



<b>Course Number:</b>	ACR/COMPOSITES	<b>Course Title:</b>	Collision Repair/Composites
<b>Credit Hours:</b>	3	<b>Clock Hours:</b>	Mon-Fri 11:45-2:05
<b>Instructor:</b>	Gil Russell	<b>Room:</b>	Collision Repair/Composites
<b>Office Hours:</b>	N/A	<b>Voice Mail:</b>	207-342-5231 ext 110
<b>E-mail Address:</b>	grussell@waldotech.org		

**Text:**

**BASIC COMPOSITE STUDY GUIDE/ACMA**  
**VACUUM INFUSION PROCESS STUDY GUIDE/ACMA**  
**COMPOSITE MATERIALS/FABRICATION HANDBOOK #1**  
**author: John Wanberg**  
**COMPOSITE MATERIALS FABRICATION HANDBOOK#2**  
**author: John Wanberg**  
**COMPOSITE BASICS volume 7.**  
**author: Andrew C. Marshall**

**Suggested Supplies:** work boots, old jeans and long sleeve shirt, safety glasses (REQUIRED)

**Pre/Corequisite:** Ability to read, comprehend, and write at a high school level. Lexile Reading at 1000 or higher is recommended due to the technical nature of the Material and Textbooks (9th grade reading level). Understanding of basic chemical concepts and their reaction to each other. Ability to work independently for a two hour block. Ability to follow multi-step directions. Attention to detail and fine motor skills. Good attendance, as new subject material is introduced daily. The ability to work with in groups and provide professional, courteous customer service. Understanding and adherence to standards of professionalism and lab safety. LAB SAFETY is Paramount and a NON-NEGOTIABLE.

### Course Description:

The Composite course offers an introduction to the Composite Industry and the processes used in the different types of the infusion process. The Composite course will be ACMA CERTIFIED by the end of the 2020 school year. The course is taught and graded using the ACMA (AMERICAN COMPOSITE MANUFACTURING ASSOCIATION) standards. Job placement is an option only for students who prove themselves to be a reliable employee, students in job placement have to understand that they represent WCTC as well as the company they work for.

### Course Objectives

This course is designed to:

- Introduce students to composite workplace safety
- Encourage students to explore composite careers in different aspects of the trade
- Develop skills for obtaining employment through portfolio, resume and communication development.
- Provide students with the necessary skills to be a viable asset to any Composites Employer.

## Course Activities

This course will include:

1. Lectures and lab projects to be conducted during meeting times
2. Quizzes covering the concepts and information derived from current sections of course material
3. Lab design projects involving teams or individuals.
4. Participation in a live work.

## Unit Topical Outline

1. SHOP SAFETY:  
through the use of standardized modules used each year by the instructor to ensure student safety out in the lab area  
example:
  - A. Basic hand tool safety
  - B. Hazardous waste safety
  - C. Proper PPE
  - D. Fire Extinguisher use.
2. SP2 Certification
3. Students MUST earn their 10 hr OSHA card in order to pass the quarter in which it is offered.
4. Wet Lay up process  
.Basic Composite Study Guide
5. Wet Lay up through vacuum bagging.  
. Basic Composite Study Guide  
. Vacuum Infusion Process Study Guide.
6. Materials used in the Composite Process.  
.Composite Materials#1  
.Basic Composites Study Guide  
.Vacuum Infusion Process Study Guide  
.Composite Materials Handbook #2
7. Students must demonstrate to the instructor the ability to perform each of the above mentioned processes.  
Students are required to do both the vacuum infusion process as well as a wet lay up and a wet lay up through the use of bagging.

## Evaluation Basis:

a. LAB	50%
b. Attendance	20%
c. Classroom	30%

## Policies on Course Grading:

- Exams will be delivered in the classroom by the instructor.
- Students have 10 days to make up any work missed, ONLY after it is determined to be an excused absence.
- **Failure to do so will result in a zero for the grade.**
- All LAB work missed will be up to the student to learn as processes will NOT be repeated.

## Lab Grading and Policy:

The grading is done/ and credit earned in a quarter by quarter basis, any or all failed quarters will result in 1 lost credit  
Students required to take Math MUST pass the Math portion of the course as well as the Composite side in order to earn full credit.

## WCTC Grading Scale:

Letter	Grade Point	Scale
A+		98-100
A		95 – 97.9
A-		93 – 94.9
B+		90 – 92.9
B		87 – 89.9
B-		85 – 86.9
C+		82 – 84.9
C		79 – 81.9
C-		77 – 78.9
D+		75 – 76.9
D		72 – 74.9
D-		70 – 71.9
F		Below 70

## Attendance Policy:

WCTC believes that regular and prompt attendance at each class session is extremely important. It is also the School's belief that excessive absenteeism and/or lateness reflect negatively upon student reliability and the School's ability to provide quality references to potential employers.

If the total number of legitimate absences is extensive, it may be impossible for the student to meet the objectives of the course. In such instances the instructor may assign a grade of Incomplete (I).

### Lab Behavior:

Compositess is a course that requires the attention of students without distractions from others. You will not use personal electronic devices in the classroom in a manner that disrupts the instructor or other students! Examples include cell phones, radios, computer entertainment, or media devices. You will be asked to stop using these devices if in the judgment of the instructor your use of these devices is inappropriate.