



ACADEMIC PERIODIC PROGRAM REVIEW

Date: 3/22/21

Name of degree(s) and/or certificate(s): Automotive Refinishing Certificate, Automotive Bodywork Certificate, Automotive Estimating Certificate

Department: ACT –Automotive Collision Technology

Department Program Director or Lead: Richie Mitten

Review participant's names and affiliations: Richie Mitten (lead instructor), Ed Durphy (supplemental instructor)

[1st Annual Update Date:](#) Click here to enter text.

[2nd Annual Update Date:](#) Click here to enter text.

[3rd Annual Update Date:](#) Click here to enter text.

I. Program Elements and Resources

How are you achieving your plan and purpose? How effectively are elements and resources being used?

A. BUDGET

1. Provide a summary of total budget revenues and program expenditures (salaries, benefits, operating expenses) for the last 2-3 years as available (Appendix C). Describe any significant increases or decreases in the cost of the program over the review period, noting factors that may be influencing costs. Include copies of annual budgets, as available. The ACT budget was cut this year due to covid and the number of students enrolled.
2. How are decisions about program funding and expenditures made? Describe your department budget process and engagement of faculty in that process. Current body shop trends are analyzed by order of importance and discussed between Jason Gee and myself. I don't feel that the current department budget has any rhyme or reason concerning the monetary value.

B. FACULTY

1. Does the department assess and plan for the need for future faculty hires? What kind of challenges has the department faced in terms of recruitment, hiring, and retention? Describe the department's projected faculty hiring needs within the next four years. Reflecting on the teaching contributions, scholarship, service, and areas of expertise of the current faculty how well are the overall needs of the program being met? The ACT program has had an extra supplemental instructor for the past 4 years. It was difficult to find quality instructors that were not already employed in the industry. The addition of extra faculty has helped with student individual needs and lab environment demands. There is a need for faculty certification in industry needs to instruct up to date information.

C. FACILITIES, EQUIPMENT, AND INFORMATION RESOURCES

1. Facilities

Describe any specialized facilities of the program. Do these facilities meet the current needs of the program? Describe any proposed changes and improvements to resources. The ACT facilities were updated/upgraded 4-5 years ago. The current air supply system is getting cleaned and new filters installed this month. The spray booth used for painting certificate is outdated and is receiving some minor repairs this month as well. Being right next door to the maintenance they take good care of the workings around the ACT lab.

2. Equipment, Technology, and Information Resources

- a. Does the current equipment and technology meet program needs? What plans or funds exist for obtaining new resources, maintenance, repair, and replacement? Provide a ranked list of high-priority equipment needs. The ACT programs first Advisory Committee Meeting was held last month, some community Body shop members stated some new industry trends that the college should be addressing so a meeting is going to be scheduled to determine exactly what tools and pricing are going to be needed. At current timing all equipment and technology are up to date for the certificates and courses offered.

- b. Describe key information and technology resources — books, journals, databases, etc. — used by the program. Do the resources meet program needs? Provide a ranked list of high-priority information-resource needs. The same textbook (only 1) has been used since the beginning of the program 14 years ago. The textbook works and is easy to navigate so have not ever looked at a different resource. The ACT program is researching an online procedures program that is required to repair newer vehicles, the ACT program plans to start implementing this type of online digital information starting summer of 21 courses.
- c. What is the role of the library in relation to your program? To what extent does your faculty interface with library faculty, CELT, IT? The ACT students have very little to no relations with the library, CELT (didn't even know MCC still had CELT), and the lead instructor usually deals with IT issues.

II. Program Effectiveness

How Well Do You Achieve Your Plan and Purpose?

A. STUDENT LEARNING ASSESSMENT

1. Program Learning Outcomes

- a. State the Program Learning Outcomes (PLOs) as they exist on the degree Guided Pathway (Appendix A). Explain any changes that have been made during the last four years. Beyond the catalog and Guided Pathway, how are these expectations communicated to students? Since 2018 the ACT program has been implementing a different program compared to 2017. In 2018 the ACT program moved away from a strictly CBE format of delivery to a more revised Hybrid program. the prupose was to help students move through the program quicker to start becoming employable and making money sooner and making it less expensive to take. Nothing has changed with the PLOs since 2018, they are in line and working in a great manner for the students. The ACT program has also seen a rise in enrollment as well.
- b. Program Learning Outcome alignment to General Education Philosophies: Review the General Education Philosophies alignment to the PLOs. Are there any alignments that need to be addressed or modified? Everything related to PLOs is in order and working, no concerns at this time.
- c. Provide an overview of your program-level assessment efforts (see Program Outcome Map to determine where mastery and assessment take place) during the last four years. How comprehensive were your assessment efforts? Can you state with confidence that your graduates are achieving the Program Learning Outcomes at the expected levels? Over the past 18 months the ACT program has been building a solid documentation process to visibly measure student's outcomes. Each student is expected to physically be able to accomplish each outcome being a trades class and all students are accomplishing these goals. Documenting in a rubric is the next goal.
- d. Review degree Program Outcome Map (Appendix B). If one has not been created. Create one from the template in Schoology with guidance from the Director of Assessment and Curriculum and attach as Appendix B. Analyze any patterns, imbalances, or gaps. Evaluate the PLOs in the context of the curriculum, assessment planning, and the student experience. Detail specific revisions that can be/have been made to strengthen your Program Learning Outcomes? All PLO's are current and no issues found.

2. Assessment Efforts

Describe your Cycle of Learning assessment efforts. Include the Impact on Student Learning and Action plan of the last 3 Cycle of Learning Assessment reports for each in Appendix D. (Copies can be found in the Schoology Curriculum and Assessment group resources). Generally consider the following questions:

- Which General Education Philosophy(s) did the assessments address? All philosophies were addressed.
- When and where in the curriculum did the assessment take place? Most of the assessment took place towards the second half of the curriculum.
- What form did the assessment take? Physical (hands-on) lab environment

- What were the results of the assessment? Did students meet expected levels of performance? Students were meeting the levels expected, results did show weak points of delivery that were addressed.
- How were the results used to improve the program? The weak areas of delivery information were reconfigured to meet a higher quality for the students.

3. Writing Across the Curriculum

Describe your Writing Across the Curriculum assessment efforts. Include your WAC data worksheets in Appendix E. (located in the Schoology Curriculum and Assessment group resources). In each case, consider the following questions:

- When and where in the curriculum did the assessment take place? Towards the end of the course
- What form did the assessment take (portfolio, collection of smaller writing samples, large essay/term paper)? Hands-on lab environment
- What were the results of the assessment(s)? Did students meet expected levels of performance? All students were at passing level (80% or higher) of performance.
- How were the results used to improve the program? The results verified that the curriculum and rubric were up to date and working as they should.
- Will the Identified course change based on your analysis? No changes are needed at this time.

4. Assessment Planning

- a. Draft or revise the 4-year program assessment plan, drawing on the Program SLOs and their mapping to the curricula on the Program Outcome Map. Include this plan in Appendix F. If you don't have a current plan, contact the Director of Assessment and Curriculum for a template. Will the draft plan allow you to state with confidence that your graduates are achieving the Program SLOs at the expected levels? The goal for the next 4 years is to improve the digital side of the collision program, digital estimates, researching vehicle repair procedures, electronic measuring of damaged vehicles, and pre/post scanning of damaged vehicles. At this time I feel with confidence that the students learning outcomes are where they should be for student employability but with the industry constantly changing there are a few things to add for up to date learning.

B. CURRICULUM

1. Summarize the program degree requirements as published in the current catalog. What is the relationship between major and GE courses? Are there any free or defined electives? Are courses reliably offered in the required/recommended sequences? If not, why not? How does the overall curriculum compare with those of colleges in Arizona? The ACT program underwent a complete restructure since the PPR was done. The ACT program is self-sufficient and does not require other courses outside the program for students to receive the various certificates. All courses are offered in the correct sequence and have had no scheduling issues in the past 3 years. The catalog directly reflects what is being offered, when, and how.
2. Describe any significant changes made to the curriculum since the previous program review — delivery, mode, prerequisites, structure, etc. Have you adopted any new practices in course design such as “flipping,” or the conversion of traditional face-to-face courses to online or hybrid modes? Have any of these changes been successful? How do you know? Significant changes have been made since the last PPR, the entire ACT program was restructured to better accommodate students and their time.

The new current 3 cert 12 month program has been a huge success for students. This new program implemented starting points at the beginning of each of the 3 semesters and utilizes an online delivery method for some theory, book work, worksheets and quizzes. The higher enrollment numbers and job placement of students has gone up in the past 3 years.

3. What process does the department use to revise and update curricular content? How does the department assure the currency of course documents, e.g., proposals, syllabi, and outlines? How do you provide for course alignment of the same course taught by multiple instructors? We currently only have 1 instructor teaching all ACT courses. Frequent visits to local Collision Shops and open communications with employees in shops assures that the curriculum being taught at MCC is up to date. With the new implementation of an annual advisory board meeting we will be able to use allot of that information and discussion to further improve the ACT program.

C. STUDENT SUCCESS: ENROLLMENT, PERSISTENCE, AND GRADUATION

1. Enrollment

Analyze trends in enrollment data for each of the last four academic years (Appendix C). How does the student enrollment in your program compare to college enrollment? How does the quality of students enrolled (in looking at GPA, SAT, placement exam scores) compare to that of the college? The ACT program enrollment obviously fluctuates with MCCs enrollment numbers every year. The Collision program usually maintains a decent number of students due to the fact it is a trade they are learning and the program and its courses are not reliant on other GE courses, so the student does not have to worry about successfully completing other non-relevant courses to enroll or become successful in the ACT program.

2. Fail Rates

Do you have any courses that have high fail rates (Ds, Fs, and Ws > 10%)? List courses and supporting data. Have you explored the reasons and possible solutions to improve student success? Over the past 11 years of teaching I have corrected and changed curriculum to better instruct, deliver, and retain information for student success. All current courses are manageable, straight forward, and has almost a zero fail rate with students.

D. STUDENT ENGAGEMENT AND SATISFACTION

1. How are students engaged in the program review process (e.g. do reviewers have the opportunity to meet with students, is there a student review team, etc.)? The lead instructor and the supplemental instructor review each student at the end of each course. Strengths and weaknesses are pointed out and a plan is developed to aid students in correcting issues and faults. At this time there is not a student review team.
2. In what ways does the department engage students about their experience in the program or involve them in the development of the program? Are students involved in the operations and/or policy development for the department (e.g., committee membership, other formal and informal input)? What has been learned from student input? At the end of each week, an open round table is presented to each student, they are required to verbally discuss the main thing they learned that week, and add one thing they would change. If the same concern comes up with multiple students then the ACT faculty reviews

and discuss any changes that may need to be made. Most or all students like the way the program flows and is delivered.

3. How satisfied are students with their experience of the curriculum, faculty, learning resources and environment, and administration? Describe methods used to collect student input such as focus groups, surveys, etc. Weekly open round table discussions are used to gather this information. The fluidity of the program is most students really like, its straight forward and each course is laid out the same so there is a constant with each course. The only major complaints received by students is the information they receive from MCC from others not related to the program.
4. Co-Curriculum
Describe any significant co-curricular opportunities for students in the major. How do these opportunities support student learning in the curriculum? None available at this time.

E. GRADUATE SUCCESS

1. Recent Graduates
 - a. Describe the most recent program-level results of the completion rate (Appendix C). Consider the numbers and percentages of graduates employed full/part-time, seeking/not seeking employment, or transferred to the universities, as well as other information about their jobs or schools. How successful are students in obtaining jobs or university transfer after completion of their degree? The current ACT program has had a 100% successful completion rate the past 4 years. The new scheduling and delivery method have really helped students become more successful in their learning. Our area experienced a need for collision employees 3 years ago, then due to COVID19 the industry was not thriving as it was before the pandemic. MCCs auto collision program is the local hub for 90% of the body shops looking for skilled technicians. Most years the ACT program has 50-70% job placement out of the program into an auto collision shop or a related trade.
 - b. Describe any other feedback from graduates or measures of graduate success used by the department, e.g., the results of professional exams, certification/ licensing/ registration rates, and numbers of graduate degrees awarded. What do these measures suggest about the program and its graduates? There has been allot of recent talk in the ACT program regarding outside collision certification. A national known certification source ICAR, has been mentioned that some graduates feel is important but not necessary to the success of students as the complete the ACT program. Lack of these certifications is not affecting job placement at this time.
 - c. Describe the results of any alumni surveys from the last four years. To what extent do respondents report that their experience of the program has helped them to succeed in their personal and professional lives? I have not read or seen any documented alumni surveys related to ACT program.
 - d. Describe any other measures used to obtain feedback from alumni. What do these measures suggest about the program and its graduates? All ACT students have the instructors direct contact info and the instructors are usually readily available at all times, helping with assignments, giving advice to students doing activities related to the course, and help with seeking jobs and their employment after MCC.
2. Employers

- a. Describe the results of any community employers' feedback. What does their feedback suggest about graduate success in terms of Program SLO achievement, industry readiness, employer values, salary scales, etc.? The ACT recently had its first Advisory Committee meeting, it was brought to the programs attention from a local body shop manager that MCC needed to update its vehicle data and procedure information. It was also suggested that some current training take place for instructors to update knowledge delivered to students is current, correct, and follows newer vehicle repair procedures.
- b. Describe any other measures used to obtain feedback from employers. What do these measures suggest about the program and its graduates? Local employers are still seeking MCC graduates but there has been a lack in communication with the local shops in the past 4 years. With the implement of Kirk Lacy at the college now I feel that the ACT program will make its strong local connections again, helping both successful students and program development. As stated earlier the building of a successful Advisory Committee is one of the program top goals right now, and will use this method to gain most of the local employer information needed to keep the ACT program strong and desireable.

F. S.W.O.T ANALYSIS

After assembling an Advisory Committee consisting of department resident faculty, associate faculty, non-discipline faculty, student, alumni, academic support staff, community/industry members (if applicable), and faculty from departments in which your courses feed into(if applicable), answer the following questions:

1. What are the strengths of your program according to advisory committee members? The hands on or lab portions and the variety of skills pertaining to auto collision that are covered over the period of a year.
2. What are the weaknesses of your program according to the advisory committee members? Up to date vehicle information.
3. What opportunities exist according to the advisory committee members? There are allot of jobs available
4. What threats exist for your program according to the advisory committee members? The quickly changing collision industry, repairing new vehicles is completely different than 10 years ago.

III. Future Trends and Capacity

How are current and future trends being taken into account by the program?

A. FUTURE OF THE FIELD AND CAREER OPPORTUNITIES

How is the program meeting the current and potential future needs and trends in the labor market, industry, and society? What is the bureau of labor statistics (as well as other sources) predicting? What other new areas/fields do you predict will be developing in the future related to your discipline? What will be the jobs of the future? The ACT program has recently started implementing an advisory committee, which has introduced new body shop trends to the program. We plan purchasing new digital online vehicle repair procedure information services. The need for trained Auto collision technicians is growing every year according to BLS and ICAR. Glass technicians is another field connected to auto collision that is seeing an increase in need for technicians. The collision industry (as with most) is moving towards a more technical electronic phase. Newer cars all need some kind of electronic repair or service in modern repairs.

B. PROGRAM CAPACITY

What is the program's capacity to educate more students? Are there adequate faculty, staff, facilities and other resources to meet the demand? If not, describe what additional resources are required. The ACT collision lab is large enough to accommodate more students, larger classes, more classes. Discussion has been in the works of expanding the program to different campuses as well. The last 12 months of COVID restrictions have definitely affected the ACT enrollment numbers.

C. FACULTY PROFESSIONAL DEVELOPMENT

1. What continuing education and/or professional development activities have program/unit members attended during the current cycle? I feel that professional development for instructors is not a huge priority with MCC. There is a lot of talk about PD but no real action is taken. Myself and my supplemental instructor are looking into becoming OSHA10 certified to instruct it and attending an up to date paint certification session.
2. How did this benefit your department and the College? Haven't done anything yet
3. What are the plans for continuing education and/or professional development in the upcoming cycle?
Hopefully with more of the nation opening back up after covid restrictions for the past year, we can start attending vehicle repair training sessions again.

IV. College Mission and Goals

What Are the Critical Issues? How Do They Impact the Department and Program?

A. COLLEGE MISSION AND VISION:

MISSION: MCC serves our communities, empowering students to succeed through innovative pathways and quality education.

VISION: Improving lives. Improving communities. Bridging possibility to purpose and prosperity.

1. How current and relevant is the mission and goals to your program? they are directly aligned with the ACT program
2. How do the college mission and goals shape the decisions and direction of the department and program? We help better students every day in each area stated in the mission and vision.

B. PREVIOUS PROGRAM GOALS

Briefly describe the results of the previous program review -issues identified, recommendations made, and goals. Describe significant achievements and progress made since the last program review. What proposed changes have not been made and for what reasons? Since the last program review we have shortened the length of the entire program, introduced a multiple certificate program and enriched the quality of the information given to the students, by utilizing a perfect balance of digital online delivery, in person lab demos, and up to date industry information.

V. Looking Forward

What Are Your Findings? What Issues Need to Be Addressed During the Next Four Years?

A. TAKING STOCK: SIGNIFICANT FINDINGS

Based on the discussion and analysis in this Program Review:

1. What are the strengths of the program? The hands on portion of the program which gets students the physical training needed to become employable and the direct relationships with local body shops.
2. What aspects of the program should be improved? Getting training for instructors. Modern repair methods are changing along with the modern automobile, current vehicle design and modern repair methods used in the current industry.

B. STRATEGIC THINKING

After reviewing this Program Review with your faculty:

What issues should be addressed by administration immediately? In the near future? An external nationally recognized certification for the students.

New program goals. Based on data, assessment, and curriculum analysis completed above, identify 2 or more Specific, Measurable, Attainable, Relevant, Timely (S.M.A.R.T) Goals, measurable outcomes, and

activities that you would anticipate resulting in improvements to the program in the next two years.

Setting **S M A R T** Goals

The research shows that specific and challenging goals lead to better performance (Locke, 1968). In this lesson we will be working on designing a plan and creating SMART goals to help us achieve a healthier lifestyle.



You goal should be as specific as possible and answer the questions: **What** is your goal? **How** often or how much? **Where** will it take place?



How will you measure your goal? Measurement will give you **specific feedback** and hold you accountable.



Goals should push you, but it is important that they are **achievable**. Are your goals attainable?



Is your **goal and timeframe realistic** for the goal you have established?



Do you have a **timeframe** listed in your SMART goal? This helps you be **accountable** and helps in **motivation**.

Complete the following table with your Program's ACTION PLAN, which must include a minimum of 3 goals

ACTION PLAN

GOAL		ALIGNMENT WITH MCC MISSION AND VISION	OBJECTIVE	ACTIONS/TASKS REQUIRED TO ACHIEVE OBJECTIVE	ALIGNMENT WITH OUTCOMES and ASSESSMENTS	
#1	Expanding the ACT program to multiple campuses	Aligns with both, serves communities, improves communities, and improves lives	#1	Grow enrollment	Provide accurate data for workforce needs to Admins	
			#2	Provide a closer education for students	Discuss space and monetary issues/ concerns with admin	
			#3	Save on students expenses traveling from out of town	Open courses on all campuses	
Additional Information:						
#2	Update repair information availability, tools and equipment to pertain to modern auto collision repair facilities	Empowering students to succeed through innovative pathways and quality education.	#1	Better prepare students for success in the industry upon completion of ACT program	Present data to admins on budget decisions	
			#2	Align ACT program with modern repair methods	Gather data through the newly developed advisory committee	
			#3	Advisory committee recommendations for modern tools and equipment.	Discuss wants and needs of the current body shops hiring ACT students.	
Additional Information:						
#3	Provide students with an external nationally recognized certification in the collision field of study.	Bridging possibility to purpose and prosperity	#1	Help students gain further employment after /mcc	Discuss in advisory committee current certification employers require.	
			#2	Students receive industry certifications recognized nationally and outside of our Mohave county area.	Gather data from other areas across the united states.	
			#3	Students develop skills pertaining directly to the collision industry.	Measure student assessment pertaining to chosen certification.	
Additional Information:						

C. RESOURCES REQUIRED TO COMPLETE ACTION PLAN

1. List all significant resources needed to achieve the objectives shown in the table above, including personnel, training, technology, information, equipment, supplies, and space. Every request for additional resources must support at least one objective.
2. List any professional development resources or needs based on an assessment analysis.
IMPORTANT: A BUDGET ALLOCATION PROPOSAL must be completed and submitted for EACH new resource requested.

Goal #	Objective #	Resource Required	Estimated Cost	BAP Required?	If No, indicate funding source
1	all	Classrooms/ labs on each campus	?	yes	
2	all	Access to online collision programs (all-data, CCC1, etc)	\$2k	no	ACT budget
3	all	Outside vendor (ICAR, ASE, OSHA, EPA)	\$1k-\$3k	yes	

Appendices –attach the following documents

- A. Guided Pathway(s): Attach all guided pathways for degrees and certificates under the review. SEE BELOW
- B. Program Outcome Map – Attach an updated or created program outcome maps for each degree or certificate. SEE BELOW
- C. Institutional Research Data – Attached data provided by IR or other data to support the Budget, Enrollment, Course and Degree completion and success rates sections (not available)
- D. Assessment Results & Closing the Loop – Attach last 3 years of Cycle of Learning reports' Impact and Action plan section review [ACT 2017-18 COL report.docx](#) [ACT 2018-19 COL report.docx](#) [CAR report 20-21](#)
- E. Assessment Results & Closing the Loop – Writing Across the Curriculum Data analysis (not available)
- F. Assessment Plans – Looking Ahead – Draft next 4-year Assessment plan

In the next 4 years the ACT program is looking to expand into the 2 other campuses to help student success by having a closer class being held in their prospective area of living. That should enable students to spend more time learning and less time traveling. This proposal would also aid students financially by not having to travel spending money on gas and vehicle maintenance. A nationally recognized certification being offered to the students is currently being analyzed and should be available and implemented within the next 4 years as well. With the development of the ACT advisory committee the students will have modern assessment on repairing newer vehicles and become better prepared for the current wants and needs of local collision shops.

GUIDED PATHWAY

The following sequence is the suggested pathway to complete the degree in two years. This sequence is based on satisfaction of all basic skills requirements and prerequisites and presumes a fall start date. An individual's program may vary depending on transfer institution, career objectives, or individual needs. See your academic advisor for other options and to monitor your progress.

Program Name: Automotive Collision Bodywork Certificate

Program Student Learning Outcomes (SLOs):

1. Communicate professionally with customers, insurance companies, employees and co-workers (2, 3, 6)
2. Locate reference material necessary to obtain vehicle information for specific vehicle repairs. (3, 5, 6)
3. Apply correct tool and equipment usage to professionally repair a damaged vehicle back to "pre-accident" condition. (3, 5, 6)

Required Course Enrollment for all CBE courses: All students must follow the course outline below. Students who fail to complete a course within the subscription period will receive a grade of incomplete (I) and will continue on that course until it is complete in the next subscription period. Failure to complete the course in the next subscription period will result in a grade of "F" being awarded. Students wishing to return to the program after receiving a grade of "F" must re-enter the program at the beginning of the previously failed course.

Courses Required	Credits
ACT 108 Intro to Bodywork and Safety	3
ACT 118 Auto Plastic Repair/Adhesives	2
ACT 128 Fiberglass Repair	2
ACT 208 Advanced Bodywork	3
ACT 218 Automotive Welding and Cutting	2
ACT 228 Fixed Panel Replacement	2
ACT248 Unibody/Frame Straightening	2

Key:

CBE= Competency-based Education

1. Aesthetic Sensibilities: An awareness of creative expression in the world around us.
2. Communication Skills: The ability to effectively convey meaning through various media on both personal and professional levels.
3. Critical Thinking Skills and Problem-Solving: The ability to analyze data and arrive at logical and defensible conclusions.

Total credits	16
---------------	----

Automotive Collision Bodywork Certification Outcome Map

Courses and Experiences	Program Outcomes		
	1. Communicate professionally with customers, insurance companies, employees and co-workers (2, 3, 4)	2. Locate reference material necessary to obtain vehicle information for specific vehicle repairs. (3, 5, 6)	3. Apply correct tool and equipment usage to professionally repair a damaged vehicle back to "pre-accident" condition. (3, 5, 6)
ACT108	I	I	I
ACT118	R	R	R
ACT128	R	R	R
ACT208	R	R	R
ACT218	R	R	R
ACT228	R	R	R
ACT248	M, A	M, A	M,A

GUIDED PATHWAY

The following sequence is the suggested pathway to complete the degree in two years. This sequence is based on satisfaction of all basic skills requirements and prerequisites and presumes a fall start date. An individual's program may vary depending on transfer institution, career objectives, or individual needs. See your academic advisor for other options and to monitor your progress.

Program Name: (ACT) Automotive Estimating Certificate

Program Student Learning Outcomes (SLOs):

4. Communicate professionally with customers, insurance companies, employees and co-workers (2, 3, 4)
5. Develop a professional systematic approach to properly repair a damaged vehicle. (3,4,5)
6. Determine cost effectiveness for replacing a damaged part compared to repairing. (2,4,5)
7. Perform basic bodywork and refinishing techniques used in the auto collision industry. (2,3,5)

Required Course Enrollment for all CBE courses: All students must follow the course outline below.

Courses Required	Credits
ACT 125 Auto Body Terminology	3
ACT 250 Automotive Collision Estimating	4
ACT 108 Intro to Bodywork and Safety	3
ACT 109 Intro to Refinishing and Safety	4
ACT 248 Unibody/Frame Straightening	2

Key:

CBE= Competency-based Education

1. Aesthetic Sensibilities: An awareness of creative expression in the world around us.
2. Communication Skills: The ability to effectively convey meaning through various media on both personal and professional levels.
3. Critical Thinking Skills and Problem-Solving: The ability to analyze data and arrive at logical and defensible conclusions.

Total credits	16
---------------	----

Automotive Collision Estimating Certification Outcome Map

Courses and Experiences	Program Outcomes			
	1. Communicate professionally with customers, insurance companies, employees and co-workers (2, 3, 4)	2. Develop a professional systematic approach to properly repair a damaged vehicle. (3,4,5)	3. Determine cost effectiveness for replacing a damaged part compared to repairing. (2,4,5)	4. Perform basic bodywork and refinishing techniques used in the auto collision industry. (2,3,5)
ACT108	I	I	I	I
ACT109	R	R		M, A
ACT248	R	R	R	
ACT125	R	R	R	
ACT250	M, A	M, A	M, A	

GUIDED PATHWAY

The following sequence is the suggested pathway to complete the degree in two years. This sequence is based on satisfaction of all basic skills requirements and prerequisites and presumes a fall start date. An individual's program may vary depending on transfer institution, career objectives, or individual needs. See your academic advisor for other options and to monitor your progress.

Program Name: (ACT) Automotive Refinishing Certificate

Program Student Learning Outcomes (SLOs):

8. Develop a professional repair plan to produce a factory finish on a vehicle panel. (2, 3, 4)
9. Locate reference material necessary to obtain vehicle information for specific vehicle refinishing. (3, 5, 6)
10. Apply correct tool and equipment usage to professionally repair a damaged vehicle back to "pre-accident" condition. (3, 5, 6)

Required Course Enrollment for all CBE courses: All students must follow the course outline below. Students who fail to complete a course within the subscription period will receive a grade of incomplete (I) and will continue on that course until it is complete in the next subscription period. Failure to complete the course in the next subscription period will result in a grade of "F" being awarded. Students wishing to return to the program after receiving a grade of "F" must re-enter the program at the beginning of the previously failed course.

Courses Required	Credits
ACT 109 Intro to Refinishing and Safety	4
ACT 119 Panel Prep and Masking	2
ACT 129 Stationary/Structural Auto Glass	2
ACT 230 Final Detail/ Vehicle Delivery	3
ACT 239 Advanced Refinishing	3
ACT 249 Custom Paint and Airbrushing	2

Key:

CBE= Competency-based Education

1. Aesthetic Sensibilities: An awareness of creative expression in the world around us.
2. Communication Skills: The ability to effectively convey meaning through various media on both personal and professional levels.
3. Critical Thinking Skills and Problem-Solving: The ability to analyze data and arrive at logical and defensible conclusions.

Total credits	16
---------------	----

Automotive Collision Refinishing Certification Outcome Map

Courses and Experiences	Program Outcomes		
	1. Develop a professional repair plan to produce a factory finish on a vehicle panel. (2, 3, 4)	2. Locate reference material necessary to obtain vehicle information for specific vehicle refinishing. (3, 5, 6)	3. Apply correct tool and equipment usage to professionally repair a damaged vehicle back to "pre-accident" condition. (3, 5, 6)
ACT109	I	I	I
ACT119	R	R	R
ACT129	R	R	R
ACT230	R	R	R
ACT239	R	R	R
ACT249	M, A	M, A	M, A

- G. Institutional Research Data – Attached data provided by IR or other data to support the Budget, Enrollment, Course and Degree completion and success rates sections (not available)
- H. Assessment Results & Closing the Loop – Attach last 3 years of Cycle of Learning reports’ Impact and Action plan section review [ACT 2017-18 COL report.docx](#) [ACT 2018-19 COL report.docx](#) [CAR report 20-21](#)

CURRICULUM ASSESSMENT REPORT FOR MOHAVE COMMUNITY COLLEGE AN ANALYSIS OF ASSESSMENT AND STUDENT LEARNING

ACADEMIC YEAR: 2019-2021

DEPARTMENT: *Automotive Collision Technology (ACT)*

a. **COURSES ALIGNED WITH THEIR COMPETENCIES**

Insert the courses (and their sections & modality) that had all their course competencies aligned in Schoology for which the mastery tab and data is being collected and analyzed in this report.

COURSE COMPETENCIES RESULTS:

For each course list out the numbered Competencies, that were aligned in Schoology.

ASSESSMENT TYPES: TEXTBOOK WORKSHEETS, MULTIPLE CHOICE QUIZZES, EXAMS, HANDS ON LAB

RESULTS AND INTERVENTIONS:

Pre-Intervention Semester Results

Year: 20 Semester: *Fall* Course Prefix and number: *ACT118-131*

Compile what the Mastery tab in Schoology shows for the percent grade and/or “Met” “Not met” for each competency (comes from the various graded assessments that were aligned to a given competency). Data should be broken down by course section and name the modality of each section and the number of students in each section. Data can be inserted here in the form of tables, charts or graphs. Department should report data based upon the Office of Instruction’s definition of Met, Met with Concern, Not Met as follows:

COURSE LEARNING OUTCOME MASTERY CRITERIA:

Met: 70-100%

Met with Concern: 60-69%

Not Met: 59% and Below

<i>Summative Assessment Rubric ACT118 Automotive Plastic Repair and Adhesives</i>
--

Fall 2020 Semester						
		<i>student #1 xxx144</i>	<i>student #2 xxx472</i>	<i>student #3 xxx487</i>	<i>student #4 xxx733</i>	<i>student #5 xxx673</i>
<i>Competency 1</i>	<i>Identify accurately the types of plastics common in vehicle construction</i>	<i>pass</i>	<i>pass</i>	<i>pass</i>	<i>pass</i>	<i>pass</i>
<i>Competency 2</i>	<i>Classify repair methods depending on damage</i>	<i>pass</i>	<i>pass</i>	<i>pass</i>	<i>pass</i>	<i>pass</i>
<i>Competency 3</i>	<i>Apply welding techniques used commonly in plastic parts repairs.</i>	<i>pass</i>	<i>pass</i>	<i>pass</i>	<i>pass</i>	<i>pass</i>
<i>Competency 4</i>	<i>Apply professional adhesive repair techniques to meet current auto collision standards</i>	<i>Not mastered</i>	<i>Not mastered</i>	<i>pass</i>	<i>pass</i>	<i>pass</i>
<i>Competency 5</i>	<i>Analyze current methods to repair flexible plastic parts.</i>	<i>pass</i>	<i>pass</i>	<i>pass</i>	<i>pass</i>	<i>pass</i>
<i>Competency 6</i>	<i>Prepare repaired plastic parts for refinishing.</i>	<i>pass</i>	<i>pass</i>	<i>pass</i>	<i>pass</i>	<i>pass</i>
	<i>number of competencies mastered (6/6):</i>	<i>6</i>	<i>6</i>	<i>6</i>	<i>6</i>	<i>6</i>
Notes	<i>all 5 students mastered all 6 competencies</i>					

b. INTERVENTIONS

2 of the students needed an extra lab demo and reassessment of skills to reach mastery level before the end of the course.

c. POST-INTERVENTION SEMESTER RESULTS

Year: 2020 Semester: *Fall* Course Prefix and number: *ACT118-131*

Summative Assessment Rubric ACT118 Automotive Plastic Repair and Adhesives						
Fall 2020 Semester						
		<i>student #1 xxx144</i>	<i>student #2 xxx472</i>	<i>student #3 xxx487</i>	<i>student #4 xxx733</i>	<i>student #5 xxx673</i>
<i>Competency 1</i>	<i>Identify accurately the types of plastics common in vehicle construction</i>	<i>pass</i>	<i>pass</i>	<i>pass</i>	<i>pass</i>	<i>pass</i>
<i>Competency 2</i>	<i>Classify repair methods depending on damage</i>	<i>pass</i>	<i>pass</i>	<i>pass</i>	<i>pass</i>	<i>pass</i>
<i>Competency 3</i>	<i>Apply welding techniques used commonly in plastic parts repairs.</i>	<i>pass</i>	<i>pass</i>	<i>pass</i>	<i>pass</i>	<i>pass</i>
<i>Competency 4</i>	<i>Apply professional adhesive repair techniques to meet current auto collision standards</i>	<i>pass</i>	<i>pass</i>	<i>pass</i>	<i>pass</i>	<i>pass</i>
<i>Competency 5</i>	<i>Analyze current methods to repair flexible plastic parts.</i>	<i>pass</i>	<i>pass</i>	<i>pass</i>	<i>pass</i>	<i>pass</i>
<i>Competency 6</i>	<i>Prepare repaired plastic parts for refinishing.</i>	<i>pass</i>	<i>pass</i>	<i>pass</i>	<i>pass</i>	<i>pass</i>
	<i>number of competencies mastered (6/6):</i>	<i>6</i>	<i>6</i>	<i>6</i>	<i>6</i>	<i>6</i>
Notes	<i>all 5 students mastered all 6 competencies</i>					

ANALYSIS AND IMPACT ON STUDENT LEARNING

Analyze and summarize what the data shows for each course and its competencies.

What impact did the intervention(s) have on student learning between the two semesters? All students achieved mastery level

Which competency(s) still need improvement? none

What will the department do going forward to improve upon areas showing weakness? Document troubled areas, reassess delivery model

What overall strengths and overall weaknesses were identified throughout this assessment cycle? No weaknesses in program, just weakness with students comprehension skills

COURSE LEARNING OUTCOMES ANALYSIS

The course learning outcomes have the MCC General Education Philosophy skills included in a given CLO. They appear as numbers at the end of each CLO.

MCC GENERAL EDUCATION PHILOSOPHY SKILLS

- 1. Aesthetic Sensibilities:** An appreciation of creative expression in the world around us.
- 2. Communication Skills:** The ability to effectively convey meaning through various media on both personal and professional levels.
- 3. Critical Thinking Skills and Problem-Solving:** The ability to analyze data and arrive at logical and defensible conclusions.
- 4. Cultural Diversity and Global Awareness:** An appreciation of relationships and differences in values, customs, and norms of diverse global communities.
- 5. Techniques of Inquiry:** Use of standardized methodological framework to collect, analyze, interpret, and present findings.
- 6. Technological Competency:** A proficiency in evolving technology to compete and flourish in society.

List the Course Learning Outcomes (formerly goals) and include the MCC General Education Philosophies (at the end of each CLO) for the course(s) listed above:

1. Identify accurately the types of plastics common in vehicle construction. (1, 2, 3, 4)
2. Classify repair methods depending on damage. (3, 5)
3. Apply welding techniques used commonly in plastic parts repairs. (3, 5)
4. Apply professional adhesive repair techniques to meet current auto collision standards. (3, 5)
5. Analyze current methods to repair flexible plastic parts. (2, 3, 6)
6. Prepare repaired plastic parts for refinishing. (3, 5)

Describe how each CLO is being addressed. *You can use the competency data or assessments and/or assignments that correlate to each CLO. (For this section, there are a number of ways in which demonstration of mastery has been met by students.)*

1. Worksheet
2. Quiz
3. Lab
4. Lab
5. Quiz
6. Worksheet/Lab

Looking at what the data suggests, which CLOs are being met? All CLOs are being met

Looking at what the competency data suggests, which CLOs are *not* being met? All CLOs are being met

ACTION PLAN

Based on the results and analysis, the following will be put into place to improve student learning in the future: *How will the department improve upon a competency(s) not being met? Include things like changing or adding assessments, teaching techniques or class material. This should be specific enough to provide faculty with a concrete plan to implement in the future that will continue to improve student learning.*

After reviewing data the ACT dept has decided to add an extra lab demonstration to 2 of the CLOs in order to give students added knowledge to better master all CLOs.

RECORD OF DEPARTMENT MEETINGS

The department had the following meetings to collect and analyze assessment data and to create this report and action plan.

List out the meeting dates and minutes when the department met to compile analyze and write this report.

No meetings at this time

MOHAVE COMMUNITY COLLEGE CYCLE OF LEARNING REPORT:

AN ASSESSMENT OF STUDENT LEARNING

Assessment Academic Year: 2018-19

Department: ACT Auto Collision Technology

Course: ACT170-131 Fiberglass Repair

STUDENT LEARNING OUTCOMES

- GENERAL EDUCATION PHILOSOPHY AND COMPETENCY

3. Critical Thinking Skills and Problem Solving

3.4 Apply critical thinking skills to solve problems using inductive and deductive reasoning.

- COURSE STUDENT LEARNING OUTCOMES

Goals: 2. Mix and apply catalyzed resin successfully

3. Use fiberglass resin and matting correctly

Competencies: 1. Demonstrate mixing of different fiberglass resins.

MEASUREMENT

In order for a student or a professional repair technician to accomplish a proper fiberglass repair they must mix and apply the correct activated resin to repair area, taking into consideration the ambient temperature outside and the base material that is being repaired. A poor mix or ratio of catalyst to resin will cause the repair to not adhere or delaminate causing repair problems and unprofessional outcomes. To determine this each students was given 5 samples and needed to identify resins used, select appropriate repair resin, select correct catalyst, activate resin and then apply to repair matting.

- METRICS

Competency 1: Demonstrate mixing of different fiberglass resins.	Complete all competency objectives at the level of Mastery.	Complete competency objectives with at least one objective at level of mastery and other objectives at competent.	Failure to complete at least one competency objective at level of mastery and/or failure to achieve competence in any objective.
Objective1.1: Demonstrate correct catalyst to resin curing ratios.	Successfully activates all 5 resin samples.	Successfully activates 4 of the 5 resin samples.	Fails to activate 4 or more of the 5 resin samples.

A student meets the criteria if: they successfully identify, activate, and apply 5 sample resins

A student meets the criteria with concerns if: they successfully identify, activate, and apply 4 sample resins

A student does not meet the criteria if: they successfully identify, activate, and apply 3 or less sample resins

Although the identification, activation and application seems like 3 different assessments they will lead to or affect 1 single outcome pertaining to each of the 5 samples.

RESULTS:

- FIRST ASSESSMENT RESULTS

ACT170 Competency 1 Objective 1.1						
Student Name	Identify resin	Choose correct catalyst	Identify air temperature	Apply correct amount of catalyst	Apply resin to selected cloth	

Jafet Martinez	5 of 5	5 of 5	1 of 1	5 of 5	5 of 5	
Aaron Flores	5 of 5	5 of 5	1 of 1	5 of 5	5 of 5	
Ramiro Torres	5 of 5	5 of 5	1 of 1	5 of 5	5 of 5	
Eric Gould	5 of 5	5 of 5	1 of 1	5 of 5	5 of 5	
Larry Jay	5 of 5	5 of 5	1 of 1	4 of 5	5 of 5	

Number of students Met:4

Number of students Met with concerns:1

Number of students did not meet:0

- **POST-FIRST ASSESSMENT INTERVENTIONS**

Of the 25 samples done (5 each for the 5 students assessed) only 1 of the samples was mixed in correctly. Upon a class discussion taking shop temperature and amount of catalyst added to resin sample into consideration, it was determined that insufficient amount of catalyst was added.

- **SECOND ASSESSMENT RESULTS**

Before the second assessment instructor did a refresh explanation of temperature and catalyst amount for resin activation. It was just a review for the students that did not have issues and a clarification for the student that had an issue of the 1 sample out of 5. All 5 students did 1 more sample, the 1 student for reassessment and the other 4 just for added practice/experience.

ANALYSIS

What overall strengths were identified in the students' learning throughout this assessment cycle? They all learned the importance of a correct ratio of catalyst to resin and how ambient temperature affects the curing process.

What overall weaknesses were identified in the students' learning throughout this assessment cycle? The understanding of different effects of resins and how they cure was difficult to explain and demonstrate until they did it themselves. I like to call it a "self-assessment" and not everyone is confident or comfortable enough to learn that way.

What impact did the intervention(s) have between the two assessments? The temperature of the shop had changed about 8 degrees between the 2 assessments so it was helpful and very educational for the 5 students to actively demonstrate and see how the temperature affected the 2 set of samples.

IMPACT ON STUDENT LEARNING

The first part of the student learning was the instructor performing a live demonstration of properly catalyzing an identified resin. The instructor selected the correct catalyst and added correct ratio depending on shop temperature conditions. This was explained thoroughly throughout the demonstration. The instructor then explained proper catalyzing procedures for the other type of resin utilizing the same temperature in the shop setting. Obviously being difficult to change the temperature due to it being seasonal or that time of day the students learned a single method. When time came for students do perform their hands on lab activity proving what they had learned and be assessed on their knowledge the temperature had changed in the shop due to the fact it was a different time of day and the afternoon of their demo back to the instructor was a little warmer they had to utilize "critical thinking" to modify the exact ratio of catalyst added to their samples. Upon having one of the students samples not properly cure or catalyze the entire class utilized problem solving to come up with a solution for the second assessment to change ratio mixture and take shop temperature into consideration.

ACTION PLAN

Based on the results and analysis, the following will be put into place to improve students' learning in the upcoming semester(s):

The instructor performing the lab demonstration will perform 2 different demonstrations at different temperatures so students will get a first-hand look and experience the cause and effects of temperatures before they perform their live assessments. Secondly the instructor performing the lab demonstration will NOT mix one of the demo resins properly so students will also see the outcome of incorrect catalyst ratio to resin before they attempt their own demonstration/assessment.

APPENDIX A

ACT 170 Fiberglass Cosmetic and Structural Repair X						
Competency 1: Demonstrate mixing of different fiberglass resins.	Complete all competency objectives at the level of Mastery.	Complete competency objectives with at least one objective at level of mastery and other objectives at competent.	Failure to complete at least one competency objective at level of mastery and/or failure to achieve competence in any objective.			
Objective1.1: Demonstrate correct catalyst to resin curing ratios.	Successfully activates all 5 resin samples.	Successfully activates 4 of the 5 resin samples.	Fails to activate 4 or more of the 5 resin samples.	textbook.video.live shop demo	shop activity	
Objective1.2: Explain the effects of outside temperature related to the resin curing process.	Successfully achieves 90-100% on written assignment.	Successfully achieves 80-89% on written assignment.	Achieves a 79% or less on written assignment.	textbook.live shop demo.lecture	written assignment	
Objective1.3: Explain the uses and needs for different types of fiberglass resins.	Successfully achieves 90-100% on written assignment.	Successfully achieves 80-89% on written assignment.	Achieves a 79% or less on written assignment.	textbook.live shop demo.lecture	written assignment	

This was grading rubric used:

student:	id resin	select hardener	add ratio	identify cloth	apply catalyzed resin	cure	Pass/fail
sample1							
sample2							
sample3							
sample4							
sample5							

- I. Assessment Results & Closing the Loop – Writing Across the Curriculum Data analysis (not available)
- J. Assessment Plans – Looking Ahead – Draft next 4-year Assessment plan

In the next 4 years the ACT program is looking to expand into the 2 other campuses to help student success by having a closer class being held in their prospective area of living. That should enable students to spend more time learning and less time traveling. This proposal would also aid students financially by not having to travel spending money on gas and vehicle maintenance. A nationally recognized certification being offered to the students is currently being analyzed and should be available and implemented within the next 4 years as well. With the development of the ACT advisory committee the students will have modern assessment on repairing newer vehicles and become better prepared for the current wants and needs of local collision shops.

1st Year Annual Update

1. Summarize your course and programmatic level assessment efforts in the last year. [Click here to enter text.](#)
2. What updates have been made for the next assessment cycle? [Click here to enter text.](#)
3. Were there any curricular changes in the last year? [Click here to enter text.](#)
4. What progress have you made toward your stated goals? [Click here to enter text.](#)
5. If you received resources to accomplish goals, how has the resource contributed to the goal to this point? [Click here to enter text.](#)
6. Are additional, unexpected resources needed this year to complete your stated goals from last year?
IMPORTANT: A BUDGET ALLOCATION PROPOSAL must be completed and submitted for EACH new resource requested. [Click here to enter text.](#)

2nd Year Annual Update

1. Summarize your course and programmatic level assessment efforts in the last year. [Click here to enter text.](#)
2. What updates have been made for the next assessment cycle? [Click here to enter text.](#)
3. Were there any curricular changes in the last year? [Click here to enter text.](#)
4. What progress have you made toward your stated goals? [Click here to enter text.](#)
5. If you received resources to accomplish goals, how has the resource contributed to the goal to this point? [Click here to enter text.](#)
6. Are additional, unexpected resources needed this year to complete your stated goals from last year?
IMPORTANT: A BUDGET ALLOCATION PROPOSAL must be completed and submitted for EACH new resource requested. [Click here to enter text.](#)

3rd Year Annual Update

1. Summarize your course and programmatic level assessment efforts in the last year. [Click here to enter text.](#)
2. What updates have been made for the next assessment cycle? [Click here to enter text.](#)
3. Were there any curricular changes in the last year? [Click here to enter text.](#)
4. What progress have you made toward your stated goals? [Click here to enter text.](#)
5. If you received resources to accomplish goals, how has the resource contributed to the goal to this point?
IMPORTANT: A BUDGET ALLOCATION PROPOSAL must be completed and submitted for EACH new resource requested. [Click here to enter text.](#)
6. Are additional, unexpected resources needed this year to complete your stated goals from last year? [Click here to enter text.](#)