

Moraine Valley Community College
Exploring Careers in Manufacturing Program

Instructor: _____ Phone: _____
Hours: By appointment
Course: Monday – Thursday, 9AM -12PM, July 7 – July 31, 2014

Textbook

Text: **Lassiter, Karen**, Math Skills for the Workforce: Measurement, Geometry and Algebra (ISBN): 0817263780 , Steck-Vaughn Publishing Company.

Description

This program will cover math skills needed for manufacturing. Students will learn how to measure using calipers, micrometers, protractors and compasses. Job readiness will include creating/updating student resumes and the Four Cs of 21st Century Essential Skills. The Four Cs are Communication, Collaboration, Critical Thinking and Creativity. Students will use journals to improve study skills and note-taking abilities through classroom exercises and individual/group projects.

Field trips will include visits to MVCC Manufacturing classes and touring work sites. Guest speakers will include MVCC faculty and employers.

Exploring Careers in Manufacturing Strategies and Rationale

Careers in Manufacturing will provide career exploration to high school youth. This program will provide exposure to viable career options not previously considered. If participants choose to pursue a career in Manufacturing, they may be eligible for scholarship funds that can pay for WIA-approved training programs.

The goal of the Walmart Brighter Futures 2.0 grant is to move low-income, low-skilled participants into middle-skill occupations. There are positions within Manufacturing that require additional training beyond high school but not a 4-year degree. The demand for these higher-paying, middle-skill occupations continues to rise because these are local, hands-on jobs unlikely to be outsourced.

Program Goals

The primary goal of this program is to assist participants in understanding the major skills needed in manufacturing. The program objectives are:

1. To introduce students to the expectations of manufacturing coursework
2. To review and build the basic skills necessary to enter a manufacturing course competitively
3. To develop advanced study skills
4. To explore career opportunities in the manufacturing fields

Expected Outcomes

Students will be expected to demonstrate their familiarity with and understanding of the vocational math used in manufacturing, demonstrate applied study strategies and group problem solving, provide understanding and familiarity of Four Cs of 21st Century Essential Skills and draft/update a resume.

This familiarity will be evidenced by student performance using the tools cited below.

Tools

A wide variety of approaches will be employed to meet the above goals. These include, but are not limited to:

- Journal Entries
- Lectures, discussions, and guest speakers
- Written assignments
- Module Reviews
- Student Portfolio
- Final Project

Program Structure

Sessions. There will be sixteen (16) face-to-face meetings on the following dates (all students are expected to attend all sessions):

- July 7 – July 31, 2014
- Monday – Thursday from 9AM -12PM
- Classroom tours of Welding, Automotive Technology, Heating & Air Conditioning, Non-destructive Testing

Field trips:

AEP Industries (Alsip, IL) manufactures over 15,000 types of multi-purpose and flexible packaging films.
Tuesday, July 8, 2014

Magnet-Schulz of America (Westmont, IL) is the world's largest independent Solenoid manufacturer and maker of electromechanical products.
Tuesday, July 15, 2014

Tunnel and Reservoir Plan (TARP) Pumping Station (Hodgkins, IL) is operated by the Metropolitan Water Reclamation District of Greater Chicago. It is one of the country's largest public works projects for pollution and flood control.
Tuesday, July 29, 2014

Student Portfolio

The student portfolio will contain the following:

- Samples of applied study strategies (i.e., Concept Cards, Cornell Notes, Graphic Organizers, etc.) – 20%
- Group Application Problem (from an applied problem from HVAC, Automotive, Welding) – 40%
- Journal Entries – 40%

Final Project

The Final Project will be a Career/Academic Analysis that will include:

- Career Inventory Results and Reflection Potential Course Study/Timeline (given current assessments) for a Chosen Career
- Educational Finance Plan
- Market Analysis

Points for Participation

<u>Category</u>	<u>Point Value</u>
Syllabus Review	2
Four Cs	4
Resume Creation/Revision	3
Written Assignments	7
Class Participation	15
Module Reviews	9
Portfolio	15
Final Project	15
Attendance	<u>30</u>
Total	100

NOTE: Full participation and completion of all program activities is required to receive the full student stipend. Stipend pay will be awarded as follows:

Full stipend: 75- 100 points

Half stipend: 50- 74 points

No stipend: 0 – 49 points

How to Excel in this Program

Managing your time. This program, by design, covers a large range of material in a comparatively short period of time. Its structure presumes that the student is at least keeping up with the assigned reading and activities for each week as scheduled, if not working ahead.

Instructor Availability. Please contact me directly if you have any questions about any assignment or your performance.

I am available by phone or e-mail for any questions that you have about the program, careers, and any other academic/professional concerns that you may wish to discuss.

A tentative schedule of individual class activities can be found below. Modification of class session content may be made as the course progresses.

Course Schedule

Monday, July 7	Tuesday, July 8	Wednesday, July 9	Thursday, July 10
9:00 - 9:30AM Room T910 Welcome	9:15 – 9:30AM TABE Pre-Test(Part1)	9:00 – 9:30AM TABE Pre-Test(Part2)	Classroom Activities
9:30 – 10AM T812 Welding Classroom Tour	<i>Depart MVCC at 9:45AM</i> 10:30 – 11:30AM AEP Industries Site Tour	Classroom Activities	Classroom Activities
10:00 -11AM Classroom Activities		Classroom Activities	Classroom Activities
11:00 - noon <i>Study Skills</i>	<i>Return to MVCC at 12PM</i>	Classroom Activities	Classroom Activities

Monday, July 14	Tuesday, July 15	Wednesday, July 16	Thursday, July 17
9:00-10AM <i>Job Readiness Skills</i>	<i>Depart MVCC at 9:20AM</i>	Classroom Activities	Classroom Activities
10:00 – 10:30AM Classroom Activities	10:00 – 11AM Magnet-Schultz of America Site Tour	10-11AM Community Education Specialist, Metropolitan Water Reclamation District	10 – 10:30AM NDT Classroom Tour
10:30 -11AM T-600 Auto Classroom Tour	<i>Return to MVCC at 11:30AM</i>	Classroom Activities	Classroom Activities
	Classroom Activities		
Classroom Activities		Classroom Activities	

Monday, July 21	Tuesday, July 22	Wednesday, July 23	Thursday, July 24
Classroom Activities (All day)	Classroom Activities (All day)	Classroom Activities (All day)	Classroom Activities (All day)

Monday, July 28	Tuesday, July 29	Wednesday, July 30	Thursday, July 31
9:00-9:30AM <i>Job Readiness Skills</i>	<i>Depart MVCC at 9:20AM</i> 10:00 – 11:15AM Tunnel and Reservoir Plan (TARP) Pumping Station Site Tour <i>Return to MVCC at 12PM</i>	Classroom Activities (All day)	9:00 – 10AM TABE Post-Test (Part 1&2)
9:30 -10AM HAC Classroom Tour			10:00 – 11:30AM Final Project Presentations
Classroom Activities			11:30 –noon Reflections & Student Feedback
Classroom Activities			