**WILLIAM RAINEY HARPER COLLEGE CAREER AND TECHNICAL PROGRAMS DIVISION**

**GENERAL COURSE OUTLINE**

Department Coordinator: Kurt J. Billsten Phone: 847-925-6149 Email: Kbillste@harpercollege.edu

|  |  |  |  |
| --- | --- | --- | --- |
| Course Prefix | Course Number | Course Title | *Contact Hours* |
| MFT | 108 | MANUFACTURING PROCESSES | 1. *2. Lecture!Demonstratior,*2. *2. Lab/Studio*3. 3 *Credit Hours* |

**Course Description**

Prerequisite: MFT 102 with a grade of C or better.

Provides the basics of how manufacturing transforms materials into products. Students will learn about the varying types of production and will learn about the materials that are used in production and the types of processes used in manufacturing including machining, casting and assembly.

**Topical Outline**

1. Creating Products
2. Type of Production Ill. Production Materials
3. Casting, Molding, and Forming
4. Machining
5. Conditioning, Finishing, and Assembly
6. Separating, Combining, and Filling
7. Production planning and work flow
8. Packaging and distributing products

**Method of Presentation**

1. Lecture
2. Other: Demonstration, Problem solving and discussion

**Student Outcomes (The student should)**

1. describe the major stages involved in producing products.
2. identify factors that influence which production processes and technology are used to produce a product.
3. describe the sources and properties of materials.
4. explain how finishes are used to improve the look and performance of materials.
5. understand casting, molding, and forming.
6. describe conventional and advanced machining processes.
7. explain how parts are assembled.
8. describe how separating, combining, and filling are used in production.
9. identify the key elements of production planning.
10. explain the concept of workflow.

**Method of Evaluation**

* 1. *Typical classroom assessment techniques*

\_Projects

\_Class participation

\_Objective tests

\_Studio/Lab performance

\_Final exam

\_Portfolios

\_Essays/Term papers

\_Oral examination

\_Research report

B. *Course content learning outcomes*

\_lLQuizzes

\_Group participation

\_Case study assignments

\_Homework

\_Midterm Exam

\_lLExams

1. *Additional assessment information (optional).*

Student presentations

**Textbook**

* 1. *Required*

o Manufacturing Skill Standards Council. High-Performance Manufacturing. MSSC, 2006

o *Supplementary materials*

***None***

o *Software*

***None***

Prepared by: Darlene Niebuhr Fall 2013

CID: 3901

Language on the syllabi course materials developed by INAM funds:

From the grant agreement’s Part IV  Special Conditions, Item 15, Intellectual Property Rights, the following needs to be on all products developed in whole or in part with grant funds:

“This workforce solution was funded by a grant awarded by the U.S. Department of Labor’s Employment and Training Administration. The solution was created by the grantee and does not necessarily reflect the official position of the U.S. Department of Labor. The Department of Labor makes no guarantees, warranties, or assurances of any kind, express or implied, with respect to such information, including any information on linked sites and including, but not limited to, accuracy of the information or its completeness, timelines, usefulness, adequacy, continued availability, or ownership. This solution is copyrighted by the institution that created it. Internal use, by an organization and/or personal use by an individual for  non-commercial purposes, is permissible. All other uses require the prior authorization of the copyright holder.”