

COURSE SYLLABUS

ABDR 1449 (4:2:4)

Course Title: Automotive Plastic and Sheet Molding Compound Repair

Automotive Collision Repair Program

Industrial Technology Department

Technical Education Division

Levelland Campus

SOUTH PLAINS

COLLEGE Spring 2024

SCANS COMPETENCIES

RESOURCES: Identifies, organizes, plans and allocates resources.

C-1 **TIME**--Selects goal--relevant activities, ranks them, allocates time, and prepares and follows schedules. C-2 **MONEY**-

-Uses or prepares budgets, makes forecasts, keeps records, and makes adjustments to meet objectives C-3 **MATERIALS & FACILITIES**-Acquires, stores, allocates, and uses materials or space efficiently.

C-4 **HUMAN RESOURCES**--Assesses skills and distributes work accordingly, evaluates performances and provides feedback.

INFORMATION--Acquires and Uses Information C-5

Acquires and evaluates information.

C-6 Organizes and maintains information.

C-7 Interprets and communicates information. C-8 Uses

computers to Process information.

INTERPERSONAL--Works With Others

C-9 Participates as members of a team and contributes to group effort.

C-10 Teaches others new skills.

C-11 Serves clients/customers--works to satisfy customer's expectations.

- C-12 Exercises leadership--communicates ideas to justify position, persuades and convinces others, responsibly challenges existing procedures and policies.
 - C-13 Negotiates-Works toward agreements involving exchanges of resources resolves divergent interests.
 - C-14 Works with Diversity-Works well with men and women from diverse backgrounds.
- SYSTEMS--Understands Complex Interrelationships**
- C-15 Understands Systems--Knows how social, organizational, and technological systems work and operates effectively with them
 - C-16 Monitors and Correct Performance-Distinguishes trends, predicts impacts on system operations, diagnoses systems' performance and corrects malfunctions.
 - C-17 Improves or Designs Systems-Suggests modifications to existing systems and develops new or alternative systems to improve performance.
- TECHNOLOGY--Works with a variety of technologies**
- C-18 Selects Technology--Chooses procedures, tools, or equipment including computers and related technologies.
 - C-19 Applies Technology to Task-Understands overall intent and proper procedures for setup and operation of equipment.
 - C-20 Maintains and Troubleshoots Equipment-Prevents, identifies, or solves problems with equipment, including computers and other technologies.

FOUNDATION SKILLS

- BASIC SKILLS--Reads, writes, performs arithmetic and mathematical operations, listens and speaks**
- F-1 Reading--locates, understands, and interprets written information in prose and in documents such as manuals, graphs, and schedules.
 - F-2 Writing-Communicates thoughts, ideas, information and messages in writing, and creates documents such as letters, directions, manuals, reports, graphs, and flow charts.
 - F-3 Arithmetic--Performs basic computations; uses basic numerical concepts such as whole numbers, etc.
 - F-4 Mathematics--Approaches practical problems by choosing appropriately from a variety of mathematical techniques.
 - F-5 Listening--Receives, attends to, interprets, and responds to verbal messages and other cues.
 - F-6 Speaking--Organizes ideas and communicates orally.

- THINKING SKILLS--Thinks creatively, makes decisions, solves problems, visualizes, and knows how to learn and reason** F-7
- Creative Thinking--Generates new ideas.
- F-8 Decision-Making--Specifies goals and constraints, generates alternatives, considers risks, and evaluates and chooses best alternative.
 - F-9 Problem Solving--Recognizes problems and devises and implements plan of action.
 - F-10 Seeing Things in the Mind's Eye--Organizes and processes symbols, pictures, graphs, objects, and other information.
 - F-11 Knowing How to Learn--Uses efficient learning techniques to acquire and apply new knowledge and skills.
 - F-12 Reasoning--Discovers a rule or principle underlying the relationship between two or more objects and applies it when solving a problem.

- PERSONAL QUALITIES--Displays responsibility, self-esteem, sociability, self-management, integrity and honesty** F-13
- Responsibility--Exerts a high level of effort and preservers towards goal attainment.
- F-14 Self-Esteem--Believes in own self-worth and maintains a positive view of self.
 - F-15 Sociability--Demonstrates understanding, friendliness, adaptability, empathy, and politeness in group settings.
 - F-16 Self-Management--Assesses self accurately, sets personal goals, monitors progress, and exhibits self-control. F-17 Integrity/Honesty--Chooses ethical courses of action.

Levelland

COURSE SYLLABUS

COURSE TITLE: ***ABDR 1449: PLASTICS REPAIR***

INSTRUCTOR: ***Jim Wisian***

OFFICE LOCATION & PHONE/e-mail: ***MT OFFICE #2, (806)894-9611 ext. 2289
e-mail: jwisian@southplainscollege.edu***

OFFICE HOURS: ***BY APPOINTMENT***

- I. GENERAL COURSE INFORMATION:
- A. ***1449 Course Description*** A comprehensive course in repair of non-metal composites.
 - B. ***End-of-Course Outcomes:*** Identify and repair various types of automotive plastics using approved product manufacturer's recommendations and use of adhesives.
 - C. ***Course Competencies:*** Upon successful completion of this course, the student will be able to demonstrate knowledge of general shop safety, personal and

equipment safety, including HAZMAT and Right to Know training, his/her ability to identify construction design of unitized and conventional (BOF) vehicles, demonstrate various metal straightening techniques and the use of various types of fillers. Specifically the student will be able to:

1. Identify and explain the difference between the two types of plastics used in automotive production.
2. Identify unknown plastics by means of the trial-and error weld test.
3. Repair minor cuts and cracks in plastic using adhesives.
4. Repair gouges, tears, and punctures in plastic by means of a chemical bonding process..
5. Describe the proper welding repair sequence.
6. Explain the safety precautions used when working with fiberglass.
7. Explain how fiberglass is used in adhesives to reinforce the damaged surface.
8. Make SMC and RRIM repairs.

D. **Academic Integrity:** It is the aim of the faculty of South Plains College to foster a spirit of complete honesty and a high standard of integrity. The attempt of any student to present as his or her own any work which he or she has not honestly performed is regarded by the faculty and administration as a most serious offense and renders the offender liable to serious consequences, possibly suspension.

1. **Cheating:** Dishonesty of any kind of examinations or on written assignments, illegal possession of examinations, the use of unauthorized notes during an examination, obtaining information during an examination from the textbook or from the examination paper of another student, assisting others to cheat, alteration of grade records, illegal entry or unauthorized presence in an office are examples of cheating.
2. **Plagiarism:** Offering the work of another as one's own, without proper acknowledgment, is plagiarism; therefore, any student who fails to give credit for quotations or essentially identical expression of material taken from books, encyclopedias, magazines and other reference works, or from the themes, reports or other writings of a fellow student, is guilty of plagiarism.

E. SCANS and Foundation Skills

Appropriate competencies and foundation skills set forth by the Secretary's Commission on Achieving Necessary Skills (SCANS) have been integrated into the ACR 161-264 Training program. Specifically, they are C1,C3,C5,C6,C7,C8,C9,C11,C14,C15,C16, C18, C19,C20, and F1-F17. References and methods are detailed in the Scans document filed in the office of coordinator of the Automotive Collision Repair Program.

F. Verification of Workplace Competencies

II. SPECIFIC COURSE/INSTRUCTOR REQUIREMENTS

A. TEXTBOOK & OTHER MATERIALS

Textbook: Auto Body Repair Technology 5th edition, James E. Duffy

Notebook: Must contain all required course text including handout material.

Hand tools: see attached/Required Tool List.

Safety Equip: see attached/Required Safety Equipment.

I-CAR DISC: May need to be purchased

B. Attendance Policy

Excessive absences are a serious problem, and as a part of technical training, good attendance habits are necessary. Positive steps will be taken in this program to develop these habits. The employer demands good work habits, and in order for the student to learn good work habits, our attendance policy will require punctual and regular attendance.

Students are expected to attend all classes in order to be successful in a course. The student may be administratively withdrawn from the course when absences become excessive as defined in the course syllabus.

When an unavoidable reason for class absence arises, such as illness, an official trip authorized by the college or an official activity, the instructor may permit the student to make up work missed. It is the student's responsibility to complete work missed within a reasonable period of time as determined by the instructor. Students are officially enrolled in all courses for which they pay tuition and fees at the time of registration. Should a student, for any reason, delay in reporting to a class after official enrollment, absences will be attributed to the student from the first class meeting.

Students who enroll in a course but have "Never Attended" by the official census date, as reported by the faculty member, will be administratively dropped by the Office of Admissions and Records. A student who does not meet the attendance requirements of a class as stated in the course syllabus and does not officially withdraw from that course by the official census date of the semester, may be administratively withdrawn from that course and receive a grade of "X" or "F" as determined by the instructor. Instructors are responsible for clearly stating their administrative drop policy in the course syllabus, and it is the student's responsibility to be aware of that policy.

It is the student's responsibility to verify administrative drops for excessive absences through MySPC using his or her student online account. If it is determined that a student is awarded financial aid for a class or classes in which the student never attended or participated, the financial aid award will be adjusted in accordance with the classes in which the student did attend/participate and the student will owe any balance resulting from the adjustment. **When absences exceeded more than 10% of total class hours and it is determined the student cannot pass the course the student will be asked to withdraw.**

Absence for Military Service

In accordance with Texas Education Code Section 51.9111, a student is excused from attending classes or engaging in other required activities, including exams, if he or she is called to active military service of a reasonably brief duration. The maximum time for which the student may be excused has been defined by the Texas Higher Education Coordinating Board as "no more than 25 percent of the total number of class meetings or the contact hour equivalent (not including the final examination period) for the specific course or courses in which the student is currently enrolled at the beginning of the period of active military service." The student will be allowed a reasonable time after the absence to complete assignments and take exams.

Religious Holy Days

In accordance with Texas Education Code Section 51.911, South Plains College will allow a student who is absent from class for the observance of a religious holy day to take an examination or complete an assignment scheduled for that day within seven (7) calendar days after the absence. Students are required to file a written notification of absence with each instructor within the first fifteen (15) days of the semester in which the absence will occur. Forms for this purpose are available in the Dean of Students Office along with instructions and procedures. "Religious holy days" means a holy day observed by a religion whose place of worship is exempt from property taxation under Texas Tax Code Section 11.20.

Pregnancy

In accordance with Title IX of the Education Amendments of 1972, in the event of pregnancy, termination of pregnancy or recovery from any of these conditions a student's absences shall be excused, as deemed necessary by the student's physician (Title IX.) The student should contact the SPC Title IX coordinator for further assistance.

Unexcused absence make-up policy:

A student will only be allowed to make-up tests and assignments for extenuating problems such as surgery, severe illness, pregnancy, and family emergencies. The student is responsible for providing satisfactory evidence to substantiate the reason for the absence to the instructor. A grade of zero will be given to tests and assignments if the student fails to meet these requirements. A student meeting these requirements will be provided a make-up class, not to exceed 30 days after the absence. A make-up class including tests and assignments will not be given during the courses scheduled class/lab time, but on a specific date and time as scheduled by the instructor. A grade of zero will be given to tests and assignments, if the student does not attend the make-up class. A student attending a make-up class does not constitute an excused absence and the original absence will not be dismissed. Students cannot attend more than three make-up classes

A student is allowed five absences. Students exceeding five absences will automatically be given a failing grade. Four tardies will be equal to 1 absence.

C. Assignment Policy

1. All required work must be turned in on time. Work turned in late will be assessed penalty points of 5pts per day. After second day late assignment will become a zero.
2. There will be no excused late assignments.
3. Chapter assignments will be given by the instructor. Questions at the end of the chapter will be graded on a percent basis.
Videos: Watch Video and Complete Appropriate Worksheets.
Worksheets will be graded on a percent basis.

D. Grading Policy

1. Tests will given by the instructor on all chapter assignments once that unit has been reviewed.
2. Prior notification of quizzes may or may not be given.
3. Final exams will be given to all students covering lectures and instruction for the entire semester.

Classroom (60% of final grade)

- a. Homework, will be 20% of final grade. Test will be 20% of Final grade
 - b. The final exam will be 20% of final grade *Labs will be 60% of final grade*) - Assessed on a basis of:
4. *Final Grade Computation*
 - a. *40% of final grade – classroom*
 - b. *60% of final grade – lab*
 5. Daily/Weekly
 - a. *Minimum grade required to remain in class is 70%. Any student who drops below this level without recognizable effort to improve, will be dropped from all ABDR classes.*
 - b. *A weekly lab grade will be given, which will include safety, attitude and cooperation, attendance, proper use of hand tools and quality of workmanship.*

E. Special Requirements

1. Students must complete Personal & Equipment Safety Test and Right to Know work sheets 100% correctly before participating in lab activities. (4 attempts only)
2. The instructor will appoint a student foreman on a rotation basis.
3. All students will be responsible for the tool lock up and shop clean up.
4. Each student is required to have a locker and keep it clean and organized.
5. There will be a basic set of hand tools and safety equipment required for the course. A suggested tool list will be available to the students.
6. Students must agree to the rules and regulations set forth by the program administrators. Signed copies of the rules and regulations form will be kept on file in the office of the program coordinator. Violations deemed harmful or negligent are grounds for immediate dismissal from the program. By signing, students agree to be dropped from class if violations occur.

III Course Outline A.

- Topics
1. Orientation
 2. Personal and Equipment Safety

B. Types of Plastics

1. Thermoplastics
2. Thermosetting Plastics

- 3. Sheet Molded Compound
- C. Plastic Identification
 - 1. ISO
 - 2. Trial and Error
- D. Repair Methods
 - 1. Chemical Adhesive Bonding
 - 2. Hot Air Welding
 - 3. Airless Welding

IV. Accommodations:

South Plains College strives to accommodate the individual needs of all students in order to enhance their opportunities for success in the context of a comprehensive community college setting. It is the policy of South Plains College to offer all educational and employment opportunities without regard to race, color, national origin, religion, gender, disability or age (SPC Equal Opportunity Policy--General Catalog). Any student who, because of a disability or other special consideration, may require special arrangements in order to meet course requirements should contact the instructor as soon as possible to make necessary accommodations. In addition, students may contact SPC Special Services Office and/or Counseling Center for individualized assistance.

Students can find statements for:

Intellectual Exchange, Disabilities, Non-Discrimination, Title IX Pregnancy Accommodations, CARE (Campus Assessment, Response, and Evaluation) Team, Covid and Campus Concealed Carry at Syllabus Statements (southplainscollege.edu)

phone, and text)