INTRODUCTION

A. An introduction to current refinishing products, shop safety, and equipment used in the automotive refinishing industry. Emphasis on surface preparation, masking techniques, and refinishing of trim and replacement parts.

B. Basic Refinishing (ABDR 1331) is a required course for the completion of a two year Associate of Applied Science degree in Auto Collision Repair or a Level I or Level II certificate of completion in the Auto Collision Repair Technician Program.

C. This course is occupationally related and serves as a preparation for a career in the Auto Collision Repair field.

D. Prerequisites: This course has a prerequisite or co-requisite of ABDR1319 or consent of the Dept. Chair.

E. Alphanumeric coding used throughout this module book denotes integration of SCANS occupational competencies (C1, etc.) and Foundation skills (F1, etc.).

LEARNING OUTCOMES

Upon successful completion of this course, Basic Refinishing, the student will:

A. Select and use refinishing proper tools. (C18, 19)

B. Practice shop and personal safety. (F9)

C. Mix and spray topcoats and substrates. (C18, 19)

D. Paint trim and cut in replacement parts. (C18, 19)

E. Perform proper surface preparation and masking skills. (C18, 19)
F. Refinish trim and cut-in replacement parts. (C18, 19)

G. Select the proper type of paint system to be used for specific refinishing requirements. (C18, 19)

H. Identify and describe the operation, advantages and disadvantages of siphon, HVLP and pressure type spray guns and system. (C18, 19)

I. Properly disassemble, clean, inspect, reassemble and maintain the spray gun system. (C20)

J. Practice shop safety and properly use and maintain tools and equipment. (C20)

K. Teach others a new skill. (C10) (F1, 2, 6)

L. Discuss basic refinishing theories. (C5, 6, 18, 19) (F1, 2, 6, 9)

M. Locate and read vehicle paint codes. (C5, 6, 7) (F1, 8, 9)

N. Interpret paint codes an convert OEM Codes to manufactures codes. (C5, 6, 7) (F1, 8, 9)

O. Identify and use rubbing compounds and buffing equipment. (C5, 6, 7, 15, 18, 19, 20) (F1, 8, 9)

P. Properly use respirators, painting equipment and a paint booth. (C5, 6, 7, 15, 18, 19, 20) (F1, 8, 9)

Q. Practice personal and environmental safely (C5, 6, 7, 15, 18, 19, 20) (F1, 8, 9)

III INSTRUCTIONAL MATERIALS

A. Text:

The instructional materials identified for this course are viewable through www.cted.edu/books

B. Supplemental Reading: As assigned by the instructor.

C. References: As selected by the instructor.

D. Audio Visual Aids: (Recommended)

1. “Compounding and Polishing”, Prentice Hall #941.06 (Filmstrip)
3. “Use and Care of the Spray Gun”, Prentice Hall #941.02 (Filmstrip)
4. “Spraying Color”, Prentice Hall #941.03 (Filmstrip)
5. “Sanding Techniques, Tools and Materials”, Prentice Hall #941.01 (Filmstrip)
6. “Masking, Priming and Puttying”, Prentice Hall #941.05 (Filmstrip)

E. Other instructional material: As selected by the instructor.

IV COURSE REQUIREMENTS

A. Your first responsibility is scholarship. The grade you receive will be the result of your efforts both in the classroom and in the laboratory.

B. This course is designed to require a steady, continuous effort form the student. Class participation, initiative, attendance and work efforts will be considered in grade computation.

C. Reading and study assignments will be made by the instructor. Reading of all study assignments is required, as well as specific tasks outlined by the instructor or listed on handouts, or laboratory activity sheets. Specific reading assignments will be assigned by the instructor. Students are required to complete these assignments by the time specified by the instructor. Quizzes may be given on any or all reading assignments.

D. The study of a subject is not limited to the classroom, laboratory, or limits of the syllabus. Each student should seek out and study all available material available on the subject being taught. This might include use of the Internet or the library. In general, two hours of study outside the regular class period is recommended for each hour of classroom work.

E. Students are required to attend class and laboratory sessions regularly. Those who fail to do so may be dropped from the course with a grade of “FN”.

F. Students are required to be present for all examinations. See paragraph V (Examinations) for additional information.

G. Laboratory learning activities (lab tasks) will be completed on an individual basis except when limited by tools and/or materials. Learning activities will be subjectively graded by the instructor. Students assigned to a group must be present at all times when the project is being worked on. Students who are not present while a learning activity is in progress may be given a “0” for that
activity. Students are required to complete all laboratory assignments by the time specified by the instructor.

V EXAMINATIONS

A. There will be a minimum of three major examinations:
   1. Three Week Exam
   2. Mid Term Exam
   3. Final Exam (this is a comprehensive exam)
   4. Additional examinations may be given if the instructor determines it is necessary for proper evaluation of the students in the class.

B. Students must be present for all examinations. Make up examinations will not be given. Students who know they will be absent on the day of an examination must make arrangements with the instructor prior to the absence. Students who are absent on the day of the examination due to illness or other extenuating circumstances must present to the instructor an acceptable reason for the absence on the day following the absence.

C. Students without an excused absence will be given a zero for that examination.

D. Students must take the final examination to receive a grade for the course.

VI SEMESTER GRADE COMPUTATIONS

A. Written examinations will count 45% of the student’s overall final grade.

B. Practical, hands-on lab work will count 45% of the student’s overall final grade.

C. Incentive points will count 10% of the student’s overall final grade. Incentive points are earned by doing additional work, written assignments, class participation, demonstrated initiative and positive attitude. Points will be deducted for each unexcused absence, each written assignment not turned in, each tardiness and each failure to secure tools and clean work areas.

D. Grade Computations (Example)

   1. Written Exams (45%) (maximum 100 points)
      1st Exam  90
      2nd Exam  90
      3rd Exam  +90
270 divided by 3 = 90 average

2. Lab score (45%) (maximum 100 points)
Lab score = 80
45% of 80 = 36 points for lab score

3. Incentive Score (10%) (maximum 100 points)
Incentive score = 82
10% of 82 = 8.2 points for Incentive Score

4. Final Overall Grade Computation
Written Exam 40.5 Points
Lab Score 36.0 Points
Incentive Score 8.2 Points
84.7 Total Points = a letter grade of “B”

E. Points/Score Equivalents:

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VII NOTES AND ADDITIONAL INSTRUCTIONS FROM THE INSTRUCTOR

A. Course Withdrawal: It is the student’s responsibility to officially withdraw from a course if circumstances prevent attendance. Any student who desires to, or must, officially withdraw from a course after the first scheduled class meeting must file a Central Texas College Application for Withdrawal (CTC Form 59). The withdrawal form must be signed by the student.

CTC Form 59 will be accepted at any time prior to Friday of the 12th week of classes during the 16-week fall and spring semester. The deadline for sessions of others lengths is:

- 10-week session: Friday of the 8th week
- 8-week session: Friday of the 6th week
- 5-week session: Friday of the 4th week
The equivalent date (75% of the semester) will be sued for session of other lengths. The specific last day to withdraw is published each semester in the Schedule Bulletin.

A student who officially withdraws will be awarded the grade of “W” provided the student’s attendance and academic performance are satisfactory at the time of official withdrawal. Students must file a withdrawal application with the College before they may be considered for withdrawal.

A student may not withdraw from a class for which the instructor has previously issued the student a grade of “F” or “FN” for nonattendance.

B. Administrative Withdrawal: An administrative withdrawal may be initiated when the student fails to meet College attendance requirements. The instructor will assign the appropriate grade on CTC Form 59 for submission to the registrar.

C. Incomplete Grade: The College catalog states, “An incomplete grade may be given in those cases where the student has completed the majority of the course work but, because of personal illness, death in the immediate family, or military orders, the student is unable to complete the requirements for a course...” Prior approval from the instructor is required before the grade of “I” for Incomplete is recorded. A student who merely fails to show for the final examination will receive a zero for the final and an “F” for the course.

D. Cellular Phones and Beepers: Cellular phones and beepers will be turned off while the student is in the classroom or laboratory.

E. American’s With Disabilities Act (ADA): Disability Support Services provide services to students who have appropriate documentation of a disability. Students requiring accommodations for class are responsible for contacting the Office of Disability Support Services (DSS) located on the central campus. This service is available to all students, regardless of location. Explore the website at www.ctcd.edu/disability-support for further information. Reasonable accommodations will be given in accordance with the federal and state laws through the DSS office.

F. Instructor Discretion: The instructor reserves the right of final decision in course requirements.

G. Civility: Individuals are expected to be cognizant of what a constructive educational experience is and respectful of those participating in a learning environment. Failure to do so can result in disciplinary action up to and including expulsion.
H. Absence from the class may be unavoidable in some situations. These include illness, military/civilian job requirements, or a death in the immediate family. Documentation is required in the case of excused absences for job requirement’s, excuses will be on company letterhead stationary signed by the immediate supervisor stating the reason for the absence for civilian jobs. Excuses for military personnel must be signed by the 1st Sergeant or the Company Commander. In cases of illness, one day absences may be excused on a statement from the individual stating the reason. For more than one day of illness, the individual must have a statement from the doctor treating the illness.

VIII COURSE OUTLINE

A. Lesson One: Introduction to the Automotive Refinishing Trade and Safety.

1. Learning Outcomes: Upon successful completion of this lesson, the student will:
   a. Discuss basic refinishing theories. (C5, 6, 18, 19) (F1, 2, 6, 9)
   b. Locate and read vehicle paint codes. (C5, 6, 7) (F1, 8, 9)
   c. Interpret paint codes and convert OEM Codes to manufactures codes. (C5, 6, 7) (F1, 8, 9)
   d. Practice shop and personal safety. (F9)
   e. Practice shop safety and properly use and maintain tools and equipment. (C20)

2. Learning Activities:
   a. The student will complete reading assignments as assigned. (F1, F11, C5, C6)
   b. The student will study the words/terms and complete written assignments specified by the instructor. (F1, F11, C5, C6)
   c. The student will attend classroom lectures and participate in classroom discussion. (F5 thru 7, F9, F10, C1, C5 thru 7)
   d. The student will observe demonstrations performed by the instructor. (F5, F10, C5, C6, C14)
   e. The student will complete laboratory learning activities assigned by the instructor. See the laboratory learning activity list attached. (F1 thru F17, C1, C3, C5 thru 9, C14 thru 16, C18 thru 20)

3. Equipment and Materials:
   a. Paint manufacturer color charts/books
   b. TV/VCR (as required)
   c. Others as required by the instructor.
4. **Audio Visual Aids: (Recommended)**
   
a. To be selected by the instructor from those listed in Section III D above.
b. Others as selected by the instructor.

5. **Lesson Outline:**

a. Introduction
b. Safety
c. Description of the refinishing trade
   (1) Need for the trade
   (2) Related businesses
   (3) Qualifications and responsibilities for painters and helpers
d. Structure of the trade
   (1) Paint suppliers
   (2) Regional warehouse
   (3) Paint jobbers
   (4) Spray gun and equipment suppliers
   (5) Misc. Paint material suppliers
   (6) Paint tool & equipment suppliers
   (7) Factory zone offices
   (8) New car dealers
   (9) Factory training and training centers
   (10) Used car dealers
   (11) Conventional paint and collision repair shops
   (12) Custom paint shops
   (13) High volume paint shops
   (14) Insurance companies
   (15) Government agencies
      (a) Licensing
      (b) Safety standards
e. Comparison of factory and refinish trade painting
   (1) Factory painting
      (a) Production line operation
      (b) Paint mixing
      (c) Metal conditioning
      (d) Primer application
      (e) Wet sand operations
      (f) Types and methods of color application
   (2) Refinish-trade painting
      (a) Safety
         i) ventilation
         ii) eye protection
         iii) fire protection
iv) storage of materials
v) personal safety
vi) OSHA

(3) Paint color identification
   (a) Body number plates
   (b) Location of plates
       i) American vehicles
       ii) Foreign made vehicles
   (c) Reading body plates
i) General Motors products
ii) Ford products
iii) Chrysler products
iv) American Motors products
(d) Reading paint manufacturers color charts
   i) exterior colors
   ii) interior colors
(e) Ordering colors from paint jobber
   i) exterior colors
   ii) interior colors
   iii) specialty finishes
f. OSHA/NIOSH guidelines
   (1) Job health and safety
   (2) Walking and working surfaces
   (3) Exits and exit marking
   (4) Environmental control
   (5) Hazardous materials
   (6) Personal protective equipment
   (7) Sanitation
   (8) Medical and first aid
   (9) Fire protection
   (10) Compressed air equipment
   (11) Machine guarding
   (12) Hand and portable power tools
   (13) Electrical requirements
g. Respirators
   (1) NIOSH regulations
   (2) Types of respirators and applications
      (a) General spray painting respirators
      (b) Air supplied mask or hood
      (c) Dust masks
      (d) Construction
         i) face mask or frame
         ii) cartridges
         iii) filters or pre-filters
   (3) Selection of proper respirator
      (a) Lacquer, enamel, organic vapors
      (b) Urethanes or isocyanate vapors
      (c) Toxic or non-toxic dusts
h. Dusting or blow guns
   (1) NIOSH regulations
   (2) Types
i. Compressed air equipment
   (1) Belt guards
   (2) Transformers
j. Spray booths - OSHA regulations
k. Drying equipment - OSHA regulations
   (1) Infrared lamps
      (a) Types
      (b) Heat control
      (c) Ventilation
      (d) Proper use
l. Fire safety
   (1) Storage and disposal of materials
   (2) Storage and disposal of towels
   (3) Electrical
      (a) Types
      (b) Proper selection for types of fire
      (c) Proper use
      (d) Location in the shop
      (e) Smoking areas
      (f) Welding or grinding sparks
m. Hazardous materials
   (1) Types
      (a) Asbestos
      (b) Carbon Monoxide
      (c) Cleaning solvents
      (d) Paint and thinners
      (e) Body fillers - plastic and lead
      (f) Dusts
      (g) Metal conditioning acids
      (h) Personal protection equipment
n. Power sanding equipment - portable grinder
   (1) Installation of abrasives
   (2) Proper use
   (3) Personal protection equipment

B. Lesson Two: Paint Spray Guns and Cups

1. Learning Outcomes: Upon successful completion of this lesson, the student will:

   A. The student will select, inspect and use proper tools utilized in the refinishing industry. (C18, 19)
   B. Practice shop and personal safety. (F9)
   C. Select the proper type of paint system to be used for specific refinishing requirements. (C18, 19)
   D. Practice shop safety and properly use and maintain tools and equipment. (C20)
E. Properly use respirators, painting equipment and a paint booth. 
(C5, 6, 7, 15, 18, 19, 20) (F1, 8, 9)

2. **Learning Activities:**
   a. The student will complete reading assignments as assigned. (F1, F11, C5, C6)
   b. The student will study the words/terms and complete written assignments specified by the instructor. (F1, F11, C5, C6)
   c. The student will attend classroom lectures and participate in classroom discussion. (F5 thru 7, F9, F10, C1, C5 thru 7)
   d. The student will observe demonstrations performed by the instructor. (F5, F10, C5, C6, C14)
   e. The student will complete laboratory learning activities assigned by the instructor. See the laboratory learning activity list attached. (F1 thru F17, C1, C3, C5 thru 9, C14 thru 16, C18 thru 20)

3. **Equipment and Materials:**
   a. Siphon-type spray guns and cups
   b. Pressure-fed guns and remote cups
   c. Tools for disassembly
   d. TV/VCR (as required)
   e. Gun cleaner
   f. Rags
   g. Respirator
   h. Paint booth
   i. Safety equipment
   j. Others as selected by the instructor.

4. **Audio Visual Aids:** (Recommended)
   a. To be selected by the instructor from those listed in Section III D above.
   b. Others as selected by the instructor.

5. **Lesson Outline:**
   a. Introduction
   b. Description and operation of the spray gun
      (1) Siphon-fed
      (2) Pressure fed
      (3) Spray gun parts and functions
         (a) Air cap
         (b) Fluid tip
(c) Fluid needle
(d) Fluid needle packing and nut
(e) Fluid control spring and knob
(f) Pattern or spreader control value
(g) Trigger and bearing stud/screw
(h) Air valve, packing and spring
(i) Gun body
(j) Fluid inlet or head
(k) Air inlet
(l) Material cups and accessories

(4) Disassembly and assembly
   (a) Tools and cautions
   (b) Sequences
   (c) Cautions against damage

(5) Gun selection
   (a) Type of job
   (b) Size of job
   (c) Material to be sprayed
   (d) Selection of air cap, fluid tip and needle

C. **Lesson Three**: Basic Spraying Techniques and Gun Adjustments

1. Learning Outcomes: Upon successful completion of this lesson, the student will:
   
   a. The student will select, inspect and use proper tools utilized in the refinishing industry. (C18, 19)
   b. Practice shop and personal safety. (F9)
   c. Select the proper type of paint system to be used for specific refinishing requirements. (C18, 19)
   d. Identify and describe the operation, advantages and disadvantages of siphon, HVLP and pressure type spray guns and system. (C18, 19)
   e. Properly disassemble, clean, inspect, reassemble and maintain the spray gun system. (C20)
   f. Practice shop safety and properly use and maintain tools and equipment. (C20)
   g. Properly use respirators, painting equipment and a paint booth. (C5, 6, 7, 15, 18, 19, 20) (F1, 8, 9)

2. Learning Activities:
   
   a. The student will complete reading assignments as assigned. (F1, F11, C5, C6)
b. The student will study the words/terms and complete written assignments specified by the instructor. (F1, F11, C5, C6)

c. The student will attend classroom lectures and participate in classroom discussion. (F5 thru 7, F9, F10, C1, C5 thru 7)

d. The student will observe demonstrations performed by the instructor. (F5, F10, C5, C6, C14)

e. The student will complete laboratory learning activities assigned by the instructor. See the laboratory learning activity list attached. (F1 thru F17, C1, C3, C5 thru 9, C14 thru 16, C18 thru 20)

3. Equipment and Materials:

   a. Siphon-fed spray guns
   b. Acrylic lacquer and enamel automotive paint
   c. Acrylic lacquer thinner
   d. Acrylic enamel reducer
   e. Cleaning solvent
   f. Cleaning brushes and equipment
   g. Practice panels (2' x 4') disassembly tools
   h. Safety equipment
   i. Respirator
   j. Rags
   k. TV/VCR (as required)
   l. Paint booth
   m. Others as selected by the instructor.

4. Audio Visual Aids: (Recommended)

   a. To be selected by the instructor from those listed in Section III D above.
   b. Others as selected by the instructor.

5. Lesson Outline:

   a. Spray gun adjustments
      (1) Basic adjustments
      (a) air cap
           i) vertical spraying
           ii) horizontal spraying
      (b) Fluid control
           i) spot repair
           ii) Panel or overall repair
      (c) Pattern control
           i) spot repair
           ii) panel or overall repair
(d) Atomizing pressure
   i) spot repair
      a) enamels
      b) lacquers
   ii) panel or overall repairs
   iii) determining correct atomizing pressure
      a) manufacturers recommendations
      b) without an air gauge

b. Testing the spray pattern
   (1) Description of a balanced pattern
      (a) fluid flow
      (b) atomizing pressure
   (2) Pattern testing and gun problems
      (a) vertical
      (b) horizontal or flood test
      (c) irregularities
      i) split pattern
      ii) heavy center pattern
      iii) heavy top or bottom pattern
      iv) Heavy side pattern
   (d) gun problems
      i) air leakage
      ii) fluid leakage
      iii) jerky or fluttering spray
      iv) no spray
   (e) corrective actions or adjustment
      i) air adjustments
      ii) fluid adjustments
      iii) gun repairs

c. Basic spraying techniques
   (1) Basic spraying
      (a) gripping the gun
      (b) gun to surface distances
      i) enamels
      ii) lacquers
      (c) gun speed
      (d) triggering
      (e) overlap
      (f) gun positioning
      (g) arcing the gun
      (h) feathering
   (2) Single coating
   (3) Double coating
   (4) Banding
   (5) Special conditioners
(a) edges and corners  
(b) long panels  
(c) large horizontal panels  
(d) slender panels  
(e) curved panels

6. Introduction to special purpose techniques  
(a) spot repair  
(b) mist coating  
(c) fog coating  
(d) dry-spray color application  
(e) overall refinishing sequences

d. Spray gun maintenance  
(1) Inspection of parts  
(2) Cleaning  
(a) back-flushing  
(b) solvents  
(c) air cap  
(d) fluid tip and needle  
(e) fluid passages  
(f) cup assembly  
(g) exterior  
(h) flushing with solvent  
(i) special operations for pressure systems  
   i) relieving pressure  
   ii) back flushing  
   iii) cleaning and drying the material hose

(3) Lubrication  
(4) Storage

D. **Lesson Four:** Surface Preparation

1. **Learning Outcomes:** Upon successful completion of this lesson, the student will:

a. Demonstrate skills in and knowledge of surface preparation.  
   (C18,19)  
b. Develop masking skills. (C18, 19)  
c. Practice shop safety and properly use and maintain tools and equipment. (C20)  
d. Identify and use rubbing compounds and buffing equipment.  
   (C5, 6, 7, 15, 18, 19, 20) (F1, 8, 9)
2. **Learning Activities:**
   
   a. The student will complete reading assignments as assigned. (F1, F11, C5, C6)
   
   b. The student will study the words/terms and complete written assignments specified by the instructor. (F1, F11, C5, C6)
   
   c. The student will attend classroom lectures and participate in classroom discussion. (F5 thru 7, F9, F10, C1, C5 thru 7)
   
   d. The student will observe demonstrations performed by the instructor. (F5, F10, C5, C6, C14)
   
   e. The student will complete laboratory learning activities assigned by the instructor. See the laboratory learning activity list attached. (F1 thru F17, C1, C3, C5 thru 9, C14 thru 16, C18 thru 20)

3. **Equipment and Materials:**
   
   a. Panels exhibiting major paint problems
   
   b. Aluminum-oxide and silicon carbide sand paper and discs of necessary grits
   
   c. Hand and power sanding tools; sandblaster and sand
   
   d. Metal conditioner and conversion coating
   
   e. Mineral spirits
   
   f. Pre-cleaning solvent
   
   g. Enamel reducer
   
   h. Lacquer removing solvent
   
   i. Paint remover
   
   j. Shop towels
   
   k. Tac rags
   
   l. Squeegees
   
   m. Disc adhesive
   
   n. Rubber gloves
   
   o. Goggles and other safety equipment as needed
   
   p. Respirator
   
   q. TV/VCR (as required)
   
   r. Prep area
   
   s. Others as selected by the instructor.

4. **Audio Visual Aids:** (Recommended)
   
   a. To be selected by the instructor from those listed in Section III D above.
   
   b. Others as selected by the instructor.
5. Lesson Outline:

a. Problem surface conditions - causes and correction
   (1) Problems due to exposure or age
       (a) acid or alkali spotting
       (b) chalking
       (c) etching
       (d) water spotting
       (e) rusting
   (2) Problems due to incorrect repairs
       (a) blistering
       (b) blushing
       (c) repair ring (bulls eye)
       (d) cracking
           i) checking
           ii) micro checking
           iii) line checking
           iv) crazing
       (e) dirt in the finish
       (f) dry spray
       (g) fisheyes
       (h) lifting
       (i) mottling
       (j) off-color
       (k) excessive orange peel
       (l) overspray
       (m) peeling
       (n) pin-holing
       (o) rub through
       (p) runs or sags
       (q) rusting
       (r) sand marks and sand scratch swelling
       (s) shrinking/splitting of putty
       (t) streaks in the finish
       (u) sweat-out (dulling)
       (v) wet spots
       (w) wheel burn
       (x) wrinkling

b. Car washing
   (1) Materials needed
   (2) Procedures
       (a) indoors
       (b) outdoors
       (c) cautions
c. Preparation materials and equipment

(1) Solvents
   (a) paint finish cleaning solvents
   (b) mineral spirits
   (c) enamel reducers

(2) Shop towels

(3) Metal conditioner an conversion coating

(4) Squeegees

(5) Sanding blocks

(6) Sponge pads

(7) Tac rags

(8) Abrasives
   (a) types
      i) aluminum oxide
      ii) silicon carbide
      iii) coating and adhesives
      iv) backing material
      v) open coat
      vi) closed coat
      vii) waterproof sand paper
      viii) dry-type sandpaper
      ix) sheet and disc sizes
      x) scuff pads
   (b) proper selection for specific needs
   (c) hand sanding
      i) selection of a backup tool
      ii) reducing the sandpaper
      iii) hand-holding sandpaper
      iv) finger sanding
      v) circle sanding
      vi) cross cutting
      vii) feather edging
      viii) wet sanding and blocking
      ix) dry sanding
      x) scuff sanding
   (d) power sanders
      i) safety
      ii) air files
      iii) random orbit (DA) or orbital (jitterbug)
      iv) portable grinder
         a) with standard backing pad
         b) with sponge pad
         c) pad and disc attachment
         d) use of disc adhesive
e) grit selection (cross-cutting, buffing)

f) position on the work

g) tool movement (high crown, low crown, panel edges)

h) disc cutting (circular, star shape)

i) compounding and buffing (materials, techniques)

(9) Use of lacquer removing solvent

(10) Paint removers

(a) lacquer top coats removal

(b) complete finish removal

(c) tools and materials

(d) safety

   i) ventilation and respiration

   ii) avoid contact

   iii) eye protection

(e) masking for parts protection and cleanup

(f) stripping procedures

(11) Sandblasting

(a) sandblasting equipment and functions

(b) types of sand or abrasive

(c) safety

   i) personal protection

   ii) parts protection

(d) sandblaster use and techniques

(12) Masking

(a) purpose

(b) materials

   i) automotive masking paper

   ii) limited-use materials

      a) newspaper

      b) wrapping paper

      c) plastics

      d) limitation

   iii) tape

      a) types (crepe-type, polypropylene)

      b) sizes

      c) uses

      d) selection of quality

      e) techniques

         1) holding and unrolling

         2) tearing

         3) splitting

         4) curving

            (i) stretching
5) masking molding  
   (i) curved  
   (ii) flush  

6) perimeter masking  

7) filler masking  

8) parts masking  
   (i) windshield  
   (ii) side windows  
      a)) stationary  
      b)) operational  
   (iii) door handles  
      a)) push-button  
      b)) pull-out  
   (iv) lock cylinders  
   (v) radio antennas  
   (vi) wheels  
   (vii) door and fender jambs  
   (viii) multiple parts masking (grilles and bumpers)  
   (ix) reverse masking  
      a)) straight-line  
      b)) curved-line  

f) special taping tools  
   1) brushes  
   2) wooden stylus  
   3) apron taper

E. **Lesson Five:** Refinishing

1. **Learning Outcomes:** Upon successful completion of this lesson, the student will:
   a. The student will select, inspect, and use proper tools utilized in the refinishing industry. (C18, 19)
   b. Practice shop and personal safety. (F9)
   c. Select the proper type of paint system to be used for specific refinishing requirements. (C18, 19)
   d. Practice shop safety and properly use and maintain tools and equipment. (C20)
   e. Discuss basic refinishing theories. (C5, 6, 18, 19)(F1, 2, 6, 9)
   f. Properly use respirators, painting equipment and a paint booth. (C5, 6, 7, 15, 18, 19, 20) (F1, 8, 9)
2. **Learning Activities:**

   a. The student will complete reading assignments as assigned. (F1, F11, C5, C6)
   b. The student will study the words/terms and complete written assignments specified by the instructor. (F1, F11, C5, C6)
   c. The student will attend classroom lectures and participate in classroom discussion. (F5 thru 7, F9, F10, C1, C5 thru 7)
   d. The student will observe demonstrations performed by the instructor. (F5, F10, C5, C6, C14)
   e. The student will complete laboratory learning activities assigned by the instructor. See the laboratory learning activity list attached. (F1 thru F17, C1, C3, C5 thru 9, C14 thru 16, C18 thru 20)

3. **Equipment and Materials:**

   a. Slow, medium and fast drying solvents (enamel and lacquer)
   b. Retarder (enamel and Lacquer)
   c. Viscosity cup
   d. Stop watch
   e. Paint paddles
   f. Spray guns and cups
   g. Enamel and lacquer paint (package viscosity)
   h. Graduated mixing containers
   i. Strainers
   j. Masking tape
   k. Safety equipment
   l. Respiration
   m. Shop cloths
   n. TV/VCR
   o. Paint booth
   p. Others as selected by the instructor.

4. **Audio Visual Aids:** (Recommended)

   a. To be selected by the instructor from those listed in Section III D above.
   b. Others as selected by the instructor.

5. **Lesson Outline:**

   a. Purpose of solvents
      (1) Application viscosity
      (2) Proper application
         (a) vaporization
(b) atomization
(c) flow-out
(d) flending
(e) drying
(3) equipment clean-up

b. Categories
(1) Thinners
(2) Reducers

c. Solvent composition and balance
(1) True solvent
(2) Latent solvent
(3) Diluents
(4) Special additives

d. Types
(1) Slow drying
(2) Medium drying
(3) Fast drying
(4) Retarders
(5) Temperature ranges
(6) Uses

e. Blending of solvents

f. Controlling shades of metallic colors

g. Proper reduction (thinning) methods
(1) Use of paint viscosity cups
(2) Percentage or ration guides
   (a) graduates
   (b) rulers
(3) Standard reduction (thinning)
(4) Modified reduction (thinning)
   (a) purpose
   (b) technique

F. Lesson Six: Undercoats

1. Learning Outcome: Upon successful completion of this lesson the student will:

a. The student will select, inspect and use proper tools utilized in the refinishing industry. (C18, 19)
b. Practice shop and personal safety. (F9)
c. Mix and spray topcoats and substrates. (C18, 19)
d. Paint trim and cut in replacement parts. (C18, 19)
e. Demonstrate skills in and knowledge of surface preparation. (C18, 19)
f. Develop masking skills. (C18, 9)
g. Select the proper type of paint system to be used for specific refinishing requirements. C18, 19)
h. Identify and describe the operation, advantages and disadvantages of siphon, HVLP and pressure type spray guns and system. C18,19)
i. Properly disassemble, clean, inspect, reassemble and maintain the spray gun system. (C20)
j. Practice shop safety and properly use and maintain tools and equipment. (C20)
k. Teach others a new skill. (C10) (F1, 2, 6)
l. Discuss basic refinishing theories. (C5, 6, 18, 19)(F1, 2, 6, 9)
m. Locate and read vehicle paint codes. (C5, 6, 7)(F1, 8, 9)
n. Interpret paint codes an convert OEM Codes to manufactures codes. (C5, 6, 7)(F1, 8, 9)
o. Identify and use rubbing compounds and buffing equipment. (C5, 6, 7, 15, 18, 19, 20) (F1, 8, 9)
p. Properly use respirators, painting equipment and a paint booth. (C5, 6, 7, 15, 18, 19, 20) (F1, 8, 9)

2. Learning Activities:

a. The student will complete reading assignments as assigned. (F1, F11, C5, C6)
b. The student will study the words/terms and complete written assignments specified by the instructor. (F1, F11, C5, C6)
c. The student will attend classroom lectures and participate in classroom discussion. (F5 thru 7, F9, F10, C1, C5 thru 7)
d. The student will observe demonstrations performed by the instructor. (F5, F10, C5, C6, C14)
e. The student will complete laboratory learning activities assigned by the instructor. See the laboratory learning activity list attached. (F1 thru F17, C1, C3, C5 thru 9, C14 thru 16, C18 thru 20)

3. Equipment and Materials:

a. Primers
b. Primer-surfacers
c. Primer-scalers
d. Sealers
e. Putties
f. Sanding materials
g. Spray guns
h. Solvents
i. 2 panels spray
j. Safety equipment
k. Respirator
l. TV/VCR
m. Paint booth
n. Others as selected by the instructor.

4. Audio Visual Aids: (Recommended)
   a. To be selected by the instructor from those listed in Section III D above.
   b. Others as selected by the instructor.

5. Lesson Outline:
   a. Qualities of automotive finishes
      (1) Protection
      (2) Adherence
      (3) Elasticity
      (4) Durability
      (5) Repairability
      (6) Appearance
   b. Functions of undercoats
      (1) Adhesion
      (2) Corrosion resistance
      (3) Filling quality
      (4) Sealing quality
   c. Types and general usage
      (1) Straight primers
      (2) Primer-surfacers
      (3) Primer-sealers
      (4) Sealers
      (5) Putty
      (6) Surfaces for application
         (a) Types
         (b) Preparation
   d. Selection of proper undercoat system
   e. Application of undercoats
      (1) Reduction/thinning
      (2) Gun adjustments
      (3) Air pressures
      (4) Film thickness
      (5) Drying times
      (6) Guide or disclosing coat
   f. Sanding tips
   g. Improper uses of application
Lesson Seven: Automotive Topcoats

1. **Learning Outcome:** Upon successful completion of this lesson the student will:

   a. The student will select, inspect and use proper tools utilized in the refinishing industry. (C18, 19)
   b. Practice shop and personal safety. (F9)
   c. Mix and spray topcoats and substrates. (C18, 19)
   d. Paint trim and cut in replacement parts. (C18, 19)
   e. Demonstrate skills in and knowledge of surface preparation. (C18, 19)
   f. Develop masking skills. (C18, 19)
   g. Select the proper type of paint system to be used for specific refinishing requirements. (C18, 19)
   h. Identify and describe the operation, advantages and disadvantages of siphon, HVLP and pressure type spray guns and system. (C18, 19)
   i. Properly disassemble, clean, inspect, reassemble and maintain the spray gun system. (C20)
   j. Practice shop safety and properly use and maintain tools and equipment. (C20)
   k. Teach others a new skill. (C10) (F1, 2, 6)
   l. Discuss basic refinishing theories. (C5, 6, 18, 19)(F1, 2, 6, 9)
   m. Locate and read vehicle paint codes. (C5, 6, 7)(F1, 8, 9)
   n. Interpret paint codes an convert OEM Codes to manufactures codes. (C5, 6, 7)(F1, 8, 9)
   o. Identify and use rubbing compounds and buffing equipment. (C5, 6, 7, 15, 18, 19, 20) (F1, 8, 9)
   p. Properly use respirators, painting equipment and a paint booth. (C5, 6, 7, 15, 18, 19, 20) (F1, 8, 9)

2. **Learning Activities:**

   a. The student will complete reading assignments as assigned. (F1, F11, C5, C6)
   b. The student will study the words/terms and complete written assignments specified by the instructor. (F1, F11, C5, C6)
   c. The student will attend classroom lectures and participate in classroom discussion. (F5 thru 7, F9, F10, C1, C5 thru 7)
   d. The student will observe demonstrations performed by the instructor. (F5, F10, C5, C6, C14)
   e. The student will complete laboratory learning activities assigned by the instructor. See the laboratory learning activity list attached. (F1 thru F17, C1, C3, C5 thru 9, C14 thru 16, C18 thru 20)
3. **Equipment and Materials:**
   a. Surface preparation materials
   b. Undercoat materials
   c. Enamel and lacquer
   d. Solvents
   e. Enamel and lacquer topcoat materials
   f. 2 \( \square \times 4 \square \) spray panels
   g. Safety equipment
   h. Respirator
   i. Paint booth
   j. TV/VCR (as required)
   k. Others as selected by the instructor

4. **Audio Visual Aids: (Recommended)**
   a. To be selected by the instructor from those listed in Section III D above.
   b. Others as selected by the instructor.

5. **Lesson Outline:**
   a. Composition of topcoat materials
      (1) Resin
      (2) Solvents
      (3) Pigments
      (4) Plasticizers
      (5) Metallic flakes
      (6) U.V. screener
      (7) Special additives
      (8) Manufacturing processes
   b. Factory topcoat material
      (1) Types
          (a) thermoplastic-acrylic lacquer
          (b) thermosetting-acrylic and alkyd enamels
      (2) Characteristics
      (3) Manufacturers uses
          (a) General Motors
          (b) Ford
          (c) Chrysler
          (d) AMC
   c. Repair topcoat materials and characteristics
      (1) Enamels
          (a) acrylic
          (b) alkyd
(c) polyurethane
(d) acrylic urethane

(2) Acrylic lacquers
(3) Clear
(4) Catalysts
(5) Custom colors
(6) Metallic colors
   (a) description
   (d) dispersion of flakes
      i) standard shade
      ii) light shade
      iii) dark shade

d. Compatibility of finish
   (1) Determination of finish type
   (2) Selection of refinish materials
   (3) Problems and causes

e. Film thickness limits
f. Application of colors
   (1) Selection and preparation of materials
   (2) Preparation of vehicle and spray area
   (3) Use of silicone additives
   (4) Application enamels and lacquers
INSTRUCTIONS FOR ALL STUDENTS: Student texts, notes and service manuals may be used in performance of the tasks. The instructor must verify satisfactory completion of each task by entering the date and his initials in the date column for each task. The instructor will not verify satisfactory completion of the task until all standards have been met. The grade earned will be entered in the task# column. To meet minimum requirements, the student must correctly complete each task listed below one time. Each performance exam will count 2.8 points. A maximum of 100 points will be awarded. NOTE: Failure to follow instructions, record required data, use correct tools in correct manner, clean work area, secure tools and equipment, absence, or unsafe act will result in a deduction of points from your total lab score.

<table>
<thead>
<tr>
<th>TASK #</th>
<th>LEARNING ACTIVITY DESCRIPTION</th>
<th>DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Locate the body number plate on vehicles indicated by the instructor and identify the codes for the exterior paint, interior trim and/or vinyl top colors. Include the type of OEM finish.</td>
<td></td>
</tr>
</tbody>
</table>
| 2.     | Use the codes from 1 above and a paint manufacturer’s color chart book to complete the following.  
1. Select the proper refinish color code for each vehicle.  
2. Include codes for each of the different types of finish offered by the manufacturer.  
3. Identify the type and number of stages of the OEM finish. (Single stage, BC/CC, CC/CC, tri-stage, etc.) |       |
<p>| 3.     | Select the proper respirator for spray materials selected by the instructor. Inspect the respirator for proper function and properly fit and test the unit. |       |
| 4.     | Demonstrate the proper operation of the spray booth. Includes replacement of intake and exhaust filters and inspection of mechanical components. |       |
| 5.     | Select the proper air compressor needed to supply sufficient CFM for the tools listed by your instructor. |       |
| 6.     | Demonstrate the proper use of the compounding and/or buffing machine. |       |
| 7.     | Describe how solvents are classified and the use of each type. |       |
| 8.     | Identify the components used to make solvents. |       |
| 9.     | Describe fully the role of solvents in the variables that affect the color of metallic colors. |       |</p>
<table>
<thead>
<tr>
<th></th>
<th>Description</th>
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<tbody>
<tr>
<td>10.</td>
<td>Demonstrate the different methods of reduction or thinning of color: standard and modified.</td>
</tr>
<tr>
<td>11.</td>
<td>Describe the different types of automotive undercoats, their purpose for use and general application procedures.</td>
</tr>
<tr>
<td>12.</td>
<td>Describe the components of automotive color and its manufacturing process.</td>
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<tr>
<td>13.</td>
<td>Describe fully the types of automotive color; OEM and field repair materials.</td>
</tr>
<tr>
<td>14.</td>
<td>Describe how the shade of metallic colors can be altered without tinting.</td>
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<tr>
<td>15.</td>
<td>Describe how to determine a type of finish and determine the compatibility of the refinish material.</td>
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<tr>
<td>16.</td>
<td>Describe the role of film thickness on the success or failure of a finish.</td>
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<tr>
<td>17.</td>
<td>List the equipment and materials needed in the mixing room.</td>
</tr>
<tr>
<td>18.</td>
<td>Describe the function and proper use of silicone additives.</td>
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<tr>
<td>19.</td>
<td>Describe the paint application procedures for each of the panels of a vehicle.</td>
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<td>20.</td>
<td>Describe the relationship of number of coats to mil thickness for topcoat applications.</td>
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<tr>
<td>21.</td>
<td>Disassemble each of the production spray guns, identify their individual parts, trace both the fluid and air passages, describe the operation of the contents and reassemble the spray guns.</td>
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<tr>
<td>23.</td>
<td>Describe the appearance or characteristics of the common faulty spray patterns and describe fully the causes and the corrective measures for each.</td>
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<tr>
<td>24.</td>
<td>Demonstrate proper techniques for spraying color in the following exercise: 1. Triggering - spot adjustment (Big “X”) 2. Overlap - spot adjustment (Big “O”) 3. Trigger and overlap - full adjustment (Big “O”) 4. Full panel spraying - full adjustment single coats</td>
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<tr>
<td>25.</td>
<td>List and explain the general steps required for preparing a vehicle for refinishing.</td>
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<tr>
<td>26.</td>
<td>Identify and explain the use of the common surface preparation materials.</td>
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</tbody>
</table>
27. Describe fully the types of abrasives used in surface preparation.

28. Match the proper abrasive types and grit to specific job requirements or paint systems as indicated by your instructor.

29. List the paint finish problems associated with abrasives and describe the causes and cure for each.

30. List the types of sanding techniques and demonstrate each.

31. Select the proper materials and demonstrate the proper procedures in the masking of the following:
   1. A molding with a flush edge.
   2. A molding with a curved edge.
   3. A windshield or backglass
   4. An outside door handle and lock cylinder
   5. A curved style line
   6. A radio antenna.
   7. A door jamb and its body opening

32. Properly prepare four (4) paint panels, choose and apply proper undercoats(s), reduce or thin paint materials and use the proper techniques and operations to perform the following:
   1. Refinish two (2) panels with single stage urethane (metallic).
      (Includes color sanding and buffing)
   2. Refinish two (2) panels with acrylic enamel (metallic).
      ****Each stage of each project must be validated by the instructor. Be prepared to justify your choice of materials and techniques.

33. Properly and safely use and maintain tools and equipment. (Graded throughout the course)

34. Practice shop safety. (Graded throughout the course)

35. Teach others a new skill. Complete Worksheet 1431-01

**TOTAL POINTS GRADE AWARDED (Possible 100 points)**
Learning Outcome: Teach others a new skill

This task must be completed prior to taking your final/exit exam for this course.

You have been tasked to teach another employee how to read a metric scale (ruler). Have the instructor observe you teaching a student that he selected how to do this task.

This task includes:
   A. Types of rulers.
   B. How to read the ruler.
   C. Use of the ruler.
   D. Making measurements with the ruler.

See your instructor if you have any questions.

Ask the instructor to discuss the exercise with you after you complete the task.
CENTRAL TEXAS COLLEGE  
COMPETENCY PROFILE

Program: Auto Collision Repair Technician  
Course: ABDR 1431 Basic Refinishing (128 clock hours) (4 credits)  
Entry Occupation: Auto Body Repair Helper/Apprentice  
Instructor: 

Student Name: SSAN:  
Date Enrolled: Date Completed/Withdrew:  
Total Hours Absent: Final Grade

RATING SYSTEM

The instructor will evaluate the student by placing a check mark in the appropriate number block to indicate the student’s degree of competency. (Enter N/A if the item is not applicable or not observed.) The rating for each task reflects the instructor’s evaluation of employability readiness rather than the grade given in the class. The final grade is not an average of ratings. The rating scale listed below will be used to rate the student.

RATING SCALE

1 = 95(A) = Mastered competency: Highly proficient. Can perform task without supervision. Can teach others. Meets or exceeds SCANS requirements.  
2 = 85(B) = Mastered Competency: Proficient. Can perform task with limited supervision. Meets most SCANS requirements. 
3 = 75(C) = Mastered Competency: Can perform task but requires close supervision. Meets minimum SCANS requirements.  
4 = 0(F) = Did NOT master competency: Unable to or did not attempt to perform task. Does not meet SCANS requirements.
<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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<tbody>
<tr>
<td><strong>Learning Outcome 1:</strong> The student will select, inspect and use proper tools utilized in the refinishing industry. (C18,19)</td>
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<tr>
<td><strong>Learning Outcome 2:</strong> Practice shop and personal safety. (F9)</td>
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<td><strong>Learning Outcome 3:</strong> Mix and spray topcoats and substrates. (C18,19)</td>
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<tr>
<td><strong>Learning Outcome 4:</strong> Paint trim and cut in replacement parts. (C18,19)</td>
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<tr>
<td><strong>Learning Outcome 5:</strong> Demonstrate skills in and knowledge of surface preparation. (C18,19)</td>
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<td><strong>Learning Outcome 6:</strong> Develop masking skills. (C18,19)</td>
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<td><strong>Learning Outcome 7:</strong> Select the proper type of paint system to be used for specific refinishing requirements.(C18,19)</td>
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<td><strong>Learning Outcome 8:</strong> Identify and describe the operation, advantages and disadvantages of siphon, HVLP and pressure type spray guns and system.(C18,19)</td>
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<td><strong>Learning Outcome 9:</strong> Properly disassemble, clean, inspect, reassemble and maintain the spray gun system. (C20)</td>
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<tr>
<td><strong>Learning Outcome 10:</strong> Practice shop safety and properly use and maintain tools and equipment. (C20)</td>
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<td><strong>Learning Outcome 11:</strong> Teach others a new skill. (C10) (F1,2,6)</td>
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<tr>
<td><strong>Learning Outcome 12:</strong> Discuss basic refinishing theories. (C5,6,18,19)(F1,2,6,9)</td>
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<tr>
<td><strong>Learning Outcome 13:</strong> Locate and read vehicle paint codes. (C5,6,7)(F1,8,9)</td>
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<tr>
<td><strong>Learning Outcome 14:</strong> Interpret paint codes an convert OEM Codes to manufactures codes. (C5,6,7)(F1,8,9)</td>
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<tr>
<td><strong>Learning Outcome 15:</strong> Identify and use rubbing compounds and buffing equipment,(C5,6,7,15,18,19,20) (F1,8,9)</td>
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<tr>
<td><strong>Learning Outcome 16:</strong> Properly use respirators, painting equipment, and a paint booth. (C5,6,7,15,18,18,20) (F1,8,9)</td>
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</tbody>
</table>
**Workplace Know-How and Personal Characteristics**

The rating system listed below will be used by the Worksite Supervisor to evaluate the student’s workplace know-how and personal characteristics. The Worksite Supervisor will evaluate the student on the following competency (task) listed by circling the appropriate rating from the rating scale below that best describes his/her observation of the student during the entire length of this course for the rated area (task). Enter the date the task was completed in the date column.

**Rating Scale**

1 = Above Average  
2 = Average  
3 = Below Average  
N/A = Not Observed

<table>
<thead>
<tr>
<th>COMPETENCIES: Effective workers can productively use:</th>
<th>Rating</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resources: allocating time, money, materials, space, staff.</td>
<td>1 2 3 N/A</td>
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</tr>
<tr>
<td>Interpersonal Skills: working on teams, teaching others, serving customers, leading, negotiating and working Well with people from culturally diverse backgrounds.</td>
<td>1 2 3 N/A</td>
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<tr>
<td>Information: acquiring and evaluating data, organizing and maintaining files, interpreting and communicating and using computers to process information.</td>
<td>1 2 3 N/A</td>
<td></td>
</tr>
<tr>
<td>Systems: understanding social, organizational, and technological systems, monitoring and correcting performance and designing or improving systems.</td>
<td>1 2 3 N/A</td>
<td></td>
</tr>
<tr>
<td>Technology: selecting equipment and tools, applying technology to specific tasks and maintaining and troubleshooting technologies.</td>
<td>1 2 3 N/A</td>
<td></td>
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</tbody>
</table>

**THE FOUNDATION: Competence requires:**

<table>
<thead>
<tr>
<th>Rating</th>
<th>Date</th>
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</thead>
<tbody>
<tr>
<td>Basic Skills: reading, writing, arithmetic and mathematics, speaking and listening.</td>
<td>1 2 3 N/A</td>
</tr>
<tr>
<td>Thinking Skills: thinking creatively, making decisions, solving problems, seeing things in the mind's eye, knowing how to learn and reasoning.</td>
<td>1 2 3 N/A</td>
</tr>
<tr>
<td>Personal Qualities: individual responsibility, self-esteem, sociability, self-management and integrity.</td>
<td>1 2 3 N/A</td>
</tr>
</tbody>
</table>

**PERSONAL CHARACTERISTICS**

<table>
<thead>
<tr>
<th>Rating</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relations with others: Effectiveness in working with students, instructors and others; cooperation; shows respect.</td>
<td>1 2 3 N/A</td>
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<tr>
<td></td>
<td>1</td>
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<tr>
<td>------------------------</td>
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</tr>
<tr>
<td><strong>Dependability:</strong></td>
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<tr>
<td>attendance; loyalty;</td>
<td></td>
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<tr>
<td>punctuality; adherence</td>
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<tr>
<td>to schedules and</td>
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<tr>
<td>deadlines; consistency</td>
<td></td>
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<tr>
<td>and results;</td>
<td></td>
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<tr>
<td>perseverance.</td>
<td></td>
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<tr>
<td><strong>Work Attitudes:</strong></td>
<td></td>
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<tr>
<td>willingness to learn;</td>
<td></td>
</tr>
<tr>
<td>willingness to accept</td>
<td></td>
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<tr>
<td>and profit from</td>
<td></td>
</tr>
<tr>
<td>evaluation;</td>
<td></td>
</tr>
<tr>
<td>enthusiasm;</td>
<td></td>
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<tr>
<td>initiative;</td>
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<tr>
<td>commitment;</td>
<td></td>
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<tr>
<td>pride in work.</td>
<td></td>
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<tr>
<td><strong>Communication:</strong></td>
<td></td>
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<tr>
<td>listening; speaking;</td>
<td></td>
</tr>
<tr>
<td>and nonverbal skills;</td>
<td></td>
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<tr>
<td>effectiveness in</td>
<td></td>
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<tr>
<td>communicating with</td>
<td></td>
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<tr>
<td>students, teachers and</td>
<td></td>
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<tr>
<td>others.</td>
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<tr>
<td>**Personal Hygiene-</td>
<td></td>
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<tr>
<td>Grooming:**</td>
<td></td>
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<tr>
<td>personal health care</td>
<td></td>
</tr>
<tr>
<td>and cleanliness,</td>
<td></td>
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<tr>
<td>dresses and maintains</td>
<td></td>
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<tr>
<td>self appropriately for</td>
<td></td>
</tr>
<tr>
<td>a business environment.</td>
<td></td>
</tr>
</tbody>
</table>

Based on my observation/evaluation of the student he/she has: (place a “√” in the appropriate block).

<table>
<thead>
<tr>
<th>Entry level skills now.</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Entry level skills</td>
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</tr>
<tr>
<td>after additional</td>
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</tr>
<tr>
<td>external learning</td>
<td></td>
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<tr>
<td>experience.</td>
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<tr>
<td>Entry level skills</td>
<td></td>
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<tr>
<td>after additional</td>
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<tr>
<td>course work.</td>
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<tr>
<td>Entry level skills</td>
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<tr>
<td>after additional</td>
<td></td>
</tr>
<tr>
<td>course work and</td>
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<tr>
<td>additional external</td>
<td></td>
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<tr>
<td>learning experience.</td>
<td></td>
</tr>
</tbody>
</table>

**Instructor Comments:** (Please provide additional information regarding your evaluation of the student’s performance.)

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

**INSTRUCTOR CERTIFICATION**

I certify this competency profile to be true and accurate to the best of my knowledge.

Signature: ___________________________ Date: ___

I have seen this evaluation and discussed it with my Instructor.

Student Signature: ___________________________ Date: ___

<table>
<thead>
<tr>
<th>Written Exam</th>
<th>First</th>
<th>Second</th>
<th>Exit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final Score</td>
<td></td>
<td></td>
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</tbody>
</table>