

## Math Essentials 12 (formerly Math for the Workplace 12) Curriculum Outcomes

### **Module 1**

- demonstrate an understanding of the meaning and uses of accuracy and precision
- use a measuring tape to measure tactile items in both imperial and SI units
- identify the difference between length, area, and volume
- demonstrate an understanding of the meaning and uses of significant figures
- demonstrate an understanding of, and be able to solve problems using dimensional analysis
- identify, use, and convert among and between SI units and Imperial units to measure and solve measurement problems
- estimate distances by using a personal benchmark such as walking pace
- demonstrate an understanding of, and be able to solve problems using the Pythagorean Theorem

### **Module 2**

- investigate a range of career opportunities to determine the best personal fit for their interests within the trades
- demonstrate to others what type of mathematical knowledge is required to be successful at various career choices
- demonstrate entry level competence in the mathematics associated with the specific career choice the student has made

- sketch and construct a model which will enable a student to show others some mathematics involved in a career interest

### **Module 3**

- calculate the dimensions of actual objects using blueprints with various scales
- sketch and build representations of three-dimensional objects using a variety of materials and information about the objects
- illustrate, explain, and express ratios, fractions, decimals, and percents in alternative forms
- find and calculate rates in practical applications such as pulse rate
- estimate and calculate deductions taken from a pay stub as percent of gross earnings
- sketch enlargements and reductions of objects using various scales
- use the slope formula to solve trigonometric problems commonly found in industry

### **Module 4**

- demonstrate to others what type of mathematical knowledge is required to be successful at their career choice
- demonstrate competence in the mathematics associated with the specific career choice the student has made
- prepare a detailed blueprint for, and construct a model which will enable a student to show others some mathematics involved in a specific career interest