

Biological Illustration 3100-001/002, 2 units

T 8-10:50a R 8-9:50a

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Office: N253, Office Hour: R 10a

Semester: Spring 2020

Course Description. Techniques of illustrating to include rough drafts and pencil drawings, ink renderings, graphs, maps, lettering, etc., with emphasis placed on biological materials. No Pre-Requisites.

Textbook. No text required. Suggested reading:

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. Scientific Illustration. 1994. Phyllis Wood. John Wiley & Sons, Inc. New Jersey, USA.

Student Learning Outcomes. Upon successful completion of the course, students should be able to:

- A. Create Illustrations using contour line, stippling, hatching and cross-hatching.
- B. Develop a working knowledge of tools/mediums of the trade such as graphite, pen and ink.
- C. Ability to draw and scan illustrations to a digital format for publication.
- D. Understand the illustration process, including research, layout, initial sketch and finished drawing; with emphasis on effective scientific communication.
- E. Follow the history of scientific illustration into the modern profession it is today.

Attendance. Attendance is mandatory, and counts as 40% of your grade. As most instruction will be given at the start of class, punctuality is a must. Three absences will be allotted for unforeseen circumstances and will not affect student grade. Two late occurrences will result in one absence. Habitual tardiness may result in early dismissal from the course. Attendance records can be reviewed on the Moodle course website. A geotracking attendance app will be used called Arkaive. Download the free app and create an account. Make sure location settings on phone/laptop are turned on. Enrollment Code: MR4B. This app will only be used for roll call; attendance can then be viewed in Moodle. Please create your Moodle account within the first week. Google: CSUStan Moodle. Click on the link and search for this class BIOL 3100. Use the enrollment code: biolillussp20.

Participation. Various assignments will be given throughout the semester. To receive a passing grade all assignments must be completed. Ample time is provided in class for this, and it is expected that class time be used for working on the assignments, not answering texts, watching T.V, studying for other classes, and/or excessive chit chat. If such is observed, you may be asked to continue your extracurricular activities elsewhere. This will result in a half credit deduction for the day. Should you finish an assignment early, you may begin working on the next assignment, or the homework assignment for this class.

Assignments. Assignments will be given every week, ranging from sketches to finished drawings in a variety of techniques and materials. Assignments will make up 40% of the final

grade. Due dates will be given in class. Assignments may include: bones, cells, plants, insects, shells, mammals, birds, life-cycles, commissions/community outreach etc. Assignments will be evaluated by the following criteria:

Effective Communication. Does the drawing successfully convey information conducive to scientific understanding (identification, natural process, function...)

Accuracy of Subject. Are proportions, colors and details of the subject accurate?

Effort/Improvement. How much time and research are put into the development process of a drawing and the finished drawing itself? Is their noticeable improvement in technique, composition or process?

Effective use of Technique/Presentation. Is the artwork clean and professionally presented? Are techniques effective in conveying subject? Are the techniques properly applied?

Homework. To help you practice and improve in your drawing abilities, your homework assignment this semester will be to make a drawing a day. This drawing can be big or small, more of a sketch, or more detailed, from life, or a picture, in a variety of media (as used in class). Drawings that are more detailed may count for more than one drawing. If you finish an assignment in class, you are welcome to work on your homework assignment. Your sketchbook will be reviewed to provide feedback on your progress. Homework is worth 20% of your final grade, and will be evaluated on effort, improvement, and successful application of techniques.

- **Your drawings can be any subject that you can observe, not from imagination.**
- **At least one of your drawings each week should practice current techniques discussed in class.**
- **Label each week, and technique(s) used.**
- **February 3-April 30 (12 weeks, 5 drawings a week, 60 drawings total, Due May 5th)**

Course Outline

Course material subject to change at the discretion of instructor. This weekly outline is designed to give students an indication of what to expect but is in no way a binding document. It is impossible to know how each class of students will progress and /or any tailoring that may be needed.

Week 1.

Discuss syllabus and supplies.

Week 2.

History of Scientific Illustration. Drawing bootcamp: Learn to simplify for success.

Week 3.

Working with graphite. Hatching, cross-hatching and blending techniques demonstration. Assignment: Geometric shapes.

Week 4.

Field sketching: Leaves. Final drawing: Dimensional leaf in graphite. Demonstrate effective techniques for creating dimension.

Week 5.

Introduction to the quill pen. Demonstrate drawing techniques. Series of exercises, including lettering. Handout: Pressure sensitivity and the quill pen. Assignment: Practice making fluid lines while drawing. (example: feathers) Graphite to ink.

Week 6.

Research: Written and observed. Assignment: Line drawing. (example: Microscope slide)
Discussion: Including written information with an illustration.

Week 7.

Shading techniques in pen: Hatching, cross-hatching, stippling, ink wash... Assignment: Shading with the pen. (example: shells, bones, fossils, plants, reptiles, mammals...) Size matters: Reproduction and sizing of the original illustration.

Week 8.

Continue assignment. Color theory and watercolor pencils demonstration.

Week 9.

Successful layering of color and creating dimension. Assignment: Cross-section in color.

Week 10.

Field Sketching: Ecosystems. Video: Drawing trees.

Week 11.

Assignment: Research and prepare full color illustration. (example: birds, insects, fish, microscope...)

Week 12.

Introduction to scratchboard. Tools and techniques demonstration. Assignment: Scratchboard. (example: Mammal)

Week 13.

Begin final project. (example: life-cycle, field guide...) Research, plan and sketch.

Week 14.

Final drawings to be scanned and arranged using the computer. Discussion of arrangement, lettering, inclusion of grids and graphs. How to properly scan and size illustrations for printing/production.

Week 15.

Finish final illustration and present.

Grading. Standard letter grading will be used. Feedback on individual assignments will facilitate improvement. The final grade will be based on the following weighted categories:

Attendance: 40% In-Class Assignments: 40% Homework: 20%. The cumulative average of these three categories will be used to calculate the final grade. The online interface called Moodle will be used for all grading and additional information relating to assignments. All students must log into the CSU Stanislaus Moodle and create an account for this class. Below is the grading scale that will be used:

Grading Scale (%)	
94-100	A
90-93	A-
87-89	B+
84-86	B
80-83	B-
77-79	C+
74-76	C
70-73	C-
67-69	D+
64-66	D
60-63	D-
0 - 59	F
70-100	Credit
0-69	No Credit

Academic Integrity. See Student Code of Conduct in Catalog.

Disability Resource Services. By university commitment and by law, students with disabilities are entitled to participate in academic activities and to be tested in a manner that accurately assesses their knowledge and skills. They also may qualify for particular accommodations that ensure equal access to lectures, labs, films, and other class-related activities. Contact Disability Resource Services at Ext. 3159 or information about making accommodations.

Supply List. You will need the following items to complete the course:

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| 1. Strathmore 400 Series Mixed Media Pad 9x12 | | 9731098 |
| 2. Sketch book, spiral bound (for field sketching) | | 9731022 |
| 3. Drawing Pencils, 1ea: 2H, HB, 2B, 6B | | 9722894 |
| 4. Erasers, 1ea. White Plastic, Kneaded | 9729866 | 9701028 |
| 5. Ruler (clear preferable) | | TB23369 |
| 6. Blending Tortillons | | 9701043 |
| 7. Hunt Crow Quill pen holder with assorted nibs (hunt 102 nib) | | 9727800 |
| 8. Higgins Black Magic Ink | | 9730337 |
| 9. Sakura Pigma Micron pen 01 (.25mm) | | 9716819 |
| 10. Engraving Tool (Royal Brush 4 piece) | | Amazon |
| 11. Black Scratchboard 11x14 or 8x10 | | 9711798 |
| 12. Set of 12 (or more) Watercolor Pencils | | 9736842 |
| 13. Aqua Flo Brush | | 9733210 |
| 14. Lint Free cleaning cloth (for pen nib) | | |
| 15. Small cup for water | | |

You will find most of these items at the campus bookstore. You may visit enasco.com and search the item numbers on the side. Michaels arts and crafts store and Hobby Lobby will also carry these supplies. You can expect to pay around \$40+ dollars for the above supplies, depending on what you already have. **Be sure to bring your student ID for discounts; save your receipt!**