

1360 Web Design

Lab 3

Cropping and Resizing with Photoshop

Optimizing images for the web

In I360, you need to know how to do three things in Photoshop in order to optimize your images for the web:

- **Resize an image**

If the image file is larger than the image displayed in your site, the user is downloading more information than needed and your site will load slower than is necessary.

- **Crop an image**

If you want to adjust the shape or focus of an image, cropping is the tool for you.

- **Save an image as an appropriate web-friendly format**

For the majority of the images in your final projects, this will mean a JPG or PNG.

Review of common file formats

Vector versus Raster

Vector

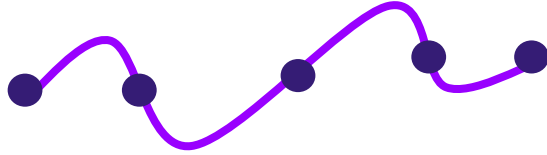


Image made up of dots and lines with given coordinates (math)

Best for logos and graphical elements with big areas of a single color

Completely resizable

Adobe Illustrator creates **vector** graphics

Raster



Image made up of pixels, each with their own color

Best for photographs

Resizing possible, but can't make an image larger without losing quality

Adobe Photoshop creates **raster** graphics

Web Image Formats: GIF

Images ending with **.gif** are excellent for:

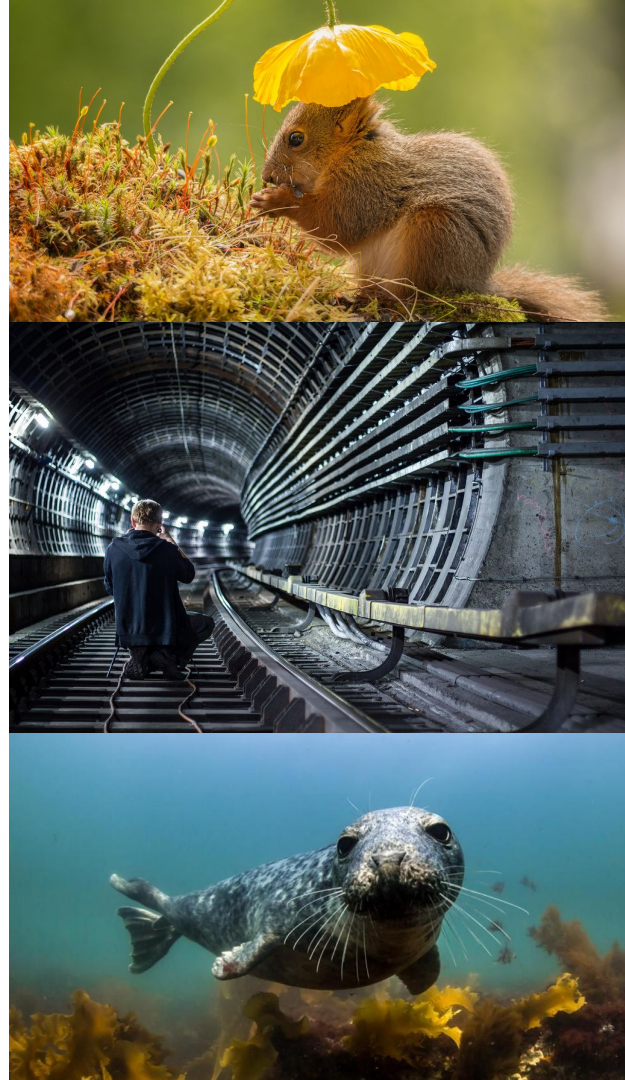
- Logos/graphics with large swaths of the same color
- A simple graphic where you need one color to disappear / be transparent
- If you want an *animated gif*



Web Image Formats: JPG

Images ending with .jpg are best for:

- Photographs
- Complex images where no transparency is needed



Web Image Formats: PNG

Images ending with .png are just perfect for:

- simple graphics when transparency is needed - *PNG-8 is now considered better than GIF for this use*
- when the transparency is complex or there is a lot of blending of colors, use PNG-24, but know that the file size will be larger
- Photographs can be saved in this format too
-- it's a **LOSSLESS** format meaning the quality will be higher than with a JPG, but you may or may not notice depending on the image. Always check the resulting file size, compare and decide.



Web Image Formats: SVG

Scalable Vector Graphic

- Written in code within <tags>
- Can be made interactive
- Drawn by the browser = no resource to load
- Most browsers will draw, mostly adopted
- Can be manipulated/created in Adobe Illustrator



PHOTOSHOP

If you don't have Photoshop installed
on your computer, please do so now

Call 812-855-6789 if you have issues -- you need a code and to
download Adobe Suite -- then install Photoshop

<https://iuware.iu.edu/>

PHOTOSHOP

*Follow the directions for each **Skill**,
then complete each **Challenge**.*

- Read the directions and all related slides before attempting each skill / challenge.

SKILL #1:

Resizing an image

1. **File > Open** the image **college.jpg**
2. **Image > Image Size** (pops up a window)
3. Set the **Width** to be **2048px** and click **OK**

- The Height will automatically adjust so that the aspect ratio (width:height) remains the same -- this is good.
- That width (2048px) is good for very large content images and for fullscreen / fullwidth background images.
- Going much larger means slow load times without much added benefit (**stay in a 2000-3000px wide range**)

4. **File > Export > Export As** (pops up a window)

5. Select **Format JPG** and set the **Quality** to between **60-75%**

- Aiming for approx 1000KB (1M) in size -- if your bkg is ever more than about 1.5M, it's probably too large.
- Simpler images (less complex in color/pattern) of this size will be in the 250-500KB range.

6. Click **Export All**, select a location and new name for the file, click **Export** to save.

- Name this photo **college-bkg.jpg** and save it into a "Lab 3" folder on your computer.

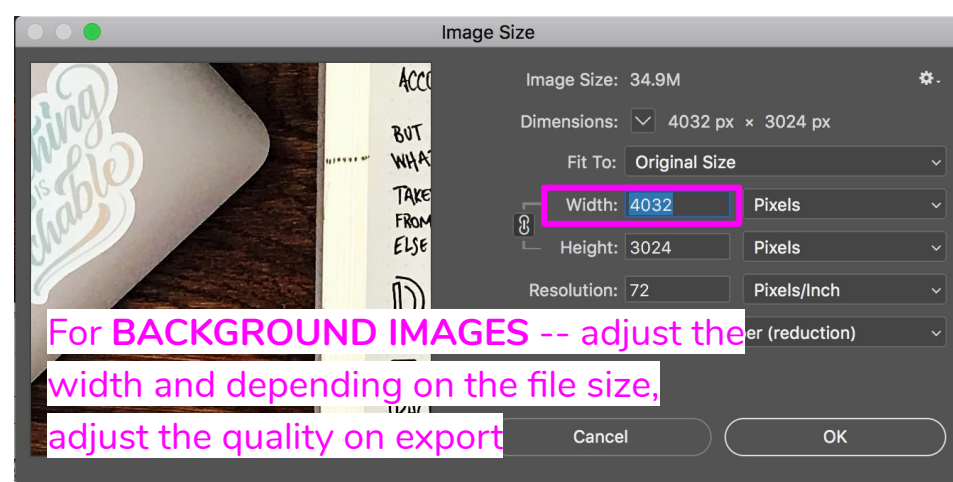


Photo by [Matt Ragland](#) on [Unsplash](#)

Export As

Scale All

Size:

Suffix:



1x



college

JPG

2048 x 1536

1.2 MB

Notice how the size of the resulting image changes as you adjust the size and quality



Adjust the format and quality as needed

You can also adjust the image size as you export

Use the + and - to zoom in and out of your image



25%



File Settings

Format:

JPG



Quality:

70%



Image Size

Width:

2048

px

Height:

1536

px

Scale:

50.79%



Resample:

Bicubic Aut...



Canvas Size

Width:

2048

px

Height:

1536

px

Reset

Metadata

Cancel

Export All...

SKILL #2

Cropping an image

1. **File > Open** the image
college-student.jpg in Photoshop

2. Select the **CROP** tool from narrow, vertical tool palette on the left

- Your image will now have a **dashed line** around the edge
- On the corners and in the middle of each side, you'll see a box -- a **handle**

3. Drag a handle to **adjust the size/shape of your image**

Let's crop this photo from an environmental portrait showing a lot of background to a medium portrait showing mostly just our subject -- adjust until the woman fills the box.

- If you want to keep the shape/size the same **hold down SHIFT** as you drag

4. Double click on the image to **apply the crop**

5. **Save** (resize if needed - try setting this one to perhaps **500px** wide today - notice the space savings)

- Name this photo **college-student-portrait.jpg** and save it into your **Lab 3** folder.



For **CONTENT IMAGES** -- it's important to guess-timate how large this image will display. If it will never be more than **500px** wide, then don't save it as **3000px** wide.

About Cropping

When you crop an image, you're making an *artistic choice*. You may also be **changing the meaning of a photograph**. It's important to be aware of that effect.



In this photo by Henri Cartier-Bresson from the 1960s, notice how the choice made by cropping the photo impacts the meaning.



About Cropping

What you leave OUT of a photo can be as important as what you leave IN in terms of **EMPHASIS**.

These photos are all the same size (with the same aspect ratio of 6w:4h, as in a 6"x4" photo).

The choices are: an environmental portrait (top), medium portrait (bottom) and a detail shot (right).



How does the **meaning** and **focus** change for you given the different choices below?

Problem: Art Direction

One problem with RESPONSIVE CONTENT images is that we usually want to see something particular in the image. In this image, we see the worker's face when the image is wide, but as the image shrinks, we lose his expression.

Sometimes this might not matter, but often what we want to do is zoom in on the important parts as the width available for the image gets narrower.





Notice how now we can see more of the worker in the photo as the photo gets narrower. With a RWD technique we'll learn in class, we will be able to adjust the image that appears depending on the width of the viewport. What we want to do today is optimize one of our images for this task and create the optimal view of an image for when the viewport is **narrow**, **medium** and **wide**.

CHALLENGE ONE

Optimize a **background image** for use in a web project.

1. Go to <https://unsplash.com/>

This is a site with free HD images -- all they ask is that you give the photographer credit in a comment or caption.

2. Find / download an image you think might make a great background image

3. **Optimize and save**
as **background-image.jpg**



CHALLENGE TWO

Optimize a **content image** for use in a web project.

1. Go to <https://unsplash.com/>
2. Download an image of an animal
-- *just find one that you like*
3. Crop the image if you would like to
4. Optimize the image to fit in a design
where the .container for your site
is a maximum of **800px wide**
5. Save your optimized image
as **content-image.jpg**



CHALLENGE THREE

SEE DIRECTIONS ON NEXT SLIDE

Crop a **content image** in preparation for three different viewport widths.

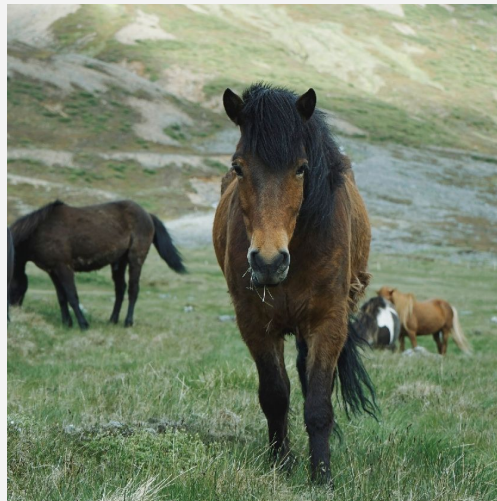
Large / Wider viewport



Medium



Small / Narrower viewport



In this case the photo is not just large to small, but also wider to narrower like the viewport. That doesn't necessarily have to be true. The image could be the same dimensions, just a different crop for each viewport width. It depends on your image and your design constraints.

CHALLENGE THREE

Crop a **content image** in preparation for three different viewport widths.

- Go to <https://unsplash.com/>
- Find an *environmental portrait* -- this means it's an image where the **subject** easily fits *entirely within the photograph borders*, and is surrounded by its environment. You'll have an easier time today if you choose an image that is wider than it is tall.
- **LARGE / WIDE:** Save this photo as 800px wide. **image-lg.jpg**
- **MEDIUM:** Use the 800px wide image you just saved, keeping the height the same if you can with your image choice, crop the width but make sure to still include the subject. **image-md.jpg**
- **NARROW:** Using the medium image you just saved, crop the photo to be narrower and shorter - save as **image-sm.jpg**

CHALLENGE THREE

Crop a **content image** in preparation for three different viewport widths.

BONUS: If you're getting the hang of this, using the small image you just saved, make a choice appropriate to your photos and crop even tighter, perhaps even a close-up portrait - save as **image-xs.jpg**

FYI -- the reason we're suggesting you make the image smaller as you crop by using the previous image each round, is that you don't NECESSARILY NEED to start with the high resolution original because we're assuming the screen is also getting smaller.

However, if you were cropping with a graphic/print design in mind, you might only crop from the original/largest version in order to retain as much information as possible.



Portrait



Medium portrait



Close up portrait

More resources

Photoshop is a powerful photo editing tool. You can do much much more than the skills we learned today. Other useful techniques for your projects:

- Be able to adjust the color, tone and contrast of an image
- Set a specific ratio or size for an image as you crop
- Cut out an image so it has a transparent background

All of this and more can be found in online tutorials. We suggest starting with the Adobe PS Documentation, free Tutorials and User Guides page:

USER GUIDE: <https://helpx.adobe.com/support/photoshop.html>

TUTORIALS: <https://helpx.adobe.com/photoshop/tutorials.html>

Lynda.com at the Monroe County Public Library

If you go get a library card from the public library, you can also access their subscription to Lynda.com (now called LinkedIn Learning), which provides entire video courses on various technologies. It's especially useful for Adobe products.

- Look for an “**essentials**” course using **Photoshop CC**
- *No need to take the entire course -- just find the technique you want to try*
- If you try this, please let us know how it works -- this used to be a program IU provided, but no longer. At least you can access it through the local library if you're interested in this kind of skill work.

Did you learn today's skills?

If you are not sure on any of these, please attend a help session:

Can you now...

- 1) demonstrate the results of the **three challenges?**
(were you able to crop / edit / save each photo?)
- 2) explain the editing choices you made when
cropping your image in the third challenge?