Scientific Illustration ENTO 896, Spring 2014

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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, drafting techniques, 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
• Students will learn to prepare scientific illustrations.
• Students will learn to accurately draw specimens.
• Students will learn to use lights and shadows and perspective in their drawings.
• Students will develop fundamental skills with traditional drawing techniques such as pencil, pen and ink, scratchboard, carbon dust, and colored pencils.
• Students will learn drafting methods.
• Students will learn to use PowerPoint to create graphs for scientific publications.
• Students will learn techniques for scanning, editing and adjusting the resolution of images.
• Students will learn copyright requirements, archival techniques, transfer methods, typography and techniques for presenting information.
• Students will learn to prepare a portfolio of their work.

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 be on time to class and stay until the end of the class period unless dismissed early by instructor.
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 in WAM so emails from Blackboard will reach you. This is how I will be contacting you each week.
- Access to a scanner and know how to use it or have access to someone who does. This is how distance 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.
- Purchased or borrowed art supplies listed on supply list will be needed by THIRD week of class. Only a pencil and tracing paper are needed the first two weeks of class.

Evaluation
Students will be evaluated on the following:

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

Class Materials
Class materials will be posted in Blackboard 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**

Microsoft PowerPoint will be used in this class to create presentations and graphs. It is available for purchase from UNL Computer Sales at: http://sales.unl.edu/licenses/microsoftcampusstudents.asp for around $10 - $15 for UNL students, faculty and staff.

For image editing, students may use the free program Irfanview (download from: http://www.irfanview.com/) or purchase Adobe Photoshop Elements (around $60) or Adobe Photoshop (around $290) from the UNL Computer Shop http://sales.unl.edu/catalog/results/Results_By_Category.php

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.

Adobe Acrobat Reader is needed to access reading materials.

**Art Supplies**

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

**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:**


(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 reference:**
The Visual QuickStart guides by Peachpit Press are excellent books for learning new software. Check Amazon or other book sellers for current versions. I also recommend you check your library to see if they have reference materials.

**Projects**
Projects are due 2 weeks from date of assigning in most cases. 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 me 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. 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 during semester)**
- Practice drawings (25 points)
- Resolution quiz (50 points)
- 4-Object shadings (25 points)
- Great equalizer (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 (50 points)
Final Project (200 points)
Final Portfolio (50 points)

Total Points = 925

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.

A+ 898 - 925 points
A  861 - 897 points
A-  833 - 860 points
B+ 805 - 832 points
B  768 - 804 points
B-  740 - 767 points
C+ 713 - 739 points
C  676 - 712 points
C-  648 - 675 points
D+ 620 - 647 points
D  583 - 619 points
D-  555 - 582 points
F  0 - 554 points