



Ahead of the curve

Graphic communications students leave Clemson University ready to take on the production world



Skilled graphic artists who also know the intricacies of print production and Adobe® Portable Document Format (PDF) workflows are in high demand. Just ask John Leininger, professor in Clemson University's 350-student Graphic Communications program. In 2005, every student who did not continue on to graduate school had a job within a month of graduation.

“Our students are extremely marketable due to their high level of skill in using Adobe Creative Suite 2 software and strong knowledge of Adobe PDF workflows,” says Leininger. “Adobe technologies form the foundation of our prepress training.”

Graphic Communications program students graduate Clemson University with marketable skills based on Adobe Creative Suite 2 and Adobe PDF workflows. In 2005, every student who did not continue on to graduate school had a job within a month of graduation.



Using Adobe Creative Suite 2: a boon for education

A primary focus of the Graphic Communications program is building student skills in Adobe Creative Suite 2. Students graduate with in-depth knowledge of the suite's components, including Adobe InDesign® CS2. According to Leininger, Adobe Creative Suite 2 and educational pricing for institutions like Clemson are some of the best things that have ever happened to the university's Graphic Communications program.

"Everyone I know in education is using Adobe applications, and the tools are more functional, integrated, and cost-effective than ever," says Leininger. "From what I've seen, our industry has totally bought into Adobe Creative Suite 2, including InDesign CS2."

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Department of Graphic Communications, Clemson University

Advancing design and production skills

The foundation of Clemson's course work is hands-on learning. The Graphic Communications Department has developed a cumulative curriculum, with each class building on the previous one. Rather than breaking the course work into industry segments such as prepress, press, and bindery, students build their experiences as they learn to work through the entire production process. Students take every project from design to bindery and progressively acquire new software and equipment skills.

During the first foundation class, students use Adobe InDesign CS2 and Photoshop® CS2 software to design a basic offset-printed piece with a two-color image that includes line work and overlapping screen tints. For their second project, students create a three-color greeting card for screen printing. As with their first project, they use InDesign CS2 and Photoshop CS2, but on this project, students must work with duotones in Photoshop. The last project is a T-shirt with three-color line work and trapping applied to each color in InDesign CS2.

Once students discover the seamless integration among the components of Adobe Creative Suite 2, they can work creatively and easily combine files in a variety of formats and from different applications into their layouts. Because Adobe applications have similar user interfaces and commands, the students' learning curve is minimized.

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“Each student works on his or her own designs,” says Leininger. “Because there are no prepackaged lessons, students have to figure out how to design and output their own files. Clemson’s goal is to create practical problem-solvers, not people who can only design a pretty image. This approach, along with learning valuable skills in Adobe software, is what makes our students so marketable.”

Taking design and output to the next level

In the next class, students continue to build their skills in Photoshop CS2 by creating a halftone study. They manipulate the same halftone image in nine different ways and use Adobe Illustrator® CS2 to create an artistic background. They choose a theme and background, with a focus on how the design can be created to guarantee reliable output on press.

The same class designs and prints a two-color over one-color multiple panel brochure on a topic that interests them. Once composed in InDesign CS2, Photoshop CS2, and Illustrator CS2, students convert the file to Adobe PDF and image a plate.

Students in this same class also use Adobe’s Macromedia® Dreamweaver® to create a personal web page with 20 different requirements. As seniors, students revisit their web site, transforming it into a portfolio for use in job searches.

Producing print production geniuses

Upping the ante, juniors must tackle an eight-page booklet composed of two four-page signatures; one signature is done four-color over four-color, and the other is two-color with black and a PMS color. In this project, the students must include 26 techniques, such as duotones, posterizations, process color, overlapping screen tints, matching the PMS color on the four-color signature with screen tints, and more.

“Students create the entire job using the skills they learned in the earlier courses with InDesign CS2, Photoshop CS2, and Illustrator CS2,” explains Leininger. “They discover that there’s almost nothing that can’t be accomplished in design and print production using these three tools.”

Students convert the final file to Adobe PDF and impose it using a third-party program to fit the imposition formats required by two different presses. According to Leininger, seldom does a student’s first file work properly. To sift through their document and find the images or effects that are causing problems, students turn to the powerful preflighting options in InDesign CS2 and Adobe Acrobat® Professional software; they must carefully check every stage to be sure, for instance, that bleeds following the files and fonts are not being left behind.

In the flexography course, students use Illustrator CS2 to develop images to standard die layouts. They must include the percentage of distortion required to wrap a raised plate around cylinders. They must also step and repeat the images, trap them in a third-party program, and apply a color-managed workflow to ensure predictable printing.

Organization

Clemson University
Clemson, South Carolina
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Challenge

- Enhance student learning with functional, integrated design and production tools
- Find cost-effective, highly functional software
- Build real-world skills across the entire production process
- Help students develop marketable print production skills
- Learn to use preflighting tools to image complex files correctly
- Build design skills using the industry’s most advanced graphics tools
- Learn the advantages of Adobe PDF workflows

Solution

- Place Adobe Creative Suite 2 at the core of the curriculum
- Teach students the entire print production process using Adobe Creative Suite 2, Dreamweaver, and an Adobe PDF workflow
- Output files to Adobe PDF for printing
- Troubleshoot files using powerful preflighting options

Benefits

- Minimized the learning curve by using a functional, integrated software suite
- Enabled students to use Adobe preflighting tools to ensure complex files print correctly
- Showed students how to streamline production by using Adobe PDF workflows
- Provided students with hands-on, marketable skills extending across the production process
- Garnered immediate employment for 100% of the 2005 graduates

Tool Kit

- Adobe Creative Suite 2 Premium. Components used include:
 - Adobe InDesign CS2
 - Adobe Photoshop CS2
 - Adobe Illustrator CS2
 - Adobe Acrobat Professional 7.0
- Macromedia Dreamweaver
- XMPie uDirect plug-in for InDesign
- Apple Power Mac G5 computers running Mac OS X

At Clemson University, Graphic Communications students develop real-world experience. Adobe Creative Suite 2 and an Adobe PDF workflow help students gain sought-after skills that extend across the production process.



Learning the latest techniques

The Graphic Communications program also focuses on teaching students skills in variable data printing (VDP). As personalized communications become an increasing means of communicating to a target audience, the Clemson program's graduates will be prepared to offer prospective employers a broad and deep range of applicable skills including database management, file tagging, and campaign metrics.

Leininger travels around the country, with a dozen laptop computers, to train printers to understand VDP, and he typically brings one or two students along to assist in the training. This is usually the students' first business trip. Designed to be done as a one- or two-day course, the training provides data list development and mailing prep experience as well as hands-on training in creating files for VDP using Acrobat, InDesign CS2, and the XMPie uDirect plug-in for InDesign.

Because the program prides itself on exposing students to the cutting-edge issues in the printing industry, Leininger is now developing training on how to use Job Definition Format (JDF). Although this is not yet a major component of the Clemson curriculum, he sees the automation and productivity improvements that JDF provides as the future of print production. According to Leininger, "Adobe Creative Suite 2 supports the ability to work with JDF better than any other graphic communications software."

Developing real-world skills

Graphic communications professionals no longer have the luxury of being experts in just one discipline; they have to learn skills that span a broad spectrum. With the help of Adobe Creative Suite 2 software, the unique Clemson program provides students with real-world experience and sought-after skills.

"In the design and print industries, there's no substitute for in-depth knowledge in using Adobe Creative Suite 2 and producing Adobe PDF files," says Leininger. "These skills are the standard by which everyone is measured."

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