



Lunch and Learn Series

Designing for Print

IOWA STATE UNIVERSITY
Printing Services

The Adobe Creative Cloud Suite

Iowa State University has a university wide license for the Adobe Creative Suite. It is available to ISU Faculty Staff and Students. Contact your IT department to have it installed.

What is in the Adobe Creative Cloud Suite related to printing?



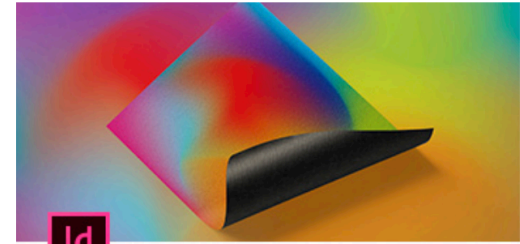
Photoshop

Edit, composite, and create beautiful images, graphics and art on desktop and iPad.



Illustrator

Create beautiful vector art and illustrations.



InDesign

Design and publish elegant layouts for print and digital.

ISU Identity – the Wordmark

<https://www.brandmarketing.iastate.edu/>

The ISU Identity uses a custom created wordmark which can be downloaded from the University Marketing website. Along with downloads, the Marketing website has a wealth of resources about our brand. Here are some guidelines regarding use of the wordmark:

- Don't skew the wordmark
- Don't attempt to recreate the wordmark
- The wordmark should be used in only Pantone 186, black or white
- Don't use the wordmark in a low resolution in printed material



When to use Photoshop vs Illustrator vs InDesign vs Microsoft Word

Adobe Photoshop is the program of choice when it comes to manipulating and enhancing photos. Working within simple layers; you'll find handy tools, filters, and effects to stylize and create artistic photos.

- Working with photos
- Editing or manipulating photos
- Building mock-ups



Adobe InDesign is the industry-leading page design and layout application that lets you create, preflight (a.k.a. quality check for printing), and publish beautiful documents for print and digital media. The ability to package your design for the printer makes submitting jobs quick and easy.

- Creating multi-page layouts
- Building text-heavy layouts
- Designing magazines and newspaper layouts
- Making newsletters, booklets, and brochures



Adobe Illustrator is a vector-based design program and is popular for its capability to create pixel-perfect designs. Artwork created in Illustrator can be scaled down for small postcards, or scaled up to banner size (or bigger!) - and never lose its sharpness and resolution.

- Designing logos and branding
- Drawing or illustrations (Ex: stickers)
- Artwork that needs to be scalable (Ex: A poster you want to print letter size and to also print very large)
- Single page designs



Microsoft Word is not recommended to design printed pieces such as postcards, brochures, posters, flyers etc. The software is limited in the ability to add bleeds. The control of the color and layout is also limited. Word is best used for:

- Creating letters
- Writing papers with few images such as a thesis



Images - Quality (Resolution)

- Image quality is measured in pixels per inch (PPI) also known as dots per inch (DPI). The greater the PPI, the greater the detail and the better the print quality
- The minimum ppi to print at a good quality is 200ppi. 300ppi is ideal.
- Using website images in your printed pieces will generally result in low resolution, blurry images on your final project
- Keep in mind that when graphics that are not vector are sized up, the resolution will reduce
- Hint: Your monitor displays between 72 and 96 ppi. To adequately view print resolution on a monitor, you should zoom in 400%



Images – 3 Easy Ways to Check Image Resolution

1. How to check image resolution with Adobe Photoshop

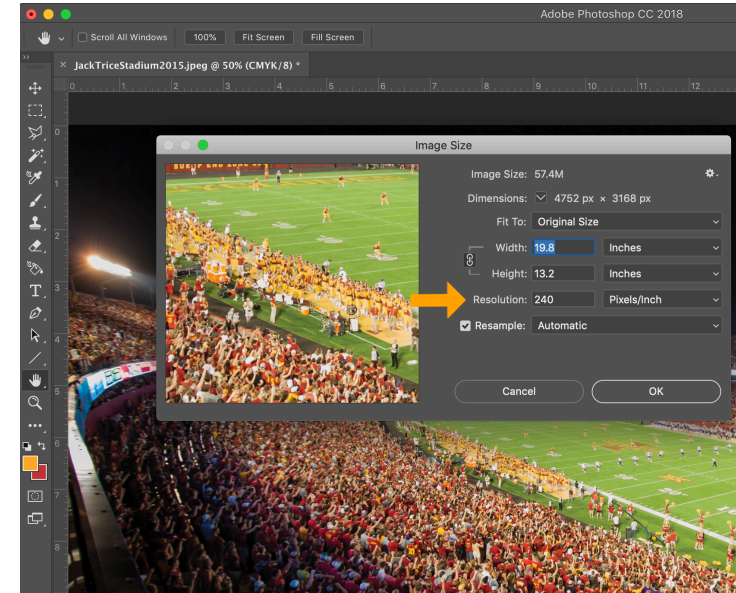
Open your image in Photoshop
on Image > Image Size
View the resolution section

2. How to check image resolution with Adobe Acrobat

Open your file in Acrobat
Set the view to 300%

3. How to check image resolution with Windows

Open Windows Explorer and browse to the folder that contains your image. Right-click on the image file and select “Properties”. (“Get Info” on Mac)
Click on the details tab (“More Info” on Mac)
Your image resolution will display in the details tab.



Images - Types

.TIFF – TIFF images are uncompressed and thus contains a lot of detailed image data (which is why the files are so big) TIFFs are also extremely flexible in terms of color. This file type is ideal for use in printing.

.EPS – EPS is essentially a graphics format for vector images that Adobe Illustrator uses when you have vector graphics, they can scale without losing quality.

.JPG – JPEG files are images that have been compressed to a small-size file. JPEG files are bad for line drawings or logos or graphics, as the compression makes them look “bitmappy” (jagged lines instead of straight ones). They can be good for web use such as photos.

.GIF and .PNG – These formats also compress images and are used almost exclusively for web images (computer screen viewing), never for print images. They do not support cmyk color and when converted, will print dull. Your final printed product will look different than what you view on screen if you use these types.



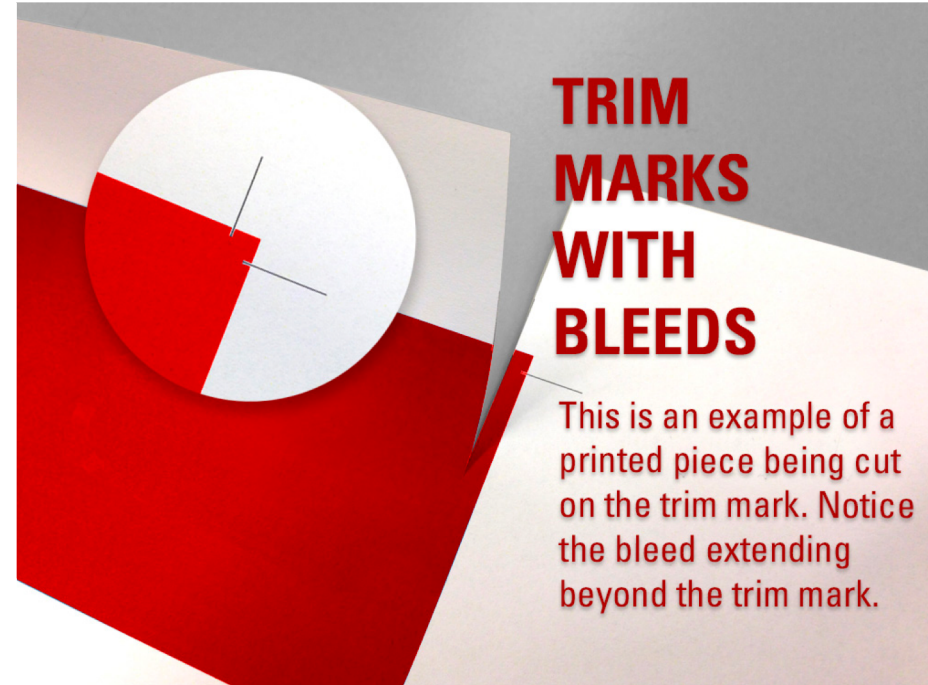
Bleeds (1 of 3)

What is a Bleed?

Bleed is a printing term that is used to describe a document which has images or elements that touch the edge of the page.

Why do you need to add a bleed to your files?

After trimming, the bleed, set at .125" beyond the edge of your page, ensures that no unprinted edges occur in the final trimmed document. It is very difficult to print exactly to the edge of a sheet of paper/card, so to achieve this, it is necessary to print a slightly larger area than is needed and then trim the paper/card down to the required finished size. Trim marks are added by our machines to let the cutter know where to trim.



Bleeds (2 of 3)

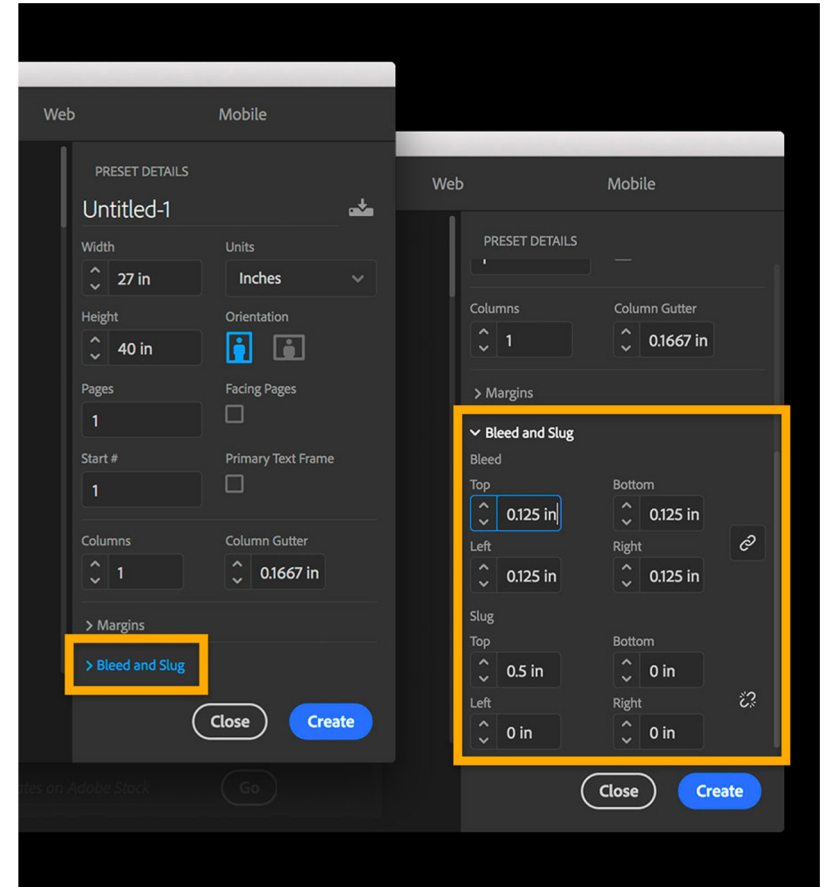
Setting a bleed in Adobe InDesign and Illustrator

Creating a new document

You can set bleeds when you create a new document.

1. Go to “file” then “new”
2. Select inches as the unit measurement.
3. Then scroll down to find the bleed section where you will set all sides to .125". Hit “create”

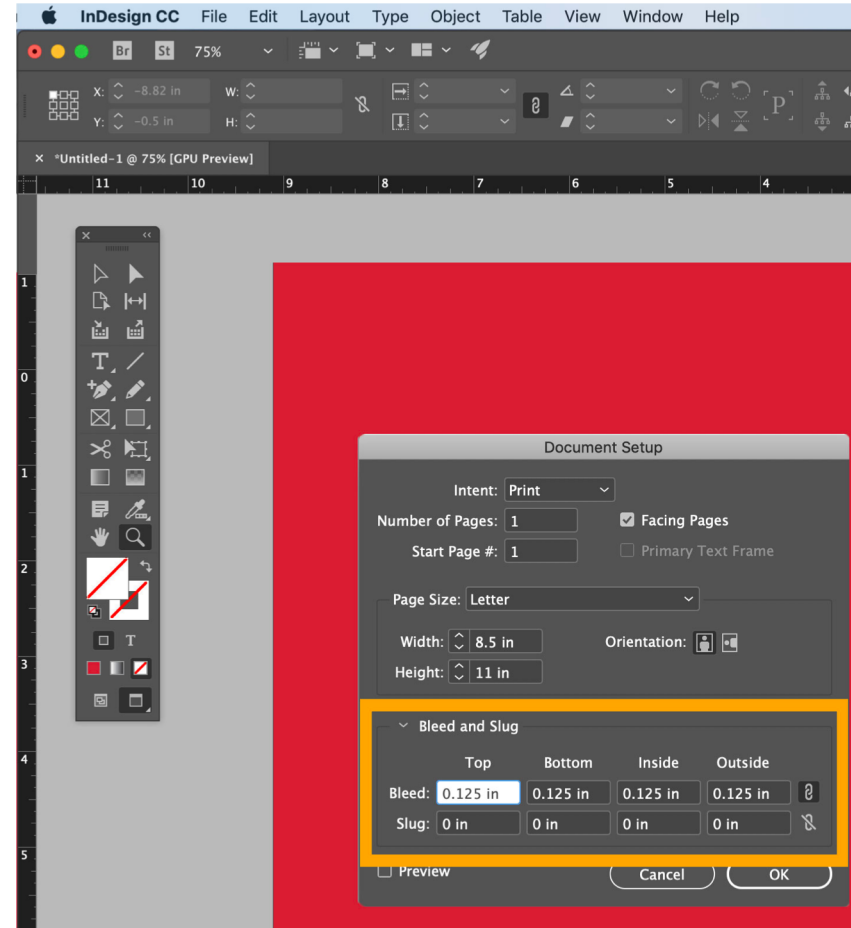
Your new document will have a red box outside your print area where you will expand your graphics.



Bleeds (3 of 3)

Adding bleeds to an existing document

You can also set bleeds (.125" on each side) on an existing document by going to file, document setup. This window will look slightly different in Illustrator but there is a section to add bleed measurements here as well.



Color – RGB vs CMYK

Your computer uses a color space called RGB (red, green, blue) to produce the colors you see on your screen.

A printing press uses a color space called CMYK (cyan, magenta, yellow, black) to produce similar colors using four colors of ink. This is also known as 4 color process.

It is highly recommended to send us your file and the images placed on them in CMYK mode. We can convert your files to RGB but occasionally there are problems with projects printing correctly when RGB is mixed with CMYK. Additionally, when you are viewing your project on your computer, it is not showing you an accurate portrayal of the final product colors.

RGB



Digital, Web

CMYK



Print

Spot



PMS 5483



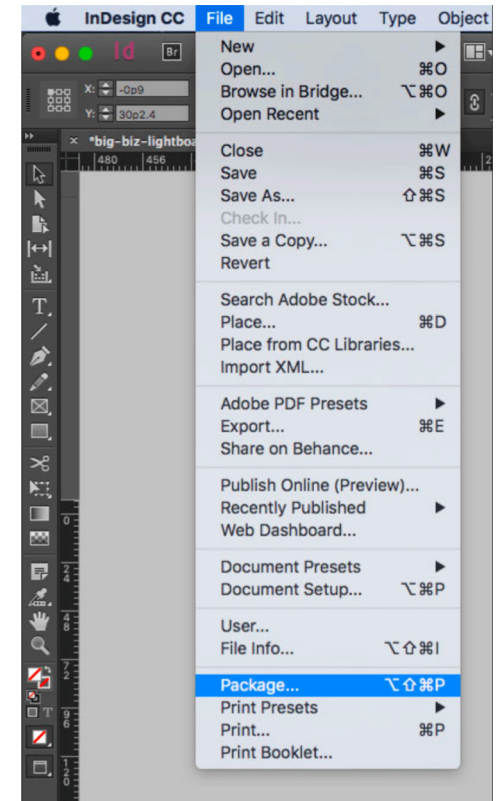
Offset Print

Packaging your InDesign Files

When you create a document using InDesign, the actual InDesign file is only one piece of the puzzle. Any images, graphics or fonts used are linked outside that file. In order for others to open the file correctly by including those external files you must use InDesign's built in feature called packaging.

Here are directions on how to package an InDesign file:

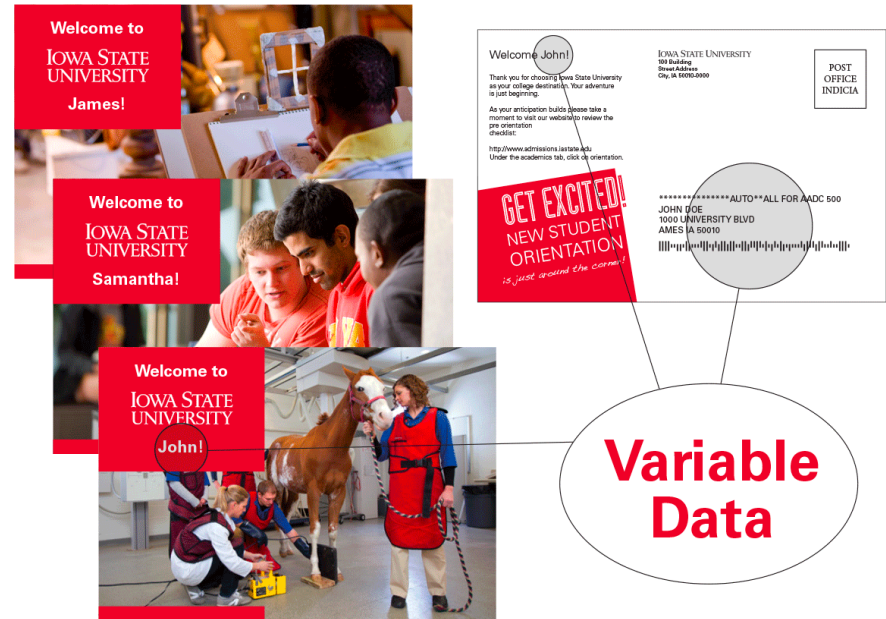
1. Open your file in InDesign.
2. If possible, resolve any errors concerning missing links or fonts.
3. Go to File > Package.
4. Click the Package button at the bottom of the summary window.
5. You will be asked to save your file.
6. Click continue on the "Printing Instructions" window. We do not use the information on this page so you don't need to fill it out.
7. Browse to where you'd like to create the package folder (desktop would be fine) and enter the name of the folder. At the bottom of this window, make sure that the "Copy Fonts," "Copy Linked Graphics,"
"Update Graphic Links in Package," "Include Fonts and Links from Hidden...", "Include IDML" and "Include PDF" are all checked. Other boxes should be unchecked.
8. Click the package button.
9. Find the new folder that InDesign created and verify that it contains copies of all required files.
10. Zip your files.
11. We have an [online tool](http://www.print.iastate.edu) to submit your order. You can use your ISU NetId to fill in the contact information and then specify the details of your project.
<http://www.print.iastate.edu>



What is Variable Data Printing?

Variable Data Printing (VDP) is a highly popular printing method which allows the printed content to change within a single press run. In other words, each impression can be printed differently from one piece to the next without having to stop or slow down the press.

Variable Data Printing is performed with digital printing equipment. An excel file, provided by the customer, contains the variable data in each column that is used to personalize each printed piece. Then special software extracts this data from the excel file and merges it with design to create the individual pieces all in one printable file. These are then printed on a digital press. Just about any design element can be created as a variable, from text and headlines to photos and colors. The most common customization is to print an address directly onto the postcard, newsletter etc.



Choosing Paper (1 of 2)

Begin Each Project with Paper in Mind

When designing your print marketing piece, choosing the right paper is just as important as choosing the right typeface. Paper choice can greatly impact your end product and production cost.



When you begin a project, think through the following:

What is your final product? Is it a book, poster, flyer, business card, folded brochure etc.?

How durable would you like the piece to be? Do you want the piece to stand up to a few weeks of use or years of use?

What feeling do you want your piece to convey? Should it be viewed as fancy or inexpensive?

What assets will the piece showcase? For example, will it serve to display large photos, or will it be text heavy?

Choosing Paper (2 of 2)

Coated vs Uncoated

Coated Paper is coated with a surface sealant. This coating gives that paper a smooth, flat surface that doesn't absorb as much ink. The result is sharper printing, especially for images, and a glossier appearance of the inks.

Uncoated paper has not been coated with surface sealants. It will have a rougher feel to it and will absorb more ink resulting in a slightly more dull appearance to the color. It's a good paper for projects that will be written on such as surveys, reply cards, letterhead and envelopes. It is also best for projects that include a lot of text, like a book.



Note the color difference between uncoated on the left and coated on the right. Colors will appear different on uncoated vs coated paper.

LinkedIn Learning

As an ISU faculty, staff or student you have access to over 9,000 digital courses. On the printing subject, they have videos for the Adobe programs as well as color and design concepts. Use your University username and password and check it out:

<https://www.linkedin.com/learning/>

