
Optimizing Your Images for the Web with Adobe Photoshop

This is a short tutorial to help you optimize your images for the web. (Thank you, Tonia Malone, for allowing me to use a portion of your tutorial here!)

CROPPING AND IMAGE SIZE:

When placing an image on a web page your image should be only as large as it needs to be to display correctly on the page. If your image is too large (800 x 600) and you resize it within the Dreamweaver application by dragging its corners, the file size is not reduced, just the visual size of the image. If you reduce the image size in Photoshop to display the correct size on the web page, you can save file space/size and allow the viewer to view the image much quicker. (For example: An image sized at 800 x 600 could be a 2MB file. If that file is reduced to the size needed on the page, e.g., 360 x 413, the file size can be brought down to 436k. This file is easier for someone to view on a web page through their network connection and saves space on the server.

You may also crop an image to remove extraneous content of the image that you may wish to eliminate. If you wish to crop content, it is always best to crop first and then resize the image.

1. Open Photoshop.
2. From the **File** menu, select **Open** and navigate to the photo you wish to resize. For the purpose of this tutorial, navigate to the **images** folder of this tutorial and select the image called **01_female_faculty_original.jpg** or **03_male_faculty_original.jpg** (Do **NOT** select **02_female_faculty_small.jpg** or **04_male_faculty_small.jpg** since these are the finished products already cropped and resized.)
3. If the image is large, Photoshop may open the image at a smaller percentage such as 25% or 33%. Make sure your image is at **100%** size by clicking on the percentage number at the bottom left of the image and changing the value to 100% and then hit **Enter** to set it at this size.



4. Select the **Crop Tool** in Photoshop
5. Click and drag the Crop Tool over the image to select the area you wish to KEEP.
6. Select **Image > Crop** and the image will be cropped.
7. If you feel the color isn't quite right, try changing the Auto Levels by choosing **Image > Adjustments > Auto Levels...** Click **Edit > Undo** if you don't like the change.
8. Now let's change the size of the image. From the **Image** menu, choose **Image Size**.
9. Set the **Resolution** to 72 dpi. We recommend that images be saved at 72 dpi for web viewing since a web page is only displayed from a computer monitor at 72 dpi (technically, 96 dpi on PC monitors but most web developers still set dpi at 72).
10. Make sure the **Constrain Proportions** box is checked to keep the image size proportional. Change the Document Size **Width** and **Height** to the size needed for the web page. For the purpose of this tutorial, change the **Width** to **200 pixels** and the height will adjust proportionally on its own. Click the **OK** button.

SAVING AS A JPG/GIF:

To save a file for the web it is best to use the **Save for Web** tool in Photoshop. This will allow you to save a jpg or a gif file that is optimized for the web and your viewers.

1. From the **File** menu in Photoshop, choose **Save for Web**.
2. Click on the **4-Up** Tab. This will allow you to see four images on the page, the original and three other possibilities. There you can make one box a gif and the other a jpg and play with the **Quality** and **Colors** (i.e., 8 colors versus 256 colors). Select a box by clicking on it and changing its values. You may not need a 100% JPG; it may look just as good at 60%, which will result in a much smaller file size. Sometimes GIF files can be brought down from 256 colors to 64 colors. Play with the settings and find a good compromise in quality and size for optimal page download time. Note: JPG is generally chosen for photographs (shadows, people, buildings, etc.); GIF is usually chosen for solid colors (logos, flat art, cartoons, drawings, transparent images, etc.)
3. The images for this tutorial, **01_female_faculty_original.jpg** or **03_male_faculty_original.jpg**, will work well saved as a JPG at **75 Quality**.
4. Click the **Save** button and save the edited image file with a new name to the **images** folder (e.g., **female_faculty_small.jpg** or **male_faculty_small.jpg**) **Note:** Use a new name so you don't overwrite your original image in case you want it uncropped and at its original size for some other project in the future.

Optimizing Your Images for PowerPoint

There seems to be a lot of confusion about how to format images properly for PowerPoint, especially images that have been scanned from a slide or image scanner. Most scanners will scan an image as a TIFF. TIFFs are incredibly large and make PowerPoints swell to gargantuan sizes that cause a multitude of problems, one of which is PowerPoint crashes resulting from such large file sizes. If images are scanned as TIFFs, they should be converted to JPGs with imaging software such as Adobe Photoshop. Adobe's Image Ready CS software will even allow you to create an action/droplet as a kind of batch processing macro for optimizing multiple files at one time but that is beyond the scope of this tutorial.

Adobe PhotoShop has a feature called "Save for Web," which allows you to preview how an image will look if saved at various settings. This will allow you to choose the optimal settings depending upon what kind of image quality you need for a particular image. Drawings, clip art, and gray scale pictures should be converted to GIF files. The JPG format is a better choice when an image has gradations such as that which occurs in a photograph whereas GIF is a better choice for images with blocks of solid colors.

Most people scan images at incredibly large sizes that aren't going to be helpful when placed in a PowerPoint and displayed with an LCD projector or on a web site. After all, the web can only display between 72–96 dots per inch (dpi) resolution depending on the platform (Mac or PC) so any additional pixels (dots) is actually just "fluff" and adds size to the image without improving the display. In general, if posting for the web or projecting on an LCD projector, simply convert your PowerPoint images to 96 dpi with Adobe Photoshop as explained in the section above.

Printing is an entirely different story! If you plan to have your PowerPoint files be printable with quality-looking images then your images should be optimized to at least 300 dpi. If you wish for the images to fill the whole screen, be sure and size them at 1024 X 768 – the resolution of most projectors these days. (Check your projector's resolution to make sure; you may have an older projector with a resolution of 800 X 600, in which case you would want to size your images to be 800 X 600). If you wish for the image to be printable and appear half the size of

the PowerPoint slide, convert the image to half that resolution (i.e., 512 X 384 for 1024 X 768 projectors or 400 X 300 for 800 X 600 projectors). For best results, it's best to scan at about 2 times the size of what you want to put into PowerPoint so that you have more raw data to work with initially.

The biggest mistake most people make is trying to resize their images within PowerPoint. DO NOT resize images in PowerPoint!! Since it is not an image editor, resizing images within PowerPoint is the main reason for image deterioration and also for PowerPoint crashes, since although you don't see the image data, it is still contained within the file.

For display of a collection of images on a web page, I would suggest a software tool such as Adobe Photoshop's **Automate Web Photo Gallery** command (available for both Mac and PC from our Cal Poly Keyserver program at: <http://keyserver.calpoly.edu/>) or iPhoto software (Mac only and available free in the iLife set of tools provided on any new Macintosh) or Picasa software (PC only and available for free download from Google at: <http://picasa.google.com/index.html>).

Adobe Photoshop's method looks very professional and is fairly simple to use; however, as software goes, Photoshop is rather expensive while the other two software applications are free! All of these programs provide a simple way to convert images into web pages in only a few moments with the additional advantage of having both thumbnails and larger images available for your viewers. After you create web pages with any of these tools, you may place the .html pages on a web server with a link pointing to the initial .html file or zip them within one folder and upload them into a Blackboard course.

- An example of iPhoto web page results can be found at:
http://www.atascaderoucc.org/images/photo_gallery/thanksgiving_dinner/thanksgiving_dinner.html
- An example of Picasa web page results can be seen at:
<http://www.csulb.edu/%7Egajewski/wildflowers/>