Assessment: Course Four Column

Spring/Summer 2019

El Camino: Course SLOs (IND) - Auto Collision Repair and Painting

ECC: ACRP 2A:Basic Automotive Painting - Refinishing

Course SLOs	*Assessment Method Description*	*Results*	*Actions*
SLO #1 Mixing Primer - Students will be able to mix a given quantity of primer using the correct ratio and will be able to adjust, operate, and clean an HVLP primer gun. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2014-15 (Spring 2015), 2018-19 (Spring 2019), 2021-22 (Spring 2022) **Input Date:** 11/29/2013 **Comments::** Offered once every 3 years	**Performance -** Student will be assigned two metal panels, one flat and one bent to imitate the outside of a car door. The student must sand and clean the panels ('prep for paint'). Student will then receive a graduated mixing cup, stir stick, and primer P-sheet (product instruction sheet) and will be given access to the class primer, hardener and reducer for mixing. Student will be able to (1) mix the correct amount of primer using the mixing ratio found in the P-sheet, (2) adjust his gun to spray the primer, (3) spray the primer on the panels evenly, then (4) disassemble and properly clean his spray gun. **Standard and Target for Success:** It is expected that 95% of students will be able to perform all 4 tasks correctly. It is hoped that 100% of students will be able to perform 3 of the 4 tasks correctly. 'Correctly' is defined as: (1) student finds the ratio in the P-sheet, uses the mixing cup to pour	**Semester and Year Assessment Conducted:** 2018-19 (Spring 2019) **Standard Met? :** Standard Not Met 28 students were enrolled in the class, 25 completed this task. 100% of the students who participated were able to perform all 4 steps of the assessment with success. 89% of all enrolled students performed all 4 steps of the assessment with success. Students had two objects to prime (flat panel and 3-dimensional object) and had already completed a hands-on spray gun adjustment quiz to learn how to adjust and clean their own guns. Many students have taken more than one advanced class and are very familiar with spraying primer. I fully expected everyone who participated to succeed. Since the SLO is worded that "95% of students" instead of "95% of students who complete the tasks", I must report we did not meet our target. (03/14/2019) **% of Success for this SLO:** 95 **Faculty Assessment Leader:** Patricia Fairchild **Faculty Contributing to Assessment:** Patricia Fairchild	**Action:** Reword assessment target description to exclude non-participating students (09/27/2020) **Action Category:** Teaching Strategies
		Semester and Year Assessment Conducted: 2014-15 (Spring 2015) **Standard Met? :** Standard Met	**Action:** Do not use alkyd primer for panels again. When applied too thick it doesn't dry. Use

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	the correct amount (approx. 4 oz) in the right ratio (2) student adjusts the gun to spray in an oblong pattern with enough air pressure to properly atomize the primer (3) student uses a 50% overlap to evenly coat the panel with no transparent spots, runs, sags, fish eyes or heavy spray (4) student disassembles, thoroughly cleans and reassembles his spray gun so that it will work properly the next time he uses it	We achieved 100% success in all three areas of testing. 100% of students were able to correctly mix the simulated primer, hardener and reducer in a 4:1:1 ratio. 99% of students participated, one student absent who did not make up the assignment) were able to apply multiple coats of primer to their panels using a spray gun with good overlap technique and travel speed. 100% of students were able to correctly achieve a proper oblong spray pattern. Although the tasks were not graded for quality, the majority of these beginning students produced quality results. (10/08/2015) **Faculty Assessment Leader:** Patricia Fairchild	urethane or polyester primer instead. Make sure toolroom provides this. (10/08/2016) **Action Category:** Program/College Support
SLO #2 Panel Prep and Painting - Students will be able to differentiate between full panel repairs, spot repairs, and blend panels and be able to prepare each for refinishing using the correct tools and procedures. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2018-19 (Spring 2019), 2021-22 (Spring 2022) **Input Date:** 11/29/2013 **Comments::** Offered once every 3 years	**Multiple Assessments -** Differentiation between the 3 types of panel repairs will be an embedded test question in the final exam. An illustration of a damaged panel with adjacent panels will be shown. The student must correctly identify if the panel will need to be completely refinished (full panel), spot refinished (spot repair) or is simply a blend panel. The other part of this assessment will be a performance exam. The student must prepare a given panel for refinishing. He must (1) determine which type of repair will be performed and (2) use the correct tools and abrasive grits to complete the prep work. **Standard and Target for Success:** It is expected that 90% of students will get the embedded test question correct. It is expected that 90% of students will be able to determine the type of prep work needed on the	**Semester and Year Assessment Conducted:** 2018-19 (Spring 2019) **Standard Met? :** Standard Not Met 27 students were enrolled in this class at the time of the assessment, 24 completed both assessment tasks. 100% of students who participated turned in successful results. 89% of all enrolled students met the target for success. 24 students were able to differentiate between the different types of panel repairs and determine what kind of panel prep was necessary for refinishing when they were shown different damage examples on a vehicle in the lab. This number dropped to 17 on a later written test that used black and white photos. The two questions used were multiple choice. 24 students performed the sanding prep steps successfully. 3 students did not participate. (05/02/2019) **% of Success for this SLO:** 90 **Faculty Assessment Leader:** Patricia Fairchild **Faculty Contributing to Assessment:** Patricia Fairchild	**Action:** Encourage better results on written tests by using large color images. These could be laminated and returned after the test to save money. Colorful posters hanging in the lab and classroom that show tools and procedures will also help students visualize, understand and remember the processes they are being asked to perform. (09/27/2020) **Action Category:** Program/College Support

Course SLOs	Assessment Method Description	Results	Actions
	panel and that 95% of students will be able to correctly prepare the panel for refinishing.		
SLO #3 Gun Cleaning & VOC Tracking - Students will be able to thoroughly tear down a paint spray gun, clean all parts and surfaces using environmentally correct techniques and chemicals, and reassemble. Students will also be able to monitor the type and amount of liquid material used and record the data in the VOC (volatile organic compound) tracking log book. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2018-19 (Spring 2019), 2021-22 (Spring 2022) **Input Date:** 11/29/2013 **Comments::** Offered once every 3 years	**Multiple Assessments -** The first part of the assessment will be a performance exam. Students will be assigned two or more panels to be painted with various types of paints during the semester. Paints include single stage, solvent-base, water-base, water-borne, tri-coats and clearcoats. Students will be responsible for cleaning their own guns and for keeping them in proper working condition. This will include complete disassembly, selection of the correct cleaning chemical, and reassembly. The second part of the assessment involves a journal/log. The student will be responsible for keeping a log sheet of all chemicals and quantities sprayed throughout the semester. This tracking sheet includes research and recording of the VOC content of the various chemicals. **Standard and Target for Success:** It is expected that 95% of students will still have a usable spray gun at the end of the semester and that 80% will be able to correctly fill in and maintain a VOC tracking sheet. 'Usable' is defined as a gun that has all of its parts including air pressure regulator with gauge, can achieve a properly atomized oblong spray pattern, and does not leak. Successful completion of a VOC tracking sheet means that the	**Semester and Year Assessment Conducted:** 2018-19 (Spring 2019) **Standard Met? :** Standard Not Met 27 students were enrolled at the time of the assessment. 21 completed both parts of the assessment. 96% of students (26/27) were able to maintain their guns in proper working order throughout the semester. The 27th student purchased a very inexpensive gun and threw it away rather than clean it after the last project. This standard was met. 78% of students (21/27) successfully tracked their VOC numbers for the chemicals used. Four students did not record data properly, Two did not record any data at all. This standard was not met. VOC tracking data is required by the state for body shops and educational facilities. ACRP started using a digital tracking system for its donated BASF paints, which the students learned quickly. But for primer and the non-BASF paints they purchased elsewhere, they had to record the information by hand in a 3-ring binder. It was easy to forget to do this, and not at all easy to find the info to write down. Add to this poor handwriting and the recording agency would not even accept our handwritten sheets. ACRP faculty is working to create simpler checkbox-type sheets to use instead. A digital system was suggested by building manager which sounds great but no one in ACRP knows how to build one. (05/16/2019) **% of Success for this SLO:** 95 **Faculty Assessment Leader:** Patricia Fairchild **Faculty Contributing to Assessment:** Patricia Fairchild	**Action:** Create or obtain a digital system for tracking all chemical VOCs used in ACRP. The best system might be a computer next to the toolroom window so students can look up paint formulas, print labels, pay the toolroom and track VOCs all in one place. The ideal system would also allow students to check out tools digitally and allow ACRP to track tool usage, loss and damage. An app they could use on their phones that does all this so and lets them study the tools and chemicals at home would be next-level amazing. (09/27/2021) **Action Category:** Program/College Support

Course SLOs	Assessment Method Description	Results	Actions
	student has correctly created an entry for each chemical sprayed including: date, painter's name, material name, hardener and reducer names, mixing ratio, VOC content and amount sprayed.		

ECC: ACRP 4B:Beginning Automotive Collision Repair II

Course SLOs	*Assessment Method Description*	*Results*	*Actions*
SLO #1 I-CAR MIG Welds - Students will be able to set up and use a MIG welder properly and safely to perform three welds (lap, plug, reinforced butt) on automotive gauge steel according to I-CAR standards. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2017-18 (Fall 2017), 2018-19 (Spring 2019), 2020-21 (Spring 2021) **Input Date:** 11/29/2013 **Comments::** Offered once every 2 years	**Performance -** Students will be observed setting up MIG welding equipment along with tools needed to performing a lap, plug and reinforced butt weld in the lab using automotive gauge steel and in actual automotive applications. **Standard and Target for Success:** It is expected that 70% of the students will be able to perform the desired task at varied levels. The measure of success is in direct correlation with I-CAR standards for quality, penetration and strength.	**Semester and Year Assessment Conducted:** 2018-19 (Spring 2019) **Standard Met? :** Standard Met Of the 10 students assessed, 75% completed the task successfully. 25% did not complete the task successfully. The breakdown of performance is as follows: Students assessed 8 Achieved 3(Excellent) 1 Achieved 2(Satisfactory) Based on these results, students who successfully completed this task did so safely and accurately without extra assistance. The student not completing the task successfully demonstrated the need for some form of assistance from the instructor. (07/22/2019) **% of Success for this SLO:** 90 **Faculty Assessment Leader:** Brent Kooiman **Faculty Contributing to Assessment:** Brent Kooiman	**Action:** The instructor will create more in class activities and work closer with students who received unsatisfactory to ensure that they understand the material presented to them. (07/22/2019) **Action Category:** Teaching Strategies
		Semester and Year Assessment Conducted: 2017-18 (Fall 2017) **Standard Met? :** Standard Met 70% of the students successfully performed the desired welding tasks by demonstrating I-CAR quality welds on automotive gauge steel and actual automotive applications. (02/08/2018) **Faculty Assessment Leader:** Chuck Owens	**Action:** The industry is ever evolving with new technological advancements and repair methodologies. As instructors and industry professionals we have to stay current and trained up. Continual training and education is a must. (02/07/2020) **Action Category:** Teaching Strategies
SLO #2 Large Dent Removal - Students will be able to use dent removal equipment such as the Maxi welder or stud welder and Porto Power to remove a large dent from an automotive panel with no rear access. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2017-	**Performance -** Students were observed gathering the tools needed and performing large panel dent removal using the stud welder, Maxi Welder and Porta Power equipment. **Standard and Target for Success:** It is expected that 70% of the students will be able to perform the desired task at varied levels. The measure of	**Semester and Year Assessment Conducted:** 2018-19 (Spring 2019) **Standard Met? :** Standard Met Of the 10 students assessed, 100% completed the task successfully. The breakdown of performance is as follows: Students assessed 10 Achieved(Excellent) (07/22/2019) **% of Success for this SLO:** 100 **Faculty Assessment Leader:** Brent Kooiman	**Action:** No actions need to be taken at this time. (07/22/2019) **Action Category:** Teaching Strategies

Course SLOs	Assessment Method Description	Results	Actions
18 (Fall 2017), 2018-19 (Spring 2019), 2020-21 (Spring 2021) **Input Date:** 11/29/2013 **Comments::** Offered once every 2 years	success is in direct correlation to industry standards for quality and finish.	**Faculty Contributing to Assessment:** Brent Kooiman	
		Semester and Year Assessment Conducted: 2017-18 (Fall 2017) **Standard Met? :** Standard Met Using the Maxi Welder, Stud Welder, and or Porta Power for applicable situations, 85% of students successfully straightened and finished large panel repairs. Students performed the desired tasks on vehicles being worked on in the lab/shop either on their own or through class collaboration and instructor guidance. (02/08/2018) **Faculty Assessment Leader:** Chuck Owens	**Action:** The industry is ever evolving with new technological advancements and repair methodologies. As instructors and industry professionals we have to stay current and trained up. Continual training and education is a must. (02/07/2020) **Action Category:** Teaching Strategies
SLO #3 Vehicle Disassembly Procedures - Students will be able to read a damage estimate and systematically tear down a panel for repair and refinish according to the repairs required by the estimate. Students will also be able to properly store and label the removed parts for later reassembly. **Course SLO Status:** Active **Course SLO Assessment Cycle:** 2017-18 (Fall 2017), 2018-19 (Spring 2019), 2020-21 (Spring 2021) **Input Date:** 11/29/2013 **Comments::** Offered once every 2 years	**Performance -** Students will be observed reading a damage estimate, gather the required tools and equipment to perform a systematic teardown for repair/refinishing and labeling parts for reinstallation. **Standard and Target for Success:** It is expected that 70% of the students will be able to perform the desired task at varied levels. The measure of success is in direct correlation with industry standards of aptitude, planning and organization.	**Semester and Year Assessment Conducted:** 2018-19 (Spring 2019) **Standard Met? :** Standard Met Of the 10 students assessed, 100% completed the task successfully. The breakdown of performance is as follows: Students assessed 10 Achieved (Excellent) (07/22/2019) **% of Success for this SLO:** 100 **Faculty Assessment Leader:** Brent Kooiman **Faculty Contributing to Assessment:** Brent Kooiman	**Action:** No action is required at this time. (07/22/2019) **Action Category:** Teaching Strategies
		Semester and Year Assessment Conducted: 2017-18 (Fall 2017) **Standard Met? :** Standard Met Students were observed reading a damage estimate, gather the required tools and equipment to perform a systematic teardown for repair/refinishing and labeling parts for reinstallation. 90% of the students successfully perform the desired task to industry standards of aptitude, planning and organization. (02/08/2018) **Faculty Assessment Leader:** Chuck Owens	**Action:** The industry is ever evolving with new technological advancements and repair methodologies. As instructors and industry professionals we have to stay current and trained up. Continual training and education is a must. (02/07/2020) **Action Category:** Teaching Strategies