



Lake Technical College

2017 - 2018

Master Plan of Instruction
Automotive Collision Repair & Refinishing
I-CAR Training Alliance Program

David Beliveau, Instructor



The mission of Lake Technical College is to be an integral component of the economic growth and development in our community by offering a variety of high quality career-training opportunities.

Lake Technical College does not discriminate on the basis of race, religion, color, national origin, gender, genetic information, age, pregnancy, disability, or marital status in its educational programs, services or activities, or in its hiring or employment practices. The district also provides access to its facilities to the Boy Scouts and other patriotic youth groups, as required by the Boy Scouts of America Equal Access Act, or any other youth group listed in Title 36 of the United States Code as a patriotic society.

2001 Kurt Street, Eustis, FL 32726 - (352) 589-2250

www.laketechnology.org

LAKE TECHNICAL COLLEGE
Automotive Collision Repair & Refinishing

INTRODUCTION

The Automotive Collision Repair & Refinishing Program, a 1400 hour I-CAR, NATEF, and ASE certified program, is responsible for training individuals to attain an entry-level status in the automotive body repair industry. The program covers a broad range of instruction. An appropriate amount of time is spent in each area to thoroughly cover needed instructional material as well as to gain manipulative skills competence.

The program utilizes both theory and practical application of material to help the students gain needed knowledge and skills. Due to the increasing complexity of the construction of today's automobile, it is as important to know why a procedure is done as it is to know how it is done. Understanding how a vehicle is constructed, therefore, has an important role to play in this course of study.

Each student must successfully complete written test material on theory and related topics as well as successfully demonstrate the practical application of this information in the shop environment.

Effective October 17, 2017 the program will become Automotive Collision Technology Technician and will include new and updated courses.

PROGRAM MISSION

The mission of the Automotive Collision Repair & Refinishing Program is to prepare students for employment in the automotive collision repair & refinishing field. It is also designed to assist those students who wish to update present skills and cross-train in other automotive areas. The program focuses on student and industry needs, and training is constantly updated by the faculty and program advisory committee to keep current with technological changes.

ADMISSION REQUIREMENTS

Applicants must be at least 16 years of age and should be academically, physically, and emotionally capable of meeting the demands of the chosen program. Applicants make initial application through the Admissions Office. A minimum skills evaluation is part of the admission process. It is highly recommended that students meet with the program faculty prior to entering the program.

The Automotive Collision Repair & Refinishing program has the following admissions requirements:

1. Complete an LTC online application
2. Take the TABE, if required
3. Meet with a career advisor
4. Confer with the program faculty or department chairperson prior to actual enrollment

TEST OF ADULT BASIC EDUCATION (TABE)

All applicants for Career and Technical Education (CTE) programs 450 hours or more, with the exception of Florida Law Enforcement Academy applicants, take a state mandated TABE prior to enrollment. TABE scores are good for two years and must be valid at the time of enrollment.

Several exemptions to TABE are accepted. In order to be exempt, a student must submit official documentation to a career advisor for verification of an exemption:

1. Applicants who have earned a standard State of Florida high school diploma, 2007 or later, or possess a documented degree (AA, AS, AAS, BA or BS) may be exempt from TABE testing. (s.1004.91).
2. Applicants who have earned a State of Florida High School diploma via the GED® test no more than two years prior to the start of class.
3. Students taking any accepted standardized tests such as PERT or ACT may be exempt from the TABE provided the scores are at satisfactory levels and the test was taken within two years of enrollment in a Career and Technical Education program (6A-10315, 6A-10.040).
4. A student who has completed or who is exempt from the college-level communication and computation skills (CLAST) examination pursuant to s.1008.29 is also exempt from the TABE. Per s. 1008.29.
5. Documented successful completion of college-level remedial coursework may be used to meet TABE requirement.

6. Documented passing scores on state-designated industry certification tests may be used.
7. Mandated TABE exit scores may be waived for documented special needs students as per Florida guidelines. The student must enroll in AAEE and begin remediation in order to meet the exit requirements of the CTE program in which the student is enrolled. A student, with a documented disability, who is approaching completion (mastered 90% of the competencies) of the CTE program and has not met TABE scores, may be considered for a TABE exemption based on the following. It is determined through a SIT meeting that the student has successfully mastered the competencies of the CTE program in which she/he is enrolled and has been participating as expected in AAEE. The members of the SIT meeting may agree to waive TABE requirements.

According to Florida Department of Education rules, students who fail all or parts of the TABE may only retest using a different TABE version after 60 documented hours of remediation in the Applied Academics for Adult Education (AAEE) lab or three months if not attending AAEE. Students may not retake the same test version for six months. We, therefore, strongly recommend that students test early, especially for licensure programs, in order to allow time for remediation and retesting should the need arise.

Students who do not meet the minimum TABE scores set by the Florida Department of Education for their program must begin attending remediation classes in the AAEE lab prior to or at the time of enrollment in a Career and Technical Education class for at least one block a day and make acceptable progress as determined by the AAEE faculty. It is highly recommended students meet state mandated TABE requirements by the time they have completed 50% of their program. Students who do not meet state mandated TABE scores may not receive a certificate of completion as per Florida Department of Education rules.

Applicants transferring appropriately leveled TABE, PERT or other accepted standardized test scores from other testing centers must do so by having an official score report sent directly to the Admissions Office prior to enrollment in the program. Scores brought by hand will be accepted only if document provided by the outside testing center is in a sealed envelope. Standardized tests scores are valid for two years.

TABE scores are good for two years and must be valid at the time of enrollment. TABE scores that expire during continuous enrollment remain valid until the end of such enrollment. Under continuous enrollment, students must be enrolled at least 50% of each semester per school year. Continuous enrollment applies to attendance in a single program.

The required TABE exit scores for this program are: Reading 9; Math 9; and Language 9.

ESSENTIAL TRAINING TASKS

Physical Requirements

Ability to:

1. Reach
2. Exhibit a high degree of manual dexterity
3. Stoop, Crouch and/or bend
4. Exhibit a high degree of finger dexterity
5. See (near acuity)
6. Lift 50 pounds or less
7. Communicate with others in verbal and/or written form

Mental and Emotional Requirements

Ability to:

- | | |
|---|---|
| <ol style="list-style-type: none"> 1. Work with others 2. Make decisions. 3. Cope with anger/hostility of others in a calm manner. 4. Cope with moderate to high levels of stress. 5. Cope with confrontation. 6. Cope with frustration. 7. Assist with problem resolution. 8. Demonstrate a high degree of patience. 9. Plan and organize daily activities. | <ol style="list-style-type: none"> 10. Apply common sense understanding to carry out instructions furnished in both written and oral form. 11. Tolerate moderate noise level. 12. Measure accurately. 13. Work without close, direct supervision. 14. Work on multiple tasks and priorities. 15. Perform and complete tasks of relative complexity. 16. Perform basic mathematical operations. 17. Demonstrate mechanical skills. |
|---|---|

REQUIRED TOOLS

All students are encouraged to have the following items in order to be fully prepared for employment:

<u>TOOL</u>	<u>APPROXIMATE COST</u>	<u>TOOL</u>	<u>APPROXIMATE COST</u>
OCP A		OPC C	
1. DA Sander	\$ 60	1. Welding Helmet	\$ 40 – up
2. Respirator Mask	\$ 19	2. Large Hammer	\$ 20 – up
3. Sanding Blocks	\$ 12		
4. Safety Glasses	\$ 6	OCP D	
5. 8" Sander	\$100	1. Paint Guns (optional)	\$300 – up
6. Straight Line Sander	\$100	2. Finish Sander	\$150
7. Basic Socket Set	\$ 60 – up		
8. Basic Wrench Set	\$ 20 – up	OCP E	
9. Basic Screwdriver Set	\$ 15 – up	1. 8" Grinder	\$100 – up
10. Basic Hammer and Dolly	\$200	2. 6" Grinder	\$ 50 – up

ACCOMMODATIONS

Federal and state legislation requires the provision of accommodations for students with disabilities as identified on the secondary student's IEP or 504 plan or postsecondary student's accommodations plan to meet individual needs to ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their postsecondary provider.

Students desiring accommodations or updates to their accommodations are encouraged to self-identify as early in the program as possible. In order to receive disability accommodations, students must self-disclose the disability to the Students with Disabilities Coordinator and provide documentation that clearly shows evidence of a disability and applicable accommodations. The Students with Disabilities Coordinator will schedule a meeting with the student and faculty to discuss the documented disability and applicable accommodations.

Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments, assessments, time demands, schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodation requested and provided is maintained in a confidential file.

TUITION

Tuition is charged for adult students at a rate established by the State legislature. Current fee information is available in the Admissions Office. Tuition is waived for eligible high school dual-enrolled students. Tuition is due prior to the first day of each semester based on the Lake Technical College payment calendar. Failure to pay all fees due at the time class begins will result in not being able to attend class and/or clinical if applicable.

CLASS SCHEDULE

Full-time students attend class from 8:00 AM to 4:00 PM Monday through Thursday with a 30 minute lunch period. This schedule provides 7.5 hours of instruction each day for a total of 30 hours per four-day week, excluding holidays and school breaks as outlined in the current school calendar.

ATTENDANCE POLICY

In an effort to develop appropriate work ethics, Lake Tech students are expected to attend all class sessions. As is expected in the workplace, when it is necessary to be absent due to illness or emergency situations, all students are to notify the faculty on or before the date of absence. The student attendance policy for each postsecondary program is consistent with industry standards.

Campus attendance is kept via a computerized system. It is the responsibility of the student to **log in and out** in order to receive credit for class time. This allows the school to keep accurate attendance records for the actual number of hours and minutes attended. Faculty are not expected to manually enter student attendance. Only one override is permitted for failure to log in or out. Therefore, failure of a student to log in and out may result in a documented absence. Logging in or out for another student or having another student log in or out is unacceptable behavior and may result in dismissal.

Only regularly scheduled class hours will be reported for attendance. Make-up time will not be accepted except as approved by the Executive Director of Lake Technical College.

Absences

A student who is absent for six (6) consecutive class sessions will be withdrawn from enrollment in his/her program. A student withdrawn for absenteeism must petition administration to return. A student having medical documentation or documentation of an extenuating circumstance does not need to petition to return. Students exhibiting a pattern of consecutive absences less than six days will be subject to dismissal as determined by a School Intervention Team.

Students in non-licensure programs must have achieved a minimum of 80% attendance at the end of each quarter. Students not having met this requirement will sign an acknowledgement that they have been notified that continued absences will pose a threat to grades and program enrollment. School Intervention Team meetings will be held as necessary to attempt to alleviate issues resulting in excessive absences and to counsel the student of possible alternatives and consequences. Students who miss more than 20% of their program will not be allowed to re-enroll the next semester and must wait until the following enrollment period to re-register unless the student's appeal to the Executive Director has been approved. Only regularly scheduled class hours will be reported for attendance.

Tardiness

As in the workplace, students are expected to be in their seats promptly in the morning, after break, and after lunch. Students are expected to notify the faculty before the start of class of any anticipated tardies.

Leaving Campus during School Hours

For safety reasons, students will notify their faculty when leaving campus early. Students may leave campus for lunch provided this is done within the allotted time.

PLAN OF INSTRUCTIONAL PRACTICES

The School of Automotive Collision Repair & Refinishing program at Lake Technical College is designed as an open-entry, individualized, competency-based method of instruction. With this instruction method, a qualified student may enter the program at any time during the school year. The student proceeds through the prepared curriculum individually and at the student's own pace, within the limits set by the program faculty. The faculty follows the student's progress, making suggestions, as required, so the individual will gain the knowledge and experience in a minimum of time. The student must successfully complete all of the competency requirements of the program to receive a graduation certificate.

Teaching Methods

With open-entry/open-exit, competency-based instruction, the students typically consists of individuals at various levels in their progress through the curriculum. For this reason, a minimum of formal classroom instruction time is used in the learning process.

The curriculum is structured so that a student uses a "student learning guide" which lists reading assignments, audio-visual programs, and exercises designed to acquaint the individual with necessary information that must be known and work skills that must be performed in order to accomplish the competency. Each competency unit will contain one or more "hands-on" projects so that the student reads the instructions, sees a demonstration using audio-visual programs, and then demonstrates the skill in the shop.

Students are encouraged to communicate with each other. More advanced students act as mentors for newer students demonstrating procedures, answering questions, and helping each other. This creates "double learning situations" where the idea is reinforced for the advanced student while the newer student gains additional knowledge and skills. The faculty manages this process by creating learning situations and pairing the mentor with the learner. The faculty is the final resource to answer unresolved questions and demonstrate procedures.

As occasions arise, the faculty may conduct impromptu "shop talks" to explain a procedure or process to a group of selected students involved in a shop project.

Audio-visual equipment in the form of digital presentations, DVDs, PowerPoint, and web-based resources are used to research assigned areas of instruction. Crash estimating manuals, paint company color chips, frame and unibody dimension books and trade publications are used to supplement the learning activities.

Customer service projects are selected to gain working experience that would be expected to be encountered in the field. The student is required to perform various related tasks on bench projects and on customer service vehicles. Tasks are selected to parallel actual automotive refinishing industry-related work using actual tools and equipment that are encountered in the field. The student must follow accepted work rules, safety equipment, and housekeeping habits that would be encountered on the job.

To encourage proper professional skills and good housekeeping, all students are required to clean up their workstations as they complete each task or project as well as participate in daily shop cleanup. All cleanup and shop maintenance jobs are rotated among all students.

Foremen are assigned to supervise the shop and tool room tasks. Tools may be periodically checked out from the tool room. The tool deposit is designed to ensure against lost or damaged tools due to abuse and/or neglect.

Students are encouraged to attend industry educational meetings, conferences, paint clinics, and seminars.

Online Access

Technology is an integral part of our daily lives. From smart phones to electronic tablets, these devices are becoming items that many cannot function without. In addition, the Internet is changing the way education is delivered. Lake Technical College strives to ensure that our students are able to compete in this technology driven world. With this in mind, it is recommended that students have an online presence and access to the internet.

It is also important that students have an email address that they check on a regular basis. A lot of information may come to you through your email, so it is important that you check it regularly. If you do not have an email address, there are numerous services that provide FREE email addresses. Please make sure your faculty have a current, working email address for you. See your faculty for more information.

Social Media

The advent of social media has created a world-wide communication medium for persons of all ages. While extremely popular, these websites have also created their own set of “not-so-popular” problems such as cyber-stalking, identity theft, cyber-bullying, cyber-cheating (posting of exam, or other course material), and a host of other nebulous challenges that users may face. Another reality associated with social media is its far-reaching consequences for those who share posts that may be seen by others as inappropriate.

Potential employers, current employers, civic, or educational organizations you may be associated with, and many others are looking at social media sites for information that may tell them things about an individual. Students should also be cautioned on how private their social media content really is – despite the settings on an account. All social media sites are potentially vulnerable. A simple search of how to view pages that are set as “private” for a popular social media website yielded numerous responses for ways to view the content. Everything from blogs to online videos offer to explain how to accomplish this task.

Students in all programs need to be cognizant of the fact that most professions rely on great moral character. It is recommended that when using social media, assume that all posts will be seen/read by everyone with access to the internet.

Safety

A basic outline of safety standards and practices is covered along with a continuous implementation of safety principles.

Evaluation

A pretest is given to determine entry-level knowledge and skill. Oral and written tests during and at the end of each unit or competency are administered with checklists relating to projects and tasks.

The faculty observes and evaluates all shop projects. Whenever possible, criterion reference models and/or checklists are used to evaluate shop performance.

On a progress chart major skills (competencies) are listed for each student. As a competency is correctly mastered by the student, it is initialed by the faculty and graded.

Work Based Activities

Work-based learning activities play an integral part of the curriculum of Lake Technical College’s (LTC) career-technical training programs. These activities are planned with two objectives in mind. First, the activity provides students with the opportunity to develop and apply a “real world” experience using the knowledge and skills attained in the program. Second, the activity provides the faculty with objective input from potential employers or customers of program graduates. Each work-based activity has a written instructional plan outlining objectives, experiences, competencies and evaluation required during the activity.

Work-based activities are program specific and may include:

- Unpaid in-school shop/lab activities to provide customer service opportunities under the direct supervision of the program faculty. Shop activities reflect the objectives, experiences, competencies and evaluations required for each student to complete the program.

- Unpaid job shadowing experiences that may include in-school or off-campus employer-based experiences under the supervision of a qualified employer representative who is working closely with the program faculty.
- Paid or unpaid cooperative training experiences conducted at the employer's work location under the supervision of a qualified employer representative and under the direction of the program faculty.

Cooperative Education

Cooperative training is available for students and coordinated by the program faculty. Cooperative training is for students who have shown competence in program training which indicates readiness for placement in an on-the-job program. High school students participating in the cooperative job placement program must be in at least the 12th grade.

Students who do not function satisfactorily on the job may be returned to the program for additional training, or when the cooperative agreement is terminated at the request of the student, the parent, the employer, or the program faculty.

Veterans will be accepted into the program in accordance with the Department of Veterans Affairs approved program.

Additional information regarding co-op opportunities may be obtained from the program faculty.

Job Shadowing

Job shadowing experiences, or volunteer experiences, are available to students who may benefit from the experience. These experiences are designed to give the student actual hands-on experience doing a variety of related tasks. Length and type of experiences will vary. The program faculty determines appropriateness of the experience. Additional information regarding job shadowing experiences may be obtained from the program faculty.

Career Dual Enrollment Students

All students enrolled in Lake Technical College are expected to function as adults. Career dual enrollment students will be held to the same behavioral and performance standards as adult students.

GRADING PROCEDURE

Grading Scale

The grading policy for this program is as follows:

90-100	Excellent
80- 89	Passing
< 80	Failing

Lake Technical College is a postsecondary institution designed to provide trained individuals to industry. The grading scale for this program reflects industry standards. The approved postsecondary program grading requirements must be met if the student is to receive a certificate.

Program grades are based on the three criteria: Skills, Knowledge, and Professional Skills. Each area counts as one-third of the nine weeks grade. Students receive a minimum of one skills and one knowledge grade for each week of enrollment. Students will receive a mid-term assessment of grades during each nine-week period. A minimum grade of 80% in each is required in order to receive a passing grade. If the student's grade is below an 80%, the student will be counseled as to what steps need to be taken to bring the grade to a satisfactory level.

Grades will be based on three areas:

- | | | |
|----|---------------------|----------------------|
| 1. | Skill | 33 1/3% of the grade |
| 2. | Knowledge | 33 1/3% of the grade |
| 3. | Professional Skills | 33 1/3% of the grade |

Program Progress

Students are expected to complete the program of training within the hours allotted by the State of Florida for completion. The student's rate of progress will be closely monitored by the faculty to ensure program completion in a timely manner.

Requirements for a Certificate

All competencies specified in the State of Florida Curriculum Framework for the program must be successfully completed with at least an 80 percent in the areas of skills, knowledge, and professional skills. Students must also meet minimum TABE requirements prior to graduation.

Students must also meet minimum TABE requirements prior to graduation.

Professional Skills

Effective professional skills are the cornerstone to successful employment. Students are expected to demonstrate productive professional skills during all phases of enrollment. Faculty will work with students who need assistance in this area to improve the overall possibility for successful employment.

Attendance: Attends class for all scheduled hours assigned, arrives/leaves on time, contribute to class discussion and is actively involved in all activities.

Character: Displays academic integrity (inclusive of not committing plagiarism), trustworthiness, dependability, reliability, self-discipline, and self-responsibility.

Teamwork: Respects the rights of others; is a team worker; is cooperative; ensures confidentiality in all classroom, clinical and other matters; demonstrates professional behavior in interactions with peers, preceptors, and faculty.

Appearance: Displays appropriate dress, grooming, hygiene, and wears full regulation uniform of the day.

Attitude: Displays a willingness to cooperate and accept constructive criticism; sets realistic expectations; approaches assignments with interest and initiative.

Productivity: Follows safety practices; conserves materials and supplies; maintains equipment; stays on task and utilizes time constructively; demonstrates proactive learning through involvement in activities and contributions to class discussions.

Organization: Manifests skill in prioritizing and management of time and stress; demonstrates flexibility in handling change; completes assignments on time; uses work time appropriately.

Communication: Contacts faculty to report concerns; notifies faculty of tardy/absence one hour before start of class; seeks clarification and understanding through appropriate, pertinent questions.

Leadership: Displays leadership skills; appropriately handles conflict and concerns; demonstrates problem-solving capability; maintains appropriate relationships with supervisors/faculty and peers; follows the chain of command.

Respect: Deals appropriately with cultural/racial diversity; does not engage in harassment of any kind to include but not limited to verbal, nonverbal, and written; addresses faculty and peers in appropriate tone and with appropriate language to include but not limited to electronic (email, text, etc.) communications.

STUDENT DRESS CODE

Students who attend Lake Tech shall dress in a manner appropriate for the job in which they are receiving training, including any special protective gear and professional uniforms. All clothing, makeup, and jewelry must be clean, neat, modest, in good repair, appropriately sized, and be neither distracting nor offensive.

The Executive Director or designee has the final authority for determining whether or not a student's apparel conforms to the dress code. If it is determined that it does not, students will be required to change into clothing which will conform to this code or leave campus. Students may return to campus when they have changed into appropriate clothing.

Minimum Program Dress Code

1. Pants shall be worn fastened and at the waist. Pants should be dark colored, straight legged or boot cut (jeans are acceptable). Baggy pants are not permitted in any program area. Baggy pants are considered to be more than one size larger than the individual's waist. Shorts are not permitted.
2. Shoes must meet safety/industry standards. Open toed shoes are not permitted
3. Program logo school T-shirts are to be worn.
4. For safety reasons, shorts, loose clothing, jewelry, and loose hair below the collar are not allowed.
5. Hats are only permitted in shop areas if required by the program master plan of instruction and must be worn appropriately (i.e., ball cap bills worn forward).

REMEMBER – Students at this College are preparing for employment in positions where public relations may be a major factor in one's success. Individual desires cannot always take precedence.

GENERAL SCHOOL INFORMATION

Campus Safety

Lake Technical College makes every effort to provide a safe environment for all students, visitors, faculty and staff. Basic safety standards, which will include fire drills, weather drills, equipment usage, and traffic regulations, will be covered in the program orientation. These basic safety standards will be reinforced throughout the program enrollment. See the current school catalog for additional campus safety information.

Competency-based Instruction

Any student who enters a LTC program with previous experience or educational background that would enable the student to successfully complete a test of competence in any area may, with the permission of the faculty, complete a test to measure that competence.

Follow Up

Lake Technical College is proud of its graduates and celebrates the next step graduates take whether it is employment, military or further education. Prior to completing, students may visit the Career Success Center for assistance with employability skills such as resume writing. In addition, faculty may provide students with employment leads. However, it is up to the individual student to actively pursue employment opportunities. We like to hear how our graduates are doing and want to celebrate your successes so be sure to communicate with your faculty any employment, military, or further education you enter. Students are required to participate in an Exit Interview prior to their last day in their program.

Food and Drink

To protect equipment and furnishings in the classroom and laboratory areas, only water, in closed, covered containers, is permitted. No other food or drinks are allowed, unless specific permission is granted by the faculty. However, under no circumstance may food or drinks be in the laboratory areas.

Lunch

Food services are provided on the main campus by the Culinary Institute and are available during breaks and lunch. Adult students may leave the LTC campus during the scheduled 30-minute lunch break as long as they return to the program on time.

Parking Regulations

Students may park only in the south parking lot in spaces not designated as staff or customer service parking. For safety, loitering in or around vehicles once the vehicle is parked is not allowed, and a 5 mph speed limit is enforced. In consideration of the neighbors and classes in session, loud music in vehicles on campus is prohibited.

Smoking

Lake Tech is a tobacco free institution. The use of tobacco products of any kind, including e-cigarettes, is not permitted at any Lake Tech location. This includes the parking lots.

FINANCIAL AID

Policies and guidelines for the administration of all financial aid are established according to federal and state law. Applicants complete an information form, Free Application for Federal Student Aid, and furnish documentation needed to verify eligibility. More information on the application process may be obtained in the Financial Aid Office.

The Financial Aid Office will assist students, where possible, with access to financial support offered by federal agencies (U.S. Department of Education – Pell Grants, Department of Veterans' Affairs), other state and local agencies and local organizations (scholarships).

JOB DESCRIPTIONS

Collision Repair Technician

The job of a collision repair technician is to repair damaged vehicles to a "pre-accident" condition. This is done by replacing or repairing and realigning the exterior panels made of sheet metal, plastic, or fiberglass. In addition, the technician must replace/straighten and align the structural components to bring the vehicle back to factory specifications.

To help the technician perform top quality repairs, most shops today are equipped with modern equipment, such as:

1. Body and frame machines to hold the vehicle in place while pulling the damaged areas back to specifications.
2. Measuring equipment to show the technician which part of the structure is bent and to verify when it is back to factory specifications.
3. Special welding equipment to weld structural components made up of high strength, low alloy steel.
4. Special equipment to weld plastic panels such as bumpers, interior panels and, on some newer vehicles, even fenders.

Automotive Refinish Technician

The job of the automotive refinish technician is to restore the finish of the repaired vehicle back to the factory finish.

Automobiles of today come from the factory with glamour finishes, using layers of clear coats and pearl coats to give special effects and provide extra durability. The refinish technician will be working with paint products far superior to those used a few years ago. The technician must prepare the repaired areas of the vehicle, mask off adjacent panels, prime, sand, and spray the final finish.

ADVANCEMENT OPPORTUNITIES

Top notch technicians may decide to specialize in some segment of automotive repair. Technicians who have certain personal characteristics such as leadership skills or ability to deal with people may find the job of team leader, shop manager, production foreman, parts manager, or estimator to be especially challenging. There is also the opportunity to open one's own business.

OPPORTUNITIES FOR WOMEN

Today, women have an excellent opportunity in all facets of the collision repair industry including repair technician, refinish technician, estimator, parts manager, adjuster, shop manager, show owner, etc. There are more women entering the collision repair industry every year.

AREAS OF SPECIALTY

The collision repair industry offers several areas of specialty. Here are just a few:

1. Suspension steering and four-wheel alignment
2. Estimating or appraising
3. Structural repair, including frame repair and unibody alignment
4. Custom paint work
5. Some shops specialize in the type of vehicles repaired

WHERE TECHNICIANS WORK

Automotive collision repair and refinishing technicians are employed by privately owned collision repair shops, new and used car dealers, franchised repair centers, and the vehicle manufacturing industry.

HOURS

Most technicians work between 40 and 48 hours per week. When overtime is required, technicians usually receive additional pay. Most collision repair shops are closed on Sundays and holidays.

OUTLOOK

The collision repair industry is getting larger each year. It is rapidly approaching a 30-billion-dollar-a-year industry, which is not directly affected by the ups and downs in the economy; therefore, it does provide steady work.

Considering the increasing cost to replace the high-tech automobiles of today along with the increase in skills needed to repair them, collision repair and refinishing should continue to be an outstanding career with even more opportunities as time goes on.

EARNINGS

Yearly potential may be in excess of \$50,000 depending on the skills, experience, type of work performed, and geographic location. Fringe benefits vary widely among shops. Pay may be based on an hourly wage, on a percentage of the team output, or a combination of these.

PROGRAM OBJECTIVES

See the attached Florida Department of Education curriculum framework for objectives and competencies.

**Florida Department of Education
Curriculum Framework**

Program Title: Automotive Collision Repair and Refinishing
Program Type: Career Preparatory
Career Cluster: Transportation, Distribution and Logistics

PSAV – Career Preparatory	
Program Number	1470603
CIP Number	0647060300
Grade Level	30, 31
Standard Length	1400 hours
Teacher Certification	AUTO BODY @7 7G AUTO IND @7 %7 %G
CTSO	SkillsUSA
SOC Codes (all applicable)	49-3021- Automotive Body and Related Repairers
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.shtml
Basic Skills Level	Mathematics: 9 Language: 9 Reading: 9

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Transportation, Distribution and Logistics career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of the Transportation, Distribution and Logistics career cluster.

The content includes but is not limited to basic trade skills; refinishing skills; sheetmetal repair skills; frame and unibody squaring and aligning; use of fillers; paint systems and undercoats; related welding skills; related mechanical skills; trim-hardware maintenance; glass servicing; and other miscellaneous repairs. The course content should also include training in communication, leadership, human relations and employability skills; and safe, efficient work practices.

This program focuses on broad, transferable skills and stresses understanding and demonstration of the following elements of the Automotive industry; planning, management, finance, technical and product skills, underlying principles of technology, labor issues, community issues, and health, safety and environmental issues.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of five occupational completion points.

This program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44 (3)(b), F.S.

The following table illustrates the **PSAV** program structure:

OCP	Course Number	Course Title	Course Length	SOC Code
A	ARR0210	Paint and Body Helper	250 hours	49-3021
	ARR0213	Paint and Body Assistant	250 hours	
B	ARR0020	Auto Collision Estimator	100 hours	49-3021
C	ARR0313	Frame and Body Repairman	150 hours	49-3021
D	ARR0127	Automotive Refinishing	325 hours	49-3021
E	ARR0240	Automobile Body Repairer	325 hours	49-3021

National Standards

Programs identified as having Industry or National Standards corresponding to the standards and/or benchmarks the Automotive Collision Repair and Refinishing program can be found using the following link:

<http://www.natef.org/Achieving-Accreditation/Program-Standards.aspx>

Common Career Technical Core – Career Ready Practices

Career Ready Practices describe the career-ready skills that educators should seek to develop in their students. These practices are not exclusive to a Career Pathway, program of study, discipline or level of education. Career Ready Practices should be taught and reinforced in all career exploration and preparation programs with increasingly higher levels of complexity and expectation as a student advances through a program of study.

1. Act as a responsible and contributing citizen and employee.
2. Apply appropriate academic and technical skills.
3. Attend to personal health and financial well-being.
4. Communicate clearly, effectively and with reason.
5. Consider the environmental, social and economic impacts of decisions.
6. Demonstrate creativity and innovation.
7. Employ valid and reliable research strategies.
8. Utilize critical thinking to make sense of problems and persevere in solving them.
9. Model integrity, ethical leadership and effective management.
10. Plan education and career path aligned to personal goals.
11. Use technology to enhance productivity.
12. Work productively in teams while using cultural/global competence.

Standards

After successfully completing this program, the student will be able to perform the following:

- 01.0 Demonstrate vehicle and industry knowledge, business management, and shop and occupational safety skills.
- 02.0 Prepare vehicles for repair and refinishing by applying creative techniques.
- 03.0 Creatively repair, replace and adjust outer body panels.
- 04.0 Perform welding operations that apply creativity and interpretation.
- 05.0 Evaluate and prepare surfaces for refinishing.
- 06.0 Select and apply appropriate polishing compounds and detail techniques.
- 07.0 Setup vehicle for measuring and pulling.
- 08.0 Calculate, measure and repair unibody vehicles.
- 09.0 Inspect and creatively repair frame type vehicle bodies.
- 10.0 Maintain and operate spray equipment.
- 11.0 Finish defects, causes and cures.
- 12.0 Prepare metal parts and panels for creative finishing.
- 13.0 Prepare and apply body fillers.
- 14.0 Perform miscellaneous repairs.
- 15.0 Repair fiberglass and plastic components.