**ART 1103 Stained Glass I**

COURSE SYLLABUS

**Frontier Community College Fall 2017**

**Course Number: ART 1103 Title: Stained Glass I Section/CRN: 60761**

**Credit:\_3 credit hours**

**Class Meeting Times, Days, Locations: Thursday, 6:00-9:30pm**

**Course Location: Gill’s Glass Shed**

**951 Big Four Rd.**

**Clay City, Illinois**

**Instructor Information:**

**Name: Phyllis Gill**

**Email: gillfarmspg@gmail.com**

**Office location and phone number: 618-676-1307 & Cell 618-839-2475**

**Course Description**:

The basic techniques and fundamentals of stained glass construction, including design, patternmaking, cutting, fitting, etching, frosting, painting, silk screening, chipping, glazing, and polishing will be studied. Lecture / Lab. Repeatable 3 times.

**Student Learning Outcomes**:

Successful completers will::

1. Construct various stained glass objects.

2. Demonstrate stained glass techniques and fundamentals.

3. Use the various tools, materials and equipment necessary for preparing stained glass projects.

**Methods of Instruction**:

The lecture/demonstration/laboratory method of instruction will be used.

**Required Textbooks, Reference and Other Materials:** No Textbooks are required. However, several books are available for the entire class to use as resources. Books are also available for patterns creation. Texts are available demonstrating alternative techniques used for more complex projects.

**Attendance Requirements:** Students are expected to be present each week for class. If you are going to absent, please notify in advance.

**Methods of Student Evaluation:**

Student evaluation will be based upon knowledge and skill level achieved, attendance, participation, and project completion and quality.

The primary objective is to increase and expand student’s knowledge in the art of doing stained glass. Students must complete four projects during the semester. Students will be assessed on each project completed in the course.

**Supplies:** During the first class, students will have the option to furnish their own supplies or purchase a kit. The kit contains a cutter, pen foil, H lead, U lead, sun catcher lead, solder, flux, oil, patina, suction cup, practice glass, and glass for the first project. Students will be responsible for other supplies necessary for various projects/assignments throughout the semester. Eyeglasses or safety glasses must be worn when working on projects.

Other suggested supplies/items to have on hand while in class:

* Band-Aids (fabric works best)
* Q-tips
* Scissors
* Pliers
* Metal paper clips
* Ruler
* Wire cutters
* Alcohol
* Steel wool, Size 0000
* Ceiling title board
* Old paint brush or clothes brush
* Wooden popsicle stick or clothespin
* Leather glove or battery clip
* Wallpaper knife or utility knife
* Small cups for flux and patina
* Old toothbrush to use with patina
* Magic Eraser
* Scotch brite scouring pad
* Grip drawer liner
* Electrical or masking tape

**Projects/Assignments**

* Projects created will involve foil, lead, and a combination of foil and lead
* Wire foiled projects
* Cutting glass
* Grinding glass
* Creation of large and small patterns
* Demonstration of understanding of the functions of tools used in creation of stained glass
* Demonstration of mastery in the techniques used in the creation of stained glass
* Demonstration of techniques used to clean and polish finished projects

Each completed project will be assessed for grading throughout the creation (knowledge of project and technique used to create the project) to completion.

**Classroom Decorum**

* Please use all tools properly
* Please return tools to the proper cabinet or shelf after use
* Clean your work area at the conclusion of each class
* Please keep personal items such as cellphones or other items which may be a distraction away from the working area.
* Please be courteous of classmates

The following outline will be followed throughout the semester. However, this syllabus is subject to change at the discretion of the instructor. Due notice will be given to the student.

**Topical Outline**:

I. Materials and Equipment 16

A. History

B. Types

1. Antique

2. Cathedral

3. Opalescent

4. Machine-Streaky

5. Flashed

6. Streaks

7. Textured

8. Hammered

9 Crackle

10. Flemish

11. Fracture

12. Ring-mottled opalescent

13. Slab

14. Iridized

15. Glue-chip

16. Waterglass

C. Design Effects

D. Lead and Other Came

1. How came is measured

2. Hand U Cames

3. Specialized cames

4. Degrees of lead came

5. Widening and narrowing channels

6. Fitting the glass to the came

7. Tapping glass into came

8. Stretching the came

9. Storing came

10. Physical characteristics of lead came

11. Cutting and mitering

12. Cornering

13. Lead poisoning

E. Designing with Lead

1. H cames

2. U or end cames

3. Specialized cames

4. Outside lead

5. Brass-crowned lead came

6. Zinc came

7. Reinforcing bar

F. Soldering Process

1. Characteristics of solder

2. Shapes of solder

3. Core solder

4. Procedure for good solder joint

a. cleaning joint surfaces

b. fitting lead cames

c. choosing correct flux

d. soldering iron temperature

e. cleaning joints after soldering

5. Fluxes

6. Heat sources

a. soldering guns

b. soldering irons

7. Desoldering process

G. Tools

1. Glass cutters

a. classic cutter

b. wheel size

c. bevel angle

d. handles

e. ball-ended cutters

f. grozzing teeth

g. carbide glass cutters

h. sharpening glass cutters

i. cutter-wheel lubrications

j. testing for sharpness

k. advanced-design cutters

l. diamond cutter

m. circle cutters

n. odd-shape cutters

o. strip-cutting devices

2. Glass pliers

a. glass or breaking pliers

b. grozzing pliers

c. running pliers

3. Special purpose pliers

a. round-barrel grozzers

b. heavy-duty grozzers

c. glass nippers

d. underslung-jaw breakers

e. round-jaw grozzers

f. glat-jaw grozzers

g. chain pliers

h. came-cutting pliers

4. Pattern cutters

a. pattern scissors

b. pattern knife

c. electric pattern cutters

5. Other necessary tools

a. lead knife

b. lathkins

c. lead stretcher

d. leading nails

e. glass drills

f. glass grinders

g. wire brushes

h. marking pencils

i. patterns, abrasive and kraft papers

j. putty

k. slab-glass wedge and hammer

l. antiquing patina

m. miscellaneous other tools

6. Baubles, bangles, and beads

a. glass jewels

b. roundels and "bottle bottoms"

c. millefiore

d. glass globs

e. metallic embroidery

f. glass rods

g. bottles

II. Procedures 16

A. Scoring and Breaking Glass

1. Scoring glass

a. choosing glass cutter

b. the fissure

c. table surface

d. holding the cutter

e. cutting stance

f. glass surface

g. choosing side to cut

h. cutting force and speed

i. cutting wheels

j. cutting oil

2. Breaking the score

a. tapping method

b. Fulcrum method

c. breaking by hand

d. tabletop method

e. breaking with running pliers

f. breaking with glass pliers

g. breaking plate glass

h. cutting circles

i. cutting inner circles

j. breaking long strips

3. Scoring problems

a. points and thin cuts

b. three-ring sign

B. Cutting Patterns

1. Designing the pattern

2. Cutting the pattern

3. Using the pattern

C. Designing for Stained Glass

1. Balancing lead lines

2. Mixing lead sizes

3. Designing corners

4. Designing for reinforced leads

5. Using reinforcing rods

6. Developing a color sense

7. Color and the light table

D. Copper Foil Method

1. Foil sizes and thickness

2. Copper foiling: step by step

3. Soldering foil

4. Beading

5. Combining copper and lead

6. Foiling machines

E. Finishing Techniques

1. Cleaning the glass

2. Puttying

3. Brushing the leads

4. Antiquing leads

5. Filing Soldered joints

6. Applying hanging loops

III. Projects 20

A. Making a Window

B. Lampshades

C. Suncatchers

IV. Other Processes 4

A. Three-Dimensional Patterns and Designs

V. Safety

It is IECC policy to provide reasonable accommodations to students with disabilities. If you would like to request academic support services please contact Kara Blanton, Advisor at (618)842-3711.