



## Sign up for the free DIGITAL IMAGING WORKSHOP – August 15, 2007

From newspapers to science, digital images are quickly becoming the visual medium of choice. But what exactly is a digital image? There is more to collecting scientific digital image data than just taking a picture. Why is it so easy to manipulate an image, and what can you do to ensure that the data contained in your digital image remains intact? If you are using, or plan to use, digital images in your work, you need to be aware of the uses and limitations of digital images.

Graduate students, staff, post-docs and interested faculty are invited to attend this free 4hr workshop. The workshop will be co-taught by several UA technical staff and faculty with decades of experience in film photography, light & electron microscopy, computerized image analysis and digital image manipulation. This workshop is scheduled in the week before classes begin to make it easier for graduate students to attend.

**Course outline:** <http://www.mcb.arizona.edu/ipc/Outline.htm>

**Registration:** space is limited for this workshop, go to: <http://www.mcb.arizona.edu/imagingWorkshop.cfm>

**Details:** Wednesday, August 15, 2007 from 8:30am to 1pm at the Environment and Natural Resources building, room 253A

**Bonus:** after the workshop, the instructors will be available to answer attendee's questions about the course material, and/or any other questions related to microscopy or image analysis that might come up.

## There are no stupid questions...

Please, do not be intimidated. It has always been our goal to be approachable and helpful to anyone with a question related to microscopes and digital imaging. Some examples of the kinds of questions we see on a regular basis include:

- Fixation (which type of fixative should we use, how much tissue is needed, how long should we fix the tissue, what labs can work with fixed tissue, what about frozen tissues?)
- Which type of microscopy might give the best answer to our research question? What are the microscopy technique's strengths and/or weaknesses? How much will it all cost?
- How should we prepare a figure for a publication? What are TIFF, EPS, and DPI anyway?
- How can we describe what we are seeing in our images? What's the proper terminology? How should we describe what we did (or want to do) in the methods section of a paper or grant?
- Is there any way to look at live cells instead of just chemically fixed tissues?
- Can we analyze our images and get some numbers?
- What fluorescent dyes work best with the confocal or deconvolution microscopes?
- How can the people in our lab get some training so that they can use the Confocal/TEM/etc?
- How can our lab get in contact with microscope or digital camera vendors? How about someone to clean our microscope?
- Our lab wants to try a new microscopy technique, how do we get started?

## Keep that original image data!

Manipulation of digital images should always be done on a copy of the unprocessed image data file.

The original raw data file is the standard to which the final image can and should be compared. Maintaining a copy of the unaltered original image is the user's only protection against accusations of misconduct. This is also the only way that users can recover from a mistake in image processing. Data should be archived to media that are not easily altered (e.g., CD-R or DVD-R). Maintaining the image in the original file format is highly recommended.

From Digital Imaging Ethics: [http://swehsc.pharmacy.arizona.edu/exppath/micro/digimage\\_ethics.html](http://swehsc.pharmacy.arizona.edu/exppath/micro/digimage_ethics.html)