



Appledore Island, Isle of Shoals, Kittery, Maine

t: 603.964.9011 • shoals.lab@unh.edu • shoalsmarinelaboratory.org

Shoals Marine Laboratory
Biological Illustration (BIOSM 2040/MEFB 460)
Summer 2025

Course Syllabus and Schedule

Faculty: Carol Schwartz (csillustration@gmail.com)
Cornell Lab of Ornithology Scientific Illustration Fellow (To be named)

Prerequisites: None

Class enrollment limit: 12

Credit hours: 3 (Cornell credits) or 4 (UNH credits)

Description of the Course:

In this course, students build a foundation of skills needed for biological illustration using the many visual opportunities that Appledore Island offers for natural science subjects. Lectures and demos introduce each of five projects using a variety of media including graphite and graphite dust, pen & ink, watercolor, and colored pencil. Basic standards needed in the creation of professional work are covered, include observational drawing, attention to detail and accuracy, composition, color, tonal values, and perspective. The class will visit many locations on the island for inspiration and visual reference. Students will create a final project demonstrating skills they have developed with one of the media covered in the course.

Student Learning Outcomes:

- Sharpen skills in observational drawing to analyze and distinguish details that are needed to communicate a particular natural science illustration.
- Understand and be able to apply materials and techniques for the mediums covered in the course.
- Demonstrate accurate and clear illustrations and communication of concepts.
- Demonstrate knowledge of composition, color, tonal values, and perspective.
- Be able to evaluate the quality of a work and how to solve problems related to drawing, composition, color, and tonal values.

Course Materials:

- 1.
2. The Guild of Natural Science Illustrators Technique Sheet will be provided for students electronically.
3. Sketchpad, 9" x 12"



4. Drawing pencils, ranging from size 8B to 4H
5. Kneaded eraser
6. dip pen and nibs
7. Dr. Ph.Martin's Black Star waterproof India Ink
8. Colored pencil set
9. Watercolor or gouache paints set
10. Tracing paper
11. Fabriano Artistico watercolor block, cold press, 9" x 12"
- 12.
13. Bristol pad, hot press
14. , 9" x 12"
15. Paint palette

(suggested reference reading for additional information)
 The Guild Handbook of Scientific Illustration, 2nd Edition

Assignments & Grading:

Students are assigned 4 projects working with four different media plus 1 final project using a media of their choice. Grades will be evaluated based on use of knowledge presented in the course and demonstrated in project artworks.

Letter Percentage Description

A 94-100%	Outstanding development, comprehension, and quality
A- 90-93.9%	Almost outstanding development, comprehension, and quality
B+ 87-89.9%	Very good development, comprehension, and quality
B 84-86.9%	Good development, comprehension, and quality
B- 80-83.9%	Average development, comprehension, and quality
C+ 77-79.9%	Marginal development, comprehension, and quality
C 74-76.9%	Adequate development, comprehension, and quality
C- 70-73.9%	Minimum Standard in development, comprehension, and quality
D+ 67-69.9%	Lacking in any significant development, comprehension, and quality
D 60-66.9%	Not acceptable/did not follow direction
F 0-59.9%	Not attempted and/or Missed Project/Critique

Overall Grading Percentages

Project 1	15%
Project 2	15%
Project 3	15%
Project 4	15%
Project 5	20%
Participation	20%

Participation: Success at Shoals requires a positive attitude and a willingness to accept changes in the schedule with grace. Island living demands respect for your fellow classmates, and residents on Appledore. Students are expected to actively participate in all facets of this course, and to display good citizenship while at Shoals. 20% of your grade will be based on the faculty's subjective evaluation of your personal involvement in course activities. If you have any questions or comments about the course, please contact the instructors directly.

Expectations and Conduct:

Students are responsible for fully understanding all of the information presented in this syllabus. If there are any questions regarding this information, it is the student's responsibility to bring it to the instructor's attention. In addition, students are responsible for attending all activities associated with this course and completing all assignments. Students are responsible for asking questions anytime they need clarification (remember, there is no such thing as a bad question).

Every student is responsible for their own behavior- specifically in being respectful and collegial to other students and with instructors. Students are responsible for fully understanding and adhering all of the information presented in the *Appledore Island Handbook*

1. *Personal Technology.* Do not use cell phones or similar devices in the classroom or during course activities. If you take notes with your computer or tablet, disable wireless access during lecture.
2. *Computer Facilities.* The lab has a modest computer facility in Lighton Library; please treat this shared facility with respect. Printers are available, but please limit printing to your FINAL document (if required).
3. *Transmission of Course Materials.* Students are not authorized to replicate, reproduce, copy or transmit lectures and course materials presented, or derivative materials including class notes, for sale or free distribution to others without written consent of the instructors who are the original source of the materials.
4. *Academic Integrity.* Any work submitted must be your own. Uncredited use of another person's words, data or images is considered plagiarism, a serious violation of the Code, whether the material comes from another student, a web site, or a published paper. Students must adhere to Cornell's and UNH's Policy for Academic Honesty/Plagiarism and Discrimination
 - i. Cornell: <http://cuinfo.cornell.edu/aic.cfm>
 - ii. UNH: <http://www.unh.edu/vpsas/handbook/welcome-university-new-hampshire>
5. *Disabilities & ADA Accommodation:* Students with a disability must contact Cornell's (420 CCC building; 607-254-4545) or UNH's Student Disability Services(<http://www.unh.edu/disabilityservices>) four weeks prior to start of class for confidential discussion of needs and for registration to verify eligibility for academic accommodations. No retroactive accommodations can be made.
6. *Mental Health:* Shoals Marine Laboratory cares about you and your well-being. If you experience unusual personal or academic stress during the course or need to talk with someone about a personal problem, seek support from your instructors as soon as possible. In addition, any SML staff is available for consultation 24/7. Find staff in the office in the Hamilton House between 8am – 7pm or knock on the door of Bartels House after hours

Schedule:

Tentative, may change at instructor's discretion, boat availability, opportunities that occur synergistically with other classes or groups on the island, etc.

Day 1

Introductions, studio tour

Presentations: Visual Science Illustration, Getting Started and Best Practices

Presentation & Demo: Introduction to Graphite Pencil Basics and Graphite Dust

Drawing in PK Lab: Skulls, Bones, Sea Table

Select graphite project subject and start on graphite drawing, emphasis on observational drawing

Day 2

Island walk

Continue to work on graphite drawing

Graphite drawing due in afternoon, presentation and critique

Presentation and Demo: Pen & Ink

Day 3

Presentation: Intertidal Species

Intertidal collecting trip (wear shoes that can get wet)

Select pen & ink project and create sketch, discuss sketches, work on project

Day 4

Pen & ink project presentation and critique

Presentation: Botanical Illustration

Presentation & Demo: Colored Pencils on paper and film

Select colored pencil project, create sketch, discuss sketches, work on project

Day 5

Colored pencil project due in afternoon, presentation and critique

Presentation & Demo: Watercolor and Gouache

Day 6

Presentations: The Artful Bird, The Artful Insect

Presentation: Bird Anatomy and Design

Select watercolor project, group discussion of thumbnail ideas, begin sketch

Day 7

Sketch due, transfer to watercolor paper, begin painting

Day 8

Discuss individual project

Work on watercolor project

Day 9

Watercolor project due in afternoon, presentation and critique

Presentation: Using Digital Tools in Visual Science Illustration

Select individual project, group discussion of thumbnail ideas, begin sketch

Day 10

Informal Discussion: Professional organizations for biological illustrators

Sketch due, group discussion of sketches, begin work on individual projects

Day 11

Informal Discussion: Careers in Biological Illustration, the publishing industry

Work on individual projects

Day 12

Informal Discussion: Marketing your Work

Work on individual projects

Day 13

Work on individual projects

Day 14

Final presentation of art, Final critique, Appledore Art Exhibition

Meals:

M-Sat: Breakfast = 7:30am, Lunch = 12:30pm, Dinner = 6:00pm
Sun: Brunch = 10:00am, Dinner = 5:00pm