

# SLO Presentation

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AB

Date: 09-15-2022

## ISLO

### Civic Engagement

- Students will develop values and beliefs in their role as a member of local, national and global societies to promote truth, fairness and goodwill to others. They will use the democratic process to further their values and beliefs and recognize and accept differing perspectives based on cultural diversity. They will engage in actions which provide service to others and have a positive impact on their local community.

### Communication and Expression

- Students will demonstrate the ability to effectively and appropriately communicate their thoughts and ideas both in written and oral forms. They will develop verbal and non-verbal delivery skills, in an appropriate manner, to communicate their ideas as well as evaluate the ideas of others in a wide variety of contexts.

### Critical Thinking and Quantitative Reasoning

- Students will demonstrate the ability to recognize assumptions within an argument and actively and skillfully analyze underlying reasoning to develop a conclusion. They will apply qualitative and/or quantitative analysis to solve problems, predict outcomes, test hypotheses, and explore alternatives in an ethical manner.

### Information Literacy

- Students will demonstrate the ability to determine when gathering additional information is necessary. They will use appropriate resources and technologies to locate, evaluate and incorporate the information when developing supporting arguments and drawing conclusions. Students will also develop the ability to understand any legal, ethical or social issues regarding the use of information.

### Personal Knowledge and Responsibility

- Students will develop the necessary skills to define, maintain and complete their personal educational goals. They will learn to work independently to accomplish personal goals toward realizing their full potential academically, physically and emotionally whether for personal enrichment, further education or career advancement.

<b>Technology</b>
AB
<b>Automotive Refinishing--Cert</b> <ul style="list-style-type: none"><li>• Students will demonstrate proper trouble-shooting techniques to solve refinishing problems and defects including the causes and cures for each.</li><li>• Students will demonstrate safe practices regarding personal, environmental, and facility in the handling, use and disposal of hazardous materials.</li><li>• Students will demonstrate the skills required for entry level positions in automotive refinishing.</li><li>• Students will identify glamour and specialty finishes and describe methods for their duplication in automotive paint application.</li><li>• Students will properly assemble, set up, adjust, and spray automotive paints with a compliant professional spray gun.</li><li>• Students will properly clean, mask, block sand, and apply primer to repaired panels to industry standards.</li><li>• Students will properly mix and apply primers, under-coats, base-coats, and clear-coats to properly prepared panels.</li></ul>
<b>Damage Appraisal and Shop Management--Cert</b> <ul style="list-style-type: none"><li>• Students will analyze and determine a given shop's production capacity and use process improvement methods to improve on the existing layout and production plan.</li><li>• Students will demonstrate how to properly create and format computerized damage estimates in each estimating software platform and develop appropriate supplements.</li><li>• Students will describe various elements and aspects of ethics in handling automotive insurance claims, including detecting fraudulent claims and how to prevent perpetuation of fraud in collision repair while providing appropriate compensation for collision repair procedures.</li><li>• Students will fairly negotiate simulated insurance claims involving automotive collisions.</li><li>• Students will identify appropriate ethical behavior as related to preparing damage reports and in negotiating settlements for repair work.</li><li>• Students will learn how to identify various personality types including their own and demonstrate ways of adapting their responses to improve customer relations.</li><li>• Students will learn to organize their time at work and in their personal lives by tracking their time use and selecting alternative activities as they see fit to enhance their lives.</li></ul>

- Students will properly analyze structural damage to crashed vehicles and develop appropriate repair plans to correct structural realignment to factory specifications.
- Students will properly format and write hand-written estimates using information from Motor Crash guides or Mitchell Estimating guides and Procedure Pages.
- Students will use suspension design and geometry together with suspension theory to correctly identify damaged or bent components.
- Students will work as teams to create and operate a simulated collision repair shops including: market area, size, location, number of employees, production and office space, capacity, operating budget, and compensation for it's' employees.

### **General Automotive Collision Repair--Cert**

- Students will analyze structural damage to crashed vehicles and develop appropriate repair plans to restore them to factory specifications.
- Students will complete I-CAR Industry Certification training for ProLevel-1 certification.
- Students will properly clean vehicles to be repaired and remove necessary moldings and trim for access.
- Students will properly clean, prepare, block sand repaired areas, and mask vehicles for application of primers.
- Students will properly identify the base materials used to make automotive parts, and select appropriate repair materials and methods to restore damaged parts to factory specifications.
- Students will properly repair automotive metal and plastic parts to industry standards.
- Students will properly set up and tune GMAW (MIG) welders and complete plug, lap, butt, butt with insert welds to industry standards.
- Students will properly use terminology unique to the collision repair industry when describing learning activities.

### **CSLO**

#### **AB51 - Non-Structural Repair**

- Students analyze minor body damage and panel misalignment to automobiles.
- Students correct body panel misalignment to fenders, hoods, doors, and deck lids.
- Students safely remove exterior trim pieces of a vehicle and reinstall them without damaging them.
- Students disassemble, organize parts, tag and bag components in appropriately labeled containers and properly reassemble them later.
- Students properly repair non-structural body damage with appropriate hand and power tools to vehicle manufacturer standards.

#### **AB52 - Structural Damage Repair**

1. Students will analyze structural damage to automotive vehicles and properly repair them to OEM standards.
2. Students will retrieve vehicle-specific repair information from OEM technical information websites.
3. Students will properly perform frame inspection and repair on automotive structures.
4. Students will set up welding equipment and perform required welds according to manufacturer recommendations.
5. Students will remove and replace heated and non-heated fixed glass using manufacturer's specifications and procedures and recommended materials.
6. Students will properly inspect, measure, and repair unibody structures.

#### **AB53 - Steering, Suspension and Powertrain Damage**

- Students differentiate unibody damage affecting wheel alignment from adjustable suspension components and systems used in wheel alignment.
- Students identify automotive power train components and list related problems typically encountered in automotive collisions.
- Students describe correct processes of damage analysis as related to power train, steering and suspension systems.
- Students demonstrate proper use of measuring and gauging systems.
- Students demonstrate proper damage analysis of cooling electrical, air conditioning, and heating components involved in collisions.
- Students explain the theories of operation and areas of concern for the cooling system, electrical system, air conditioning system, and heating system as related to automotive collisions.

#### **AB54 - Advanced-Design Panel Repair**

- Students identify advanced design sheet metal materials, and make appropriate repairs, welding/bonding and replacement including ULSAB panels, HSLA panels, HSS, Ultra High-Strength Steel panels, Advanced High-Strength Steel and aluminum structures and outer panels.
- Students repair plastics using adhesives and fillers.

- Students repair and replace fiberglass and composite body panels.
- Students install and repair structural members made from advanced materials.
- Students welding and joining methods for advanced design materials using Gas Metal Arc Welding (GMAW) steel and aluminum, pressure spot welding with or without bonding adhesives, silicon-bronze welding of factory seams, structural riveting with or without bonding adhesive, and Gas Tungsten Arc Welding (GTAW).
- Students use advanced methods and materials for corrosion protection of unique automotive panels according to OEM recommendations.

### **AB55 - Structural Panel Replacement**

- Students visually inspect and analyze structurally damaged vehicles and properly measure and replace damaged structural panels using a variety of measuring and repairing equipment to industry standards.
- Students create a repair plan for a selected project vehicle.
- Students measure and analyze structurally damaged vehicles with universal and electronic equipment.
- Students demonstrate proper structural repair and replacement of damaged vehicle structures.
- Students perform GMAW (MIG), and STRSW welding applications on automotive steels.
- Students select proper corrosion prevention materials used in the repair and replacement of body and structural components.

### **AB56 - Non-Structural Automotive Welding**

1. Students will demonstrate the ability to properly set up and join two pieces of metal together using the different welding processes.
2. Successful students will properly weld non-structural automotive metals to industry standards using GMAW and resistance spot-weld processes.
3. Students will describe the I-CAR GMAW-Steel certification test and criteria for successful completion of the test.

### **AB57 - Structural Automotive Welding**

1. Successful students will demonstrate structural automotive welding and cutting to industry standards.
2. Students will display knowledge in methods used for corrosion prevention and protection of welded high strength steel.
3. Students will perform structural automotive welds in accordance with the I-CAR welding qualification test requirements.

### **AB58L - Collision Repair Lab**

- Students differentiate between the various metals used in unibody construction.
- Students identify high strength and Ultra High Strength steel panels and select appropriate repair and replacement procedures.
- Students identify and select proper tools and materials for repair of project vehicle.
- Students gauge and measure unibody damage using universal and dedicated equipment.
- Students repair a damaged unibody structure and its components to original factory specifications.
- Students use Gas Metal Arc Welding (GMAW) to join metal panels.

### **AB59F - Full Frame Repair Analysis**

- Students will assess damage to full-frame vehicles, measure damaged vehicles with a variety of universal and electronic measuring instruments, and complete structural repairs to industry standards.

### **AB59M - Computerized Measuring Training**

- Students will accurately analyze and measure vehicle structures using computerized measuring systems to industry standards.

### **AB59P - Structural Repair Planning**

- Students will apply collision theory and basic measuring procedures to accurately measure and analyze collisions, and develop relevant repair plans to industry standards.

### **AB59U - Unitized Structural Repair Analysis**

- Upon satisfactory completion of this course, students will apply collision theory and basic measuring procedures to accurately measure, analyze, and repair structural damage to unitized vehicles to industry standards.

### **AB61 - Preparation And Spot Refinishing**

1. Describe proper methods to clean a vehicle in preparation for refinishing.
2. Identify needed materials and methods used to and, prepare and mask a vehicle for a spot and blending procedure.
3. List the steps involved in mixing and application of base coat and clear coat in a spot refinishing operation.

- 4. Differentiate various fillers, primers, primer surfaces, and sealers, and describe the purpose and application of each.
- 5. Compare the various solvents, catalysts and additives used in acrylic enamel, water borne enamel, acrylic urethane, urethane clear coats, enamel refinishing, and identify safe and appropriate methods of clean up.

### AB61L - Automotive Refinishing Lab

- 1. Properly prepare project vehicle for refinishing.
- 2. Document personal use of refinishing materials and equipment according to Air Quality Management District (AQMD) requirements.
- 3. Demonstrate improved quality of product and individual proficiency in automotive paint preparation and spot refinishing and report necessary preparation and spot painting techniques needed to improve speed and hone skills.

### AB62 - Overall And Multi-Coat Refinishing

- Students demonstrate proper safety related to spot repair, overall refinishing, products relate to care and maintenance of interior and exterior, and products related to the use of plastic component refinishing.
- Students identify various methods used in testing refinishing products.
- Students contrast the effects of mica and pearl in various colors.
- Students compare the use of different toners used to produce carrying effects in color.
- Students prepare a spray-out panel and a let-down panel use in the color tinting and matching process for two-stage and multi-coat painting.
- Students identify and analyze vehicle paint condition, properly prepare vehicles for overall refinishing, and apply paint finish to match factory original color coat and texture.

### AB63 - Production Refinishing

- Students apply proper preparation and painting procedures for base-coat/clear-coat, and solid colors on practice panels.
- Students utilize proper steps, paint base-coat/clear-coat, solid, metallic, and multi-coat colors on steel, galvanized, and aluminum panels.
- Students create a schedule for lab work including at least three projects that would provide for efficient and effective use of time for completion of all work needed.
- Students locate and identify correct paint codes on multiple vehicle models then mix and prepare the paint for each.
- Students repair a scratch on a panel and blend into an adjacent panel.
- Students prepare and refinish one panel on a separate vehicle.
- Students sand and prepare a third vehicle for spot refinishing.

### AB64 - Automotive Air Brush Painting

- Students describe concepts used in layout of graphic design in automotive applications.
- Students demonstrate proper application of air brush painting using existing lines and shapes of vehicle panels.
- Students acquire a 3-D design or graphic image and transfer that image to a vehicle via air brush painting.
- Students properly mix and apply paint sprayed by air brush and provide proper top-coating to preserve and maintain applied art work.

### AB65 - Mix and Adjusting Color

- Students compare and contrast the causes of different paint color and textures mismatches.
- Students mix and match colors using toners with several samples of different automotive colors using a commercial tintometer and mixing bank.
- Students create a 'let down' panel and demonstrate its use in correctly identifying multi-coat variants.

### AB66 - Lettering, Striping and Design

- 1. Describe concepts used in layout of graphic design in automotive applications.
- 2. Explain proper application of lettering, graphic design, and pin-striping utilizing existing line of vehicle.
- 3. Develop a design or graphic image using computer software and send it to a printer/plotter to cut in vinyl, then apply it properly to a vehicle.
- 4. Use knowledge gained regarding use of color to enhance vehicle esthetics with accessory pinstripes and graphics.
- 5. Properly mix and apply accessory paint as stripes, letters, graphic design, and special effects.
- 6. Describe proper maintenance and adjustment of tools used in generating graphics, lettering, pin-stripes.

### AB67 - Automotive Custom Painting

- Students use appropriate terminology and identify and select appropriate tools and materials used in custom painting.
- Students identify and select appropriate processes and materials for custom paint application of pearls and candies.
- Students demonstrate appropriate techniques used to create custom paint effects on automobiles.
- Students demonstrate various masking and spraying techniques used to design and create holographic effects, shredding, spray painted flames, scallops, checkerboards, and murals.
- Students apply custom clear-coat finishes to automobiles.
- Students color-sand and polish clear-coats to a custom, mirror-like finish.

### **AB68L - Refinishing Lab**

- Students use inspect vehicles, checking panel gaps to determine expected damage and identify expected structural damage appropriately to industry standards.
- Students demonstrate proper calibrations to the latest gravity feed, siphon feed, and pressure feed spray equipment and demonstrate proper and safe spraying techniques with each type.
- Students exercise problem solving techniques related to the newest fillers, epoxy primers, primer surfaces, and sealers; and in refinishing with water-borne paint, acrylic enamel, acrylic urethane, base coat, and clear coat systems.

### **AB73 - AB OCCUPATIONAL WORK EXP**

- Complete assigned ASE technical tasks related to this subject

### **AB74 - Automotive Collision Repair Occupational Work Experience**

- Identify various career paths related to auto collision repair and list the daily duties connected with each job
- Properly complete and maintain a daily time log of hours spent on the job and the tasks completed as well as prepare paperwork related to a job in a collision repair facility
- Describe appropriate interviewing techniques as a job applicant

### **AB75 - Body Panel Customizing**

- Students identify career opportunities in automotive body panel design and fabrication and explain the relationship of this course in the educational track for automotive design and fabrication.
- Students properly identify equipment, hand tools, and techniques used in sheet metal modification and identify and select appropriate methods to weld automotive grade sheet metal with minimal distortion.
- Students demonstrate proper use of a shrinker and stretcher with aluminum and steel sheet metal.
- Students describe and perform proper metal finishing methods used for aluminum and steel body panels.
- Students properly identify the process and techniques for duplicating and existing portion of an automotive body panel using templates and patterns.
- Students compare and contrast various methods of removing, fabricating, and fastening steel panel sections to modify the existing design.

### **AB76 - Partial-Panel Fabrication**

- Upon satisfactory completion of this course, 75% students will be able to perform proper sheet metal bending and forming techniques with steel and aluminum comparing and contrasting various methods of removing, modifying, installing, aligning and welding partial automotive panels to industry standards

### **AB77 - Full-Panel Fabrication**

- Students identify and select appropriate tools and techniques to form and shape sheet metal to specific design characteristics.
- Students properly identify shapes and designs by name and describe the process for recreating that design in various types of sheet metal.
- Students identify and select appropriate tools and techniques to design, fabricate and install complete automotive body panels.
- Students continue skills development in selecting appropriate metal joining methods and welding panels fabricated during class.
- Students demonstrate various methods of metal-finishing welded seams so as to be nearly undetectable.
- Students describe and perform proper forming techniques including complete body panels with specific dimensional specifications.

### **AB79L - Automotive Fabrication Lab**

- Students select appropriate fabrication projects(s) to hone and improve skills.
- Students properly use sheet metal forming and cutting tools and equipment to accomplish metal forming tasks.
- Students demonstrate improved skill development and reduction in flaws on finished panel formation and joining projects and simultaneously reduce flaws in work while reducing material use.
- Students develop a fabrication plan including identification of required tools, materials and procedure appropriate for completion of chosen project.

- Students critique projects of self and other students regarding the overall quality of work performed and the cost-effectiveness of each project from a labor, parts, tool cost, and materials perspective.

### AB80 - Autobody Customer Service

1. Maximize personal time management and shop productivity by tracking personal time use for a week and review findings. Create a schedule of daily, weekly, and monthly activities. Apply concepts learned to office operations and tasks assigned.
2. Identify methods of determining and improving levels of customer service including: Demonstrate appropriate customer reception and telephone communication techniques; identifying different personality types and adapt responses based on their style; provide an improved customer service process for a repair center; demonstrate appropriate conflict resolution methods with customers and co-workers of various types and apply appropriate business ethics to shop operations.
3. Develop a tracking method for work in process to provide customers with status updates on their vehicles in repair.
4. Properly use terminology related to the auto collision repair industry and demonstrate proper processing of shop paperwork including: handwritten and computerized estimates and shop management reports; "closing" a file upon completion of a repair; tracking of in-process work and the status of each vehicle.

### AB83A - Computerized Damage Estimating - Audatex

1. Create damage reports in the Audatex estimating system as assigned including New, Used, Aftermarket, Reconditioned, and Repaired parts.
2. Perform special procedures including: apply betterment on damaged parts; create a price markup on used parts; apply a discount to specific parts; add additional labor; add line notes to clarify additional added items; and add sublet procedures to estimates.
3. Explain proper administrative processes in Audatex including: add new users in Audatex, create and use standard manual entries to save time writing estimates, lock estimates (locking them to create a supplement), select different billing profiles for estimates, and print estimates on paper and electronically as pdf files.
4. Critique my own and other students' computerized damage reports in Audatex for accuracy and completeness and provide final corrected copy of estimates completed.
5. Interpret the meaning and location of procedure pages (P-Pages that show included and non-included items) in the Audatex estimating system, how to add P-Pages to the estimates, and where additional training and tutorials are available to learn more about the Audatex.

### AB83P - Computerized Damage Estimating - Pathways

- Students create damage reports in the CCC-One (Pathways) estimating system as assigned including Jew, Used, Aftermarket, reconditioned, and Repaired parts.
- Students perform special procedures including: apply betterment on damaged parts; create a price markup on used parts; apply a discount to specific parts; add additional labor; add explanation lines to clarify additional added items; and add sublet procedures to estimates.
- Students explain proper administrative processes in CCC-One (Pathways) including: add new users in CCC-One (Pathways), create and use Parts Tales to save time writing estimates, commit estimates (locking them to create a supplement), select different billing profiles for estimates, and print estimates on paper and electronically as pdf files.
- Students critique my own and other students' computerized damage reports in CCC-One (Pathways) for accuracy and completeness and provide final corrected copy of estimates completed.
- Students interpret the meaning and location of procedure pages (P-Pages that show included and non-included items) in the CCC-One (Pathways) estimating system, how to add P-Pages as Remarks in estimates, and where additional training and tutorials are available to learn more about the CCC-One (Pathways).

### AB83U - Computerized Damage Estimating-Ultramate

- Students create damage reports in Mitchell Ultramate estimating system as assigned including New, Used, Aftermarket, Reconditioned, and repaired parts.
- Students perform special procedures including: apply betterment on damaged parts; create a price markup on used parts; apply a discount to specific parts; add additional labor; add explanation lines to clarify additional added items; and add sublet procedures estimates.
- Students explain proper administrative processes in Mitchell Ultramate including: add new users in Ultramate, create and use Long-Expansion Groups to save time writing estimates, commit estimates (locking them to create a supplement), select different billing profiles for estimates, and print estimates on paper and electronically as pdf files.
- Students critique my own and others students' computerized damage reports in Ultramate for accuracy and completeness and provide final corrected copy of estimates completed.
- Students interpret the meaning and location of procedure pages (P-Pages that show included and non-included items) in the Ultramate estimating system, how to add P-Pages as Remarks in estimates, and where additional training and tutorials are available to learn more about the Ultramate estimating system.

### AB86 - Production Management

1. Interpret the meaning and location of procedure pages in manual and computerized estimating systems. And provide appropriate research of correct parts and replacement labor in labor time guides and in computer estimating systems.
2. Determine production capacity and profitability level for a shop at various production levels; include calculations for profit and productivity differences between hourly and flat rate compensation plans.
3. Provide a shop floor plan for improved production in a designated repair center. Develop flow charts showing current and improved work flow for that shop.

- 4. Allocate repair order assignments to technicians and teams based on difficulty of work and ability and capacity of technicians and analyze profitability of the repairs including a repair timeline.
- 5. Maximize personal time management and shop productivity by developing repair plans for each job, review plans to determine an improved process or sequence of repair.
- 6. Consider reallocation of tools, materials, shop layout, and job assignments for improved productivity.

### AB88 - Estimating and Management Update

- Students identify updated or changes in the procedure pages (P-Pages) for computer generated estimating systems.
- Students properly identify the year, make and model of newer vehicles and correctly record vehicle identification number and manufacturing date into computer estimates in each system.
- Students create damage reports and supplements to later models of vehicles on the computer estimating system as assigned by the instructor and provide critiques of personal and other students' computerized damage reports for accuracy and completeness, providing the final corrected copy of estimates completed.
- Students consider allocation of equipment, materials, office layout, job assignments, and use of computer-generated information to improve the estimating process as currently used in industry.

### AB181 - Non-Structural Damage Estimating

- Students visually inspect and analyze non-structural damage to vehicles and properly prepare damage estimates using parts, materials, and labor, using collision estimating guides and other reference material to industry standards.
- Students identify and compare automobile body parts, components, construction and design and explain their relationship in automobiles.
- Students critique written estimates to improve accuracy and detail, including those of other students.
- Students describe various automotive paint refinishing methods and procedures.
- Students illustrate the proper process and sequence for writing estimates.
- Students assess various types of sheet metal damage, inner structure damage, plastic component damage, and paint damage.

### AB182 - Structural Damage Estimating

- Students inspect vehicles, checking panel gaps to determine expected damage and identify expected structural damage appropriately to industry standards.
- Students will visually inspect and analyze structurally damaged vehicles and properly develop hand-written and computerized damage estimates accurately describing required labor, parts and materials needed to restore such vehicles to factory specifications.
- Students accurately write legible hand-written estimates identifying both structural and non-structural damage including appropriate: parts, labor, material, and sublet procedures using OEM repair guidelines.
- Students use information from the visual inspection & structural measurement to determine various types of structural damage to be corrected.
- Students accurately write computer estimates identifying structural and non-structural damage to be corrected including: parts, labor, materials, and sublet procedures using factory (OEM) guidelines.
- Students critique computerized and hand-written estimates to improve accuracy and detail, including those of other students.

### AB183 - Computerized Damage Estimating

- Students will efficiently duplicate an estimate generated by a different software application between the systems to industry standards

### AB188 - Introduction to Automotive Claims Handling

- 1. Complete paperwork related to auto insurance claims handling.
- 2. Compare the in-shop adjusted-claim process with the direct repair program (DRP) process. Include differences in how supplemental damage is approved and processed in each program.
- 3. Identify and describe various types of pre-existing damage and critique judgment repair time on estimates for cosmetic and structural damage to vehicles.
- 4. Identify and select approved/ standardized repair methods for damaged vehicles including I-CAR general approved methods of repair (Uniform Procedures for Collision Repair) and Original Equipment Manufacturer (OEM) approved repairs.
- 5. Apply negotiating skills to settle differences of opinion as to how specific repairs are to be completed using estimates from estimating classes for the claims handling process.

### AB281 - Structural Damage Analysis for Estimators

- Students utilize the fundamental principles of collision theory to locate and identify additional "hidden" damage to vehicle structures affected by collisions.
- Students use the fundamental steps in visual inspection, identify structural damage for each of the four collision types including front end collision, rear end collision, side hit, and rollover, then diagram the structural damage for each collision type.
- Students identify and measure specific suspension control points on damaged and undamaged vehicles, and measure bent and unbent suspension parts to determine component damage.

- Students describe effective anchoring of different vehicles for structural repair.

### AB282 - Steering, Suspension and Powertrain Analysis for Estimators

- 1. Identify and describe the basic front suspension designs including straight axle, twin "I" beam, control arm, strut-type and explain the adjustability of each.
- 1. Identify and describe the basic front suspension designs including straight axle, twin "I" beam, control arm, strut-type and explain the adjustability of each.
- Students identify and describe the basic front suspension designs including straight axle, twin "I" beam, control arm, strut-type and explain the adjustability of each.
- Students list and describe the five steering geometry angles including steering axis inclination (S.A.I.), caster, camber, toe, and toe-out on turn, or turning radius and identify the two basic functions that the angles perform.
- Students compare and contrast steering and suspension geometry angles in front wheel drive versus rear wheel drive vehicles.
- Students demonstrate proper methods of measuring suspension, steering, and powertrain components for damage using simple angle-finders, tape measures and string. I am able to check rear suspension track angles or thrust angles using the same tools.

### AB283 - Advanced-Frame Analysis for Estimators

- 1. Use proper terminology to describe various types of structural damage to advanced-design pick-up and SUVs structures.
- 2. Identify collision forces including inertia, internal and external forces that affect advance-design pick-ups and SUVs and list factors causing deflection and diagram their effects.
- 3. Analyze damage in a sequential manner, defining the types of damage encountered, and apply the measuring techniques necessary to identify the structural damage, and explain design elements of advanced-design full-framed vehicles that prevent them from uniformly collapsing.
- 4. Perform thorough inspections on damaged vehicles by following the procedures described for each of the four basic collision types on advanced-design pick-ups and SUVs.
- 5. Describe the principles and importance of vehicle tracking, weight distribution and drivetrain alignment and diagnose problems related to each problem on advance-design pick-ups and SUVs.

### AB285 - Collision Repair Management

- 1. Create a business plan for a real or fictitious automotive collision repair business. Completely identify all functions, equipment needs, personnel needs, financial needs and all other aspects of an automotive collision repair business.
- 2. Write specific policies, procedures, and SOPs related to business operations including: critical financial key performance indicators (KPIs) and other data required to effectively operate a repair facility; develop job descriptions for each position in a repair facility and identify various compensation methods for productive and non-productive employees; draw an organizational chart representing your fictitious business; and develop a warranty policy.
- 3. Develop a marketing and advertising strategy for your fictitious company.
- 4. Identify regulatory compliance issued and the federal and state organizations affecting automotive repair.
- 5. Compare and contrast various computerized shop management systems available according to cost, utility, support, warranty, overall benefit to management, and ease of implementation.

### AB286 - Computerized Shop Management

- Students give a brief history of computerized shop management applications including DOS-based applications of the 1980s and 1990s including the current trends in computerized shop management.
- Students review practical daily use of at least three shop management software applications reviewed in this course and list the features, functions, and ease-of-use for each, including the ongoing training and learning opportunities for each management system.
- Students identify and match shop management applications based on repair center size, number of affiliated repair centers, volume of work, complexity of third party applications, and stockholder and user requirements.
- Students compare and contrast different shop management applications and select one system with a team of students to design, develop and operate your group's fictitious business.
- Students provide a final report about your experiences reviewing different shop management systems, and of your experiences setting up and operating your group's business.

### AB287 - Advanced Collision Repair Management

- 1. Students will be able to apply the latest principles and processes used in collision repair management to improve customer satisfaction, company profits, and insurance company relations to industry standards.
- 2. Students will identify and differentiate various repair center types including OEM Certified Repair Centers; Insurance-Owned Repair Centers; Multi-Shop Organizations; Franchise Repair Centers; and Co-Operative Repair Centers.
- 3. Students will identify Direct Repair Programs (DRP) of various insurance companies and describe requirements to acquire and maintain each DRP.
- 4. Students will develop a list of requirements for industry training to become an OEM Certified Repair Center for a single OEM.
- 5. Students will describe the training requirements for an organization to acquire and maintain I-CAR Gold-Class status.
- 6. Students will differentiate independently owned repair centers from dealership-owned or affiliated repair centers.

**AB288 - Advanced Automotive Claims**

- 1. Identify various careers in automotive claims adjusting and describe their daily duties, responsibilities and types of compensation including independent appraiser, insurance adjuster, insurance appraiser manager, insurance quality control re-inspector, third party claims auditor and others.
- 2. Demonstrate appropriate negotiating processes for adjusted claims and direct repair program re-inspections, and process simulated supplemental work authorizations for vehicles in repair to expedite repair process.