

Scientific Glassblowing CHEM-798 Syllabus

I. **Instructor:** Neal Korfhage – Chemistry room B1
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II. **Objective of the course**

The objective of this course is to learn basic scientific glassblowing hand operations and techniques to gain an appreciation of how scientific glassware is made for science.

III. **What to expect each class session**

Each class period will begin with a demonstration of the glass seal by the instructor, followed by “hands-on” practice of the seal by the student for the remainder of the class period. Basic scientific glassblowing techniques from cutting and fire polishing tubing to construction and repair of basic chemical apparatus will be covered. Sufficient time will be provided for completion of all assignments during regular class period. Access to glass shop (room B11) for extra practice time is encouraged and offered on a first come first serve basis. All tools and materials will be provided to the student.

IV. **Final Exam**

No written exam is given and there is no required reading or textbook. You should begin work on your final project 2-3 weeks (or more if necessary) before the last class period of the semester. Your final project should be your own creation that demonstrates your proficiency with the techniques that have been covered in class.

V. **Safety in the Glass Lab**

Safety glasses are required to be worn at all times.

- Each student will be provided with a pair of didymium glassblowing glasses. These glasses filter the bright sodium glare produced when the glass is heated.

Protective clothing

- Sandals are not recommended footwear.
- Long hair should be tied back when working around open flames.
- Avoid wearing synthetic clothing that will burn and melt when exposed to flames or hot glass.
- Roll up long sleeves so they won't catch on fire.
- Cut resistant gloves are available to protect you when cutting glass.

First Aid

- IMMEDIATELY tell instructor you are injured.
- For minor cuts, Band-Aids will be available.
- Severe cuts may require treatment at the Student Health Center.
- For burns, immediate immersion in cold water is the best treatment for minor burns to the hands. I also have a burn kit in B11.

Know location of each of the following:

- Fire extinguisher
- Fire alarm
- Safety shower
- Eye wash

General safety rules:

- Never hand the hot end of a piece of glassware to the instructor. Hot glass looks like cold glass.
- No eating or drinking in the glass lab.
- Use common sense.
- Report all accidents to the instructor immediately.

Equipment

Each student will receive the following equipment in a metal container:

1. National Hand Torch
2. Graphite rod
3. Tweezers
4. Cork assortment
5. Blow hose
6. Didymium glassblowing glasses

Each student is responsible for his/her equipment and must be returned back to the instructor at the end of the semester. After the completion of each class your equipment will be stored in your desk drawer and/or cabinet until next class period.