Course Number:          Instructor: Jeff Owen
OCAS Code:             Phone Number: 580.327.0344
Course Length:         Career Cluster: Transportation, Distribution, & Logistics
Pre-requisite:         Career Pathway: Automotive Collision Repair
Course Description:   Career Major: Combination Collision Repair Technician, Refinishing Technician
Instructional Philosophy: The instructor will provide not only technical training in the Auto Collision Technology area but also soft-skills training in an effort to provide training and services needed for students to succeed in the workplace.
Course Goals: Upon successful completion of this course, the student will be able to:

- Determine type and color of paint already on vehicle by manufacturer's vehicle information label.
- Shake, stir, reduce, catalyze/activate, and strain paint according to manufacturer's procedures.
- Apply finish using appropriate spray techniques (gun arc, gun angle, gun distance, gun speed, and spray pattern overlap) for the finish being applied.
- Apply selected product on test and let-down panel in accordance with manufacturer's recommendations; check for color match.
- Apply single stage topcoat for refinishing.
- Apply basecoat/clearcoat for panel blending or partial refinishing.
- Apply basecoat/clearcoat for overall refinishing.
- Denib, buff, and polish finishes where necessary.
- Identify the types of rigid, semi-rigid or flexible plastic parts to be refinished; determine the materials, preparation, and refinishing procedures.
- Refinish rigid, semi-rigid and flexible plastic parts.
- Clean, condition and refinish vinyl (e.g. upholstery, dashes, and tops).
- Apply multi-stage (tricoat) coats for panel blending or overall refinishing.
- Identify and mix paint using a formula.
- Identify poor hiding colors; determine necessary action.
- Tint color using formula to achieve a blendable match.
- Identify alternative color formula to achieve a blendable match.
- Identify blistering (raising of the paint surface); determine the cause(s) and correct the condition.
- Identify blushing (milky or hazy formation); determine the cause(s) and correct the condition.
• Identify a dry spray appearance in the paint surface; determine the cause(s) and correct the condition.
• Identify the presence of fish-eyes (crater-like openings) in the finish; determine the cause(s) and correct the condition.
• Identify lifting; determine the cause(s) and correct the condition.
• Identify clouding (mottling and streaking in metallic finishes); determine the cause(s) and correct the condition.
• Identify orange peel; determine the cause(s) and correct the condition.
• Identify overspray; determine the cause(s) and correct the condition.
• Identify solvent popping in freshly painted surface; determine the cause(s) and correct the condition.
• Identify sags and runs in paint surface; determine the cause(s) and correct the condition.
• Identify sanding marks (sandscratch swelling); determine the cause(s) and correct the condition.
• Identify contour mapping (shrinking and splitting) while finish is drying; determine the cause(s) and correct the condition.
• Identify color difference (off-shade); determine the cause(s) and correct the condition.
• Identify tape tracking; determine the cause(s) and correct the condition.
• Identify low gloss condition; determine the cause(s) and correct the condition.
• Identify poor adhesion; determine the cause(s) and correct the condition.
• Identify paint cracking (crow'sfeet or line-checking, micro-checking, etc.); determine the cause(s) and correct the condition.
• Identify rust spots; determine the cause(s) and correct the condition.
• Identify dirt or dust in the paint surface; determine the cause(s) and correct the condition.
• Identify water spotting; determine the cause(s) and correct the condition.
• Identify finish damage caused by bird droppings, tree sap, and other natural causes; correct the condition.
• Identify finish damage caused by airborne contaminants (acids, soot, and other industrial-related causes); correct the condition.
• Identify die-back conditions (dulling of the paint film showing haziness); determine the cause(s) and correct the condition.
• Identify chalking (oxidation); determine the cause(s) and correct the condition.
• Identify bleed-through (staining); determine the cause(s) and correct the condition.
• Identify pin-holing; determine the cause(s) and correct the condition.
• Identify buffing-related imperfections (swirl marks, wheel burns); correct the condition.
• Identify pigment flotation (color change through film build); determine the cause(s) and correct the condition.
• Measure mil thickness.

Major Course Projects:

Students are allowed to work on their own projects as well as live-work projects as approved by instructor.

Students will compile a portfolio which includes classroom theory and activities as well as a summary of hands-on work in the shop. Students will include photographs of projects and live
work projects with descriptions for each photo.

**Project Outline:**
Students may begin working on projects as their skill level allows. All projects must be completed by the first of May. These projects will reinforce classroom theory instruction and will require the student to consult industry service information during the course of task performance.

**Instructional Delivery Plan:**
The instruction for this course will utilize various methods in an effort to promote and accommodate different learning styles including classroom lecture, classroom demonstrations, shop demonstrations, hands-on learning activities, classroom discussion, interactive media, textbook, computer based learning activities, research projects, guest speakers, and student presentations. Students will be required to work independently as well as in teams. Assignments will require students to use academic skills in math, science, and language arts.

**Assessment Plan:**
Pass Safety Test with 100% accuracy.

Assessment Plan:
50% Performance of technical skills
45% Tests and written assignments
5% Academic Career Center (ACC)

**Grading Scale:**
- A 90-100 Exceeds expectations
- B 80-89 Meets industry standards and expectations
- C 70-79 Passing grade, but does not meet some standards
- D 60-69 Passing, but only meets the minimum standards
- F Below 60 Failing, does not meet minimum standards

**Alliance Credit Offered:**
OSU-IT

**Industry Alignments:**
ICAR

**End of Instruction Industry Assessment:**
Students will have to pass Safety Test at 100% accuracy and demonstrate safety practices.

**Industry Assessment:**
- Auto Body: Painting and Refinishing Technician - CTTC
- ASE: Collision Repair and Refinish Series – Painting and Refinishing
- NOCTI: Collision Repair and Refinishing Technology
- NATEF: Painting and Refinishing

**Resources:**
- I-CAR Worker Protection Curriculum
- SP2 – [http://www.sp2.org](http://www.sp2.org)

**Attachments:**
Student curriculum is available at [www.nwtech.edu/owen/](http://www.nwtech.edu/owen/)