

Syllabus Fall Semester

Course:AR1100 (lecture)=5 credit hours [REDACTED]

AR1111(Skill development) =7 credit hours [REDACTED]

Course pre-requisite: none

Recommended: Basic skills in reading, writing and mathematics and English.

Required: Manual dexterity and good hand eye coordination.

Instructor: [REDACTED]

Consultation hours: [REDACTED].

Required text: How to paint your car. I-Car-cd's (tba)

Supplementary Materials:

additional refinish manuals, equipment manuals, etc. from various suppliers will be provided.

Course description:

This course will include the procedures and practice in handling and maintenance of equipment, use of materials and proper surface preparation for automotive refinishing. This will include the repair and refinishing procedures of various substrates for refinishing. Corrosion protection for various types of metals, repair, and refinishing procedures for various types of plastics. Cosmetic repairs will include parts replacement nonstructural (fastener attached.) small dent repair procedures using fill materials, body fillers including plastic parts materials. Application procedures of various automotive top coat refinish products will include single stage and two stage finishes, including water borne base coat. Also procedures of mixing and matching colors as needed. Hands on Training Color Match Toning, Blending, Surface Prep.

Course objective:

It is the objective of our refinishing course to provide our students with the most up to date information on products, procedures, and trends in the automotive refinish market. This information is designed to enhance the student's productivity, knowledge, and future success.

A safety examination will be passed before any work is performed in the shop. Task lists will be given to each student and as the tasks are completed they will be checked off by the instructor.

The I-CAR (Inter Industry Conference on Auto Repair) course in Finish Matching and Detailing will be used extensively. It is the goal of this class to have the students leave with a pro level 1 certificate. This is a great plus in the job market as many shops are going I-CAR Certified.

A safety examination will be passed before any work is performed in the shop. Task lists will be given to each student and as the tasks are completed they will be checked off by the instructor.

Daily attendance is mandatory with all of your tolls and physical and mental attitude to be in a safe environment. The lab is designed to function like a collision repair shop.

Housekeeping is important for many reasons. If you use a tool, piece of equipment or material, you are expected to return it to its proper place by the end of the class period. By the end of the class time your station should be swept and organized before you leave.

Skills USA:

The skills USA contest is held in the beginning of the second semester. It will be held at the school, state. All winners will compete for nationals in Louisville, Kentucky.

Projects:

The lab skills developed and experience gained is similar to experience required for employment in an auto collision repair and refinish facility on a daily basis. Bench work or throw away projects will be used until the student competence is demonstrated at a level to justify working on larger projects or customer vehicles. Contract with other students or persons to have their work done at the college is prohibited. We are here to learn how to repair/refinish / vehicles parts. Salt Lake Community College is not a commercial production shop. The instructor will screen, select and assign work to the students based on their knowledge of the subject, skills and ability. SLCC parts department will screen and schedule outside work. A written job order and cost repair will be initiated before work is started and repairs/refinishing will be paid in full before the vehicle/part is delivered back to the client. Parts and other commodities may be ordered through the SLCC Parts Department. The following requirements are to be met before projects are started.

1. Cars must be licensed and insured.
2. Cost is materials plus a 30% up charge.
3. Work orders and schedule for all projects
4. Labor estimate (from estimation system) is required for all projects
5. Limited number of cars are to be parked in compound or lab. Cars parked in parking lot for longer than a week will be towed at owner's expense.
6. No collisions
7. No metal patches (this is a refinishing class., not a metal repair class)

Class Audit:

Students who audit the class can only take the Auto Collision Course once.

Course and Shop Policy:

You will be required to dress properly for safety reasons and to present yourself and this course with respect to all concerned.

1. Pants must be full length
2. Work shirts or shop coveralls are recommended
3. No open toe shoes allowed, safety shoes are recommended

You must safety equipment (PPE, Personal Protective Equipment) by the next class (prior to working in the lab). Your required tools from the tool lists are required by the second week of classes.

Class format: AR1100 and AR1111

We will utilize a balance of classroom based, multi-media presentations, interactive classroom discussions, and practical hands on experience.

Some classes will be provided by industry specialists in areas required by federal and local laws. Certificates of completion will be awarded.

Grading system:

Grading and evaluation will be based on assignments completed. You will have to demonstrate your knowledge and ability by positive performance and production. The task lists will provide you with the overall course requirements for completion and grade. Daily attendance is mandatory with all of your tools and the physical and mental attitude to do a good safe job in the lab. Excessive absents (3 days) and tardiness (3 days) will result in a grade adjustment. If you are not in class, you will not earn a high grade. Only the very top students can earn an "A" in theory class by scoring in the 90%-100% range on test scores and assignments.

Housekeeping is important for many reasons—if you use a tool or a piece of equipment, you are expected to return it to its proper place by end of the class period. Your work station will be swept and organized before the roll call at the end of the day. If you have any questions regarding tool or equipment location, ask for help or for answers. Your help and support is asked and needed to show a positive image of our facilities. Night classes and industry seminars are conducted 2-3 times a week, you will be invited to attend many of these but not all of them. (Please adhere to our clothing requirements.)

Evaluation techniques will be utilized throughout our classes to monitor not only the learning process of the students but to provide immediate feedback to the instructor relative to their performance.

Our hope is to provide our students with the best possible learning experience.

General grading system:

- A (90-100%)
- B (80-89%)
- C (70-79%)
- D (60-69%)
- E (0-59%)
- I Incomplete

Course content:

Upon completion of this course, the student will have acquired the knowledge and necessary skills of proper procedures and practices in handling and maintenance of the equipment, use of materials, and proper surface preparation of various substrates for refinishing. Selection and application of under coats and top coats products for automotive refinishing will be covered in detail. Basic color mixing and matching colors. Competency at the level of industry standards will be acquired.

Emergency evacuation procedures:

In case of emergency situation, elevators should NOT be used as emergency exits. All class members are to meet in the parking area of the ATC building during lab hours. During theory class hours they are to meet on the north east side

of the ATC building. We will then verify that all students are accounted for and unharmed. Please inform your instructor if you require any assistance or accommodation during an evacuation. The instructor will identify several students in the class that are willing to provide assistance. If you have a disability, please notify your instructor and fill out an evacuation information form. If you have a disability, needing accommodations, please contact the disability resource center in cc008, phone 801-957-4659

Course outline:

Unit 1 orientation

- A. School and shop policies
- B. Refinishing course content
- C. Safety-including hazardous material usage

Unit 2 equipment

- A. Spray gun variations
- B. Selection
- C. Spray gun adjustments
- D. Spray application technique

Unit 3. Air supply equipment

- A. air compressor types and maintenance
- B. related equipment for air supply
- C. spray booth and prep station equipment and maintenance

Unit 4 equipment and options of sanding procedures

- A. proper procedures selection used for preparation
- B. selection and use of various abrasive used in various processes

Unit 5 preparation cleaning

- A. materials used
- B. methods of use and preparing surfaces

Unit 6 masking

- A. materials used
- B. technique for application depending on repair and refinish conditions

Unit 7 pretreatment materials and use

- A. metal conditioners
- B. etching primers, etc.

Unit 8 undercoats- selection and procedures used in application

- A. primer
- B. primer surface
- C. primer sealers

D. adhesion promoter

Unit 9 top coat selection and procedures used in application

- A. single stage finishes
- B. 2 stage finishes
- C. Water borne

Unit 10 history of paint past present and future

- A. Oem finishes and application methods
- B. Refinish materials and application procedures
- C. Mixing and matching colors

Terms and words to know

These terms and words are commonly used in the industry and should be understood and known by the students.

1. VOC's
2. HVLP
3. CFM
4. PSI
5. SDS(MSDS)
6. Value, Hue, Chroma
7. Galvanic corrosion
8. RFU
9. Base Coat
10. Clear Coat
11. Single stage
12. Two stage
13. Tri coat
14. Epoxy primer
15. NIOSH
16. Corrosion Protection
17. Matamerism

Student Tool and Supply List

I-CAR CD'S: The following lists of CD's are to be provided to each student.

- WKR01- Hazardous Materials, Personal Safety, and Refinish Safety
- REF01- Refinishing Equipment and VOC Regulations
- REF02-Surface Preparation and Masking
- REF03- Color Theory, Application, Tinting and Blending
- REF04-Detailing
- TRM01-Trim and Hardware
- CPS01-Corrosion Protection

Tools & Supplies: These tools and supplies are required for your safety protection and your performance in the lab

<u>Quantity</u>	<u>Description</u>
1 pair	Safety glasses with side shields
1 pair	Splash goggles
1 pair	Cotton gloves
1 pair	Solvent resistant gloves
1 set	Hearing protection
1 set	Painting respirator, dual cartridge NIOSH approved (one with replacement Cartridges or disposable respirator unit)
1	Disposable spray suit
1 set	Plastic filler applicators-assorted sizes
1	Filer mixing board
1	Sanding blocks-rubber 2 ¾ X 5 (3M, Soft, Med, Hard)
1	Assorted sanding blocks
1 Box	Disposable plastic gloves
1 pkg	Disposable filter mask
1 set	Fastener and Molding Remover Set
1	Loose leaf 3 ring note book
1	Pad lock/combination lock for your personal locker

Second Semester Optional equipment: it may be to the students' advantage to purchase the following equipment as it may be required upon employment in our industry.

1. 6' dual action sander (DA)
2. Primer spray gun
3. Base coat spray gun