

# Scientific Imaging Syllabus

Course Format: 1, 3 hour lecture/lab period per week. 3 credit hours.

Prerequisites: Sophomore standing with major in the sciences, education or visual arts or permission of instructor.

Note: This class can NOT be used as an elective in the Biology major or Minor (it does not count towards the 40 hours)

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Books: Photoshop for Nature Photographers by Ellen Anon and Tim Grey. 2010. (required)  
 Note: 2008 edition for Photoshop 4 can be used as well.

Other Expenses: You must have access to a digital or 35mm camera. You may need to pay for film and some media, details in syllabus.

Attendance: You are expected to attend all class meetings. You must notify me in advance of any absence. Failure to attend classes will result in a lower grade.

Exams: A single final exam. Several quizzes

Portfolios: A series of 36 assigned images + 4 freelance images in various formats. A copy of the portfolio assignment is attached. Typically 1 image per week will be graded for 30 points. The other 2 images will receive a cursory overall grade of up to 10 points.

**Class Grading:**

Portfolio – critically graded (12 images @ 30 points)	360 points
other images (24 @ 10 points)	240 points
freelance – 4 images @ 25 points	100 points
Presentation	50 points
Final	200 points
Quizzes	50 points
Participation/Attendance/Peer Grading	50 points
	1050 points
Your final grade will be determined as follows:	
A+ 97%	B+ 87%
A 93%	B 83%
A- 90%	B- 80%
C+ 77%	D+ 67%
C 73%	D 63%
C- 70%	D- 60%
	F < 60%

The plus-minus grades may be adjusted to fit the circumstances at the discretion of the instructor.

Mid-term grade will be based on the portfolio(s) turned in as of March 7th.

As the 2011-2012 College Catalog states, "Dishonesty within the academic community is a very serious matter, because dishonesty destroys the basic trust necessary for a healthy educational environment." [p. 128] .... Penalties for academic dishonesty may include "a failing grade on the project, a failing grade in the course, or expulsion from the College." [p. 128]

Week	Date	Topic	Schedule Reading	Assignment (Portfolio)
1	Jan. 18	Introduction/Quickstart	<u>Basics</u>	
2	Jan. 25	Exposure/PowerPoint		
			<u>Photo Basics</u>	
3	Feb. 1	Good Images Photoshop	<u>Photoshop (skim)</u>	01. Diagram 02. Scanned Image 03. Page of Text with Photo B/W* 04. Flowchart
4	Feb. 8	Photoshop Camera Clinic	<u>Digital Darkroom</u>	05. Equipment – Labeled 06. Portrait (fun) 07. Labeled Apparatus
5	Feb. 15	Equipment Techniques Sharpness *****QUIZ*****	<u>Camera Web Pages</u> <u>Wide-Angle</u>	08. Software Screen Capture 09. Portrait (formal)
6	Feb. 22	Composition Copystand	<u>Copystand</u> <u>Macro</u>	10. Moving Subject 11. Wide Angle 12. Glass container with liquid
7	Feb. 29	Microscopy	<u>Field Photography</u>	13. Object with scale 14. Photo of Computer Screen 15. Your Room
8	March 7	Critique/Aesthetics		16. Pollution 17. Habitat - Terrestrial 18. Macro
<b>March 14 Spring Break</b>				
9	March 21	Digital - Photoshop	<u>Insect Photography</u>	19. Habitat – Aquatic 20. Worm 21. Laboratory
10	March 28	Students' Choice	<u>Flash</u>	22. Protozoa 23. Algae (with scale) 24. Procedure
11	April 4	Instructor's Choice	<u>Telephoto</u>	25. Atmospheric Phenomenon 26. Geologic Phenomenon 27. Image taken with Flash
12	April 11	Image Analysis ***** QUIZ*****		28. Field Work 29. Field Plot 30. Telephoto
13	April 18	Presentations		31. Fish 32. Life Cycle 33. Area Related
14	April 25	Presentations		34. Bird 35. Amphibian 36. Area Related or animated GIF

Hyperlinks are to web-based material. See course web page at: <http://www.marietta.edu/~biol/imaging/image.html>

Some web material is password-protected, the password is: \_\_\_\_\_

The Anon and Grey book is meant as a lab resource, not a textbook, hence, there are no reading assignments from it. Bring it to class and have it handy when working on your images.

\*Must be hard-copy

**Final: Wednesday, May 2, 3:00 to 5:30 PM**

Presentation: Each student will prepare a 10 minute presentation showing their work and explaining to the rest of the class the artistic intent, strengths and weaknesses – as well as pointing out any special techniques utilized. Each student is free to include several works by other artists for comparative or illustrative purposes.

## Costs:

In general, it is impossible to say how much the course will cost you. By use of digital cameras, it is theoretically possible to complete the portfolio for “free”. If you shoot film it will cost more.

**Camera:** Each student will need to have use of a 35mm or digital camera. This could be anything from a disposable camera to a 35mm SLR. A 35mm digital SLR with interchangeable lenses would be best. A single departmental camera with basic lenses will be available, as will a digital camera and a digital camera for the microscope.

**Film:** Conceivably, most of the assignments in the portfolio can be done with a digital camera. If you decide to use film, you must supply the film and processing.

**Printing Supplies:** Students may use (with reason) the other color printers in the department without cost; however, you may wish to purchase special print paper on your own.

**Image rights:** All images submitted for grading become the non-exclusive property of Marietta College, to be used in the educational programs, or to promote the college, or to be sold to benefit the college. Of course, you retain all other rights to the images; you just can't stop the college from selling your image if we want the money. Some of your images may be used in classes. Images taken of you by the other students in the class or by the instructor can also be used by them to turn in assignments and by the instructor or the college for instructional or promotional purposes. All digital images submitted may be collected on a CD, posted on the web, or stored on the network. Of course, this means that other students will have copies of your images. All hard-copy images may be retained by the college to post in the hallways, use for dartboards, or in an emergency, as toilet tissue. You can ask for them back, but we don't have to give them back. If you become a famous photographer, we reserve the right to flood the market with cheap knockoffs of your early work.

### General Requirements:

- All images must be your original images, taken since the start of the semester. All images must have a title.
- Digital images should have the photographer's name and the title digitally added in an inconspicuous space. In most cases, this will be done by increasing the canvas size in Photoshop so that the text is not on the image itself.
- Digital images should not be more than 1800 pixels wide or 1000 pixels high and must be in a format that will open in Photoshop.
- Digital images will be submitted on the network in the appropriate directory. This is the normal way most of your work will be submitted unless you are using film. Each file submitted will use the following naming convention:  
Assignment #\_Last Name\_FirstName\_Year  
The first assignment (diagram) would be: 01\_McShaffrey\_Dave\_2012.JPG  
The algae assignment would be: 23\_McShaffrey\_Dave\_2012.PSD  
Freelance Assignments would be F1\_McShaffrey\_Dave\_2012\_science.JPG  
Note that the suffix (.JPG, .PSD) depends on the type of file; you will normally be turning in JPG files.
- Hard copy images (35mm slides, LaserWriter or color printouts, prints) should have the photographer's name and the title displayed on them. *See instructor for more details.*
- All work must be physically handed in or present on the server **AT THE BEGINNING OF CLASS THE WEEK IT IS DUE**. Class time may not be used for turning in homework due that week.
- Work will be graded on:
 

A. Technical merit (exposure, sharpness, contrast, color, etc.)	10 points
B. Composition	10 points
C. Artistic Merit	10 points
- Two of the four freelance images must be submitted before mid-terms. No more than 1 freelance image can be presented per week. Freelance images marked (science) will be graded 10/10/5 Technical/Composition/Art; images marked (art) will be graded 15/10 Composition/Art.
- Each student must fill out a peer grading sheet (next page) for one image from another student in the class each week (after the first portfolio is submitted). A total of 10 such sheets are due from each student; you may not review another student's work more than once, nor may you turn in more than one sheet per week without prior permission to do so. Failure to submit a peer grading sheet will be penalized at 5 points per occurrence. Peer grading sheets will be assessed as part of the class participation grade. Peer grading will remain anonymous, although comments may be shared with the class and/or the students involved (the student graders names will be removed).

Name of Student doing Grading: \_\_\_\_\_

Peer Grading Sheet

Name of Student being assessed: \_\_\_\_\_

Insert image being assessed here and size it reasonably.

Grading and comments may be typed or printed neatly. Form may be printed in color or B/W

One a scale of 1 to 10, how would you rate the technical merits of this image (sharpness, depth-of-field, exposure, color balance):

Comments:

One a scale of 1 to 10, how would you rate the composition of this image:

Comments:

One a scale of 1 to 10, how would you rate the artistic merits of this image:

Comments:

Continue on back as needed.....