Sinclair Community College
444 E. Third St.
Dayton, OH 45402

Master Syllabus

OPT 2216 - Facilities Planning

Division: Science, Mathematics and Engineering

Department: Operations Technology

Credit Hour Total: 3.0 **Lecture Hrs:** 2.0 **Lab Hrs:** 2.0

Prerequisite(s): OPT 2205

Date Revised: October 2012

Course Description:

Students will gain a basic understanding of facility planning, layout strategies and material handling techniques within a safe working environment. Two classroom, two lab hours per week.

General Education Outcomes:

- Oral Communication
- Written Communication
- Critical Thinking/Problem Solving
- Values/Citizenship/Community
- Computer Literacy
- Information Literacy

Course Outcomes:

Plant layout & material handling
Describe the relationships between plant layout and material handling.

Assessment Method: Locally developed exams
Performance Criteria: Correctly answer 70% of exam questions

Assessment Method: Portfolios
Performance Criteria: Grade of 70% or better on portfolio

Plant layout & material handling design
Perform basic plant layout & material handling analysis and planning techniques and apply knowledge to a plant design project.

Assessment Method: Locally developed exams
Performance Criteria: Correctly answer 70% of exam questions

Assessment Method: Performance appraisals
Performance Criteria: Grade of 70% or better on portfolio

Plant site selection factors
Describe factors that effect plant site selection.

Assessment Method: Locally developed exams
Performance Criteria: Correctly answer 70% of exam questions

Assessment Method: Portfolios
Performance Criteria: Grade of 70% or better on portfolio

Outline:

Introduction to Plant Layout & Material Handling.
Plant site selection.
The plant layout problem.
Plant layout procedures (in general).
Types of layouts.
Group technology.
PERT (Program Evaluation and Review Technique)
Activity relationships.
Process and flow pattern planning.
Flow pattern-planning techniques.
Emerging technologies and PL & MH CAD/CAM, robotics, integrated manufacturing, etc.
Introduction to material handling.
Material handling equipment.
Material handling systems planning and costs.
Robotics and material handling.
Shipping and receiving.
Plant services.
Work area planning.
Quantitative techniques in PL & MH.
Selling your plan.
Maintaining the facility.