

AGRO 828, AGRI 828, ENTO 828, HORT 828

Scientific Illustration – Spring 2018

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Objectives:

This class provides an introduction to Scientific Illustration. Instruction covers both classical techniques and new technologies and media. Students explore the history of Scientific Illustration, copyright, typography, resolution and scanning principles, and the creation, publication and presentation of scientific artwork. Students completing this course will have the knowledge and skills to create scientific illustrations using a variety of techniques. Students will also learn how to prepare graphs for scientific publication. Successful scientific illustrators must work with deadlines, and on time completion of assignments is a requirement for this course.

Course Objectives

By the end of the course, my students should be able to:

- Create accurate scientific illustrations from specimens.
- Compose illustrations with proper lights and shadows and perspective.
- Create scientific illustrations using traditional drawing techniques such as pencil, pen and ink, scratchboard, carbon dust, and colored pencils.
- Create a graph for scientific publication per selected journal specifications.
- Scan, edit and adjust the resolution of images.
- Discuss copyright requirements and archival techniques.
- Apply proper typography and layout to publication materials.
- Create a portfolio of their illustrations.

Student Obligations

- Students will study each lesson and apply that knowledge to prepare illustrations or homework as assigned.
- Students will complete and submit projects by due dates.
- Students will participate in discussions in class or in Blackboard.
- Students will complete on-line exams by due dates.
- Students will maintain a work journal and submit the appropriate pages for review with their homework assignments.

Prerequisites

In order to complete this course successfully, it is required that you have the following in place before the second week of class:

- Active email account that is updated so emails from Canvas will reach you. This is how instructor will be contacting you.
- Access to a scanner and know how to use it or have access to someone who does. This is how students will submit homework assignments.
- Computer technical support in the event your computer doesn't cooperate (or crashes or has problems).
- Access to computer with a recent version of PowerPoint to complete graphing assignment.
- Purchased or borrowed art supplies listed on supply list will be needed by **THIRD** week of class. A computer with internet access and a pencil and tracing paper are the only supplies needed the first two weeks of class.

Evaluation

Students will be evaluated on the following:

- Accurate representation of specimens
- Comprehension of goals and objectives
- On-time completion of assignments
- Understanding and mastering techniques
- Amount of effort and individual improvement
- Participation in on-line class discussions

Class Materials

Class materials will be posted in Canvas each week.

Cheating

The University of Nebraska-Lincoln has a policy about academic dishonesty, as indicated in the Student Code of Conduct (see Undergraduate Bulletin). As a student at UNL, you enjoy rights and protections under the code and are obligated to conduct yourself in compliance with the code. One area where students occasionally have some confusion regards plagiarism or misrepresenting the work of another as one's own.

As the Student Code of Conduct indicates, academic sanctions for misconduct subject to appeal are at the discretion of the instructor, and may include giving the student a failing grade for the course. In this course, the least penalty I will impose for misconduct is a one letter grade reduction in the course grade, but in most instances the penalty for cheating will be a failing grade in the course.

Incompletes

If you must take an incomplete for this course, you will have to **RETAKE** the entire course and resubmit any and all assignments to remove the incomplete from your record.

Students with Disabilities

Students with disabilities are encouraged to contact the instructor for a confidential discussion of their individual needs for academic accommodation. It is the policy of the University of Nebraska-Lincoln to provide flexible and individualized accommodation to students with documented disabilities that may affect their ability to fully participate in course activities or to meet course requirements. To receive accommodation services, students must be registered with the Services for Students with Disabilities (SSD) office, 132 Canfield Administration, 472-3787 voice or TTY.

Computer software and other resources required to complete this course:

Computer and software support for students is available through the UNL Help desk. Any questions on purchasing software, installation and use please contact Help Center and not the instructor.

Computer Help Center

501 Building, Room 105

Monday-Friday

7:30 a.m. to 7:30 p.m

Phone: (402) 472-3970 or toll-free (866) 472-3970

E-mail: mysupport@unl.edu

Required: Scanner with appropriate scanning software to scan homework assignments at high resolution to submit for grading.

Required: Microsoft PowerPoint will be used in this class to create presentations and graphs.

Students can get Office365 at no cost by going here: <http://go.microsoft.com/fwlink/p/?LinkId=391418> and using their husker email.

Required: [Quicktime](#) and a current Internet browser are required to view video demonstrations and lectures. Both can be downloaded free of charge if they are not already installed on your computer.

Required: [Adobe Acrobat Reader](#) is needed to access reading materials.

Required: You will need a digital image editing software program. Below are two choices - both free. If you choose to teach yourself the basics of Adobe Photoshop and/or Illustrator to complete final project, download the free program from UNL. Contact Computer Help Center for assistance if instructions below don't work.

Suggestions:

Adobe Creative Cloud provides software for graphic design, video editing, and web development.

Popular programs include Adobe Acrobat, Dreamweaver, Illustrator, InDesign and Photoshop.

Adobe Creative Cloud Suite subscription is available for free at

<http://procurement.unl.edu/adobe-creative-cloud>

If you want a simple program for image editing, students may use the free program Irfanview (download from: <http://www.irfanview.com/>).

Art Supplies

A list of art supplies needed for this course are listed in the document **Art Supplies** in Canvas.

Reading Material

Reading materials required for this course will be listed and available in weekly lessons. There is no required textbook for this course. If you want to buy some books for your own reference, I would recommend the following:

For Scientific Illustration reference:

Hodges, Elaine R. S. GNSI Handbook of Scientific Illustration. Second Edition. 2003. Wiley Publishers.

(This book is considered the "bible" of Scientific Illustration and really the only book on this subject that you would "need". It is an expensive book but worth the investment if you continue drawing after this course.) This book is NOT required. Readings from this book will be in the University Library links.

PowerPoint and Adobe Creative Suite references:

The **Visual QuickStart** guides by Peachpit Press are excellent books for learning new software. Check Amazon or other booksellers for current versions. I also recommend you check your library to see if they have reference materials. **Google search** is also a great resource for learning software techniques.

Projects

Projects are usually due 2 weeks from assignment date. Project due dates will be determined by the instructor and are rarely negotiable. Late projects will be graded and then 5 points will be deducted for each day (including the weekends) the project is late. **Assignments are due by 11:59 PM on the day they are due.** Rarely will there be exceptions to this. If an emergency does occur, please contact instructor as soon as possible so arrangements can be made for the late assignment.

All work will be judged on the basis of improvement and not in direct competition with other students. Your enthusiasm, hard work, and interest will be used in my evaluation of your progress and your work. Neatness, accuracy, improvement, timeliness, time spent on the project, and following the instructions for each project will be the basis of your grade.

Plan on spending at least 7-10 hours per week on your drawings and homework for this class.

You will need a minimum of two specimens (you may have more if you choose) to draw from. Specimens must be the actual 3D samples of inanimate objects (tools, instruments, rocks, archeological pieces, etc.) or natural history objects of the entire or a part of an animal and plant (insect, mammal, bird, feather, wings, bones, flower, leaves, etc.). No photos may be used. These specimens must be pre-approved by the instructor prior to drawing them for projects. **No grade will be given for a drawing if the specimen is not pre-approved.**

Required Projects (projects and points may be changed by instructor at any time during semester)

- Practice drawings (25 points)
- Resolution quiz (50 points)
- 4-Object shadings (25 points)
- Final pencil drawing of first specimen (50 points)
- Final Pencil drawing of second specimen (50 points)
- Nine-object pen and ink (50 points)
- Specimen in pen and ink (50 points)
- Line Graph for Journal publication (50 points)
- Specimen in scratchboard (50 points)
- Specimen in carbon dust (50 points)
- Specimen in colored pencil (50 points)
- Copyright Discussion (50 points)
- One additional exercise (Choose one of the following) (50 points)
 - a. Additional pen and ink illustration(s)
 - b. Additional scratchboard illustration(s)
 - c. Additional watercolor wash illustration(s)
 - d. Additional carbon dust illustration(s)
 - e. Pencil color illustration(s)
 - f. Transparent watercolor illustration(s)
 - g. Project of your own design AND approved by Instructor.
- Miscellaneous assignments and quizzes (50 points)
- Final Project (200 points)
- Final Portfolio (50 points)

Total Points = 900

Grade Scale

If you are taking this class pass/no credit, you must maintain a C average or better to get a pass credit for the class. Total points earned divided by total points possible equals letter grade score. (Grade scale points and scores possible are subject to changes at any time by instructor).

- A+** = 97 - 100%
- A** = 93 - 96.9%
- A-** = 90 - 92.9%
- B+** = 87 - 89.9%
- B** = 83 - 86.9%
- B-** = 80 - 82.9%
- C+** = 77 - 79.9%
- C** = 73 - 76.9%
- C-** = 70 - 72.9%
- D+** = 67 - 69.9%
- D** = 63 - 66.9%
- D-** = 60 - 62.9%
- F** = 0 - 59.9%