I INTRODUCTION

A. Extension of Structural Analysis and Damage Repair II providing skill development in the auto body application of theories to repair and replacement of complete body units.

B. Structural Analysis and Damage Repair IV (ABDR 2435) 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 of ABDR 1419, ABDR 1442, and ABDR 1471 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.).

II LEARNING OUTCOMES

Upon successful completion of this course, Structural Analysis and Damage Repair IV, the student will:

A. The student will select and demonstrate the correct equipment use to analyze the nature and extent of frame damage. (C18, 19) (F9)

B. Locate and identify precise points of damage to frames and underbodies. (C18, 19) (F9)

C. Correct localized and multiply damage through the use of properly designed holding, blocking, anchoring and force application. (C18, 19) (F9)

June 12, 2007
D. Discuss Frame and Underbody Damage Analysis Theory. (C15)

E. Read Alignment Gauges. (C5, 6, 15, 18, 19, 20) (F1, 2, 3, 8, 9, 10, 12)

F. Identify areas of Structural panels recommended for sectioning. (C18, 19)

G. Perform sectioning procedures on structural components. (C18, 19)

H. Practice shop safety and properly use and maintain tools and equipment. (C20) (F9)

I. Demonstrate and understanding of collision theory. (C15)

III INSTRUCTIONAL MATERIALS

A. Text:

The instructional material identified for this course are viewable through www.ctcd.edu/books

B. Supplemental Reading: As assigned by the instructor.


2. Gaging and Analyzing Collision Damage, Chief Automotive Systems 1978. No ISBN.

C. References: As selected by the instructor.

D. Audio Visual Aids: See resource list at end of this module book.

1. “Introduction to Unibody Repair”, Vital Systems Inc. (Video)
2. “Unibody: Damage Analysis”, Vital Systems Inc. (Video)
5. UMS Training Video”, Chief Automotive Systems (Video)
6. “The Universal Bench”, Vocational Media Associates (Video)
7. “Frame-Unibody Straightening”, Delmar Publishers (Video)
8. “Unibody: Damage Correction”, Vital Systems Inc. (Video)
9. “EZ Liner Training”, Chief Automotive Systems (Video)
10. “Toyota Repair”, Chief Automotive Systems (Video)
11. “Oldsmobile Side Hit Repair”, Chief Automotive Systems
12. “Replacing Structural Parts, Corrosion Protection”, Delmar Publishers (Video)
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:

<table>
<thead>
<tr>
<th>POINTS</th>
<th>GRADE</th>
<th>POINTS PER SEMESTER HOUR</th>
</tr>
</thead>
<tbody>
<tr>
<td>90-100</td>
<td>A</td>
<td>4</td>
</tr>
<tr>
<td>80-89</td>
<td>B</td>
<td>3</td>
</tr>
<tr>
<td>70-79</td>
<td>C</td>
<td>2</td>
</tr>
<tr>
<td>60-69</td>
<td>D</td>
<td>1</td>
</tr>
<tr>
<td>0-59</td>
<td>F</td>
<td>0</td>
</tr>
<tr>
<td>WITHDRAWAL</td>
<td>W</td>
<td>0</td>
</tr>
<tr>
<td>INCOMPLETE</td>
<td>I</td>
<td>0</td>
</tr>
</tbody>
</table>

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 other 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 used for sessions 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 (“IP”) 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 “IP” 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. If instructor notes or handouts are given to you, you must study them, exams may be taken from these notes also.

VIII COURSE OUTLINE:

A. **Lesson One**: Basic Frame and Underbody Damage Analysis Theory

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

   a. Locate and identify precise points of damage to frames and underbodies. (C18, 19) (F9)
   b. Discuss Frame and Underbody Damage Analysis Theory. (C15)
   c. Practice shop safety and properly and safely use and maintain tools and equipment. (C20) (F9)
   d. Demonstrate and understanding of collision theory. (C15)

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 discussions. (F5, F6, F7, F9, F10, C1, C5, C6, C7)
   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. Vehicle as required
   b. Service publications
   c. TV/VCR (as required)
   d. 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. Auto construction
d. Unibody damage analysis

B. Lesson Two: Gauge Reading and Measuring Systems

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

   a. The student will select and demonstrate the correct equipment use to analyze the nature and extent of frame damage. (C18, 19) (F9)
   b. Read Alignment Gauges. (C5, 6, 15, 18, 19, 20) (F1, 2, 3, 8, 9, 10, 12)
   c. Practice shop safety and properly and safely use and maintain tools and equipment. (C20) (F9)

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 discussions. (F5, F6, F7, F9, F10, C1, C5, C6, C7)
   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. Vehicle as required
   b. Measuring systems
      (1) Universal
      (2) Lazer/Computerized
      (3) Self-centering
   c. Centering gauge
d. Strut centerline gauge

e. Tram gauges

f. TV/VCR (as required)

g. 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. Impact and its effects
   d. Visual analysis
   e. Measurements
   f. Gauge measuring systems
   g. Tram gauges
   h. Centering gauges
   i. Strut centerline gauges
   j. Universal measuring system
   k. Bench and fixture measuring systems

C. Lesson Three: Equipment Set-Up and Damage Connection

1. Learning Outcomes: Upon successful completion of this lesson the student will:
   a. The student will select and demonstrate the correct equipment use to analyze the nature and extent of frame damage. (C18, 19) (F9)
   b. Correct localized and multiply damage through the use of properly designed holding, blocking, anchoring and force application. (C18, 19) (F9)
   c. Practice shop safety and properly and safely use and maintain tools and equipment. (C20) (F9)

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 discussions. (F5, F6, F7, F9, F10, C1, C5, C6, C7)
   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. Vehicles  
   b. Measuring systems  
   c. Power tools  
   d. Hand tools  
   e. Body jacking equipment  
   f. Frame alignment machine  
   g. TV/VCR (as required)  
   h. 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. Tools and equipment  
   d. Body alignment basics  
   e. Straightening and alignment techniques  
   f. Stress relieving  
   g. Final operations

D. **Lesson Four:** Structural Sectioning

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

   a. Identify areas of structural panels recommended for sectioning. (C18, 19)  
   b. Perform sectioning procedures on structural components. (C18, 19)  
   c. Practice shop safety and properly and safely use and maintain tools and equipment. (C20) (F9)
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 discussions. (F5, F6, F7, F9, F10, C1, C5, C6, C7)
   
   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. Vehicles
   
   b. Measuring systems
   
   c. Power tools
   
   d. Hand tools
   
   e. Body jacking equipment
   
   f. Frame alignment machine
   
   g. TV/VCR (as required)
   
   h. 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. Structural sectioning
   
   d. Anti-rust treatments
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 ("P, N" or a numeric grade) will be entered in the task# column.

CERTIFICATE STUDENT INSTRUCTIONS: Performance Exams will be graded on a “pass-fail” system based on industry standards. NOTE: Failure to follow instructions, record required data, use correct tools in correct manner, clean work area, secure tools, absence, or unsafe act will result in the student failing the task. Certificate students who have selected the alpha-numeric grading system will be graded as outlined for degree students (see below).

DEGREE STUDENT INSTRUCTIONS: To meet minimum requirements, the student must correctly complete each task listed below one time. Each performance exam will count 8.3 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, 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>Module 2435-01: Basic Frame and Underbody Damage Analysis Theory</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Learning Activities:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Complete reading assignments.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Complete written assignments.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>View audio visuals.</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Instructor discussion and theory.</td>
<td></td>
</tr>
</tbody>
</table>
Performance Exam:

1. Write a 6 page paper explaining Basic Collision Theory and Damage Theory. You must address the following topics:
   a. Damage Forces
   b. Visual Inspection vs. Measurement
   c. Centerline
   d. Level
   e. Datum
   f. Critical Measurement

2. Make an analysis of damage to a vehicle using systematic visual inspection methods.

Module 2435-02: Gauge Reading and Measuring Systems

Learning Activities:

1. Complete reading assignments.
2. Complete written assignments.
3. View audio visuals.
4. Instructor discussion and theory.

Performance Exam:

1. Analyze collision damage to a vehicle using the self-centering gauge.
2. Analyze collision damage to a vehicle using the universal measuring system.
3. Analyze damage to a vehicle using the laser/computerized measuring system.

Module 2435-03: Equipment Set Up Damage Correction

Learning Activities:

1. Complete reading assignments.
2. Complete written assignments.
3. View audio visuals.
4. Instructor discussion and theory.

Performance Exam:

1. Write a paper describing the types of straightening systems used in industry today and list their advantages and disadvantages.
2. Demonstrate the use of hydraulic body jacking equipment in:
   a. Pushing Applications
   b. Vector Pulls
3. Demonstrate the proper holding and blocking techniques on both a perimeter and light truck frame for the following damage conditions:
   a. Sway
   b. Diamond
   c. Twist
   d. Mash with Sag
   e. Mash with Diamond and Twist

4. Set-up and use the straightening equipment to correct the following structural conditions:
   1. Diamond
   2. Twist
   3. Sway
   4. Mash with Sag
   5. Mash with Diamond and Twist

**Module 2435-04: Structural Sectioning**

**Learning Activities:**

1. Complete reading assignments.
2. Complete written assignments.
3. View audio visuals.
4. Instructor discussion and theory.

**Performance Exam:**

1. Perform the following sectioning procedures:
   a. Rail-Butt Joint with Insert
   b. Rail-Lap/Offset Butt Joint
   c. Reinforced Rail
   d. Rocker Panel-Butt Joint with Insert
   e. Reinforced A-Pillar
   f. B-Pillar-Lap/Offset Butt Joint

2. List the materials, tools, sequence and application techniques required to re-apply corrosion protection to sectioned panels.

3. Practice shop safety and properly use and maintain tools and equipment. Graded throughout the course.

| Total Points/Grade Awarded (Possible 100 points) |   |
## CENTRAL TEXAS COLLEGE
### COMPETENCY PROFILE

<table>
<thead>
<tr>
<th>Program:</th>
<th>Auto Collision Repair Technician</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course:</td>
<td>ABDR 2435 Structural Analysis and Damage Repair IV (128 clock hours) (4 Credits)</td>
</tr>
<tr>
<td>Entry Occupation:</td>
<td>Auto Body Repair Helper/Apprentice</td>
</tr>
<tr>
<td>Instructor:</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Student Name:</th>
<th>SSAN:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date Enrolled:</td>
<td>Date Completed/Withdrawn:</td>
</tr>
<tr>
<td>Total Hours Absent:</td>
<td>Final Grade</td>
</tr>
</tbody>
</table>

### 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>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Learning Outcome 1:</strong> The student will select and demonstrate the correct equipment use to analyze the nature and extent of frame damage. (C18, 19) (F9)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Learning Outcome 2:</strong> Locate and identify precise points of damage to frames and underbodies. (C18, 19) (F9)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Learning Outcome 3:</strong> Correct localized and multiply damage through the use of properly designed holding, blocking, anchoring and force application. (C18, 19) (F9)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Learning Outcome 4:</strong> Discuss Frame and Underbody Damage Analysis Theory. (C15)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Learning Outcome 5:</strong> Read Alignment Gauges. (C5, 6, 15, 18, 19, 20) (F1, 2, 3, 8, 9, 10, 12)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Learning Outcome 6:</strong> Identify areas of Structural panels recommended for servicing. (C18, 19)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Learning Outcome 7:</strong> Perform sectioning procedures on structural components. (C18, 19)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Learning Outcome 8:</strong> Practice Shop Safety and Properly use and Maintain Tools and Equipment. (C20) (F9)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Learning Outcome 9:</strong> Perform outer door panel and intrusion beam replacement. (F1, 2, 8, 9, 12)(C5, 15, 18, 19, 20)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</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><strong>Resources:</strong> allocating time, money, materials, space, staff</td>
<td>1 2 3 N/A</td>
<td></td>
</tr>
<tr>
<td><strong>Interpersonal Skills:</strong> 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>
<td></td>
</tr>
<tr>
<td><strong>Information:</strong> 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><strong>Systems:</strong> 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><strong>Technology:</strong> selecting equipment and tools, applying technology to specific tasks, and maintaining and troubleshooting technologies.</td>
<td>1 2 3 N/A</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>THE FOUNDATION: Competence requires:</th>
<th>Rating</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Basic Skills:</strong> reading, writing, arithmetic and mathematics, speaking and listening.</td>
<td>1 2 3 N/A</td>
<td></td>
</tr>
<tr>
<td><strong>Thinking Skills:</strong> 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>
<td></td>
</tr>
<tr>
<td><strong>Personal Qualities:</strong> individual responsibility, self-esteem, sociability, self-management and integrity.</td>
<td>1 2 3 N/A</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PERSONAL CHARACTERISTICS</th>
<th>Rating</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Relations with others:</strong> effectiveness in working with students, instructors, and others; cooperation; shows respect.</td>
<td>1 2 3 N/A</td>
<td></td>
</tr>
</tbody>
</table>
**Dependability:** attendance; loyalty; punctuality; adherence to schedules and deadlines; consistency and results; perseverance

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>N/A</th>
</tr>
</thead>
</table>

**Work Attitudes:** willingness to learn; willingness to accept and profit from evaluation; enthusiasm; initiative; commitment; pride in work

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>N/A</th>
</tr>
</thead>
</table>

**Communication:** listening; speaking; and nonverbal skills; effectiveness in communicating with staff and other workers.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>N/A</th>
</tr>
</thead>
</table>

**Personal Hygiene-Grooming:** personal health care and cleanliness, dresses and maintains self appropriately for a business environment.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>N/A</th>
</tr>
</thead>
</table>

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

- **Entry level skills now.**
- **Entry level skills but requires completing additional external learning experience.**
- **Entry level skills but requires completing additional course work.**
- **Entry level skills but requires completing additional course work and additional external learning experience.**

**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>2435-01</th>
<th>2435-02</th>
<th>2435-03</th>
<th>2435-04</th>
<th>EXIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attempts</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Final Score</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# RESOURCE LIST

**ABDR 2435 Structural Analysis and Damage Repair IV**

<table>
<thead>
<tr>
<th>No.</th>
<th></th>
<th>Title</th>
<th>Author(s)</th>
<th>Publisher(s)</th>
<th>ISBN/Link</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.</td>
<td>010</td>
<td>Gaging and Analyzing Collision Damage</td>
<td>Chief Automotive Systems</td>
<td></td>
<td>1978.</td>
</tr>
<tr>
<td>4.</td>
<td>2435-03</td>
<td>“Introduction to Unibody Repair”</td>
<td>Vital Systems Inc.</td>
<td></td>
<td>(Video)</td>
</tr>
<tr>
<td>5.</td>
<td>2435-04</td>
<td>“Unibody: Damage Analysis”</td>
<td>Vital Systems Inc.</td>
<td></td>
<td>(Video)</td>
</tr>
<tr>
<td>7.</td>
<td>2435-06</td>
<td>“Measuring Vehicle Damage”</td>
<td>Delmar Publishers</td>
<td></td>
<td>(Video)</td>
</tr>
<tr>
<td>8.</td>
<td>2435-07</td>
<td>“UMS Training Video”</td>
<td>Chief Automotive Systems</td>
<td></td>
<td>Video)</td>
</tr>
<tr>
<td>9.</td>
<td>2435-08</td>
<td>“The Universal Bench”</td>
<td>Vocational Media Associates</td>
<td></td>
<td>(Video)</td>
</tr>
<tr>
<td>10.</td>
<td>2435-09</td>
<td>“Frame-Unibody Straightening”</td>
<td>Delmar Publishers</td>
<td></td>
<td>(Video)</td>
</tr>
<tr>
<td>11.</td>
<td>2435-10</td>
<td>“Unibody: Damage Correction”</td>
<td>Vital Systems Inc.</td>
<td></td>
<td>(Video)</td>
</tr>
<tr>
<td>12.</td>
<td>2435-11</td>
<td>“EZ Liner Training”</td>
<td>Chief Automotive Systems</td>
<td></td>
<td>(Video)</td>
</tr>
<tr>
<td>13.</td>
<td>2435-12</td>
<td>“Toyota Repair”</td>
<td>Chief Automotive Systems</td>
<td></td>
<td>(Video)</td>
</tr>
<tr>
<td>14.</td>
<td>2435-13</td>
<td>“Oldsmobile Side Hit Repair”</td>
<td>Chief Automotive Systems</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td>2435-14</td>
<td>“Replacing Structural Parts, Corrosion Protection”</td>
<td>Delmar Publishers</td>
<td></td>
<td>(Video)</td>
</tr>
<tr>
<td>16.</td>
<td>2435-15</td>
<td>“Sectioning Front Rails”</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17.</td>
<td>2435-16</td>
<td>“Sectioning A-Pillars”</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18.</td>
<td>2435-17</td>
<td>“Sectioning B-Pillars”</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19.</td>
<td>2435-18</td>
<td>“Sectioning Rocker Panels”</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>