other lab facilities keep humming along giving students great customer service and great IT tools for success. UNT community members are encouraged to check out the GACL website (gacl.unt.edu) for lab locations and information and to stroll around the campus and check out these facilities and what they have to offer!

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Network Connection

By Dr. Philip Baczewski, Senior Director of Academic Computing and User Services and Deputy Chief Information Officer for University Information Technology

From Fine Art to Toilet Paper

Amazon.com is one of the staples of Internet commerce. In fact, it represents one of the first most successful commerce sites to be developed on the Internet. If you've never purchased something via Amazon.com, I'm not sure how you are reading this, since if you have an Internet connection, it's likely you've made an Amazon purchase.

For those who are 18 years old or under and can't remember, Amazon.com was founded in 1995 by Jeff Bezos specifically to harness the potential retail power of the Internet. Considering that commercial Internet service providers only first began operating in 1989 and were not common until the mid 1990's, and that the Mosaic web browser was only released in 1993, pursuing a business model based on Web Internet commerce was a gutsy move for the time. Of course, that was also the start of the dot-com bubble which saw massive investment in Internet commerce start-up companies, followed, in 2001, by a crash in stock prices and failure of many of those companies. Amazon, however, was a survivor, going on to post its first annual profit in 2003.

Delivering the goods

Amazon.com started with selling books, but has become a major retailer of pretty much everything these days (I bought a battery-powered lawnmower on Amazon.) That includes groceries that are "dry goods", i.e. that don't require preservation. So, one of the modern amenities that Amazon brings us is a way to "subscribe" to toilet paper that gets delivered to your door on a regular basis. This sets up Amazon to be in direct competition with the likes of Walmart and you can bet that the battle is already raging.

Perhaps if you are well-provisioned in toilet paper, you'd rather buy fine art on Amazon. Why would you want to go to all those galleries when you can sit at home sipping your own wine (available from Amazon) and nibbling on your own gourmet cheese (available from Amazon) while browsing for a canvas to grace that glaringly empty spot over your sofa? Or perhaps, if you live in a castle, you are more interested in a more modestly-priced set of tapestries. Amazon's got you covered there as well.

Selling pieces of the Internet

As one of the largest retailers on the Internet, Amazon has developed one of the largest IT infrastructures on the Internet to support their commercial activity. Running such a business requires lots of servers to support the web browsing, order taking, and payment transactions required to sell all that stuff. Amazon has taken what they've learned about Internet and server infrastructure and turned it into a product they call their Elastic Compute Cloud.

So, if you aspire to your own Internet business so that you can one day afford to buy your art on Amazon, Amazon.com can help you get started by renting you a server to run your application or company site. The Elastic Compute Cloud enables anyone to quickly provision a server of whatever size they need and have that available for a short or long time, with the charge calculated as an hourly fee that varies with the capability of the server instance.

In other words, Amazon is not just selling on the Internet, they are selling pieces of the Internet itself.

Buying newspapers, capturing domains

Amazon was in the news recently when founder Bezos up and purchased the Washington Post, something he could do as a hobby (I mean, maintain as part of his personal holdings) thanks to the amazing success of Amazon. While there is speculation that the Post acquisition falls in line with Amazon's desire to become a bigger player in media production, Bezos has given no sign that the management of the Post will dramatically change any time soon.
In other arenas, Amazon is generating a bit more controversy. As discussed previously, ICANN, the organization that oversees Internet addresses, has been taking applications for new "top-level domains", i.e. the part that makes up the last bit of an Internet address. Most of us know the likes of ".com" and ".edu", but Amazon has applied for names like ".book", ".author", and ".read". This would give Amazon control over any addresses that end in those words, keeping any competitors from using those address forms. It's not surprising then that publishing industry groups and rivals like Barnes and Noble are objecting to such control. So maybe that Amazon/Walmart fight comes naturally, since they are both have a large industry presence and seem to try to push smaller players out of their market space.

Can you cross state lines with a rented text book?

In yet another odd news story about Amazon.com comes the word that textbooks rented by students from Amazon will not be allowed to cross state lines. Apparently, if Amazon figures out that you travelled out of state with our rented textbook, they reportedly reserve the right to charge you the buyout price of the book. Students that rent their textbooks and have them shipped to their home address and then go to college in a different state from which they return their textbooks could potentially fall into this costly web. Speculation is that this policy by Amazon has something to do with its ongoing fight against charging state sales tax to customers.

Tax-free purchases provide online retailers with a great advantage over local stores. Why pay 8-10% more locally, when you can avoid the expense by buying online? Amazon has, in particular, tussled with the State of Texas who sent Amazon a bill for $268,809,246.36 in uncollected taxes, including a pre-addressed envelope for convenient payment (I think Texas gets "style points" for the envelope.) Amazon initially claimed to have no physical presence in the state, which was true if you didn't count the distribution centers located in and planned for the State. Amazon now charges Texas sales tax.

In less than a generation ...

It is striking that in less than a generation, the whole nature and notion of commerce has been changed by the development of the Internet. Amazon has been one of the biggest players in that change and continue to expand their influence. I'm sure you'll be reading more about it in the Washington Post.
Resources for new UNT students

"Learning to operate in a new and unfamiliar environment is challenging, especially if you don’t know who to ask or where to go for help. Here are campus resources that will help you make a smooth transition to life as a UNT student." ~ Opening paragraph of the Resources for new UNT students website:

http://www.unt.edu/features/newstudents/index.htm

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Helpdesk FYI

By Richard Sanzone, User Services Manager, Academic Computing and User Services

Zip-File Attachment Quarantine

Recent virus activity has prompted UNT to implement a quarantine policy on incoming UNT Exchange (employee) email messages that contain zip-file attachments. Your incoming Exchange email messages will be quarantined if they have a zip-file attachment. Please see below to learn how to retrieve your quarantined emails.

Notification of Quarantined Email Message

You receive a message in your Exchange account when a message is quarantined due to a zip-file attachment. The message is from "Mail Delivery System" with the subject as "Email Quarantined Due to Security Concerns." The quarantine notification informs you of the reason the message was quarantined (the zip-file attachment), the sender and the subject of the quarantined message. A link to UNT's IronPort system (spam.unt.edu) is provided where you can retrieve the quarantined message.

Retrieve a Quarantined Email Message

You may retrieve a quarantined email message by clicking the IronPort link in the quarantine notification or by navigating directly to https://spam.unt.edu. Make sure you verify the URL of the webpage begins with https://spam.unt.edu (it's ok if the URL has additional text attached AFTER the https://spam.unt.edu portion). Do not enter your username and password on the website if the URL differs from this format.

IronPort spam.unt.edu Login Page:

You will see a list of quarantined messages after logging in to IronPort. To retrieve a message:

1. Put a checkmark in the box preceding the message(s) you would like to retrieve.

2. Select "--Release" from the "Select Action..." menu. Alternatively, you can select "--Release and Add to Safelist" if you want to always allow emails from the selected sender to automatically bypass the quarantine.

3. Click the "Submit" button next to the action menu.
The message(s) will appear in your Exchange email account within a few minutes.

Please see this IT Shared Services Messaging website for more information on using the IronPort spam.unt.edu system.

The above article can also be found at helpdesk.unt.edu/zip.

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How to import and merge many Excel files; each with multiple sheets of data...for statistical analysis.

Link to the last RSS article here: Multivariate outlier detection with Mahalanobis' distance, tricks for sequential string or character names. -- Ed.

By Dr. Jon Starkweather, Research and Statistical Support Consultant

This month’s article was motivated by the need to import and merge together multiple Excel files and the multiple sheets within each Excel file. Excel is extremely popular as a tool for organizing data and it has fairly easy-to-use functions for rudimentary statistics and data displays (i.e. graphs & charts). However, it is not a statistical software package and therefore, it is often necessary to import Excel data structures into other, more statistically oriented software. For this reason, RSS personnel do not recommend using Excel; for data storage, data display, or data analysis. An often quoted phrase is the following; the only thing worse than using SPSS, is using Excel. For more information on the known problems with Excel and other spreadsheet based software, see Burns (2013). RSS recommends storing data in plain text (.txt) files with comma delimiters; also known as a comma separated values (.csv) file type. The reason RSS recommends text (.txt) or comma separated values (.csv) file types is because those file types can be easily opened or imported into all the statistical software packages. However, if you feel you must use Excel, then this article should help you with the inevitable task of getting data from Excel into a more worthy software package for statistical data analysis; and there really is no more worthy software for that purpose than R.

Context of the Example

An example has been created to illustrate a procedure for importing several Excel files, each with multiple sheets, into the R workspace and merging them together as a single data frame. The premise of our example is a research design with 10 participants, 3 lighting conditions, and 5 time series (chin movements, left eye [pupil] movements, right eye [pupil] movements, left wrist movements, right wrist movements). Each participant was exposed to each lighting condition and their movements were measured throughout a 10 minute typing task -- all three body-part measuring apparatus took samples 100 times per minute to measure positional changes (in millimeters) from an enforced baseline / start position, while each eye’s pupil movement reflects the movement (in millimeters distance) from looking at the center of the screen. In other words, the eye (pupil) movement refers to changes of movement in gazing at the center of the screen to gazing at the edges of the screen, or the keyboard. Again, the time series data was sampled at 100 times per minute for the full 10 minutes of typing \((n = 1000, \text{ per time series})\). Motion capture software exported the resulting data into 10 Excel files. Each Excel file corresponds to each participant (participant.1.xls, participant.2.xls...etc.) and each Excel file contains 3 sheets; one sheet per lighting condition (Off, Dim, Bright). Each sheet contains five time series corresponding to the five measured variables (Chin, R_eye, L_eye, R_wrist, L_wrist). The resulting simulated data is available on the RSS servers so that the reader can download the data files and replicate what is illustrated below. Our goal was to import all the data and merge it into a single data frame.
Illustrative Example

First, ‘set’ the working directory (wd) to the (path) location on your computer where the files are located; in this example, we have the 10 Excel files on our desktop. Below, and throughout the example, we are using black, Times New Roman, font for text and we are using Courier New font for R script (in red) and R output (in blue).

```
setwd("C:/Users/jds0282/Desktop/")
```

Next, load the packages which will allow us to import Excel data files; the XLConnect package is the package we want and it requires the rJava package.

```
library(rJava)
library(XLConnect, pos = 4)
```

Next, create an object with the file names. Here, we are using the paste function to create sequential character string names.

```
pre1 <- "participant"
pre2 <- seq(1:10)
suf <- "xls"
file.names <- paste(pre1, paste(pre2, suf, sep = "."), sep = ".")
rm(pre1, pre2, suf)

file.names
```

```
[1] "participant.1.xls" "participant.2.xls" "participant.3.xls"
[2] "participant.4.xls" "participant.5.xls" "participant.6.xls"
[3] "participant.7.xls" "participant.8.xls" "participant.9.xls"
[4] "participant.10.xls"
```

Next, create an object with the sheet names. Recall, each file contains 3 sheets; each sheet corresponds to a lighting condition.

```
sheet.names <- c("Off","Dim","Bright")
sheet.names
```

```
[1] "Off" "Dim" "Bright"
```

Next, we create a vector of names which will be the column names for the final data frame. The data frame must include columns (factor level variables) which contain coding information which identifies each row’s data. In this example, we need three such participants; one for the participant, one of the condition, and one for the sampling frame (1 to 1000) which represents each of 100 samples per minute (for 10 minutes). The other five names (and columns) represent the five motion capture time series distance measures.

```
e.names <- c("participant.id","condition","sampling.frame",
              "Chin","R_eye","L_eye","R_wrist","L_wrist")
e.names
```

```
[1] "participant.id" "condition"  "sampling.frame"  "Chin"
[2] "R_eye"       "L_eye"       "R_wrist"       "L_wrist"
```

The last step in preparation is to create the final data frame (data.1), keep in mind, this data frame only has one row (for now) and that row includes only ‘NA’ values. However, some simple mathematics allows us to compute the size of the final data frame. It will have 8 columns and 30,000 rows (10 participants * 3 conditions each * 1000 rows per condition). It is important to remember the first row is made up of ‘NA’ values and represents a place holder (it will be deleted after all the data is imported).

```
data.1 <- data.frame(matrix(rep(NA,length(e.names)), ncol = length(e.names)))
names(data.1) <- e.names
data.1
```

```
participant.id condition sampling.frame Chin R_eye L_eye R_wrist L_wrist
```
Now, we're ready to use two `for-loops` to import each sheet of each file and row bind (rbind) them to the original / final data frame. However, it may be beneficial to elaborate on what each line of each `for-loop` is doing. Line numbers have been added to the script below in order to help facilitate explanation of each line. Obviously, these line numbers are not functional R script (red, Courier New) or R output (blue, Courier New) and therefore are printed in black (Times New Roman) font.

```r
for (i in 1:length(file.names)){  
  wb <- loadWorkbook(file.names[i])
  for (j in 1:length(sheet.names)){
    ss <- readWorksheet(wb, sheet.names[j], startCol = 2, header = TRUE)
    condition <- rep(sheet.names[j], nrow(ss))
    sub.id <- rep(file.names[i], nrow(ss))
    s.frame <- seq(1:nrow(ss))
    df.1 <- data.frame(sub.id, condition, s.frame, ss)
    names(df.1) <- e.names
    data.1 <- rbind(data.1, df.1)
  }
}
rm(ss, condition, s.frame, sub.id, df.1)
rm(wb)
```

Line 1 above simply initiates a `for-loop`; which is nothing more than a way to tell the computer to read all the lines between the curly braces ({}). before proceeding, it should read those lines again, and again, and again...until i equals the length of the `file.names` object. The length of the `file.names` object is 10 because we specified earlier 10 file names. So, line 1 is essentially instructions which say; read the following lines, or iterate through the following lines, 10 times. The character `i` is assigned a zero until the first iteration is complete, at which time it is assigned a 1; next iteration i = 2, and so on until i = 10. The closing curly brace is on line 14 and the script after that curly brace will only be read when all 10 iterations have completed. So, lines 2 through 13 will each be read, or processed, 10 times in sequence (i.e. read lines 2 through 13, then read lines 2 through 13, then...).

Line 2 above simply imports an Excel workbook (file) and assigns it to `wb` (an arbitrary or temporary name of the workbook). We are telling the software the file name to look for by passing the file.names object to the loadWorkbook function and because the file.names object contains all 10 names, we specify the one which corresponds to the iteration number (i). So, for the first iteration, the loadWorkbook function looks for "participant.1.xls" because that is the first object of the file.names object.

Line 3 initiates a second `for-loop` but instead of labeling each iteration `i` we are labeling each iteration in this loop `j` which differentiates the iterations of the two loops. The `j` loop will iterate from 1 until the length of the `sheet.names` object. Recall, we specified 3 sheet names; corresponding to the 3 lighting conditions (Off, Dim, Bright). Keep in mind, the closing curly brace for the `j` loop is on line 12 which means, there will be 3 iterations of loop `j` occurring inside each single iteration of the `i` loop. Another way to think about this is; we read in an Excel file with the `i` loop and that file contains 3 sheets, each of which must be imported before going to the next Excel file.

Line 4 imports or reads the `j`th sheet and assigns it as an object of `ss`. The `ss` is simply an arbitrary or temporary name for the sheet. Each sheet contains the data from the five measurements (chin, right eye, left eye, right wrist, left wrist) – this includes 1000 time series data points for each of the five measures or columns. Take note of the arguments of the readWorksheet function. First, we pass the `wb` object (the workbook) to the readWorksheet function, then we specify which sheet to import using the vector of sheet names (here, the `j`th sheet, with `j` = to the iteration number of the `j` loop). Subsequent arguments allow us to specify the particular column and row (startCol; startRow; Header = TRUE or FALSE) of the sheet which contains the data. We could (although not shown) use other arguments (endCol; endRow) to specify specific places in the sheet to stop reading or importing data.

Line 5 simply creates a vector containing the sheet name (of the sheet just imported) replicated the same number of times as the number of rows of that sheet (n = 1000) and assigns that vector the name 'condition'. Line 6 does the same thing for the workbook name or Excel file name which corresponds to the participant whose data is being imported. This values simply number each sample from the motion capture software (1000 samples = 100 samples per minute of the 10 minute task). Line 8 simply creates a temporary data frame (df.1) which has 1000 rows and 8 columns. The columns correspond to the participant identification (participant.id), the sheet name or condition (1 of three lighting conditions), the sequential sampling frame numbers (1 to 1000) and then the five motion capture measures (chin, right eye, left eye, right wrist, left wrist). Line 9 assigns the proper names to these columns, which are the same names and will match the columns of the final data frame (data.1). Line 10 'row binds' (rbind) the
newly imported data (df.1) to the bottom of the final data frame (data.1) – simply adding rows to the final data frame.

Line 11 removes (rm) all the no longer needed objects. Line 12 ends the ‘j’ loop. Line 13 removes (rm) the no longer needed workbook (wb). And finally, line 14 ends the ‘i’ loop and then removes objects no longer needed. Line 11 and line 13 are not strictly necessary because each iteration of each loop will re-write or over-write the objects contained in those lines. However, programming has some best practices which can be described as similar to some rules learned in kindergarten...always share and always cleanup after yourself.

Now, to point out one of the benefits of using R: after having read the above section and having studied the R script it describes; it is plain to see that an object oriented programming language, such as the R programming language, is much more efficient than written American English. It took a large paragraph to explain only 14 lines of programming.

Once the looping functions have completed (it should take less than 10 seconds), you can run a summary of the final data frame. You'll notice there are some oddities associated with the data frame, which are revealed in the summary output.

```
summary(data.1)
```

```
 participant.id  condition  sampling.frame  Chin
 Length:30001  Length:30001  Min. : 1.0  Min. :-501.606
 Class:character  Class:character  1st Qu.:250.8  1st Qu.:249.776
 Mode:character  Mode:character  Median : 500.5  Median: 0.044

           Mean : 500.5  Mean : -1.056
 3rd Qu. : 750.2  3rd Qu. : 247.143
 Max. : 1000.0  Max. : 501.578

 NA's :1  NA's :1

R_eye            L_eye            R_wrist           L_wrist
 Min. :-5.022822  Min. :-5.018528  Min. :-502.5246  Min. :-502.9264
 1st Qu.:-2.504122  1st Qu.:-2.508357  1st Qu.:-249.2208  1st Qu.:-249.9485
 Median: 0.000448  Median:-0.001666  Median: -0.3302  Median: 0.2345
 3rd Qu.: 2.500890  3rd Qu.: 2.521117  3rd Qu.: 248.6416  3rd Qu.: 248.3726
 Max. : 5.013923  Max. : 5.028788  Max. : 503.3902  Max. : 502.5689

 NA's :1  NA's :1  NA's :1  NA's :1
```

The first thing to notice is the participant identification (participant.id) and condition columns contain character string information instead of factor level data. Also, notice the number of rows (for all columns) is 30001 instead of 3000. The extra row is the first row of the data frame which contains all NA as a result of how we created the data frame prior to importing the data. So, we need to remove the first row and we need to convert the first two columns to factors.

```
data.1 <- data.1[-1,]
data.1[,1] <- factor(data.1[,1])
data.1[,2] <- factor(data.1[,2])
```

```
summary(data.1)
```

```
 participant.id  condition  sampling.frame  Chin
 participant.1.xls : 3000  Bright:10000  Min. : 1.0  Min. :-501.606
 participant.10.xls: 3000  Dim :10000  1st Qu.: 250.8  1st Qu.:249.776
 participant.2.xls : 3000  Off :10000  Median : 500.5  Median : 0.044
 participant.3.xls : 3000  Mean : 500.5  Mean : -1.056
 participant.4.xls : 3000  3rd Qu.: 750.2  3rd Qu.: 247.143
 participant.5.xls : 3000  Max. : 1000.0  Max. : 501.578
 (Other) :12000

 R_eye            L_eye            R_wrist           L_wrist
 Min. :-5.022822  Min. :-5.018528  Min. :-502.5246  Min. :-502.9264
 1st Qu.:-2.504122  1st Qu.:-2.508357  1st Qu.:-249.2208  1st Qu.:-249.9485
 Median: 0.000448  Median:-0.001666  Median: -0.3302  Median: 0.2345
 3rd Qu.: 2.500890  3rd Qu.: 2.521117  3rd Qu.: 248.6416  3rd Qu.: 248.3726
 Max. : 5.013923  Max. : 5.028788  Max. : 503.3902  Max. : 502.5689

 NA's :1  NA's :1  NA's :1  NA's :1
```
Now that we have the data imported and merged into a single data frame, we can then export that data frame by writing it to our working directory, which was set at the beginning of the script ('setwd') to our desktop. The file which is saved to the desktop will be named "typing_experiment_data.txt" and it will contain comma delimited (or comma separated) values, without row names but with column names. Any missing data (there is none in this example) will be recognized as 'NA' and decimals will be represented with periods ('.').

```r
data.1 <- read.table(file = 'typing_experiment_data.txt',
  sep = ',', na = 'NA', dec = '.', row.names = FALSE,
  col.names = TRUE)
```

## Conclusions

Keep in mind, there are a variety of different ways of accomplishing what was accomplished in this article. The example here merged all the data into one data frame. Different situational needs might dictate keeping the data separated by participant (i.e. workbook or file) or separated by condition (i.e. sheet); in those instances it may be preferable to import the data structures to multiple list objects or multiple data frames. That is another benefit of using R, the flexibility it affords the analyst in deciding what to do and how to do it. An R script file with the same information as contained in this article is available at the Research and Statistical Support Do-It-Yourself Introduction to R course website. Lastly, for those interested in seeing how the example data was created in R, and how it was exported from R into Excel.xls files; please take a look at the script which was used. An Adobe.pdf version of this article can be found here.

Until next time, *you can’t always get what you want, but if you try sometimes...*

Footnote 1: The phrase is believed to have originated with respected statistician and prominent R user Frank Harrell of Vanderbilt University at the 5th annual Bayesian Biostatistics Conference.

Footnote 2: The data can be downloaded from the following links:

- http://www.unt.edu/rss/class/Jon/Benchmarks/ExcelFiles/participant.1.xls
- http://www.unt.edu/rss/class/Jon/Benchmarks/ExcelFiles/participant.2.xls
- http://www.unt.edu/rss/class/Jon/Benchmarks/ExcelFiles/participant.3.xls
- http://www.unt.edu/rss/class/Jon/Benchmarks/ExcelFiles/participant.4.xls
- http://www.unt.edu/rss/class/Jon/Benchmarks/ExcelFiles/participant.5.xls
- http://www.unt.edu/rss/class/Jon/Benchmarks/ExcelFiles/participant.6.xls
- http://www.unt.edu/rss/class/Jon/Benchmarks/ExcelFiles/participant.7.xls
- http://www.unt.edu/rss/class/Jon/Benchmarks/ExcelFiles/participant.8.xls
- http://www.unt.edu/rss/class/Jon/Benchmarks/ExcelFiles/participant.9.xls
- http://www.unt.edu/rss/class/Jon/Benchmarks/ExcelFiles/participant.10.xls

## References / Resources

Training

By Claudia Lynch, Benchmarks Online Editor

Do you need training on widely used computer programs including those used in statistical analysis? If so, this monthly Benchmarks Online column is for you.

Statistical Analysis

Instructor-led courses are offered only by special request. Please contact an RSS member or Claudia Lynch if you are interested in taking such a class or wish to have someone offer a class for your students. SPSS, SAS and Introduction to R are offered online. Make sure and check out the RSS Matters article Statistical Resources in the July 2012 issue of Benchmarks Online.

Special classes can always be arranged with the RSS staff. Also, you can always contact the RSS staff for one-on-one consultation. Please read the FAQ before requesting an appointment though.

Coming up! - Dr. Jon Starkweather, Research and Statistical Support Consultant, will be making a presentation on services offered by RSS at a put on by the College of Education Doctoral Students Association for graduate students and faculty on September 21. Check this website for 2013 conference information. It had not been posting when this article was published.

Especially for Faculty and Staff Members

In addition to the online statistical courses, which are available to students, faculty and staff, staff and faculty members can take courses offered through the Business Service Center (they have a new comprehensive training curriculum), and the Center for Learning Enhancement, Assessment, and Redesign (CLEAR). Additionally, the Center for Achievement and Lifelong Learning (CALL) offers a variety of courses, usually for a small fee.

EIS training is available and expanding. Click here for online tutorials.

Microsoft IT Academy

All students, faculty and staff within the UNT System now have access to online learning via the Microsoft IT Academy. See this article in the July 2012 issue of Benchmarks Online for more information.

Microsoft E-Learning

Microsoft E-Learning courses are available for faculty and staff via our UNT-Microsoft Campus Agreement. Please contact Claudia Lynch at lynch@unt.edu for instructions on accessing this training. If you haven't accessed the training since last year you will need to get a new access code. UNT, UNTHSC and UNTSYSTEM e-mail addresses are now able to access Microsoft E-Learning.

Central Web Support

Central Web Support provides "End-User and Administrative Support for hosted general web sites, and Drupal websites for academic and administrative departments." Visit their website for "How-Tos about Everything."

CLEAR
CLEAR offers courses especially for Faculty Members. **CLEAR training includes:**

- Blackboard
- Turnitin
- Turning Point
- Assessment
- Teaching Effectiveness
- Respondus

Further information can be found [here](http://it.unt.edu/benchmarks/issues/2013/08/training).

**Register now** for the **Teaching Excellence Seminar Fall 2013**, Monday, August 26, 2013

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**CLEAR Open Labs Scheduled**

**Date(s):** Friday afternoons (August 23 & 30, September 6, 13, 20, 27)

**Time:** 1-4 p.m.

**Location:** Chilton 112K (UNT – Denton Campus)

**No registration required!**

The CLEAR Open Lab was designed to provide faculty with the opportunity to drop in for assistance with Blackboard Learn. The lab is not a formal training session, but rather a block of time during which one or more CLEAR staff members with expertise in Blackboard are on hand to answer questions and provide guidance. Faculty may drop in at any time during the lab and leave as soon as they have had their questions answered. They are encouraged to bring their laptops to make the most of their time in the lab.

For faculty or teaching assistants who are new to Blackboard Learn, we recommend attending a formal training session that provides an overview of the system ([http://clear.unt.edu/training](http://clear.unt.edu/training)) or scheduling an appointment with an instructional consultant ([http://clear.unt.edu/go/ic](http://clear.unt.edu/go/ic)).

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**Ed2go**

Ed2go are courses that are offered, for a fee, to UNT faculty, staff and students as well as the general public. According to the CALL [website](http://www.ed2go.com/unt/):

> CALL has partnered up to provide online learning on a variety of topics. From standardized test preparation to database programming to training for libraries and their staff, there’s a variety of areas from which to choose in online learning.

> The online minicourses, provided in conjunction with Ed2go, are standardized 12-lesson modules released over a six week period. (Courses are active for eight weeks to provide some flexibility). Each module features a quiz. Lessons are instructor-led and course participants and instructor communicate through a course discussion board. Lessons can be downloaded and saved. At the end of the course there is a final quiz. A passing grade opens a window that allows students to print out a course completion certificate.

> Most courses are $89, and UNT faculty, staff and students may receive a $10 discount.

For additional information surf over to [http://www.ed2go.com/unt/](http://www.ed2go.com/unt/) Visit the **Ed2go blog** [here](http://www.ed2go.com/unt/).

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**Information Security Awareness**

The ITSS Information Security team offers Information Security Awareness training to all UNT faculty and staff.

**It is a policy requirement that ALL staff take an information security course at least once a year.**

See July’s **“Link of the Month”** for the latest information about Security Awareness training.

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**Business Service Center Training & Development**
Provides training to UNT System institutions: [http://bsc.untsystem.edu/training-development](http://bsc.untsystem.edu/training-development). There is also a link to [download Office 2010 training](http://bsc.untsystem.edu/training-development) (in PowerPoint 2010 format) on the BSC website.

### Alternate Forms of Training

Many of the General Access Labs around campus have tutorials installed on their computers. See [http://www.gacl.unt.edu/](http://www.gacl.unt.edu/) for a list of labs and their locations. The 24 Center in Willis Library, for example, has a list of Tutorials and Software Support. The Library Instructional Unit also offers workshops and training, including "tech skills" training. Visit their websites for more information: [http://www.library.unt.edu/library-instruction](http://www.library.unt.edu/library-instruction). The [Training Website](http://bsc.untsystem.edu/training-development) also has information about alternate forms of training. Computer Based Training (CBT) and Web-based training are some of the alternatives offered, although due to the rising costs of training, shrinking budgets and changing technology, computer-based training at UNT is in a state of transition. For up-to-date information on CBT at UNT, see the CBT [website](http://bsc.untsystem.edu/training-development).

### Info~Tech, UNT's IT Research Partner

Info~Tech is UNT's IT research partner. UNT System, UNT, UNT Health Science Center and UNT Dallas employees have access to Info~Tech research at: [www.infotech.unt.edu](http://www.infotech.unt.edu) (click on the UNT System name to login). Your standard EUID and Password gains you access to the Info~Tech system. Please take a moment to read their terms and conditions by clicking through the agreement when you set up your profile the first time you log in.

### State of Texas Department of Information Resources

Another possible source of training for staff and, perhaps, faculty members is the Texas Department of Information Resources. A look at their Education and Training [website](http://www.infotech.unt.edu) reveals some interesting possibilities.

### New Horizons Computer Learning Centers

New Horizons is a DIR vendor, which means that state agencies, like UNT, get special pricing for their services negotiated at the State level (click [here](http://www.infotech.unt.edu) for more information about DIR vendors). [New Horizons](http://www.infotech.unt.edu) offers courses at their own facilities in Dallas and Fort Worth, but will arrange for onsite training as well.
Staff Activities

Staff activities for UIT are reported in this column. ITSS staff activities are handled by ITSS Communications.

Transitions

New Employees:

- Yixiao Xu, ACUS/Adaptive Lab consultant (part-time).
- Mounika Kolluri, ACUS/Adaptive Lab consultant (part-time).
- He “Lena” Huang, ACUS/Adaptive Lab consultant (part-time).

No longer working in UIT:

- Jackson Hardesty, UIT Helpdesk Consultant (part-time).
- James Martin, ACUS/Adaptive Lab consultant (part-time).
- Hines Vaughn, UIT Helpdesk Consultant (part-time).
- Molly Yocum, Fiscal Desktop Support, AITS (part-time).
- Yang Cao, ACUS/Adaptive Lab consultant (part-time).
- Taylor Schumacher, CSS Tech, Classroom Support Services (part-time).
- Caitlin Currie, CSS Tech, Classroom Support Services (part-time).
- Kaleb Futch, CSS Tech, Classroom Support Services (part-time).

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The Class of 2017

By Claudia Lynch, Benchmarks Online Editor

Every August since 1998, Beloit College in Beloit, Wisconsin has released a summary of characteristics typical of incoming freshman. This year's list emphasizes that the Class of 2017, most of them born in 1995, have totally embraced technology. The introduction to this year's list reads:

When the Class of 2017 arrives on campus this fall, these digital natives will already be well-connected to each other. They are more likely to have borrowed money for college than their Boomer parents were, and while their parents foresee four years of school, the students are pretty sure it will be longer than that. Members of this year's first year class, most of them born in 1995, will search for the academic majors reported to lead to good-paying jobs, and most of them will take a few courses taught at a distant university by a professor they will never meet.

The use of smart phones in class may indicate they are reading the assignment they should have read last night, or they may be recording every minute of their college experience…or they may be texting the person next to them. If they are admirers of Steve Jobs and Bill Gates, they may wonder whether a college degree is all it’s cracked up to be, even as their dreams are tempered by the reality that tech geniuses come along about as often as Halley’s Comet, which they will not glimpse until they reach what we currently consider “retirement age.”

Though they have never had the chicken pox, they are glad to have access to health insurance for a few more years. They will study hard, learn a good deal more, teach their professors quite a lot, and realize eventually that they will soon be in power. After all, by the time they hit their thirties, four out of ten voters will be of their generation. Whatever their employers may think of them, politicians will be paying close attention.

For this generation, Dean Martin, Mickey Mantle, and Jerry Garcia have always been dead. Find the rest of the list here:

http://www.beloit.edu/mindset/2017/
End of Summer Hours

By Claudia Lynch, Benchmarks Online Editor

Summer school is over and fall classes are set to start at the end of the month. Many computer labs use this time to close and take care of various computer upgrades and other maintenance issues before the fall semester starts. The University is officially closed on Monday, September 2 for Labor Day.

Following are the hours for University Information Technology-managed facilities for the rest of the summer and the beginning of the Fall Semester.

- The Helpdesk’s will be open on Monday, September 2 from 8 a.m. to 5 p.m. but will be closed to walk-in traffic; phone and email only. Walk-in hours are Monday – Friday: 8 a.m. – 5 p.m.

- Data Management Services will maintain their normal operating hours the rest of the summer and will be closed for Labor Day, Monday, September 2.

- The ACUS General Access/Adaptive Lab (SYMP 104) will maintain the following hours the rest of the summer. They will be closed for Labor Day, Monday, September 2.

  Monday - Saturday: 8 a.m. - 8 p.m.
  Sunday: Noon - 8 p.m.

Hours for Other Campus Facilities

General Access Labs

24 Center (formerly known as WILLIS)

Maintaining a normal schedule through the summer except as noted.

August 19-23: 7 a.m. - 7 p.m.
August 24-25: Closed
August 26-27: 7 a.m. - 7 p.m.
August 28: Open at 7 a.m. and return to 24hr schedule.
OPEN on Labor Day, Monday, September 2.

CLOSED: August 10-27
<table>
<thead>
<tr>
<th>Location</th>
<th>Hours/Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>College of Information General Access Computer Lab (CI-GACLab) (B205)</td>
<td>(semester break). Resume normal hours August 28. CLOSED for Labor Day, Monday, September 2</td>
</tr>
<tr>
<td>MUSIC</td>
<td>CLOSED: August 10-27 (semester break). Resume normal hours August 28. CLOSED for Labor Day, Monday, September 2</td>
</tr>
<tr>
<td>PACS Computing Center (College of Public Affairs and Community Service, Chilton Hall)</td>
<td>CLOSED: August 10-27 (semester break). Resume normal hours August 28. CLOSED for Labor Day, Monday, September 2</td>
</tr>
<tr>
<td>CVAD</td>
<td>CLOSED: August 10-27 (semester break). Resume normal hours August 28. CLOSED for Labor Day, Monday, September 2</td>
</tr>
<tr>
<td>COE</td>
<td>CLOSED: August 10-27 (semester break). Resume normal hours August 28. CLOSED for Labor Day, Monday, September 2</td>
</tr>
<tr>
<td>COB (BLB 190)</td>
<td>CLOSED: August 10-27 (semester break). Resume normal hours August 28. CLOSED for Labor Day, Monday, September 2</td>
</tr>
<tr>
<td>CAS - All CAS labs will be closed on August 10 – 27 and Monday, September 2.</td>
<td>All CAS labs will be closed on August 10 – 27 and Monday, September 2.</td>
</tr>
<tr>
<td>GAB 330:</td>
<td>Normal Hours beginning August 28</td>
</tr>
<tr>
<td></td>
<td>Monday - Thursday: 8 a.m. – 2 a.m.</td>
</tr>
<tr>
<td></td>
<td>Friday: 8 a.m. – 5 p.m.</td>
</tr>
<tr>
<td></td>
<td>Saturday: Noon – 8 p.m.</td>
</tr>
<tr>
<td></td>
<td>Sunday: Noon – 2 a.m.</td>
</tr>
</tbody>
</table>
End of Summer Hours | Benchmarks Online

GAB 550:
Monday - Thursday: 8 a.m. – 10 p.m.
Friday: 8 a.m. – 5 p.m.
Saturday -
Sunday: Closed

Terrill 220:
Monday – Thursday: 8 a.m. – 10 p.m.
Friday: 8 a.m. – 5 p.m.
Saturday -
Sunday: Closed

Wooten 120:
Monday – Thursday: 8 a.m. – Midnight
Friday: 8 a.m. – 5 p.m.
Saturday: Noon - 8 p.m.
Sunday: Closed

Engineering General Access Lab
(CENGAL, englab@unt.edu, Discovery Park, B129, 891-6733)

CLOSED for Labor Day, Monday, September 2
Resume normal hours August 28.

UNT Shuttle Service

Check out the transit website to keep up with the shuttle schedule throughout the summer. A 2013-2014 Service Calendar is available here: http://www.unt.edu/transit/pdf/2013-2014_calendar.pdf

Remember:

Get your alerts fast in case of inclement weather

Visit the Emergency Management website

City of Denton Residents, sign up for the CodeRED Emergency Notification System

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Today's Cartoon

From "Today's Cartoon by Randy Glasbergen", posted with special permission.
For many more cartoons, please visit www.glasbergen.com

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