

**ART 2936c** (3 credit hours) is an introductory course to Scientific Illustration, providing students the opportunity to acquire skills of observation while illustrating a wide range of organisms. Students will explore the unique ecosystems of Florida and the multitude of species of flora and wildlife. Exploration includes plants, birds, insects, mushrooms, reptiles, fish, amphibians and mammals. Scientific Illustration offers students the opportunity to observe, study, analyze, and visually illustrate species. The skills taught in this course will further expand knowledge to offer career options in the biological workplace.

In collaboration with the Florida Museum of Natural History, the UF Natural Area Teaching Lab and the Harn Museum students enrolled in this class will have the opportunity to work from the vast collections at UF.

**Instructor's contact info:**

Mindy Lighthipe

<http://www.BotanicalArtPainting.com>

Students may contact Mindy via email:

[MLighthipe@ufl.com](mailto:MLighthipe@ufl.com)

Emails will be answered within 2 business days.

Office Hours: Students needing to meet with Mindy may do so before or after class or by appointment.

**Course objectives:**

- Familiarity with the field of Scientific Illustration and its history.
- Improvement in the observation, appreciation, and analysis of the natural world.
- Learning principles of illustration such as layout design, sketching, research processes, development of ideas, and effective science communication.
- Learning techniques that are currently being used in digital media as well as traditional applications.



**Prerequisites:**

None, all skill levels are welcome.

**Method of instruction:**

Each class will be a combination of lectures, discussion, demonstrations of art techniques, study of illustrations, group and individual critiques, and individual work on illustrations. We will also visit the Harn Museum of Art, the Florida Museum of Natural History, and the Florida Natural Area Teaching Lab during the course.

**Attendance policy:**

This is a studio class, therefore students must be present in the classroom for the entire class period and for every class. Attendance is expected and mandatory, so you need to bring a signed medical excuse if you are sick and can't come to class.

Please be aware of the attendance rules:

a. Three unexcused absences are allowed. A fourth will drop your final grade one grade, and six will drop your final grade two grades. Seven or more absences will result in failing the course.

b. Since most of the important information about the assignments for each class will be given in the first 15 min of the class, tardiness will also affect your final grade in the following way: being more than 15 min late or leaving class early 3 times will constitute one absence.

c. There will be no make-ups for this class; if students miss classes they are responsible for completing the class assignments on their own and handling them in time.

**Assignments:**

Class assignments will be given every week, and class time will be used for working on these assignments, although additional time outside the class may be needed for completing each illustration. Due dates will be announced at each class, and assignments submitted after the due date will be downgraded one grade. Illustrations will be evaluated on:

a. **Communicative Ability:** Assignments must be effective at communicating a specific scientific concept, as this is the main purpose of scientific illustration. Examples of concepts are natural processes, species identification, laboratory procedures, and form and function.

b. **Accurate Drawing:** Each assignment needs to be informative and representational. Therefore, a level of accuracy in the drawings should show the subject in proper proportion, scale, color and detail.

c. **Research:** Every assignment must be the result of a process of research and should communicate specific ideas and concepts. For this class, this process may be even more important than the final result, as the main purpose is to learn to observe, study and be able to visually illustrate different components of nature.

d. **Execution & Technique:** Each assignment must be clean and well presented. Each assignment should display the proper usage of each technique taught in class.

**Suggested reading materials:**

1. The Handbook of Scientific Illustration. 2003. Edited by Elaine R. S. Hodges, with Steve Buchanan, John Cody, and Trudy Nicholson. John Wiley & sons, Inc. New Jersey, USA.
2. Amazing Rare Things: The Art of Natural History in the Age of Discovery. David Attenborough, Susan Owens, Martin Clayton, and Rea Alezandratos.
3. Manual of Scientific Illustration. Charles S. Papp. 1976. American Visual Aid Books. Sacramento, California, USA.



**Suggested online resources:**

Guild of Natural Science Illustrators: [www.gnsi.org](http://www.gnsi.org)

Scientific Illustration Consortium: [www.scientificillustration.org](http://www.scientificillustration.org)

Science + art: [www.science-art.com](http://www.science-art.com)

Science and art: [www.sciencefriday.com/arts/](http://www.sciencefriday.com/arts/)

Association of Illustrators: [www.theaoi.com](http://www.theaoi.com)

Every picture tells a story:

[www.everypicture.com](http://www.everypicture.com)

The science picture company:

[www.sciencepicturecompany.com](http://www.sciencepicturecompany.com)

**Grading:**

Grades will be based on the following:

Class Participation 20%

Sketch Book 10%

Class Assignments 50%

Final Project 20%

100%

Grades-

95%- 100% (4.0) A

90%-94% (3.67) A-

86%- 89%(3.33) B+

85% (3.0) B

80%-84% (2.67) B-

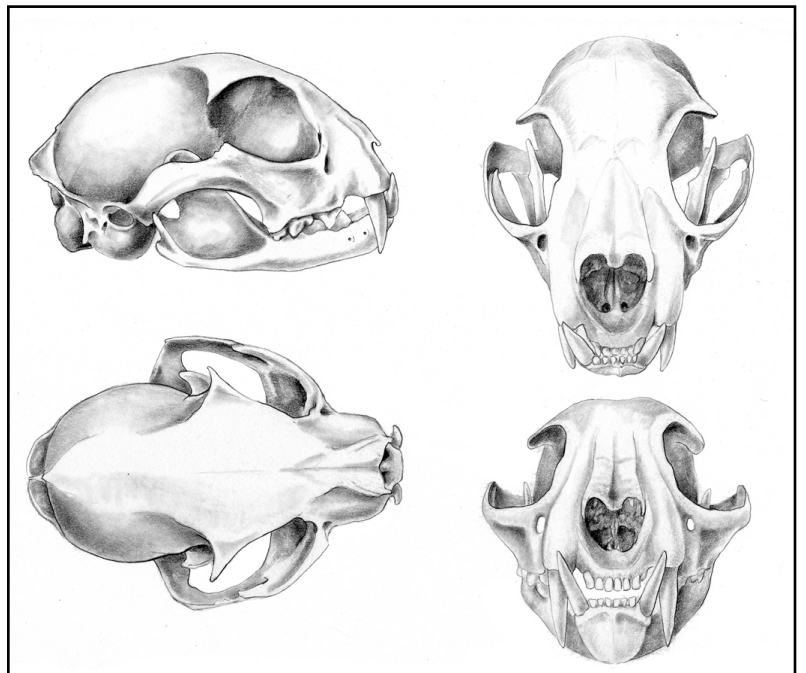
79%- 76% (2.33) C+

75% (2.0) C

70%-74%(1.67) C-

66%- 69%(1.33) D+

65% (1.0) D



In this course students will be exposed to the following Skills, Techniques and Subjects.

**Skills Taught:**

- Perspective, measuring, and accurate drawing related to scientific illustration
- Specific light source used in scientific illustration
- Scanning and preparation of illustrations for digital reproduction
- Dissection of specimens and how to effectively illustrate them on a illustration plate
- Camera Lucida and microscope illustration
- Working from Photography
- Composition of an Ecosystem



**Techniques Taught:**

- Graphite
- Pen & Ink
- Watercolor
- Gouache
- Scratchboard
- Digital Illustration
- Colored Pencil

**Subjects:**

- Bones & Fossils
- Plant Morphology and Botanical
- Insects- Butterflies, Beetles
- Shells
- Mammals- Taxidermy and skins
- Amphibians & Reptiles
- Birds- Taxidermy and skins

**Final Project/Exam:**

At the end of the semester the students will be given a choice of one of the following final projects:

- Scientific Illustration with dissection of parts of specimen in Black & White
- Field Guide Illustrations of 3 same species- Color or B&W
- EcoSystem- Animal, Insects, Plants in their Environment- Color or B&W

This project is due during exam week and a formal time will be designated for a review and critique of the final project.

**Students with Disabilities-** Anyone who is requesting classroom accommodation must register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this document to the Instructor when requesting accommodation.

**Art Supply List- \*To be purchased by the 2nd class.**

**All other supplies will be discussed in class and information on where to purchase them.**

- \*1 Strathmore drawing pad 14" X 17". Series 400.... NOT SKETCH
- \*1 pad of tracing vellum, same size as pad or smaller. Canson Vidalon Vellum Each 50-sheet pad is tape-bound on the short side for easy removal of pages. Sheets are 55 lb (90 gsm) weight. This is my preference.
- \*Variety of Drawing Pencils. 2H, HB, 2B.

- \*Assortment of erasers: kneaded, white plastic, and pink pearl
- \*1 small clear plastic 6" ruler
- \*1 roll of Artist's Repositionable Tape
- \*1 Journal for recording for sketching and taking field notes- Can be hard bound or spiral.
- 1 Traveling Watercolor field Kit with basic colors
- 1 watercolor block of paper- Fabriano Artístico Extra White Watercolor Block - 12 x 18- Hot Press
- Water color brushes -
  - Loew Cornell series 7650- Spotter #0
  - Loew Cornell Comfort Grip RAKE Brush LC3120- 1/4",
  - Loew Cornell - Chisel Blender LC3450- # 4
  - Loew Cornell-Round LC7000- # 8 & #4
- Hunt crow quill pen holder + assorted nibs (not calligraphy nibs)
- FW Acrylic Ink or Speedball India Ink-- waterproof
- Micron Pen .03 or Copic Multiliner .03 Black only
- Strathmore 500 Series Bristol Board Plate Finish, 2 ply - Pad 11 x 14

Supplies can be purchased online at <http://www.DickBlick.com> or <http://www.JerrysArtarama.com>

**You may also find the supplies at:**

**Michael's**

3644 SW Archer Rd

Gainesville, FL 32608-2420

Phone: (352) 377-9797

Mon-Sat: 9:00am - 9:00pm

Sun: 10:00am - 7:00pm