BLUEPRINT READING FOR MANUFACTURING
IMT 104  Section: 001

Credit Hours:  3.00   Lab Hours:  0.00   Lecture Hours:  3.00
Semester: Spring   Course Begins: 3/14/2013   Course Ends: 5/8/2013
Days: Thursday   Times: 5:30 PM to 9:20 PM   Room: E-105
Instructor: Peter Barroso
E-mail: bareng@mc.net
Phone: 815-675-2702
Office Hours: N/A
Office Location: N/A
Other Contact Information: Cell Phone 708-702-1323

Required Course:
Supplies : Calculator; Machinist 6-inch Rule; Paper, Pencil & Eraser.

Course Description:
Blueprint Reading for Manufacturing teaches students how to read shop blueprints and study the information needed to fabricate parts and perform assembly operations.

Section Notes:
[Insert if applicable]

Course Objectives:
Cognitive:
1. Explain the physical characteristics of an object after having seen the blueprint.
2. List the important relationships between a blueprint and the manufacturing process.
3. Calculate various specifications from a blueprint.
Affective:
1. Appreciate the importance of the various types of prints.
2. Understand the importance of accuracy in blueprint interpreting.
Manipulative:
1. Handle and physically maintain paper documents.

Course Outline:
I. Types and Origins of Prints
   A. Hand drawn
   B. Copy methods
   C. Document storage
II. Object Representation
   A. Plan views
   B. 1st or 3rd angle projection
C. Standards and conventions

III. Related Mathematics
   A. Measurement formats
   B. Calculations

IV. Geometric Dimensions and Tolerances
   A. Shape description
   B. Standard dimensions
   C. Determining tolerances

V. Sectional Views
   A. Common sections
   B. Sectioning conventions
   C. Placing sections on the print

VI. Auxiliary Views
   A. The necessity of auxiliary views
   B. Layout methods
   C. Placement of views

VII. Detail and Assembly Prints
   A. Level of detail
   B. User, Customer
   C. Bill of materials (BOM)

VIII. Machined Features
   A. Specification notes
   B. Standard practices
   C. Notes and call-outs

IX. Threaded Fasteners
   A. Standard fasteners
   B. Custom fasteners
   C. Associated objects

X. Numeric Control Documents
   A. G and M codes
   B. Ordinate dimensions

XI. Cams and Gears
   A. Gear nomenclature and design
   B. Cam nomenclature and design

XII. Specialized Prints
   A. International standards
   B. U.S. government
### Weekly Course Schedule

<table>
<thead>
<tr>
<th>Date of Class</th>
<th>Chapters</th>
<th>Course Schedule</th>
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</thead>
<tbody>
<tr>
<td>3/14</td>
<td>1,2,3</td>
<td>Syllabus, Introduction, Basics, Reading, Lines and Views of Manufacturing Prints</td>
</tr>
<tr>
<td>3/21</td>
<td>4 - Handout</td>
<td>The Total Manufacturing Print, Math Review, Fractions, Decimals, Metric</td>
</tr>
<tr>
<td>4/4</td>
<td>5</td>
<td>Dimensions, Hands on measurements of parts</td>
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<td>4/11</td>
<td>6 &amp; 7</td>
<td>Tolerances &amp; Surface Texture, Mid-Term Exam</td>
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<tr>
<td>4/18</td>
<td>8 &amp; 9</td>
<td>Threads &amp; Fasteners</td>
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<tr>
<td>4/25</td>
<td>10, 11 &amp; 12</td>
<td>Gears, Machine Terms &amp; Holes, Machining Requirements</td>
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<tr>
<td>5/2</td>
<td>13</td>
<td>Geometric Dimensions and Tolerances</td>
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<tr>
<td>5/9</td>
<td>14</td>
<td>Types of Blueprints &amp; Computer-Aided Design</td>
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<tr>
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<td></td>
<td>Final Exam</td>
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</tbody>
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**Please Note:** This is an accelerated course schedule and requires an additional eight hours of out of class participation over the eight week period and will be accomplished by attendance at a plant tour and/or a research project.

The instructor reserves the right to change the content of the class to maintain a positive educational environment.

**Withdrawals:** The last day to drop this course is **4/5/2013**. Failure to attend class does not constitute official withdrawal. If students are considering a withdrawal, they should consult directly with the instructor and an academic advisor. Students may withdraw from a class through the Registration Office, either in person or by fax: (815) 455-3766. In their request, students should include their name, student ID number, course prefix, number and section, course title, instructor, reason for withdrawing, and their signature. Withdrawal from a course will not be accepted over the telephone.

Please refer to the following link for other important college dates: [www.mchenry.edu/academiccalendar.asp](http://www.mchenry.edu/academiccalendar.asp)

**Special Needs Statement**
McHenry County College offers support services for students with special needs. It is your responsibility to meet with the Special Needs Coordinator and provide current documentation regarding a disability. Please call or stop by the Special Needs Department, (815) 455-8676, Room A260, as soon as possible if you would like more information about the accommodations that are available. In addition, it is important for you to discuss those accommodations with your instructor so you are fully able to participate in this course.

**Academic Integrity**
As an educational community, McHenry County College values the pursuit of academic excellence and integrity. In accordance with this philosophy and Chapter 10, Act 5 of the 1994 Illinois Community College Act, academic dishonesty in any form, including cheating, plagiarism, and all other acts of academic theft, is considered intolerable. Appropriate sanctions, up to and including suspension from the College will be imposed by authorized College personnel.

**Copyright Policy**
MCC will maintain current procedures and guidelines to ensure that all staff and students comply with applicable copyright laws and other intellectual property protection laws. The College will encourage staff and students to engage in the development of intellectual property and facilitate ownership protections with respect to such development of intellectual property.

The College expects that staff and students will act responsibly and ethically in a manner consistent with all copyright laws and College copyright procedures and guidelines. This policy authorizes the College to adopt and maintain such procedures and guidelines necessary to ensure compliance with copyright laws and to facilitate ownership protection with respect to the development of intellectual property.

**Student Code of Conduct and the Judicial Process**
Consistent with the MCC mission is an expectation that students will govern themselves in terms of appropriate behavior with emphasis on self-respect and respect for others. It is the practice of the College to respect the properly exercised rights of its students. The College recognizes a student’s rights within the institution to freedom of speech, inquiry and assembly; to the peaceful pursuit of education; and to the reasonable use of services and facilities at MCC.

MCC has adopted a Student Code of Conduct and judicial process to maintain a learning environment of respect, civility, safety, and integrity for all members of the MCC community.

Whenever possible, sanctions for violations of the Student Code of Conduct may be educational in nature. However, violations affecting the health and safety of members of the MCC community are deemed to be the most serious. Therefore, acts of violence, threats or dangerous behavior are most likely to result in a suspension from the College. Violations of the academic dishonesty policy may also result in suspension or expulsion from the institution and/or reduced or failing grade.

**Children on Campus**
For the safety of children on campus, children (i.e., less than 16 years of age) are not permitted on campus unattended by a parent/guardian, except when they are attending classes offered by MCC for children. The College requires that no children be allowed into a classroom/laboratory environment, including the Testing Center, Learning Center and computer labs, solely for the purpose of a parent/guardian to provide direct supervision of his/her child.

**Teaching Schedule**
The scheduling of the activities and teaching strategies on this syllabus, but not the objectives or content, may be altered at any time at the discretion of the instructor.

**Resources**
The following are useful resources available to you as a student at McHenry County College:

**Advising and Transfer Center:**
Phone (815) 479-7565; Office A257
www.mchenry.edu/ATC/Index.asp

**Counseling:**
Phone (815) 455-8765; Office A257
www.mchenry.edu/counseling

**Financial Aid:**
Phone (815) 455-8761; Office A262
www.mchenry.edu/financialaid

**Library:**
Phone (815) 455-8533; Office A212
www.mchenry.edu/library

**Special Needs:**
Phone (815) 455-8676; Office A260
www.mchenry.edu/specialneeds

**Tutoring and Study Skills (Sage Learning Center):**
Phone (815) 455-8579; Office A247
www.mchenry.edu/sage