APPLICATION ISSUES
Some issues with specific applications:

Adobe Illustrator and InDesign (Macintosh and Windows)
In Illustrator, make sure you have configured the Page Setup correctly and the Page Tool is set to enclose what you want to print. Use the preview to check your job before printing. In Illustrator you can move the image around in the preview window to change where the image prints on the paper.

Adobe Photoshop (Macintosh and Windows)
Images from Photoshop need to be set at **no more than 212 dpi** resolution to print to our laser printers. To print to the large-format inkjet printers, set the resolution to **no more than 150 dpi**. Using resolutions higher than these will make your files too big and will not increase the quality of your prints. This applies to images you create in Photoshop and import into other programs as well. You should also flatten the image before printing. Use the preview to check your job before printing.

Remember, if you have a large image (over 40–50 MBs), you should save the file as a PDF, close the file, open it in Adobe Acrobat and print from there as described above.

Adobe Acrobat (Macintosh and Windows)
Make sure you have configured the Page Setup correctly. Make sure to set the Page Scaling setting to NONE or ACTUAL SIZE so your job does not change size on you (unless you want it to change the size.) Use the preview to check your job before printing.

AutoCAD (Windows)
There are a variety of print settings in AutoCAD. Make sure you have set the scale correctly. Use the Full Preview to check the job before it prints. Click on the **>** button in the lower right corner to show the entire Print window and configure your print job.

QUESTIONS?
If you have questions, please check the web pages at http://design.ncsu.edu/it/ or contact the College of Design IT staff in William Keating Bayley Information Technology Laboratory, Brooks 202–204 for help.

You can also send an email to design_help@ncsu.edu with specific information about your problem.

College of Design
Information Technology

PRINTING 101
Tips and Tricks for Printing at the College of Design

Printing is one of the biggest issues in College of Design computing. Designers need to print a lot! Some of the most frequent questions we receive have to do with printing. This workshop and handout are designed to let you know about useful resources and to help you print more efficiently.

What we will discuss—
- WolfPrint Print Quota
- Help Resources
- Working from the Computer's Hard Drive
- What Happens When I Hit Print?
- Using PDFs to Print Large Files
- Printing Issues from Macintosh and Windows
- Using Page Setup/Print Options
- Printing from Specific Applications
- File Size and Image Resolution
- Printing to the Large-Format Inkjet Printers, aka Plotters
- Using the Print Monitor windows
- We will take time for questions and open discussion of tips you can offer to help others.

What we WON'T discuss—
- Adding Printers on personally-owned computers (See http://design.ncsu.edu/it/ for instructions.)
- How to get applications to do things other than print

Costs
Black and White laser prints up to 8.5"x14" are 10¢ per side, 11"x17" or larger are 20¢ per side.
Color laser prints up to 8.5"x14" are 25¢ per side, 11"x17" or larger are 50¢ per side.
Plotters are $1.60/square foot for color or $1.20/square foot for grayscale.

WolfPrint Quota
Money for WolfPrint comes directly from your AllCampus account. Users may add money to their AllCampus account online at http://go.ncsu.edu/print using a credit card. There is a 25 cent service fee for adding $10.00 or less online. There is a $2.00 charge for adding over $10.00. Users may go to the AllCampus office in the Talley Student Union and add money without incurring a service fee. AllCampus accounts may also be used for dining and other purchases on campus, so you may want to add more than you would use for printing. For more information see http://go.ncsu.edu/print.

Check your WolfPrint balance here: http://go.ncsu.edu/print. Log in using your Unity ID and password.

College Computing Web pages: http://www.design.ncsu.edu/it/
- HELP and Technical Support pages
- Instructions for adding printers, getting on the network, etc.
- Computing NEWS updates

Signs Near Printers
We put up signs in the labs, clusters, and on the printers that provide instructions for printing. They are there to help you. Please read them!

Work From the Computer's Hard Drive

Before you start working, copy files to the computer's hard drive. On lab computers, you can copy files to the Desktop while you're working. Files on the Desktop will only be available on that particular computer. They do not roam around with you to different computers. Copy files from Transfer, ClassStore, flash drive, etc. before you start working and printing. Then copy the files back when you are finished. This gives you an instant backup file if anything goes wrong and it helps you work more efficiently. Working on the hard drive is faster than working over the network. On lab computers, please remove files from the Desktop when you are finished.

"What Happens When I Hit the Print Button?" Or "Why didn't my print come out?"

IMPORTANT: You MUST authorize each print job at http://go.ncsu.edu/wolfprint.

Several things happen in the background and on servers around campus. Basically, your document is sent from your computer to a server. If everything is OK, the document is then sent to the actual printer. That can take a while, depending on the size of the file and whether any jobs are already in the queue.

On laser printers, the server gets a page count from the actual printer before the job is printed and then gets a second page count after the job is printed. The server subtracts the difference and multiplies that by the per page cost for that printer. It then deducts that amount from you print credit. On the large-format inkjet printers, the server measures the job and charges based on the square footage of the job. This happens before the job is sent to the printer, so sometimes you may be charged even though your print did not come out for some reason. If this happens, request a refund at http://go.ncsu.edu/print. Login, look for Recent Print Jobs, then use Request Refund link on the far right for each job that didn't print.

Things can go wrong in this whole process—
- you did not authorize your print job at http://go.ncsu.edu/wolfprint
- you don't have enough WolfPrint credit or money in your AllCampus account
- you sent it to a different printer without realizing it
- you didn't configure the job properly
- the file is too big to print efficiently
- your job is in the queue behind other jobs.

Taking a few seconds to check everything can save you a lot of hassles.

Using PDFs to Print Quicker

When sending large print jobs (over 40–50 MBs), save your file as a PDF and print it from Adobe Acrobat. When files are sent to print, the print job can be 2–3 times the actual file size. So, a 40–50 MB file can be up to 80–150 MBs when sent to the printer. This can significantly increase the processing time when printing. Saving as a PDF compresses the file without loss of quality and allows the jobs to print much faster. Our tests have shown jobs print as much as 7 times faster using this method. Many applications let you save directly to PDF format. On a Mac, you can also use the Print dialog and select Save as PDF. On a Windows computer, you can print to Abobe PDF, which will save the file as a PDF.

You can also use **PDF Optimizer** to reduce your file size and help it print quicker. In Adobe Acrobat Pro 10 or later, select Save As Optimized PDF from the File menu. In PDF Optimizer, make sure the following are checked:
- Under Images, make sure your Bicubic downsampling is no more than 212 dpi for laser printers and 150 dpi for the plotters.
- Under Fonts, select any fonts listed that can be unembedded and then click unembed.
- Under Discard Objects, select all checkboxes.
- Under Discard User Data, select all checkboxes.
- Under Clean Up, select all checkboxes.

You'll be surprised how small your file will become and how much faster it will print after using PDF Optimizer.

Macintosh or Windows?

In most cases, it doesn't matter whether you print from Macintosh or Windows computers. Choose the platform you're more comfortable with. Certain applications are only available on one platform or the other. We'll discuss issues with both Macintosh and Windows during the workshop. Sometimes a job that won't print on one platform will print on the other platform. So, you might try that if you're having trouble.

Setting up Your Print Job for the Large-Format Inkjet Printers

Special care should be taken when printing to the large-format printers. Use the Page Setup/Print Options to select the correct paper size for your job. For best results, use one of the standard sizes. You can see the dimensions in the Page Setup or Print options. You can use custom sizes, but these tend to cause problems and should be configured carefully. The orientation settings can be confusing.

Custom Page Sizes

When setting up a custom size, make sure the height is the larger dimension whether your job is tall or wide. For example, a 30" x 22" custom size should have the height set to 30" and the width set to 22"—even if you want to print an image that is wide. If you are loading you own paper, normally you should load it short-side first. The printer normally prints in that direction, whether it's a tall or wide job.

Rotate the Job When Possible

You can have the printer rotate your job if the longer dimension is 36" or less or 44" or less depending on the size roll you are using. The rotation setting is separate from the tall or wide settings. If your job is tall, set the Page Setup to tall. If the job is wide, Page Setup should be wide. Rotation has nothing to do with those settings. Rotation is normally under the Finishing section of the Print dialog box.

Print Quality Settings on the Large-Format Inkjet Printers

On the large-format inkjet printers, users must set the print quality setting in the Print dialog window at the computer BEFORE you send the job. This is in the Paper/Quality section of the Print window. Slide the quality setting to the middle of the scale. See the sign by the printer for details.

Print Monitors

Use the print monitor windows to check the status of your print jobs. On Macintosh computers, when you print a job, that printer's monitor icon will appear in the Dock. Open it to watch the status of your job. On Windows computers, go to the Start menu, then Device and Printers to open the window. Double-click on the printer name to check the status of your print job.

Page Setup/Print Options

Always check the Page Setup or Print Options to be sure your print job is configured properly. Many printing problems can be eliminated by taking a few seconds to make sure you're using the right paper size and orientation, you're sending to the correct printer, you have the correct number of copies, etc. This is true for both Macintosh and Windows. Special care should be taken when using the large-format printers, so you don't waste your money by printing mistakes.