Virginia Western Community College
MTS 130
Motorsports Structural Technology I

Prerequisites
MTS 125 and WEL 130

Course Description
Introduces the student to the basic design and fabrication of a racecar. Develops skills for use of the tools, equipment, and materials in the production of a racecar. Emphasizes safety, accuracy, and aesthetics of the racecar and the work environment.

Semester Credits: 3 Lecture Hours: 2 Lab/Clinical/Internship Hours: 2

Required Materials

Textbook:
None

Other Required Materials:
None

Course Outcomes

At the completion of this course, the student should be able to:

- Students will examine technical and production skills required of workers within an industry/organization
- Students will demonstrate how to safely use and handle hand and power tools needed in the Motorsports Industry including: horizontal saw, band saw, cold-cut saw, bead roller, tubing bender, English wheel, sheet metal break, hydraulic shear.
- Students will demonstrate the use of automotive machine shop equipment
- Students will become familiar with how to: Prepare surface for prime; Prime body, parts, and chassis; Apply body filler; Fabricate fiberglass panels
- Students will be familiar with how to: Demonstrate assembly of high-performance engine; assemble coolant equipment, fuel systems, electrical systems, drive-line components, hydraulic systems, suspension components, steering components and braking systems for a race car.

Topical Description

1. Workplace Readiness Skills
   - Personal Qualities and People Skills
   - Professional Knowledge and Skills
   - Technology Knowledge and Skills

2. Examining All Aspects of an Industry

3. Applying Safety Practices

4. Using Tools

5. Demonstrating Manual Oxyfuel Gas Cutting (OFC)

6. Demonstrating Vehicle Setup

7. Assembling the Vehicle

8. Ensuring Motorsports Safety

9. Performing Autobody Procedures

10. Identifying and Assembling High-Performance Engines

11. Identifying and Assembling High-Performance Parts

Notes to Instructors

- None