

I-CAR EDUCATION FOUNDATION

People Actively Creating Employability Thru Short Term Task Training



Vision: Collision repair businesses will be able to hire properly educated and trained candidates that can perform entry-level tasks in a competent manner with little or no supervision.

Mission: To provide students with competency-based collision repair training for entry-level tasks and work experience through internships in collision repair businesses.

This chapter is a guide for operating a PACE+ST³ program. It is intended to highlight critical areas for success, provide an outline of the program structure, and suggest processes, responsibilities, and forms. Because local situations, issues, and other variables cannot be fully addressed for all circumstances, this guide provides a framework for local adaptation to help insure a successful implementation.

This is an additional chapter to the *"How to Establish and Operate a Successful Collision Repair Training Program"* handbook and refers to existing chapters for additional information.

**People Actively Creating Employability
Thru
Short Term Task Training**

PACE+ST³

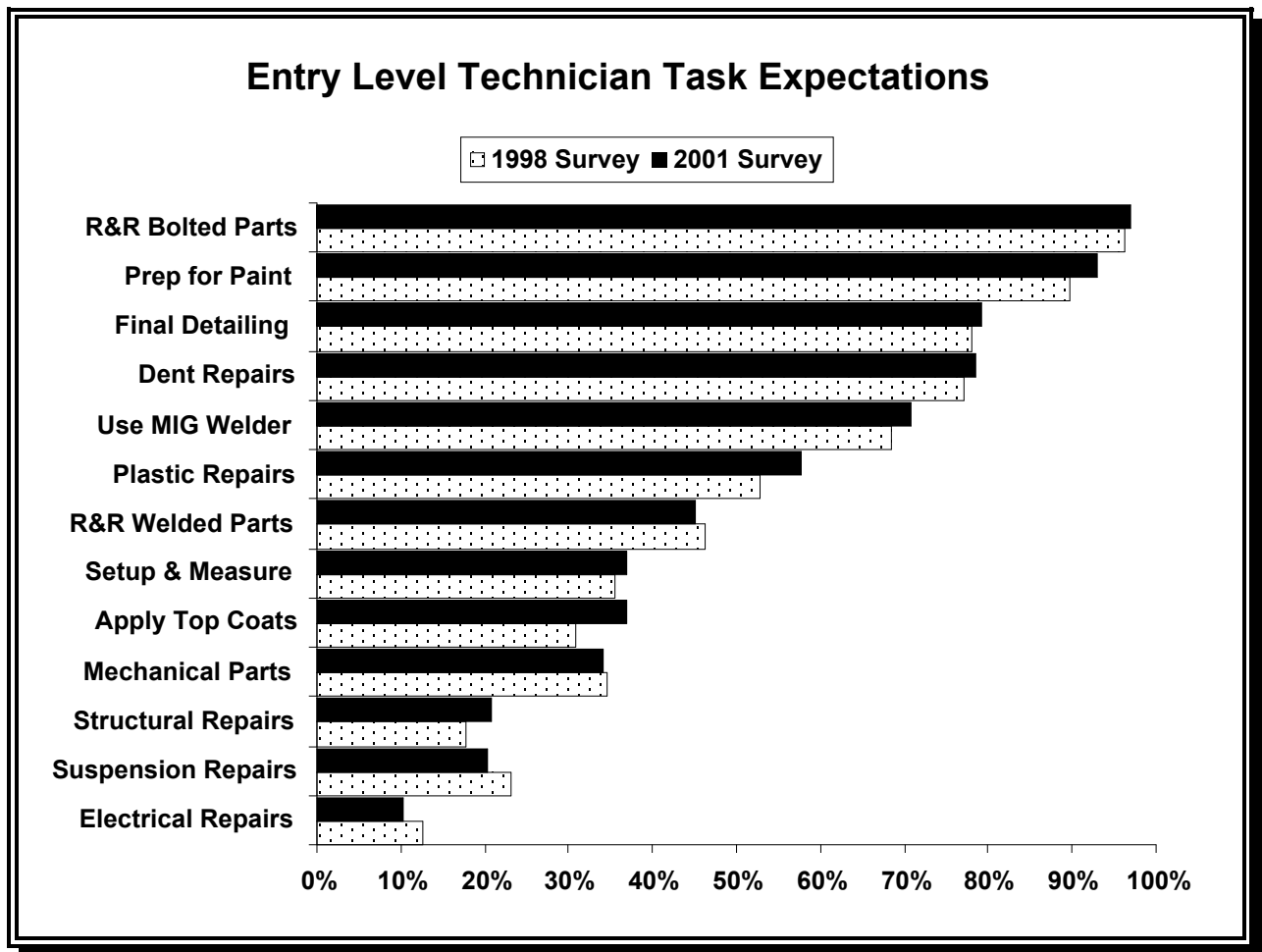
A. Introduction	Page 3
B. Getting Started	6
C. I-CAR Support	8
D. Collision Repair Business	9
E. Calendar	11
F. Advisory Council	15
G. Recruiting	19
H. Curriculum	22
I. Mentoring	32
J. Internship	39
K. Focus Meeting	48
L. Forms Summary	54
Appendices	
A - PACE+ST ³ Forms	55
B - Internship Startup Forms	67
C - Internship Report Forms	73
D - Additional Information	90

A. Introduction

The I-CAR Education Foundation, along with many industry partners, has developed a fast-paced program for recruiting entry-level technicians, training basic skills, and placing them in collision repair facilities for production work.

This program is designed to attract potential students at an early age, training basic skills during their junior year of high school, and a mentored working experience over the summer in a production collision repair facility.

This idea evolved after reviewing recent I-CAR Education Foundation Industry Survey results where collision repair business owners and managers reported on basic skills they would expect from an entry-level technician.



Even though these businesses would ideally prefer their new technicians to be knowledgeable and proficient in all aspects of collision repair, they identified basic skill areas that entry-level technicians should be expected to perform with little or no supervision right out of school. Four areas consistently ranked at the top.

- R&R Bolted Parts
- Prep for Paint
- Final Detailing
- Dent Repair

The PACE+ST³ initiative gives career and technical instructors direction, ensuring students are taught these four skill areas during their junior year, so they can work in a collision repair business during the summer before their senior year. This way, students will have at least the minimum skills needed to be a high-quality, entry-level technician. Additional skills can then be learned during their senior year.

After graduation, they can be placed in a business working full time because they will not only have the proper skill set, but also the experience and confidence from their summer production work. They are also well-prepared to continue their education in post-secondary collision repair training programs.

Benefits for the school include:

- A focused training curriculum
- Industry and instructor support
- Interaction with local business

Benefits for the collision repair business include:

- A source of pre-qualified workers
- Involvement with a school training program
- Recognition in the community and industry

Benefits for the student include:

- A focused, competency-based program
- Live mentored work experience
- Employment opportunities

Of course, these benefits don't come easy. There are critical responsibilities needed from each partner to realize these desired end results.

Responsibilities for the school include:

- Recruiting qualified candidates
- Executing a competency-based curriculum
- Working with business

Responsibilities for the collision repair business include:

- Executing an effective mentoring program
- Providing relevant production work and pay
- School Advisory Council participation

Responsibilities for the student include:

- Maintaining academic studies and attendance
- Demonstrating skill competencies
- Learning employability skills

This brief introduction outlines the basic intent and structure of a PACE+ST³ program.

There is much more.

This chapter will build on information in all 16 chapters of the "*How to Establish and Operate a Successful Collision Repair Training Program*" handbook, both print version and web-based version. The web-based version has been updated and is available at no charge on the I-CAR Education Foundation website.

http://www.i-car.com/html_pages/education_foundation/products_programs_services/how_to_handbook.html

This chapter will expand on explanations, responsibilities, and suggested forms focusing on PACE+ST³. Realizing there is no single program to fit all situations, state requirements, and legal environments, this chapter shows the best practices, processes, and procedures learned by actual experience in pilot programs for PACE+ST³.

Effective execution in certain critical areas is essential for success. These critical areas include an active Advisory Council, a competency-based curriculum, and an effective summer work experience.

Adaptation in certain other areas may be needed to accommodate local situations, including recruitment methods, student selection, and grading specifics. PACE+ST³ could even be adapted for use in post-secondary programs with minimal changes.

With everyone working together in their local market areas, PACE+ST³ can be an effective method of filling a critical shortage of entry-level collision repair technicians.

B. Getting Started

Several critical elements must be in place before this program can begin... or succeed.

1. Establish Curriculum

PACE+ST³ is centered on competence-based training of 54 basic tasks in four areas of collision repair, requiring approximately 360 hours of combined classroom and lab time. There are also non-technical skills to consider when preparing students for the workforce, such as safety and employability skills.

These 54 tasks were selected from the complete task list identified by the National Automotive Technicians Education Foundation (NATEF). Tasks selected for training in the PACE+ST³ program cover only the four target areas; R&R Bolted Parts, Prep for Paint, Final Detailing, and Minor Dent Repair.

I-CAR has training material available through both ADVANCE TECH and Enhanced Delivery. Although both are complete, competency-based collision repair curriculums, only parts of them would be needed to cover all the tasks for PACE+ST³.

Each school needs to develop an effective curriculum for teaching these technical tasks, required academics, and soft skills needed for a real work experience. Most, if not all, may already exist in the school's current materials. If not, there are outside materials available from reliable industry sources.

Additional information to consider for curriculum is in Section H.

2. Involve Advisory Council Members

An Advisory Council needs to be helpful and effective. Members are selected from local industry, including collision repair businesses, suppliers, and insurance offices.

Rather than just being a member of the council, each person needs to assume certain responsibilities to ensure success of the PACE+ST³ program.

They need to review the student's task list and learning objectives, enhancing it with local ideas and needs. They need to be willing to assist in Career Awareness activities, such as workplace tours or shadowing experiences. They need to help with vehicles for students to work on, materials for students to work with, and equipment for students to learn from. They need to help place students in quality internship experiences.

It is very important that Advisory Council members are selected carefully. A list of criteria to consider is in Section F.

3. Identify Collision Repair Businesses

PACE+ST³ depends on cooperation with local industry. After all, local collision repair businesses are customers for the school's student output. It would be in their best interest to get involved not only for a supply of qualified workers, but also to influence the training those students receive.

These businesses will support the student's work experience by employing the student and guiding his or her production work. This will become more productive for the business as the student learns to work in a fast-paced environment.

However, businesses must be selected carefully. They must have facilities and equipment compatible with the student's training. They must have a work flow, work product, and work ethic applicable to the student's education needs. They must have an employee safety program. They must have one or more employees ready, willing, and able to mentor the students during their first work experience.

Potential business partners must be selected carefully. A list of criteria to consider is in Section J.

4. Select Mentor Training Method

Student mentoring has been shown to be the single most important factor for success.

PACE+ST³ depends on actual work experience to enhance school learning with practical application and an introduction to the work environment. A positive experience is dependent on effective mentoring.

Effective mentoring is dependent on good mentor training. A proper understanding of mentoring needs and processes will help select the right technicians to be mentors and help match them with the right students.

There are several choices for mentor training, from existing in-school programs to seminar-type instruction to web-based training. Each must be analyzed for cost, time, and availability to select the best method for each individual situation.

Experience in pilot programs shows a drastic decline in success when mentor training was weak or non-existent. Pilots also showed the best results with a neutral party delivering training, both student and mentor present together, and in a focused event.

Additional information is in Section I.

C. I-CAR Support

PACE+ST³ is operated by the I-CAR Education Foundation, a non-profit subsidiary focused on development of new entry-level technicians for the collision repair industry.

Schools registering for the PACE+ST³ program will have full support of the entire I-CAR Education Foundation organization.

PACE+ST³ is open to all schools with a quality collision repair program. Regular reporting of progress to the Foundation is required. A registration form is available in Appendix A.

ASE certification to NATEF Standards is not required, but is highly recommended. Criteria involved in the certification process help to improve the program from any level. Certification may also help in securing more donations from industry. Although there are four areas possible, a school could become certified in as little as one area. PACE+ST³ will not compromise NATEF certification, but it may be necessary to realign an existing syllabus for this program. More information is available in Chapter 11.

The main emphasis of PACE+ST³ is high school programs, but it could be adapted for post-secondary programs as well.

Upon registration, the I-CAR Education Foundation will supply:

- *"How to Establish and Operate a Successful Collision Repair Training Program"* Handbook (1993 printed version, \$12.95 value)
- "Youth Apprenticeship" CD-ROM (\$49.95 value)
- Access to purchase I-CAR's training materials
- Free 1 year membership in CRIN, the national Collision Repair Instructor's Network (\$50.00 value)
- Free subscription to CollisionWeek for daily collision repair news (\$79.00 value)
- Membership in the National Auto Body Council (\$50.00 value)
- Opportunity to apply for I-CAR Education Foundation scholarships

Upon acceptance, the school agrees to follow PACE+ST³ as described, including:

- Develop and teach a curriculum to include all selected tasks
- Establish or arrange mentor training for students and mentors
- Establish internship and follow up visit plans
- Submit enrollment information
- Submit an Internship report
- Submit final reports

D. Collision Repair Business

Benefits of participating with PACE+ST³

- Provides a continuous source of qualified entry-level technicians.
- Develops trainees in accordance with the needs and expectations of your business.
- Enables your business to take an active role in improving your local collision repair training program (builds a true business-education partnership).
- Raises the overall quality of your applicant pool.
- Creates a positive career image for technicians among community youth.
- Reaches qualified candidates early.
- Lowers the costs of recruitment and screening over the long term.
- Gives you proven strategies for enhancing your workplace environment, fostering long-term retention of all your valued employees.
- Energizes the commitment of supervisors, mentors, and other employees through the enthusiasm of students eager to learn.
- Strengthens positive involvement with your community (and enhances your image).
- Showcases your facilities, technical expertise, and operating philosophy to community members.
- Improves the overall image of the collision repair industry.

Responsibilities of participating with PACE+ST³

- Serve as an active member on the collision repair training program's Advisory Council.
- Provide non-paid job shadowing opportunities for students recommended by the school.
- Sponsor one or more students for a paid summer internship after their junior year, and continued part-time internship during their senior year (if feasible), providing varied work experiences with an emphasis on skill development.
- Interview prospective student interns.
- Support the participation of one or more technicians in mentor training, prior to the summer internship period.
- Provide mentoring, job-based training, and guidance for the student(s).
- Fill out and sign a PACE+ST³ application, sign an Internship agreement, and ensure mentor reports are completed in a timely manner.
- Adhere to all relevant labor laws and insurance requirements.
- Help build community awareness of rewarding careers in collision repair.
- Visit local schools for Career Day presentations or displays.
- Evaluate your workplace environment and commit to making it a satisfying place to work.
- Explain to all your employees the benefits, operation, and their role for PACE+ST³.

How to start participating with PACE+ST³

- Talk to school representatives about PACE+ST³.
- Fill out and sign a PACE+ST³ application.
- Start identifying mentor candidates.

E. Calendar

Here is a general overview of the PACE+ST³ sequence of events bringing students from career awareness to full-time employment.

Prior to Junior Year	Junior Year			Senior Year
	Fall	Spring	Summer	
Awareness Activities	Student Orientation	Continue Class Instruction	Student Internships	Advanced Instruction
Career Days	Begin Class Instruction	Continue Lab Work	Instructor workplace Visits	Advanced Lab Work
Workplace Tours	Begin Lab Work	Internship Planning	Finalize Reports	School/Work Co-op
Program Recruitment	Shadowing Activities	Mentor Training		Full-time Employment

Below is a thirteen-month outline of sequential events to help plan activities throughout a one-program cycle. Individual program specifics, school calendars, and business participation may dictate different timing of the events as well as the level of detail involved.

Use this as a guide so all the critical steps and events are accomplished in a pre-planned and efficient manner.

September

School year begins

Students, curriculum, and advisory counsel already in place

Schedule dates for school-participation activities

Student orientation

Special event to celebrate program beginning

- Opportunity to explain program, benefits, and responsibilities

- Opportunity to discuss career paths and industry support (I-CAR, sponsors)

- Invite students, parents, administrators, advisory committee, and past graduates

- Kick-off party

- Potluck dinner

- School facility tour

- Repair facility tour

- Display student work / custom paint work

Begin student portfolios

Plan Advisory Council meeting

October

Schedule shadowing activities

Advisory Council meeting

Send enrollment information to the I-CAR Education Foundation

November

Begin student shadowing activities

Plan tours to industry partners; insurance companies, salvage yards, glass shops, etc.

Begin SkillsUSA Professional Development Program Level I

Start soliciting local businesses for internships

December

Pre-qualify students for PACE+ST³ program

Students start applying for PACE-ST³ program

Collision repair businesses start applying for PACE-ST³ program

Schedule Advisory Council meeting for January

Tours to industry partners; insurance companies, salvage yards, glass shops, etc.

Continue shadowing activities

Complete Professional Development Program Level I

January

Coach students on filling out PACE-ST³ internship applications

Advisory Council meeting

Begin recruiting sophomores for next school year

Finish shadowing activities

Finalize student grades and attendance reports

February

Start reviewing student and business applications for internships

Start planning mentor training

Start business' searching for mentor candidates

Send out mentor evaluation forms

Continue recruiting sophomores for next school year

Begin Professional Development Program Level II

March

- Begin finalizing collision repair business selection for student internships
- Begin structured recruiting events for next school year
 - Open house
 - Career Day
 - Utilize existing students
- Finalize mentor selections
- Schedule mentor training
- Schedule Advisory Council meeting for April
- Complete Professional Development Program Level II

April

- Final selection of students for internships
- Sizing for safety packets
- Advisory Council meeting
- Determine starting wage for internship program
- Student interviews for internships
- Parent meeting - review roles / responsibilities
- Begin mentor training

May

- Finalize recruitment of next year's incoming juniors
- Complete mentor training
- Student placement
- Meeting with parents of participating students
- Secure work permits, if applicable
- Complete tool scholarship or other tool agreements
- Schedule workplace orientation for student

June

- Complete workplace orientations
- Student achievement record of tasks reviewed with mentor
- Begin workplace visits (Instructor or other school representative)

July

- Continue workplace visits

August

- Complete workplace visits
- Plan Focus Group meeting
- Plan for recognition of mentors' achievement

September

- Focus group meeting to review and refine program
- Send results to the I-CAR Education Foundation

Here is a general overview of PACE+ST³ responsibilities and where they may be expected to fall, which may vary depending on local situations. Responsible groups are listed in the left column.

	Up to Junior Year	Junior Year			Senior Year
		Fall	Spring	Summer	
Advisory Council	- Publicity -Recruitment	- Ensure appropriate curriculum is in place	- Assist with internship setup activities		- Review last year's program - Offer suggestions for next year
School Administration	- Support - Publicity - Recruitment	- Curriculum approval	- Support internship activities	Support workplace visits	- Review program and adjust
School Program	- Awareness Activities - Exploration Activities - Publicity - Recruitment	- Student orientation - Classroom instruction - Lab experiences - Shadowing Activities	- Select students and businesses for internship - Arrange mentor training	- Workplace visits	- Advanced instruction
Collision Business	- Awareness Activities - Exploration Activities - Publicity - Recruitment	- Shadowing Activities	- Apply for internship - Select mentor(s) - Assist with internship setup activities	- Host intern as entry-level employee	- Cooperative education program

F. Advisory Council

An effective Advisory Council is one of the critical keys to a successful technical training program. The Advisory Council's role is to assist the program internally and represent the program in the community.

The end results of a successful collision repair training program are quality entry-level technicians and the best way to make sure these new technicians meet their employers' needs is to have their employers involved in the process.

Advisory Council members consist of local industry representatives, including independent business owners, dealership managers, paint suppliers, equipment vendors, insurance personnel, technicians, and past program graduates. This group will bring a wide range of experience and new perspectives to the program.

Advisory Council members should be:

- well respected in the industry.
- from businesses in the local market area.
- able to assist the program in some aspect.
- willing to serve for a limited time, for example, three years.
- willing to support and assist in Career Day activities.
- able to open their business for student tours.
- able to open their business for shadowing experiences.

An Advisory Council reviews the program's objectives, progress, curriculum, tools, equipment, and donations, along with other relevant issues. These members are working in the industry everyday, bringing a current business perspective, knowledge of the latest repair technologies, and expectations for entry-level technicians.

An Advisory Council can assist a collision repair training program in many aspects, including:

- Student Recruitment
- Student Development
- Curriculum Development and Review
- Securing Vehicle and Equipment Donations
- Budget and Purchasing Recommendations
- Securing and maintaining School Administration Support
- Feedback on Competency of Graduates
- Long Range Program Planning
- Instructor and Staff Selection and Development
- Student Placement

Instructors and school administrators must be prepared to respond to Advisory Council recommendations. If Council members are continually ignored or received too many excuses for inaction, the school may lose industry support.

An effective Advisory Council meets regularly. Meeting four times a year seems to be adequate to stay current and provide continuity for the PACE+ST³ program without becoming burdensome. Meeting in September, October, January, and April would have the group together near program startup, mid-year, near completion, and after summer internships for final review of the year past. There may also be additional phone or personal contact with the school during the year, depending on current needs.

An agenda should be sent out prior to each meeting so members are notified and can be prepared. Minutes should be sent out after each meeting so members can review decisions and remember any tasks they need to do. Meetings should be run formally to keep everything orderly. Motions or votes are presented to school administrators for review and opinion.

Select a council member from industry as chairman. This helps share the workload with the instructor, provides industry input for meeting schedules and agendas, and gives a single voice from the council to school administrators when needed. Additional council members could help with other meeting roles, including refreshments, meeting minutes, and reminder phone calls.

Members would be on the Council for a set amount of time, for example a three year term with a maximum of two terms. The council chairman should also have a term limit. As chairman, his or her term is recommended to be one year. Scheduled turnover ensures a fresh flow of ideas.

As part of an orientation, new Advisory Council members should spend up to a half day in school during a normal school day to experience this learning environment and be better prepared to participate in Advisory Council meetings. Members are also expected to promote enrollment, the school, and the industry in general during their normal flow of business activities.

In consideration of local situations, laws, and other variables, it would be helpful to create a handbook, outlining program specifics, for new Advisory Council members, as well as for school personnel or anyone unfamiliar with the collision repair program. This booklet would outline program objectives, processes, and expectations for all involved. A sample handbook outline is shown below.

Collision Repair Technology Program Manual

Table of Contents

Mission

Vision

Goals

Facility and Staff Guidelines

Advisory Committee

Program Curriculum

Teaching Resources

Finance and Budget

Securing Vehicles and Equipment

Recruiting Students

Internship Program

Student Achievement Records

Skills USA - VICA

Placement of Student Graduates

Continuing Education

For PACE+ST³, Advisory Councils are even more critical. Because this program reaches out directly into local industry, individual business involvement is especially important.

For PACE+ST³, Advisory Councils can assist with:

- Coordinating and scheduling workplace tours for student groups, educators, and parents.
- Planning and scheduling job shadowing for students.
- School Career Day activities.
- Determining a strategy for placing interns in repair businesses.
- Establishing a uniform pay rate for interns.
- Scheduling mentor / intern training.
- Reviewing curriculum according to the PACE+ST³ task list.
- Providing recommendations to improve the program.
- Identifying school needs for classroom support (donations of equipment, tools, information, etc.).
- Reviewing progress of tasks taught to students.
- Defining strategies to help PACE+ST³ instructors keep their own skills up-to-date.
- Reviewing classroom, lab, and personal safety procedures and compliance.
- Planning recognition activities for PACE+ST³ students and mentors.

For PACE+ST³, Advisory Council members would be given first consideration for workplace tours, shadowing experiences, internships, and post-graduation employment.

For PACE+ST³, Advisory Council members are asked to:

- Open their business for Job Shadowing and Career Day activities.
- Sponsor one or more PACE+ST³ students for a paid summer internship in their junior year.
- Offer continued part-time internship during their senior year (if feasible).
- Select and support their employees as mentors, including mentor training needs.
- Provide job-based training and guidance for the PACE+ST³ student.

Advisory Council membership requires some additional time and work, but also helps to ensure the PACE+ST³ program meets local industry needs.

Additional information and sample forms can be found in Chapter 5.

G. Recruiting

Recruitment activities never stop. Neither are they limited to the school environment.

Recruitment activities can start as early as grade school and continue throughout all high school years. Of course, the focus for PACE+ST³ is to have enough students interested by spring of their sophomore year, enroll them for their junior year, and have them ready for an internship during the summer before their senior year.

The first step is **Career Awareness**, a gradual realization that an automotive career is available, desirable, and rewarding. Opportunities may be found at any grade level and could include:

- Coloring books
- Model car contest
- Repair demonstration
- Stories about automotive history
- Car shows
- Local racing events
- Workplace tours
- Industry videos
- Community service projects

The second step is **Career Exploration**, seeking more information about specific jobs or industries. This would be relevant during high school years and could include:

- Workplace tours
- Job shadowing
- Career days
- Technology fair
- Driver Education class activities
- Car wash fundraiser
- Industry videos
- Guest speakers

Career Paths in the Collision Repair Industry

Choosing a career is an important life decision. However, this decision is different from the past where one learned a trade and then did that until retirement. We have many more opportunities available today. This is simply a decision of where to get started.

Collision repair technology is an ever-changing field with many choices in the field and with many different paths throughout the entire industry. Choosing to learn and work in the field of collision repair will give you the opportunity to learn many skills and discover

additional career paths in the many different aspects of this industry. Collision repair technicians can specialize in several areas, including:

- Metal repairs
- Structural repairs
- Refinishing
- Mechanical repairs
- Estimating

The first obvious steps beyond the technical work would be shop foreman, manager, and business owner. These positions are generally filled from the technician workforce, but it is just a beginning to see the potential in this industry.

An experienced collision repair technician will find opportunities with paint distributors, tool companies, vehicle manufacturers, equipment manufacturers, parts distributors, insurance companies, salvage yards, and, of course, career and technical education.

Learning hands-on skills, work planning, and use of equipment builds knowledge in each of those areas and will open doors to new opportunities, depending on individual interest. Collision repair work can be very rewarding, provide job security in a high-demand trade, and set the stage for future career choices.

Recruiting efforts are needed by more than just the school. Advisory Council members should be encouraged to look for opportunities and assist in person, supply materials or props, and/or make their business available when needed. Recruiting opportunities are everywhere, including career brochures at the business, running an industry video in the waiting room, and speaking at civic group meetings. Getting involved in opportunities at school is a function of staying observant for various opportunities and volunteering to help.

However, recruiting doesn't stop here. There is a more general recruiting aspect called marketing. Marketing promotes the industry in general and PACE+ST³ specifically. PACE+ST³ must be continually sold to other parties to help insure repeated success, including the repair community, equipment vendors, paint companies, school administrators, guidance counselors, parents, I-CAR committees, and civic groups.

Marketing ideas might include:

- Press releases at each step
- One or more PACE+ST³ banners placed in school and businesses
- Uniform patches for students, instructors, and mentors
- Plaques for participating collision repair businesses
- Brochures with success stories, photos, benefits, Q&As
- Website explaining the program and how to get involved
- Certificate of completion after internship

CD/DVD of the current program for more recruiting
Logo shirts
PACE+ST³ logo trinkets (key chains, flashlights, pen knives)

It may be possible to include material and equipment suppliers as sponsors, including their logo on materials as well.

Throughout these recruiting activities, parents must be involved whenever possible. They have a tremendous influence on where their son or daughter focuses interest. This modern, high-tech collision career must be sold to parents too.

More information and ideas are in Chapter 8.

The third and final step is **Career Preparation**, where the instruction and learning of technical skills begin. This is where all those small, but steady, recruitment efforts pay off with full classes and plenty of enthusiasm.

Soon after school begins, enrollment information must be sent to the I-CAR Education Foundation. The purpose is to collect simple demographic data and track PACE+ST³ progress nationally. A Student Enrollment Report is shown in Appendix A.

H. Curriculum

PACE+ST³ is designed to help a student learn the most important basic skills to be able to start working in a production collision repair facility. Classroom instruction will provide theory and lessons behind basic repair techniques. These lessons will be practiced in the school shop (lab) and graded on competency as each task is accomplished. Learning is from both traditional instruction and hands-on practice.

Along with state educational guidelines, additional workplace "employability skills" instruction, and other basic information, each student should be ready for a summer internship after the first year.

These basic skills are from the National Automotive Technician Education Foundation (NATEF) list of competencies for collision repair work. This task list is compiled by representatives from all segments of the industry and is updated every three years to keep current. From this list, basic tasks were selected that the industry defines as skills they would expect from an entry-level technician.

Listed in the following charts are 54 NATEF tasks that cover all four basic skill areas to be learned in the PACE+ST³ program. There are two charts. The first contains 27 non-structural tasks. The second contains 26 refinishing tasks and 1 plastics task. Either section could be taught first.

- High Priority - Individual (HP-I) is defined as a task that requires students to demonstrate hands-on competency to the instructor on an individual (one-to-one) basis. High Priority Group (HP-G) is defined as a task that can be taught through the use of video, demonstration, team training, etc., where students should be tested on the information presented, but are not required to demonstrate hands-on competency on an individual (one-to-one) basis. For PACE+ST³, it is recommended that students should individually demonstrate competency in all tasks.
- "Hrs." indicates the number of instruction hours, classroom or lab, recommended when using the ADVANCE TECH curriculum. "Incl" in the Hours column indicates that the required hours are included above.
- "A.T." shows an ADVANCE TECH topic where this task is addressed. It may be found in one or more modules within this topic and may also be covered in other ADVANCE TECH topics.

ADVANCE TECH is a print-based package consisting of 43 subject areas, or individual instruction modules. Each module consists of an instructor manual, overhead masters, and videotapes. PACE+ST³ requirements can be covered by just 14 of these modules. Student workbooks are also available by module.

- “E.D.” shows an Enhanced Delivery module where this task is addressed. It may be found in additional Enhanced Delivery modules as well.

Enhanced Delivery is a CD-ROM-based series of 51 units covering all of collision repair. These are the units used for regular I-CAR classes, but can be selectively presented for use with entry-level instruction for students. Each consists of an instructor CD-ROM and a student CD-ROM. PACE+ST³ requirements can be covered by just 30 of these modules.

These charts can be used as a guide when developing a comprehensive curriculum to include these essential tasks as well as other related areas. Using materials from either ADVANCE TECH or Enhanced Delivery may simplify the process.

PACE+ST³ Task List

	NATEF Task	Req.	Hrs.	A.T.	E.D.
	NON-STRUCTURAL				
	Preparation				
1.	Review damage report and analyze damage to determine appropriate methods for overall repair; develop repair plan.	HP-G	37	1A	DAM01
2.	Inspect, remove, store, and replace exterior trim and moldings.	HP-I	40	1C	DAM04
3.	Inspect, remove, store, and replace interior trim and components.	HP-G	Incl	1C	DAM04
4.	Inspect, remove, store, and replace non-structural body panels and components that may interfere with or be damaged during repair.	HP-I	38	1B	DAM02
5.	Protect panels, glass, and parts adjacent to repair area.	HP-I	Incl	1A	EXA01
6.	Soap and water wash entire vehicle; use appropriate cleaner to remove contaminants from those areas to be repaired.	HP-I	Incl	1A	REF02
7.	Remove corrosion protection, undercoating, sealers, and other protective coatings necessary to perform repairs.	HP-I	Incl	1A	EXA02
8.	Inspect, remove, and replace repairable plastics and other components that are recommended for off-vehicle repair.	HP-G	Incl	1B	DAM02
9.	Apply safety procedures associated with vehicle components and systems such as ABS, air bags, refrigerants, batteries, tires, oil, anti-freeze, engine coolants, etc.	HP-G	In All	ALL	ABR01
10.	Apply environmental practices associated with vehicle components and systems such as substrates, fluids, refrigerants, batteries, etc.	HP-G	In All	ALL	ABR01
	Body Panels				
11.	Inspect, remove, replace, and align hood, hood hinges, and hood latch.	HP-I	Incl	1B	DAM02
12.	Inspect, remove, replace, and align deck lid, lid hinges, and lid latch.	HP-I	Incl	1B	DAM04
13.	Inspect, remove, replace, and align doors, tailgates, hatches, liftgates, latches, hinges, and related hardware.	HP-I	Incl	1B	DAM04
14.	Inspect, remove, replace, and align bumper bars, covers, reinforcement guards, isolators, and mounting hardware.	HP-I	Incl	1B	DAM02
15.	Inspect, remove, replace, and align front fenders, headers, and other panels.	HP-I	Incl	1B	DAM02
16.	Straighten and rough-out contours of damaged panel to a surface condition for body filling or metal finishing using power tools, hand tools, and weld-on pull attachments.	HP-I	Incl	1D	STA01
17.	Restore corrosion protection.	HP-I	27	2E	CPS01
18.	Restore sealers, sound deadeners, and foam fillers.	HP-I	Incl	1F	CPS01

	Metal Repairs				
19.	Remove paint from the damaged area of a body panel.	HP-I	30	1E	STA01
20.	Locate and reduce surface irregularities on a damaged body panel.	HP-I	Incl	1D	FCR01
21.	Demonstrate hammer and dolly techniques.	HP-I	Incl	1D	STS01
22.	Mix body filler.	HP-I	36	1E	STS01
23.	Apply body filler; shape during curing.	HP-I	Incl	1E	STS01
24.	Rough sand cured body filler to contour; finish sand.	HP-I	Incl	1E	STS01
	Movable Glass				
25.	Inspect, adjust, repair, or replace window regulators, run channels, glass, power mechanisms, and related controls.	HP-G	16	1H	DAM04
	Metal Welding and Cutting				
26.	Protect adjacent panels, glass, vehicle interior, etc. from welding and cutting operations.	HP-G	Incl	1A	EXA02
27.	Protect computers and other electronic control modules during welding procedures according to manufacturer's specifications.	HP-G	Incl	1A	EXA02

	NATEF Task	Req.	Hrs.	A.T.	E.D.
	REFINISH				
	Safety Precautions				
28.	Identify and take necessary precautions with hazardous operations and materials according to federal, state, and local regulations.	HP-I	26	4A	REF01
29.	Identify safety and personal health hazards according to OSHA guidelines and "Right to Know Law".	HP-I	Incl	4A	WKR01
30.	Select and use the NIOSH approved personal sanding respirator. Inspect condition and ensure fit and operation. Perform proper maintenance in accordance with OSHA Regulation 1910.134 and applicable state and local regulations.	HP-I	Incl	4A	WKR01
31.	Select and use the NIOSH approved (Fresh Air Make-up System) personal painting/refinishing respirator system. Perform proper maintenance in accordance with OSHA Regulation 1910.134 and applicable state and local regulation.	HP-I	Incl	4A	REF01
32.	Select and use the proper personal safety equipment for surface preparation, spray gun and related equipment operation, paint mixing, matching and application, paint defects, and detailing (gloves, suits, hoods, eye and ear protection, etc.).	HP-I	Incl	4A	REF02
	Surface preparation				
33.	Soap and water wash entire vehicle; use appropriate cleaner to remove contaminants.	HP-I	42	1A	REF02

34.	Remove paint finish	HP-I	Incl	4C	REF02
35.	Dry or wet sand areas to be refinished.	HP-I	Incl	4C	REF02
36.	Featheredge broken areas to be refinished.	HP-I	Incl	4C	REF02
37.	Apply suitable metal treatment or primer.	HP-I	Incl	4C	CPS01
38.	Mask trim and protect other areas that will not be refinished.	HP-I	Incl	4C	REF02
39.	Mix primer, primer-surfacer or primer-sealer.	HP-I	Incl	4F	REF01
40.	Apply primer onto surface of repaired area.	HP-I	Incl	4C	REF02
41.	Apply two-component finishing filler to minor surface imperfections.	HP-I	Incl	4C	STS01
42.	Dry or wet sand area to which primer-surfacer has been applied.	HP-I	Incl	4C	REF02
43.	Dry sand area to which two-component finishing filler has been applied.	HP-I	Incl	4C	STS01
44.	Remove dust from area to be refinished, including cracks or moldings of adjacent areas.	HP-I	Incl	4F	REF02
45.	Clean area to be refinished using a final cleaning solution.	HP-I	Incl	4F	REF03
46.	Remove, with a tack rag, any dust or lint particles from the area to be refinished.	HP-I	Incl	4F	REF02
47.	Prepare adjacent panels for blending.	HP-I	20	4C	REF02
	Spray Gun Equipment				
48.	Inspect, clean, and determine condition of spray guns and related equipment (air hoses, regulators, air lines, air source, and spray environment).	HP-I	16	4D	REF01
49.	Check and adjust spray gun operation for HVLP (high volume, low pressure) or LVLP (low volume, low pressure) guns.	HP-I	Incl	4D	REF01
50.	Set-up (fluid needle, nozzle, and cap), adjust, and test spray gun using fluid, air, and pattern control valves.	HP-I	Incl	4D	REF01
	Final Detail				
51.	Clean interior, exterior, and glass.	HP-I	22	4J	REF04
52.	Clean body openings (door jambs & edges, etc.).	HP-I	Incl	4J	REF04
53.	Remove overspray.	HP-I	Incl	4J	REF04
	PLASTICS				
54.	Identify the types of plastics repair procedures; clean and prepare the surface of plastic parts.	HP-I	10	6A/F	PLA01

These charts are not necessarily the best sequence for instruction in all circumstances, nor do they include all topics that need to be addressed.

Curriculum, a full set of courses to cover all learning objectives, must be established.

A custom curriculum will be necessary to include all the additional specifics needed by state laws, school policies, and local market demands, such as proper tool use, safety procedures, and employability skills.

The technical portion for collision repair tasks is found in this NATEF Task List chart. Training materials to cover all these tasks is available from the I-CAR Education Foundation with either ADVANCE TECH (print based) or Enhanced Delivery (CD-ROM based). Student workbooks for ADVANCE TECH are available for purchase individually, while student materials for Enhanced Delivery can be printed from student CD-ROMs (also purchased separately). A list of training modules for both, covering all the PACE+ST³ tasks, is shown in Appendix D.

Training materials can also be developed from other sources as long as all NATEF tasks are learned and graded on competency.

TRAINING RESOURCES

"Uniform Procedures for Collision Repair" (UPCR) is a series of documents containing additional materials for training technical skills. UPCR contains industry-approved step-by-step instructions for various repair operations. These instructions include equipment requirements, damage analysis, safety issues, and post-repair inspection. These are not training materials, but may help reinforce instruction and hands-on activities.

These documents are available at no cost from the I-CAR website:

http://www.i-car.com/html_pages/training_programs/upcr.html

"Props for Collision Repair" is a CD-ROM available from the I-CAR Education Foundation that contains many ideas and instructions for effective teaching props developed by I-CAR instructors. Ordering information can be found at the Education Foundation website:

http://www.i-car.com/html_pages/education_foundation/products_programs_services/props_cd.html

"Props, Consumables, and Simulators" are I-CAR products available for purchase and designed to enhance instruction. Teaching props are for the instructor to help with a specific lesson (corrosion test samples). Consumables are student materials that are used to learn specific skills or theories (cardboard cutouts for frame sectioning or formed aluminum panels for dent repair). Simulators are for student exercises, but are

not used up in the process (electric circuit boards). Ordering information can be found at the I-CAR website:

http://www.i-car.com/pdf/forms_applications/propform.pdf

"Guest Speakers", a local resource that can add to classroom or lab instruction. Paint jobbers, manufacturer representatives, and material suppliers may be interested in sharing their knowledge and experience. Many of their companies have training programs on specific products or techniques and a local representative may be willing to present them for the students.

More information on teaching props is located in Chapter 4.

A full curriculum must also include state requirements, school needs, safety issues, and employability skills.

State requirements and school needs would likely already exist in current school programs and would need to be incorporated into the PACE+ST³ plan as well.

Safety procedures must be taught and can be handled in many ways.

1. Safety is an integral part of each ADVANCE TECH or ENHANCED DELIVERY module, although not all complete in one place.
2. There are separate off-the-shelf training programs focusing exclusively on safety.
3. An in-house program could be developed that meets all local, state, and federal regulations.
4. A thorough industry-accepted offering is available as an on-line program and is being offered to schools at no charge through CCAR. (<http://www.sp2.org>). This web-based program teaches students about safety issues directly related to collision repair, lets them proceed at their own pace, tests their knowledge, and provides a certificate of successful completion.

Additional safety information is located in Chapter 2.

Employability skills include resume writing, interviewing, communication skills, ethics, conflict resolution, government awareness, time management skills, career research, and others. Employability skills training can also be handled in many different ways.

1. There may already be a course of instruction in regular school programming.
2. There are off-the-shelf training programs available.

3. SkillsUSA-VICA. (<http://www.skillsusa.org>) promotes professional values and skills in a career-focused environment and offers a Professional Development Program for member schools. Benefits include:
- Scholarship opportunities
 - Training opportunities for teachers
 - Employability Skills programs
 - Leadership programs
 - SkillsUSA competition
 - Networking opportunities

Additional employability information is located in Chapter 2.

A full curriculum needs to be assembled with all the above in mind plus Advisory Council input. Shown below is a sample course outline that may be helpful in developing one to accommodate local needs and requirements.

Sample Course Outline

	1 st Semester	Class	Lab	Total	A.T.
1.	ORIENTATION				
	A. Student Records	1.0	1.0	2.0	1A1
	B. Course Outline	2.0	0.0	2.0	1A1
	C. Understanding Safety Practices	4.0	4.0	8.0	1A1
	D. Workplace Hazardous Materials	5.0	2.0	7.0	
	Total	12.0	7.0	19.0	
2.	SHOP MAINTENANCE AND PROCEDURES				
	A. Shop Cleanliness	2.0	2.0	4.0	1A1
	B. Damage Report / Repair Plan	4.0	2.0	6.0	5A1-3
	C. Create Work Order	2.0	0.0	2.0	5A4-7
	D. Shop Organization	0.0	2.0	2.0	1A1
	E. General Tools	2.0	8.0	10.0	1A1
	F. Air Compressor	2.0	2.0	4.0	1A1
	Total	12.0	16.0	28.0	
3.	DETAILING				
	A. Clean Exterior of Vehicle	4.0	10.0	14.0	4J2
	B. Clean Interior of Vehicle	4.0	10.0	14.0	4J3

		Total	8.0	20.0	28.0					
4.	NON-STRUCTURAL									
	A. Select and Use Trim Tools						2.0	4.0	6.0	1C1
	B. Remove and Install Interior Door Trim Panels						2.0	4.0	6.0	1C2
	C. Remove and Install Door Lock and Handle Assembly						2.0	4.0	6.0	1C3
	D. Remove and Install Deck Lid Lock Cylinders						2.0	4.0	6.0	1C4
	E. Remove and Install Exterior Trim and Moldings						2.0	5.0	7.0	1C5
		Total	10.0	19.0	29.0					
5.	NON-STRUCTURAL									
	A. Select and use Panel Replacement Tools						4.0	4.0	8.0	1B1
	B. Select and Understand Fastener Applications and Repairs						4.0	4.0	8.0	1B2
	C. Determine Panel Alignment Method						2.0	4.0	6.0	1B3
	D. Remove and Install Bumper, Fascia, and Header Panel						4.0	9.0	13.0	1B4
	E. Remove, Reinstall, and Align Hoods and Deck Lids						4.0	12.0	16.0	1B5
	F. Remove, Reinstall, and Align Fenders, Doors and Tailgate						4.0	12.0	16.0	1B6
		Total	22.0	45.0	67.0					
6.	EMPLOYABILITY SKILLS									
	A. Business Search and Investigation						1.0	1.0	2.0	
	B. Resume Development						2.0	3.0	5.0	
	C. Ethical Behavior						2.0	0.0	2.0	
		Total	5.0	4.0	9.0					
	TOTAL 1 st SEMESTER						69.0	111.0	180.0	

	2nd Semester		Class	Lab	Total	A.T.				
7.	NON-STRUCTURAL									
	A. Select and Understand Metal Straightening Tools						4.0	4.0	8.0	1D1
	B. Straighten Damaged Metal						6.0	14.0	20.0	1D2
	C. Metal Shrinking Techniques						2.0	6.0	8.0	1D3
	D. Select and Understand Filler Materials and Tools						2.0	4.0	6.0	1E1
	E. Prepare Surface for Body Filler						2.0	6.0	8.0	1E2
	F. Prepare and Apply Body Filler						2.0	10.0	12.0	1E3
	G. Prepare and Apply Specialty Fillers						2.0	6.0	8.0	1E4

	H. Finish Body Fillers	2.0	14.0	16.0	1E5
	Total	22.0	64.0	86.0	
8.	REFINISHING PREPARATION				
	A. Prepare the Painting Environment	1.0	1.0	2.0	4D1
	B. Prepare and Use the Paint Mixing Area	1.0	2.0	3.0	4D2
	C. Prepare and Use Air Supply Equipment	1.0	2.0	3.0	4D3
	D. Set Up, Test, and Adjust Spray Guns	3.0	5.0	8.0	4D4
	E. Determine Type and Color of Paint, Plan Refinish System	3.0	4.0	7.0	4C1
	F. Remove Paint Finish and Clean Surface	1.0	4.0	5.0	4C2
	G. Clean Surface and Apply Metal Treatment	2.0	2.0	4.0	4C3
	H. Prepare Adjacent Panels for Blending	1.0	2.0	3.0	4C6
	I. Apply Caulking and Seam Sealers	1.0	2.0	3.0	4C7
	J. Apply Chip Resistant Coatings	1.0	2.0	3.0	4C8
	K. Protect Panels and Adjacent Parts	4.0	8.0	12.0	1A4
	L. Mask Vehicle for Refinishing	1.0	4.0	5.0	4C9
	M. Apply Sealer, Primer, and Primer Surfacer	3.0	8.0	11.0	4C4
	N. Block Sand to Level Surface	3.0	12.0	15.0	4C5
	O. Identify, Clean, and Prepare Plastic Parts for Refinishing	2.0	3.0	5.0	6A1
	Total	28.0	61.0	89.0	
9.	EMPLOYABILITY SKILLS				
	A. Portfolio Development	0.0	1.0	1.0	
	B. Interviewing Skills	2.0	2.0	4.0	
	Total	2.0	3.0	5.0	
	TOTAL 2nd SEMESTER	52.0	128.0	180.0	

I. Mentoring

A critical part of an internship is effective mentoring, where an experienced technician is available to direct and assist a new worker in both employability and technical skills. On-the-job training is an important part of developing new technicians, who need a guiding hand as they begin to practice and reinforce these skills.

Not everyone will be an effective mentor. This is a skill that is independent of technical ability. It requires patience and understanding with young people.

A mentor's role is to guide the intern toward substantial personal and professional growth, allowing increased productivity to grow with experience. Mentor responsibilities include:

- Establishing a comfortable relationship with the student intern, so as to enhance communications.
- Facilitating the intern's relationship with other employees, including office personnel, managers and owners.
- Guiding the intern through hands-on experiences to accelerate the development of his or her technical skills and productivity.
- Providing frequent positive feedback to the intern regarding his or her performance.
- Stressing the importance of basic academic skills – reading, writing, math, and science – and computer skills to long term success as a technician and to other positions in the business.
- Stressing the importance of continuing education in order to stay current with evolving technology.
- Taking part in the PACE+ST³ mentor training provided prior to the summer internship period.
- Working with the school instructor during workplace visits to monitor and direct the intern's progress according to the task list.
- Encouraging the student to complete required PACE+ST³ materials, periodically reviewing those materials, and advising the intern on the quality and completeness of these reports.
- Reporting the intern's progress with weekly task reports, bi-weekly employability skills reports, and a final brief summary of the experience.
- Participating in the final Focus Meeting to discuss the experience and offer suggestions for program improvement.

“Good technical skills” are only the first of many qualities needed in order to be a good mentor. Qualities of a good mentor include having a positive attitude, patience, flexibility, and compassion. The individual must have the ability to communicate with young people and be interested in having a personal role in developing interns, for the benefit of the student, the repair facility, and the community at large. A mentor must be able and willing to make occasional personal sacrifices in terms of the time that mentoring will entail.

Other important mentor qualities include:

- A positive attitude regarding the automotive collision repair profession.
- Strong interpersonal skills.
- Knowledge about the repair facility.
- Excellent supervisory and time management skills.
- Technical competence with a willingness to keep learning.
- Personal power and appeal.
- Status and respect of peers.
- Willingness to be responsible for a student's growth.
- Ability to share credit.
- Patience and ability to take risks.
- An interest in being "part of the solution" in enhancing the image of collision repair technicians.

PACE+ST³ internship works best when there is a good match between mentor and intern. Every effort will be made to select the best student for each mentor candidate.

Effective mentoring will only occur with good mentor training. This training helps people identify their strengths and compatible traits to take on this life-changing responsibility. Mentor training helps set expectations for both mentor and student. Mentor training helps coordinate the entire PACE+ST³ internship portion of the learning experience.

There are several levels of mentor training available with no single method fitting all circumstances.

1. School Program - There may be a mentoring class available through the school. This may already exist in conjunction with a cooperative education program and could fit well with the PACE+ST³ objectives.

2. General Study - Mentoring books are available, although not necessarily focused on automotive repair. Reading would provide information, but no reinforcement or feedback.

3. Individual Study - The I-CAR Education Foundation has a Youth Apprenticeship CD-ROM that outlines an entire program, including a section on mentor training. A mentor candidate could review this on a computer to become more informed and comfortable with a mentor role focused on collision repair. This is simply reading about the mentoring process and learning expectations. It is a simple method and does not involve great detail or provide any feedback. This CD-ROM will be supplied free of charge to any schools that participate in the PACE+ST³ program.

4. Group Study - One or more outside people present a mentoring seminar to all participants. This is much more in-depth and personal. Mentors review a variety of personality scales to better learn their strengths and plan how to best approach this

mentoring task. Students are trained in a separate session, also identifying personality traits and learning styles. In a final combined session, mentors and students are matched up to begin the experience.

This method requires coordination, usually by the school, and a full day of training (or two half-days) away from the shop for mentors. Instruction is in a group setting with discussion and instant feedback. Once a mentor has been trained, they do not have to repeat the full training for subsequent years.

Training specific to PACE+ST³ may be available through the I-CAR Education Foundation using specially trained instructors. Mentor training can be done in one day with a morning session for the mentors, a separate morning session for the students, and a combined afternoon session for both. In addition to identifying one's own personality profile and reviewing expectations, attendees learn about the report forms required and start a relationship with their partner.

For assistance from the I-CAR Education Foundation plan ahead. All mentor training will need to be done just prior to the summer internship for everyone, a relatively small period of time. To minimize potential scheduling conflicts, plan mentoring training as soon as possible and contact the I-CAR Education Foundation at (888) 722-3787 for availability.

5. On-Line Study - With web-based training growing as a learning tool, mentoring programs are also available on-line. The advantages include learning at the user's convenience (date, place, and time), repeating or reviewing lessons at will, and open to all who may be interested. One such program is *Mentors@Work* and more information can be found at www.mentorsatwork.com.

Students and mentors need to be matched for the best combination to help ensure success during the internship. There are several ways to get this accomplished. Several include some time to get to know each other prior to starting work.

1. "Ranking Preference" Assignments - A sign-up sheet is posted for Students to select collision repair businesses for interviews at the school. They may choose based on several preferences including; prior knowledge of the business, a specific car line, or location to their home. One or more convenient offices or classrooms need to be available. Interviews should be scheduled close together, preferably all in one day for each business to minimize time away. Twenty minute time slots would allow for a 10 minute interview followed by some time for writing notes and comments.

As soon as the interviews are completed, each business will submit a "ranking preference" to the school coordinator. The business can also reject a candidate outright.

Each student will also submit a "ranking preference" to the school coordinator, also indicating those where they will not accept an assignment.

The school coordinator is responsible for analyzing the preference sheets and striving to match up first choices with first choices, first choices with second choices, and so on. Both students and businesses must understand that they may not be assigned their top choices.

2. "Student / Manager Mixer" - Internship candidates and business owners / managers are invited to an "interview mixer" for a couple of hours in the evening at the school. Refreshments should be served. All participants should wear name tags with the owners / managers identifying their businesses. Students must assume the responsibility of introducing themselves to the owners / managers they want to meet.

Conversations may be one-on-one or in groups. The important thing is to keep them all talking and getting to know each other.

At the end, both students and owners / managers will complete and turn in a "ranking preference" sheet to the school coordinator for match-up.

3. Advisory Council Assignment - A selection committee of 3 to 5 Advisory Council members interviews the students, usually in a single evening. The students are invited in, one a time, to meet with the committee members as a group. It would be important to have the room arranged as non-intimidating as possible, for example seating in a circle without a barrier to the student.

After the interviews, committee members discuss assignments of both students and businesses, based on student preference, business criteria, travel distance, and other factors. Participating businesses must agree to accept assignments made by this process.

4. Interviews held at each Business - Interviews and ranking are done as described in #1 above, except done at the place of business. This may be the most convenient for business owners or managers, but probably the most inconvenient for the student. Transportation may be a problem. There are also advantages including an opportunity for the student to be in his potential working environment and an opportunity for a manager to see the student outside of the school environment.

5. Assignments by the Instructor - The collision repair instructor(s) will assign students to businesses by taking into consideration factors including student preference, business criteria for new hires, proximity of the business to the student's home, student personality, and knowledge of the business facility. All must agree to accept assignments made by the instructor.

Students should officially report to someone other than their mentor, for example a shop foreman. This will keep the mentor in a safe, advisory capacity instead of as a "boss". In this manner, each mentor is free to guide and assist the student without the added responsibility of production or discipline.

Of course, the mentor should not suffer economically. Students will be paid by the business, usually some agreed-upon starting wage, and production work is expected. Perhaps each mentor's pay could include an incentive or bonus based on hours flagged by the student, which should increase as the student becomes more proficient and less of a drain on the mentor's productive time.

Part of mentoring is tracking student progress. This is different than grading a student's performance on technical skills.

Instead of grading, the mentor will check off tasks completed, make notes on general work attributes, and complete a summary at summer's end.

Shown below is a sample Task List check-off sheet for mentors to complete. These are tasks taught during the school year and should be emphasized during this work experience. The mentor simply checks off tasks completed for the instructor to review. This information becomes part of the school documentation for the internship experience.

A full Summer Internship Task List chart is included in Appendix C.

Sample Summer Internship Task List

Mentor: Check each task as student completes it satisfactorily

	Week #	1	2	3		
NON-STRUCTURAL						
Preparation						
1.	Review damage report and analyze damage to determine appropriate methods for overall repair; develop repair plan.	✓	✓			
2.	Inspect, remove, store, and replace exterior trim and moldings.		✓	✓		
3.	Inspect, remove, store, and replace interior trim and components.			✓		
4.	Inspect, remove, store, and replace non-structural body panels and components that may interfere with or be damaged during repair.		✓	✓		
5.	Protect panels, glass, and parts adjacent to repair area.			✓		
6.	Soap and water wash entire vehicle; use appropriate cleaner to remove contaminants from those areas to be repaired.	✓	✓			

Learning employability skills is also an important part of the summer internship. Each mentor is asked to report their opinions every two weeks and is discussed during the regular workplace visit.

Below is a sample form to help organize and record certain employability skills. The mentor simply checks his or her ranking from 1 to 5 for each area and adds comments if needed.

A full blank sample form is shown in Appendix C.

Sample Intern Employability Skills

Mentor: Use your best judgment and comment where needed.

	1= No/None, 3=Average, 5=Excellent	1	2	3	4	5
1.	Has a positive attitude and shows patience			✓		
	Comments <i>Gets anxious when delayed</i>					
2.	Shows self-motivation completing tasks, reporting problems, and asking mentor as needed				✓	
	Comments					
3.	Dependable, reliably reports for work on time		✓			
	Comments <i>Returns late from lunch</i>					

A final report is needed for planning and instruction during the student's senior year. This report will be helpful in reviewing each student's progress over this summer work experience. An example is shown below with a full form available in Appendix C.

Sample Final Internship Report from Mentor

What is the student's greatest strength?

Where was the student's greatest growth?

How well did the student respond to instruction or correction?

Where should the student focus to improve technical skills?

Where should the student focus to improve employability skills?

J. Internship

An internship is designed to reinforce tasks learned in a school environment and provide an introduction into the world of production work.

A summer work experience is important when preparing students for full-time employment in the collision repair industry. This "live work" experience, under the guidance of an effective mentor, applies basic skills learned during the first year of study and prepares students for advanced skills during their senior year.

Some schools have made this a summer program with high school credit for the student upon successful completion. As an official program, it may be easier for the logistics of an instructor monitoring progress and grading different objectives.

Many steps and responsibilities are involved for a successful internship.

1. Student Selection
2. Business Selection
3. Student Interviews
4. Mentor Training
5. Orientation
6. Production Work
7. Workplace Visits

1. Student Selection

Not all students may be ready for a work experience nor may there be enough businesses to accommodate all the students. Therefore, a selection, or screening process, must be in place. The collision repair instructor is usually in the best position to make this determination. It is recommended that the Advisory Council also be involved in the process.

Selection criteria may include:

- Grade Point Average in Class
- Overall Grade Point Average
- Attendance
- Attitude
- Ambition
- Talent
- Potential
- Ability to commute and work during the summer

Academic grade level, or class year, is not as important as competency levels for selection into a PACE+ST³ internship. Additional considerations should include reliable transportation and any state laws that may apply to age or work hour limits.

An application for this internship portion of the PACE+ST³ program may also help narrow the field. This application could include a student writing assignment, such as one or more paragraphs about why they want to work in a collision repair business over the summer. An application could also include a letter from the student's parents and a letter of recommendation from an outside person.

See an example application form in Appendix B.

Once an initial selection of applicants is done, they will need to interview for jobs.

Also, internship information must be sent to the I-CAR Education Foundation (Form is located in Appendix A).

2. Business Selection

Collision repair businesses must complete an application form before letting students go to work in them. They also need to be selected with the students' learning needs in mind. Businesses should have modern equipment, a good variety of work, safety policies, environmental compliance procedures, adhere to all state and local laws, and be willing to accept a student for this internship program.

An on-site tour and interview by the instructor would be essential before selection.

An application form may help with an initial round of selections. A sample form is in Appendix B.

Also, collision repair business information for these internships must be sent to the I-CAR Education Foundation (Form is located in Appendix A).

3. Student Interviews

Collision repair business owners or managers are asked to interview the pre-selected students for this summer internship. Each business will hire the intern as an employee and, therefore, can also terminate him or her if expectations are not met.

The student should realize that he or she will be employed at a retail business where customer's vehicles will be repaired. The employer has expectations of the student's work capabilities for which they will receive an hourly wage. If the student performance is perceived below mentor / business owner expectations, the instructor should be involved in meetings to resolve issues.

Student interviews can be arranged at each business or all together as a school event, where both students and business representatives can interview several choices in one place. This could be coordinated with a Career Day program at the school. (See Section I - Mentoring)

Even though they are meant to be brief and informal, don't forget that federal and state laws prohibit employers from asking certain questions during job interviews.

With students and businesses selected, a formal contract would help everyone understand their responsibilities as well as their expectations from others. This agreement is between the school, student, parents, and business to insure a successful internship.

An example contract is located in Appendix B.

4. Mentor Training

Participating businesses must have mentor training. This is too important to not do well.

Students will also participate in mentor training. They need to learn their role and expectations as well as find a good match with an experienced technician that will guide them through their summer internship.

Of the many choices available, each school needs to coordinate this effort so each business, mentor, and student is well trained. See more on mentor training in Section I.

5. Orientation

Before school is out for the summer, each student should visit the business where they will work for their summer internship. If each student spends one or two hours in the workplace, they will be more comfortable and aware when reporting for work. This also allows an opportunity to discuss any concerns with the instructor before school is out and the internship begins.

Each business owner or manager can discuss expectations, such as work hours, time clock, dress code or uniforms, tools, shop equipment, work orders, and any other items related to job function. The student can also meet other employees including shop foremen, estimators, and office workers. The student is now ready to go to work.

Internship Checklist

Businesses surveyed for interest.

- Business applications received.
- Businesses interviewed and toured.
- Health and personal safety equipment reviewed with businesses.
- Businesses selected.
- Student applications received.
- Health and personal safety equipment reviewed with students.
- Students selected.
- Mentor training completing.
- Student interviews completed.
- Mentors and students matched.
- Students understand report forms.
- Mentors understand report forms.
- Students oriented at their workplace.
- Student internship start date determined.
- First workplace visit by instructor is scheduled.

6. Production Work

When school is out for summer vacation, each student reports to their assigned business for work. They have already met their mentor, had an orientation in the shop, and know which tasks they are expected to perform.

Each student is expected to work as a production, although entry-level, technician. Tasks are limited and under the guidance of a qualified mentor. Wages are agreed upon beforehand, commensurate with skills and expectations.

With interns from the same school program working in local repair businesses, wages shouldn't be a competitive factor. "Bidding" for the "best" students would not be in the best interests of either the internship experience or the PACE+ST³ program. Starting wages should be discussed by the involved businesses or the Advisory Council to set a wage that is appropriate, fair, and agreeable to all.

Basic tools will be needed and there may be costs involved. A sample tool list is shown in Chapter 1.

Several options are available to obtain appropriate tools for the student, including:

- Borrowing tools from his or her mentor.
- Student purchases tools under a discount program.
- Business purchases tools to be deducted from student's wages.
- Business purchases tools and shares cost with student.
- Business purchases tools and gives them to student upon successful internship completion.

A safety kit with fitted masks and gloves must be arranged for each student.

Each safety kit should include:

Headgear Ratchet Style
Faceshield Window Petg .040
Respirator Wipes
Ear Plugs
Glove Guide
Mechanic's Leather Gloves
Nitrile Gloves
Latex Gloves
Safety Glasses
Respirator for Sanding
Paint Respirator and Container
Tyvek Painsuit
Tote bag

Safety kits are available through suppliers in the industry and there is a cost for them. There is also an issue of proper test fit costs as well as a prior medical exam. Donations may help offset these costs and gain positive public relations for the sponsoring company.

Students will be familiar with proper use of this safety equipment, as well as proper environmental procedures. Therefore, each business must also be prepared for, and compliant with, proper safety and environmental practices.

There is a web-based training program available through CCAR that teaches safety and compliance. As an on-line system, this could be available at any time and from any internet-ready computer. There is a fee involved for businesses, small compared to the price of non-compliance or worker injury. This safety program is available free of charge to schools. More information can be found at <http://www.sp2.org>.

Each mentor is expected to track their student's repair work as well as employability aspects, including attendance, punctuality, cleanliness, and attitude. See section H.

Each student is also expected to report on his or her progress throughout the summer. Report forms need to be explained to the students so they understand their responsibilities and information received will be consistent. If this summer internship is for credit, documentation becomes even more important.

Here are some simple example forms. More detailed report forms are in Appendix C.

PACE+ST³

Sample Weekly Time Sheet

It is the responsibility of the student to have his/her mentor or supervisor fill this out.

Student: _____

Week of: _____

School: _____

Hours to Date: _____

Hours Scheduled and Worked Each Day

	Hours Scheduled	Hours Worked	Diff. + / -
Monday	_____	_____	_____
Tuesday	_____	_____	_____
Wednesday	_____	_____	_____
Thursday	_____	_____	_____
Friday	_____	_____	_____
Saturday	_____	_____	_____
Totals	_____	_____	_____
Comments	_____		

Mentor/Supervisor _____ Date: _____

7. Workplace Visits

A school representative will plan to visit the workplace, student, and mentor approximately every two weeks. This is critical to make sure everyone is fulfilling their responsibilities, head off problems early, and offers suggestions for improvement.

Collision repair instructors would be in the best position to follow up with their own students, but a school administrator could also do this follow up.

These visits should be scheduled well ahead of time so as to minimize any disturbance with work production. A quiet office away from the shop floor and distractions would be ideal. The instructor should meet briefly with all concerned parties; student, mentor, and manager. By planning ahead, visits can be focused and more effective.

The manager can discuss progress and concerns with production, quality, and teamwork. The mentor can report on tasks being done and planned, as well as student competency. The student can relate concerns with work experiences, work environment, and his or her relationships. This is also an opportunity to review progress reports being completed by both mentor and student.

Workplace visit reports should be filled out each time to track progress and concerns. A sample form is shown in Appendix C.

At summer's end, each student will wrap up his or her work experience with a final report, as will each mentor. A report summarizing workplace visit findings and recommendations will help document the internship experience, aid in student grading, and assist in refining the program for next year. A final Focus Meeting will complete the cycle.

There could be an option to keep the student employed during their senior year. A cooperative education program would include school classes for part of the day and regular work for part of the day. If this is a possibility, these visits are a good opportunity to explore this option. Additional requirements and expectations would need to be discussed.

K. Focus Meeting

To successfully wrap up a PACE+ST³ cycle, a "Focus Meeting" should be scheduled in September after all internships have ended, school is back in session, and all involved parties can get together.

All relevant parties are invited, including Advisory Council members, students, mentors, instructors, business owners, parents, and school administrators.

A discussion is led by the Advisory Council chairman or school administration to share final outcomes, success stories, and areas for improvement. Part of the discussion will concern the future of this year's seniors, including new skills to be learned, co-op programs, if any, and potential employment after graduation.

This is an excellent opportunity for mentor recognition of a job well done. Certificates, plaques, a special tool, or a bonus check would honor the mentor with special recognition. Of course, this is only the final acknowledgement of all the work each mentor has put into the program. During the summer internship, as well as throughout the year, additional recognition could be demonstrated in many ways, including PACE+ST³ patches on their uniforms, signs in their work space, a display in the office, news releases, and advertisements in the local newspapers.

The next PACE+ST³ cycle has already begun, but those next internships are still a long way off with plenty of time to make course corrections. When all done in the right spirit, this is a process of continuous improvement for the betterment of all.

From meeting minutes, a summary would be useful as a record of progress and for improvements next year. Benefits and challenges could be summarized for each group;

- Collision Repair Instructor
- Advisory Council
- Students
- Parents
- Employers or managers
- Mentors
- Administrators

Example reports on the next pages show a few groups to illustrate how a summary might be arranged.

A final report is to be completed by the Advisory Council chairman and returned to the I-CAR Education Foundation. Compiling these experiences for all PACE+ST³ programs will help to continually improve the process. The final report form is in Appendix A.

PACE+ST³ Focus Meeting Summary Example

School Name

Date

Collision Repair Instructor

(Summary statement) _____

Benefits	Challenges
1. Increased focus on curriculum, kept class organized	1. More time involved over the summer
2. Donated props from industry partners helped classroom instruction	2. Enrollment increasing beyond capacity
3. Students returned to school with more confidence	

PACE+ST³ Focus Meeting Summary Example

School Name

Date

Student

(Summary statement) _____

Benefits	Challenges
1. Learned variations to techniques from school	1. Disadvantaged from working on older models in school
2. Learned what real work is like	2. Work pace faster than school
3. Discovered more career paths	3. Summer session too short

PACE+ST³ Focus Meeting Summary Example

School Name

Date

Mentors

(Summary statement) _____

Benefits	Challenges
1. Good opportunity to share what I've learned	1. More time away from own work
2. Satisfaction helping someone grow in skills and experience	2. Took more time than expected to settle into work routine with student
3. Better understanding of school challenges	

PACE+ST³ Focus Meeting Summary Example

School Name

Date

Parents

(Summary statement) _____

Benefits	Challenges
1. Son learned real responsibility; being on time and financial concerns	1. Costs of tools
2. Son has better respect for tools at home	2. No co-op program to continue work
3. Student enthused with career now	

After the Focus Meeting, information must be sent to the I-CAR Education Foundation. This is important to track PACE+ST³ progress throughout the country, accumulate experience on a wide scale, and work on improvements for the future.

An initial report on student enrollment was submitted in the beginning of the cycle and this final report will note the progress made and future outlook for each student. A Focus Group summary will show those things that went well and those things that will be improved.

This is a critical step in completing a PACE+ST³ program cycle. The I-CAR Education Foundation depends on an accurate reporting of information in order to support these programs as well as improve them.

Final report forms are in Appendix A.

L. Forms Summary

Listed below is a summary of forms for PACE+ST³.

The left column shows who is responsible and the “When” column shows approximately when that report is used or due. The “Type” column shows the form to be either required by the I-CAR Education Foundation (“Req.”) or to be a sample for adaptation according to local needs. “Appendix” shows where the form is found.

Who	When	Title	Type	Appendix
School	Spring	PACE+ST ³ Registration	Req.	A
School	Sept.	Student Enrollment Report	Req.	A
School	June	Student Internship Registration	Req.	A
School	June	Business Internship Registration	Req.	A
School	Sept.	Internship Completion Report	Req.	A
Council	Sept.	Focus Group Report	Req.	A
Instructor	Sep - Jun	PACE+ST ³ Task Grading Chart	Sample	A
Student	Winter	Application for Internship	Sample	B
Business	Winter	Application for PACE+ST ³	Sample	B
All	Spring	Internship Program Agreement	Sample	B
All	Summer	Workplace Visit Forms	Sample	C
Student	Summer	Work Journal Report	Sample	C
Student	August	Student Final Report	Sample	C
Mentor	Summer	Internship Task List 1	Sample	C
Mentor	Summer	Internship Task List 2	Sample	C
Mentor	Summer	Intern Employability Skills	Sample	C
Mentor	Sept.	Final Internship Report	Sample	C

These forms can also be downloaded and printed from the PACE+ST³ section of the I-CAR Education Foundation website (www.i-car.com/found).

Appendix A

PACE+ST³ Forms

PACE+ST³ Registration

Student Enrollment Report

Internship Registration - Student

Internship Registration - Business

Internship Completion Report – Student

Focus Group Report

PACE+ST³ Task Grading Form

PACE+ST³ Registration

(Page 1 of 2)

Send this information to:
I-CAR Education Foundation
3701 Algonquin Rd.
Rolling Meadows, IL 60008

School Qualification Criteria:

- Must have both classroom and lab available for collision repair instruction
- Must have an Advisory Council and meet at least twice per year
- Must be able to teach all 54 NATEF tasks for this program
- Must have at least 360 student contact hours scheduled
- Must have ENHANCED DELIVERY or ADVANCE-TECH curriculum
- Must provide requested data to the I-CAR Education Foundation

Application Date: _____

School Name: _____

School Address: _____

City/State/Zip: _____

Administrator Name: _____

Phone/Fax: _____

E-mail: _____

Instructor: _____

Phone/Fax: _____

E-mail: _____

Avg. # Students: _____ Classroom Sq. Ft. _____ Lab Sq. Ft. _____

Participate regularly in Career Day? Yes No

Participate in SkillsUSA (VICA)? Yes No

Senior Cooperative Education Program? Yes No

PACE+ST³ Registration

(Page 2 of 2)

Advisory Council Members

Name	Title	Company
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Dates of Last Two Meetings: _____

Dates of Next Two Meetings: _____

Curriculum (name or description): _____

Your required signature below guarantees that all of the above information is accurate. You also agree to provide the I-CAR Education Foundation with enrollment, internship, and job-placement information for your collision repair students. The I-CAR Education Foundation will request this information annually.

Name (Please Print): _____

Signature: _____ Date: _____

Student Enrollment

School: _____ Location: _____

Contact: _____ Phone _____

Once school has begun, fill out for all students, and send to:
I-CAR Education Foundation
3701 Algonquin Rd.
Rolling meadows, IL 60008

For Each Student:	M/F (Optional)	Age	Class	1. Caucasian 2. Other 3. N/A
Name: _____	_____	_____	_____	_____
Name: _____	_____	_____	_____	_____
Name: _____	_____	_____	_____	_____
Name: _____	_____	_____	_____	_____
Name: _____	_____	_____	_____	_____
Name: _____	_____	_____	_____	_____
Name: _____	_____	_____	_____	_____
Name: _____	_____	_____	_____	_____
Name: _____	_____	_____	_____	_____
Name: _____	_____	_____	_____	_____

Signature: _____

Date: _____

Internship Registration Students

School: _____ Date: _____

Contact: _____ Phone _____

Once the interns, businesses, and mentors have been selected,
send this information to:
I-CAR Education Foundation
3701 Algonquin Rd.
Rolling meadows, IL 60008

For Each Student:	M/F (Optional)	Age	Class	1. Caucasian 2. Other 3. N/A
Name: _____	_____	_____	_____	_____
Business: _____				
Mentor: _____				
Name: _____	_____	_____	_____	_____
Business: _____				
Mentor: _____				
Name: _____	_____	_____	_____	_____
Business: _____				
Mentor: _____				
Name: _____	_____	_____	_____	_____
Business: _____				
Mentor: _____				

Signature: _____ Date: _____

Internship Registration Business

School: _____ Date: _____

Contact: _____ Phone _____

Once the interns, businesses, and mentors have been selected,
send this information to:
I-CAR Education Foundation
3701 Algonquin Rd.
Rolling meadows, IL 60008

For Each Business:

Name: _____ Contact: _____

Address: _____ Phone: _____

City/Zip: _____ Fax: _____

Square Feet: _____ Gold Class Shop?: _____

Total # Technicians: _____ # ASE Certified: _____ # I-CAR Platinum: _____

Have you had internships before? Yes No If so, how many years? _____

Do you have a worker protection program in place? Yes No

Certifications

Mentor: _____	Age _____	ASE	Yes	No
		I-CAR	Yes	No

Mentor: _____	Age _____	ASE	Yes	No
		I-CAR	Yes	No

Mentor: _____	Age _____	ASE	Yes	No
		I-CAR	Yes	No

Mentor: _____	Age _____	ASE	Yes	No
		I-CAR	Yes	No

Signature: _____ Date: _____

Internship Completion

Student Information

Once the internship is completed, send this information to:
The I-CAR Education Foundation
3701 Algonquin Rd.
Rolling meadows, IL 60008

Student: _____ Date: _____

Address: _____ Age: _____

City/Zip: _____

School: _____ Contact: _____

Business: _____ Contact: _____

Mentor: _____ Phone _____

How long was the internship? _____ weeks

Student plans for senior year:	Continue in program?	Yes / No
	Cooperative program?	Yes / No

Student plans after graduation:	Stay in collision repair?	Yes / No
	Continue collision repair training?	Yes / No
	Full time collision repair work?	Yes / No
	Other (explain)	

Signature: _____ Date: _____

Focus Group Report

Once the Focus Group meeting is completed, the Advisory Council chairman should summarize feedback from all participants, especially mentors and business owners, to determine the success and challenges of the PACE+ST³ program at the school.

Describe notable successes. Describe challenges encountered and steps taken to resolve.

Success: _____

Success: _____

Challenge: _____

Solution: _____

Challenge: _____

Solution: _____

Challenge: _____

Solution: _____

Chairman: _____ Date: _____

Instructor: _____ Date: _____

Send this information to:
The I-CAR Education Foundation
3701 Algonquin Rd.
Rolling meadows, IL 60008

PACE+ST³ Task Tracking Form 1

Student _____

Rating Scale:

- 3 - Mastered - Can work independently with no supervision
- 2 - Requires Supervision - Can Perform job completely with limited Supervision
- 1 - Not Mastered - Requires instruction and close supervision
- 0 - No Exposure - No experience or knowledge in this area

		0	1	2	3	Date
	NON-STRUCTURAL					
	Preparation					
1.	Review damage report and analyze damage to determine appropriate methods for overall repair; develop repair plan.					
2.	Inspect, remove, store, and replace exterior trim and moldings.					
3.	Inspect, remove, store, and replace interior trim and components.					
4.	Inspect, remove, store, and replace non-structural body panels and components that may interfere with or be damaged during repair.					
5.	Protect panels, glass, and parts adjacent to repair area.					
6.	Soap and water wash entire vehicle; use appropriate cleaner to remove contaminants from those areas to be repaired.					
7.	Remove corrosion protection, undercoating, sealers, and other protective coatings necessary to perform repairs.					
8.	Inspect, remove, and replace repairable plastics and other components that are recommended for off-vehicle repair.					
9.	Apply safety procedures associated with vehicle components and systems such as ABS, air bags, refrigerants, batteries, tires, oil, anti-freeze, engine coolants, etc.					
10.	Apply environmental practices associated with vehicle components and systems such as substrates, fluids, refrigerants, batteries, etc.					
	Body Panels					
11.	Inspect, remove, replace, and align hood, hood hinges, and hood latch.					
12.	Inspect, remove, replace, and align deck lid, lid hinges, and lid latch.					
13.	Inspect, remove, replace, and align doors, tailgates, hatches,					

	liftgates, latches, hinges, and related hardware.					
14.	Inspect, remove, replace, and align bumper bars, covers, reinforcement guards, isolators, and mounting hardware.					
15.	Inspect, remove, replace, and align front fenders, headers, and other panels.					
16.	Straighten and rough-out contours of damaged panel to a surface condition for body filling or metal finishing using power tools, hand tools, and weld-on pull attachments.					
17.	Restore corrosion protection.					
18.	Restore sealers, sound deadeners, and foam fillers.					
	Metal Repairs					
19.	Remove paint from the damaged area of a body panel.					
20.	Locate and reduce surface irregularities on a damaged body panel.					
21.	Demonstrate hammer and dolly techniques.					
22.	Mix body filler.					
23.	Apply body filler; shape during curing.					
24.	Rough sand cured body filler to contour; finish sand.					
	Movable Glass					
25.	Inspect, adjust, repair, or replace window regulators, run channels, glass, power mechanisms, and related controls.					
	Metal Welding and Cutting					
26.	Protect adjacent panels, glass, vehicle interior, etc. from welding and cutting operations.					
27.	Protect computers and other electronic control modules during welding procedures according to manufacturer's specifications.					

Instructor Name: _____ Date: _____

Signature: _____

PACE+ST³ Task Tracking Form 2

Student _____

Rating Scale:

- 3 - Mastered - Can work independently with no supervision
- 2 - Requires Supervision - Can Perform job completely with limited Supervision
- 1 - Not Mastered - Requires instruction and close supervision
- 0 - No Exposure - No experience or knowledge in this area

		0	1	2	3	Date
	REFINISH					
	Safety Precautions					
28.	Identify and take necessary precautions with hazardous operations and materials according to federal, state, and local regulations.					
29.	Identify safety and personal health hazards according to OSHA guidelines and "Right to Know Law".					
30.	Select and use the NIOSH approved personal sanding respirator. Inspect condition and ensure fit and operation. Perform proper maintenance in accordance with OSHA Regulation 1910.134 and applicable state and local regulations.					
31.	Select and use the NIOSH approved (Fresh Air Make-up System) personal painting/refinishing respirator system. Perform proper maintenance in accordance with OSHA Regulation 1910.134 and applicable state and local regulation.					
32.	Select and use the proper personal safety equipment for surface preparation, spray gun and related equipment operation, paint mixing, matching and application, paint defects, and detailing (gloves, suits, hoods, eye and ear protection, etc.).					
	Surface preparation					
33.	Soap and water wash entire vehicle; use appropriate cleaner to remove contaminants.					
34.	Remove paint finish					
35.	Dry or wet sand areas to be refinished.					
36.	Featheredge broken areas to be refinished.					
37.	Apply suitable metal treatment or primer.					
38.	Mask trim and protect other areas that will not be refinished.					
39.	Mix primer, primer-surfacer or primer-sealer.					

40.	Apply primer onto surface of repaired area.					
41.	Apply two-component finishing filler to minor surface imperfections.					
42.	Dry or wet sand area to which primer-surfacer has been applied.					
43.	Dry sand area to which two-component finishing filler has been applied.					
44.	Remove dust from area to be refinished, including cracks or moldings of adjacent areas.					
45.	Clean area to be refinished using a final cleaning solution.					
46.	Remove, with a tack rag, any dust or lint particles from the area to be refinished.					
47.	Prepare adjacent panels for blending.					
	Spray Gun Equipment					
48.	Inspect, clean, and determine condition of spray guns and related equipment (air hoses, regulators, air lines, air source, and spray environment).					
49.	Check and adjust spray gun operation for HVLP (high volume, low pressure) or LVLP (low volume, low pressure) guns.					
50.	Set-up (fluid needle, nozzle, and cap), adjust, and test spray gun using fluid, air, and pattern control valves.					
	Final Detail					
51.	Clean interior, exterior, and glass.					
52.	Clean body openings (door jambs & edges, etc.).					
53.	Remove overspray.					
	PLASTICS					
54.	Identify the types of plastics repair procedures; clean and prepare the surface of plastic parts.					

Instructor Name: _____ Date: _____

Signature: _____

Appendix B

Internship Startup Forms

Application for Internship

Application for PACE+ST³

Internship Program Agreement

Sample Student Internship Application

(School Name/Logo)

Student: _____ Date: _____

Student ID Number: _____

Social Security Number: _____

Parent/Guardian: _____

Address: _____

City/State/Zip: _____

Phone(s): _____

This internship requires full time production work in a collision repair facility for the summer. You will be hired as an employee, paid a starting wage, and can be fired for non-performance or other problems. You are responsible for your own transportation.

I understand and accept these conditions.

(Signed) _____ Date: _____

Parent/Guardian: _____ Date: _____

Attachments:

1. Student. On a separate piece of paper, please explain why you are applying for this internship and why you think you are a good candidate for it.
2. Parents. Write a letter explaining why you think your son or daughter would be a good candidate for this internship. Parent may choose, and is encouraged to, verbally discuss with instructor.
3. Reference. Have a non-family member submit a statement on why they think he or she would be a good candidate for this internship, including their relationship with the student, their title/workplace, and their contact information.

Sample Business Application for PACE+ST³

(School Name/Logo)

This internship experience is to provide students with an actual working environment during the summer where they practice skills while producing quality work.

Business Name: _____ Date: _____

Address: _____

City/State/Zip: _____

Contact: _____ Phone: _____

Production Area (Sq. Ft) _____ Number of work stalls _____

Number Body Technicians _____ Days Open M T W T F S S

Number Refinish Technicians: _____ Hours Open _____

Number Other Production: _____

We have safety programs/procedures in place. Yes / No

We comply with all environmental regulations. Yes / No

We will supply intern with personal safety equipment. Yes / No

We will send a technician to mentor training. Yes / No

We will support our mentor in every way possible. Yes / No

We agree to the responsibilities of the PACE+ST³ program. Yes / No

Students will be paid a starting wage, be covered with the proper insurance, and will have a qualified mentor. Mentors will fill out reports as required and will meet with a school representative during every bi-weekly visit. This business has the right to terminate the internship upon written notice.

Signed: _____ Date: _____

PACE+ST³

Sample Internship Program Agreement

Intern: _____ Phone: _____

Employer: _____ Phone: _____

Contact: _____

Facility Address: _____

City/State/Zip: _____

Supervisor: _____ Mentor: _____

Agreement Begins: _____ Agreement Ends: _____

Starting Wage: _____

The integration of technical education, academic education, and work experience to help qualify for a position in his/her chosen field is the goal of this internship. This agreement between the school, employer, parent/guardian, mentor, and intern defines responsibilities which each accepts and agrees to as shown by their signatures.

Intern Responsibilities:

1. Perform assignments as instructed by the mentor, supervisor, or instructor that fall within the scope of this internship.
2. Keep a work schedule the employer has assigned.
3. Attending work on time and every day.
4. Arrange reliable transportation to and from work.
5. Notify the employer when absent or late according to their policy.
6. Maintain daily/weekly reports as assigned.
7. Return all paperwork promptly and as instructed.
8. Respect those in authority.

Parent / Guardian Responsibilities:

1. Support and direct the intern in carrying out his or her responsibilities.
2. Contact the instructor for any concerns, problems, or questions.
3. Strongly encourage the intern to save money for tools.
4. Remain interested by asking questions in reference to their work and learning.

Employer Responsibilities:

1. Employ intern for 8 weeks with a minimum of 20-25 hours per week.
2. Provide productive work commensurate with intern's demonstrated abilities.
3. Notify instructor in advance if intern is to terminate or if conditions of work will be altered from this agreement.
4. Provide a safe and sanitary work environment for the intern.
5. Assign a mentor who will supervise the intern and hold an evaluation meeting at least once per week.
6. Meet with the instructor at periodic intervals to discuss the intern's progress.
7. Conform to all state and federal labor laws and existing labor/management agreements.
8. Provide safety instructions to the intern for all tasks and duties to be performed.
9. Monitor intern's attendance, including time sheet and sign off.
10. Fill out and return work release notice upon termination of employment agreement.
11. Mentor support.
12. Assist with required evaluation forms.
13. Attend Focus Meeting in September.

Mentor Responsibilities:

1. Attend mentor training.
2. Assist intern in completing assignments.
3. Properly communicate with intern in a positive way.
4. Set a good example with your own behavior.
5. Use mistakes as a teaching moment.
6. Convey facility and culture expectations.
7. Establish a positive code of conduct.
8. Explain policies and procedures that need to be followed as daily routine.
9. Make the intern feel welcomed.
10. Maintain "Task Completion" report daily.
11. Complete and review "Employability" report with intern every two weeks.
12. Submit "Final" report.
13. Attend Focus Meeting in September.

School Responsibilities:

1. Administer program and provide necessary forms.
2. Provide specific and/or general instructions.
3. Act as a liaison between all parties of this agreement.
4. Screen intern applications.
5. Maintain adequate records.
6. Notify employer in advance if intern's employment status changes.
7. Maintain communications with PACE+ST³ Internship employer.
8. Evaluate the intern and assign grade.

It is our policy not to discriminate on the basis of race, color, religion, sex, national origin, or handicap in the educational process, services, and employment practices.

PACE+ST³

Sample Internship Agreement

Please read this document carefully before signing. All parties must know their part and be willing to fulfill their obligations to make this PACE+ST³ Internship Program meaningful to the intern, employer, and school. Signatures of the school program Director and Assistant are shown as their support and awareness of all involved in this PACE+ST³ Internship Program.

- 1) _____ Date: _____
Intern/Student

- 2) _____ Date: _____
Parent/Guardian

- 3) _____ Date: _____
Employer

- 4) _____ Date: _____
Mentor

- 5) _____ Date: _____
Vocational Instructor

- 6) _____ Date: _____
Program Director

- 7) _____ Date: _____
Assistant Program Director

Appendix C

Internship Report Forms

Workplace Visit Forms

Work Journal Report
Student Final Report

Internship Task List 1
Internship Task List 2

Intern Employability Skills
Final Internship Report

Sample Report Form for Instructor's Collision Repair Business Visit - Student

(Page 1 of 3)

Business: _____ Date: _____

Student: _____

	1= Poor, 3=Average, 5=Excellent	1	2	3	4	5
Student						
1.	Has a positive attitude					
2.	Confidence in employability skills					
3.	Confidence in collision repairs skills					
4.	Work assignments related to task list					
5.	Reports thorough and done on time					
6.	Gets help when needed					
7.	Class instruction has helped with work					
8.	Relationship with mentor					
9.	Relationship with supervisor					
10.	Relationship with co-workers					

Best experience: _____

Biggest Challenge: _____

Comments: _____

Sample Report Form for Instructor's Collision Repair Business Visit - Mentor

(Page 2 of 3)

Business: _____ Date: _____

Mentor: _____ Title: _____

	1= Poor, 3=Average, 5=Excellent	1	2	3	4	5
	Mentor					
1.	Student's attitude					
2.	Carries out instructions the "first time"					
3.	Keeps work area clean and neat					
4.	Attention to quality					
5.	Follows policies and procedures					
6.	Mentor report thorough and timely					
7.	Communication with student					
8.	Management support					
9.	Satisfied with progress					
10.	Comfortable with relationship.					

Best experience: _____

Biggest Challenge: _____

Comments: _____

Sample Report Form for Instructor's Collision Repair Business Visit - Supervisor

(Page 3 of 3)

Business: _____ Date: _____

Contact: _____ Title: _____

	1= Poor, 3=Average, 5=Excellent	1	2	3	4	5
	Business					
1.	Working 40 hours each week					
2.	Attendance and punctuality					
3.	Dress and grooming					
4.	Work assignments target task list					
5.	Work assignments rotated through all four task areas					
6.	Works meets industry and local standards					
7.	Work quantity up to expectations					
8.	Effective use of time					
9.	Follows safety procedures					
10.	Student employability					

Best experience: _____

Biggest Challenge: _____

Comments: _____

Sample Work Journal Report - Student

This is an expanded example of student reports from the sample reports shown on pages 42 and 43.

Sample Work Journal Report

Collision Repair

Disassembly & Remove

Student Name:			Mentor Name:		
Ro#:	Date In: / /	Mileage:	Date Out: / /		
VIN:		Engine:	Trans:		
Year:	Make:	Model:	Body Style:	Color:	

Work Experience: List the things you did, resources you used, procedures, adjustments, and measurements taken that helped you and your mentor identified the damage, recognized the methods needed and the outline for completion. Remember; if you don't document all you have learned you will not get credit. **Document = Credit.**

Disassembly & Remove:

Which exterior panels were removed? _____

What tools were used to achieve those tasks? _____

Which interior panels were removed? _____

What tools were used to achieve those tasks? _____

Adjacent to the repair areas what panels had to be protected? _____

What steps were taken to protect those panels? _____

What safety procedures were applied to vehicle components such as ABS, air bags, refrigerants, oil, etc? _____

What environmental practices were applied to vehicle components such as substrates, fluids, refrigerants, etc? _____

Mentor's Signature _____ **Date:** _____

Manager's Signature _____ **Date:** _____

Sample Work Journal Report

Collision Repair

Metal Straighten & Light Body Filler

Student Name:			Mentor Name:		
Ro#:	Date In: / /	Mileage:	Date Out: / /		
VIN:		Engine:	Trans:		
Year:	Make:	Model:	Body Style:	Color:	

Work Experience: List the things you did, resources you used, procedures, adjustments, and measurements taken that helped you and your mentor identified the damage, recognized the methods needed and the outline for completion. Remember; if you don't document all you have learned you will not get credit. **Documentation = Credit.**

Metal Straighten & Light Body Filler:

What protective coatings (undercoating, sealer, etc.) were removed to perform necessary repairs? _____

What tools were used to achieve those tasks? _____

Which panels were metal and/or body filler repaired? _____

What tools were used to achieve those tasks? _____

Which panels did you have to restore the protective coatings? _____

What steps and type of material were taken to protect those panels? _____

Mentor's Signature _____ **Date:** _____

Manager's Signature _____ **Date:** _____

Sample Work Journal Report

Collision Repair

Paint Preparation

Student Name:			Mentor Name:		
Ro#:	Date In: / /	Mileage:	Date Out: / /		
VIN:		Engine:		Trans:	
Year:	Make:	Model:	Body Style:	Color:	

Work Experience: List the things you did, resources you used, procedures, adjustments, and measurements taken that helped you and your mentor identified the damage, recognized the methods needed and the outline for completion. Remember; if you don't document all you have learned you will not get credit. **Documentation = Credit.**

Paint Preparation:

Which panels did you featheredge the broken areas to be refinished? _____

What tools were used to achieve those tasks? _____

Which panels needed primer applied to them? _____

What tools were used to achieve those tasks? _____

Which panels had to be prepared for blend? _____

What tools and steps were used to achieve those tasks? _____

Paint Preparation Work Journal Continued

Which panels had to be protected for overspray? _____

What tools and steps were used to achieve those tasks? _____

Which type of refinish was applied (single, two or tri-stage)? _____

How many coats of refinish were applied? _____

Where there any runs or dirt particles in the refinish, and if so which panels? _____

What tools and steps were used to remove those imperfections? _____

Mentor's Signature _____ **Date:** _____

Manager's Signature _____ **Date:** _____

Sample Work Journal Report

Collision Repair

Detail

Student Name:			Mentor Name:		
Ro#:	Date In: / /	Mileage:	Date Out: / /		
VIN:		Engine:	Trans:		
Year:	Make:	Model:	Body Style:	Color:	

Work Experience: List the things you did, resources you used, procedures, adjustments, and measurements taken that helped you and your mentor identified the damage, recognized the methods needed and the outline for completion. Remember; if you don't document all you have learned you will not get credit. **Documentation = Credit.**

Detail:

Were there any panels that had overspray, and if so which ones? _____

If yes, what tools were used to remove the overspray? _____

Were there any panels that had to have stripes reapplied, and if so which ones? _____

If yes, what type of stripe was it (tape, painted)? _____

Good fit and finish of panels? _____

If no, what were the problems you seen? _____

Moldings and trim installed correctly? _____

If no, what were the problems you seen? _____

Were interior, exterior and glass cleaned? _____

Were body openings (door jams & edges, etc.) cleaned? _____

Mentor's Signature _____ **Date:** _____

Manager's Signature _____ **Date:** _____

Sample Student Final Report

Write at least three good paragraphs to address each of the following.

(School to select, delete, or substitute topics as appropriate)

1. Describe your work experience, including how you felt at the beginning, where you found the most help, and what you thought about the workplace.
2. Describe three areas where you learned the most.
3. What was the biggest repair challenge you faced and how did you overcome it?
4. Explain your vehicle repair that was the most interesting, was the most difficult, or where you learned the most.
5. Explain what direction you see your career path heading in the collision repair industry.
6. Other than technical skills, what did you learn from your mentor?
7. What was the most difficult thing about working every day and how did you address it?
8. What did you learn that was different from either your school instruction or your expectations?
9. Describe which tasks you enjoyed the most and which ones you enjoyed the least.
10. Describe one of the vehicles you repaired with your mentor and how you both worked together to produce a quality job.

Summer Internship Task List - 1

Check each task as student completes it satisfactorily

Student _____

	Week #					
NON-STRUCTURAL						
Preparation						
1.	Review damage report and analyze damage to determine appropriate methods for overall repair; develop repair plan.					
2.	Inspect, remove, store, and replace exterior trim and moldings.					
3.	Inspect, remove, store, and replace interior trim and components.					
4.	Inspect, remove, store, and replace non-structural body panels and components that may interfere with or be damaged during repair.					
5.	Protect panels, glass, and parts adjacent to repair area.					
6.	Soap and water wash entire vehicle; use appropriate cleaner to remove contaminants from those areas to be repaired.					
7.	Remove corrosion protection, undercoating, sealers, and other protective coatings necessary to perform repairs.					
8.	Inspect, remove, and replace repairable plastics and other components that are recommended for off-vehicle repair.					
9.	Apply safety procedures associated with vehicle components and systems such as ABS, air bags, refrigerants, batteries, tires, oil, anti-freeze, engine coolants, etc.					
10.	Apply environmental practices associated with vehicle components and systems such as substrates, fluids, refrigerants, batteries, etc.					
Body Panels						
11.	Inspect, remove, replace, and align hood, hood hinges, and hood latch.					
12.	Inspect, remove, replace, and align deck lid, lid hinges, and lid latch.					
13.	Inspect, remove, replace, and align doors, tailgates, hatches, liftgates, latches, hinges, and related hardware.					
14.	Inspect, remove, replace, and align bumper bars, covers, reinforcement guards, isolators, and mounting hardware.					
15.	Inspect, remove, replace, and align front fenders, headers, and other panels.					
16.	Straighten and rough-out contours of damaged panel to a surface condition for body filling or metal finishing using power tools, hand tools, and weld-on pull attachments.					

17.	Restore corrosion protection.					
18.	Restore sealers, sound deadeners, and foam fillers.					
	Metal Repairs					
19.	Remove paint from the damaged area of a body panel.					
20.	Locate and reduce surface irregularities on a damaged body panel.					
21.	Demonstrate hammer and dolly techniques.					
22.	Mix body filler.					
23.	Apply body filler; shape during curing.					
24.	Rough sand cured body filler to contour; finish sand.					
	Movable Glass					
25.	Inspect, adjust, repair, or replace window regulators, run channels, glass, power mechanisms, and related controls.					
	Metal Welding and Cutting					
26.	Protect adjacent panels, glass, vehicle interior, etc. from welding and cutting operations.					
27.	Protect computers and other electronic control modules during welding procedures according to manufacturer's specifications.					

Mentor Name: _____ Date: _____

Signature: _____

Summer Internship Task List - 2

Check each task as student completes it satisfactorily

Student _____

	Week #					
REFINISH						
Safety Precautions						
28.	Identify and take necessary precautions with hazardous operations and materials according to federal, state, and local regulations.					
29.	Identify safety and personal health hazards according to OSHA guidelines and "Right to Know Law".					
30.	Select and use the NIOSH approved personal sanding respirator. Inspect condition and ensure fit and operation. Perform proper maintenance in accordance with OSHA Regulation 1910.134 and applicable state and local regulations.					
31.	Select and use the NIOSH approved (Fresh Air Make-up System) personal painting/refinishing respirator system. Perform proper maintenance in accordance with OSHA Regulation 1910.134 and applicable state and local regulation.					
32.	Select and use the proper personal safety equipment for surface preparation, spray gun and related equipment operation, paint mixing, matching and application, paint defects, and detailing (gloves, suits, hoods, eye and ear protection, etc.).					
Surface preparation						
33.	Soap and water wash entire vehicle; use appropriate cleaner to remove contaminants.					
34.	Remove paint finish					
35.	Dry or wet sand areas to be refinished.					
36.	Featheredge broken areas to be refinished.					
37.	Apply suitable metal treatment or primer.					
38.	Mask trim and protect other areas that will not be refinished.					
39.	Mix primer, primer-surfacer or primer-sealer.					
40.	Apply primer onto surface of repaired area.					
41.	Apply two-component finishing filler to minor surface imperfections.					
42.	Dry or wet sand area to which primer-surfacer has been applied.					
43.	Dry sand area to which two-component finishing filler has been applied.					

44.	Remove dust from area to be refinished, including cracks or moldings of adjacent areas.					
45.	Clean area to be refinished using a final cleaning solution.					
46.	Remove, with a tack rag, any dust or lint particles from the area to be refinished.					
47.	Prepare adjacent panels for blending.					
	Spray Gun Equipment					
48.	Inspect, clean, and determine condition of spray guns and related equipment (air hoses, regulators, air lines, air source, and spray environment).					
49.	Check and adjust spray gun operation for HVLP (high volume, low pressure) or LVLP (low volume, low pressure) guns.					
50.	Set-up (fluid needle, nozzle, and cap), adjust, and test spray gun using fluid, air, and pattern control valves.					
	Final Detail					
51.	Clean interior, exterior, and glass.					
52.	Clean body openings (door jambs & edges, etc.).					
53.	Remove overspray.					
	PLASTICS					
54.	Identify the types of plastics repair procedures; clean and prepare the surface of plastic parts.					

Mentor Name: _____

Date: _____

Signature: _____

Sample Report Form Intern Employability Skills

Use your best judgment and comment where needed.

Student _____

1= Poor, 3=Average, 5=Excellent		1	2	3	4	5
1.	Has a positive attitude and shows patience					
	Comments					
2.	Shows self-motivation completing tasks, reporting problems, and asking mentor as needed					
	Comments					
3.	Dependable, reliably reports for work on time					
	Comments					
4.	Respects Authority					
	Comments					
5.	Shows good behavior and gets along with other employees					
	Comments					

Mentor Name: _____ Date: _____

Signature: _____

Sample Report Form

Final Internship Report

What is the student's greatest strength?

Where was the student's greatest growth?

How well did the student respond to instruction or correction?

Where should the student focus to improve technical skills?

Where should the student focus to improve employability skills?

What was your biggest challenge?

Mentor Name: _____ Date: _____

Signature: _____

Appendix D

Additional Information

ADVANCE TECH Modules

ENHANCED DELIVERY Modules

I-CAR Education Foundation

Training Materials

These training modules are portions of the entire curriculum package and contain all the basic tasks involved for PACE+ST³ instruction.

ADVANCE TECH

Module #	Description
4A	Safety and Environmental Practices
2E	Restoring Corrosion Protection
1A	Non-Structural Repair - Preparation
1B	Non-Structural Repair - Panel Replacement and Alignment
1C	Non-Structural Repair - Trim and Hardware
1D	Non-Structural Repair - Metal Straightening
1E	Non-Structural Repair - Using Body Fillers
1F	Non-Structural Repair - Door Skin and Intrusion Beam Replacement
1H	Non-Structural Repair - Movable Glass and Hardware
6A	Plastic Repair - Identification and Repair Decisions
4C	Preparing the Surface for Refinishing
4D	Preparing the Equipment, Paint Area, and Refinish Materials
4F	Refinish Tinting
4J	Detailing
6F	Refinish of Plastics

Count = 15

I-CAR Education Foundation

Training Materials

These training modules are portions of the entire curriculum package and contain all the basic tasks involved for PACE+ST³ instruction.

ENHANCED DELIVERY

Module #	Description
WKR01	Worker Protection Program 1
FCR01	Fundamental Collision Repair Program 1
DAM01	Damage Analysis Program 1
DAM02	Damage Analysis Program 2
DAM03	Damage Analysis Program 3
DAM04	Damage Analysis Program 4
TRM01	Trim and Hardware Program 1
CPS01	Corrosion Protection Program 1
WCA01	Welding and Cutting Aluminum Program 1
WCS01	Welding and Cutting Steel Program 1
BRA01	Brakes Program 1
RES01	Restraints Program 1
ABR01	Anti-Lock Brake and Traction Control Systems Program 1
AIR01	Air Conditioning Program 1
HEA01	Heating and Cooling Systems Program 1
PWR01	Power Accessories Program 1
STA01	Straightening Aluminum Program 1
EXA01	Exterior Panel Repair & Replacement Aluminum Program 1
EXA02	Exterior Panel Repair & Replacement Aluminum Program 2
STS01	Straightening Steel Program 1
EXT01	Exterior Panel Repair & Replacement Steel/Plastic Program 1
EXT02	Exterior Panel Repair & Replacement Steel/Plastic Program 2
GLA01	Movable/Stationary Glass Program 1
LSC01	Lighting, Starting, and Charging Systems Program 1
REF01	Refinishing Program 1
REF02	Refinishing Program 2
REF03	Refinishing Program 3
REF04	Refinishing Program 4
PLA01	Plastic Repair Program 1
PLA02	Plastic Repair Program 2

Count = 30