COURSE NUMBER & NAME:  MCHT 1680-01 BLUEPRINT READING

SEMESTER/YEAR:  Fall 2006

LECTURE HOURS:  2  LABORATORY HOURS:  0  CREDITS:  2

CLASS TIME:  1:00 – 1:50 p.m.   TTH  ROOM: WT 143

INSTRUCTOR'S NAME:  James Quigley
OFFICE:  WT 134  PHONE:  268-2508  EMAIL:  jquigley@caspercollege.edu

OFFICE HOURS:  As Posted

COURSE DESCRIPTION:  Introduces the student to the fundamentals of blueprint reading and freehand sketching as it applies to the machine shop.

STATEMENT OF PREREQUISITES:  None

GOAL:  The student will obtain knowledge as how to read a print through identification of drawing scale, types and meaning of lines, and how to visualize information given on a drawing into a final product. Related information is given on determining a bill of materials, and sketching techniques and tools.

OUTCOMES:  At the conclusion of this course, the student will have been introduced to the various symbols, lines and notations used in print reading for the machine trade.

METHODOLOGY:  Two hours of lecture each week. There will be written tests and a final exam plus the requirements of drawing and homework.

EVALUATION CRITERIA:  Points will be totaled for all course work and the final grade will be determined by a percentage of total points as follows:

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<thead>
<tr>
<th>Percentage Range</th>
<th>Grade</th>
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<tbody>
<tr>
<td>90% - above</td>
<td>A</td>
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<tr>
<td>89% - 80%</td>
<td>B</td>
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<td>79% - 70%</td>
<td>C</td>
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<tr>
<td>69% - 69%</td>
<td>D</td>
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<tr>
<td>59% - below</td>
<td>F</td>
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REQUIRED TEXT, READING, MATERIALS:  
- Interpreting Engineering Drawings, Jensen

REFERENCES:  
- Machine Shop Practice, Moltrecht, Industrial Press
- Machinery’s Handbook, Industrial Press

CLASS POLICIES:  Last Date to Change to Audit Status or to withdraw with a W Grade: Please refer to current Casper College catalog.

STUDENT RIGHTS AND RESPONSIBILITIES:  Please refer to the Casper College Student Conduct and Judicial Code for information concerning your rights and responsibilities as a Casper College Student.
Chain of Command: If you have any problems with this class, you should first contact the instructor in order to solve the problem. If you are not satisfied with the solution offered by the instructor, you should then take your problem through the appropriate chain of command starting with the department head, then the division chair, and lastly the vice president for academic affairs.

Academic Dishonesty - Cheating & Plagiarism: Casper College demands intellectual honesty. Proven plagiarism or any form of dishonesty associated with the academic process can result in the offender failing the course in which the offense was committed or expulsion from school. See the Casper College Student Code of Conduct.

ADA Accommodations Policy: It is the policy of Casper College to provide appropriate accommodations to any student with a documented disability. If you have a need for accommodation in this course, please make an appointment to see me at your earliest convenience.

**TOPIC OUTLINE**

1. Introduction to blueprints
   - Parts of a blueprint
2. Visualization of 3 view drawings
3. Understanding the various views
4. Reading the working drawing
   - Types of lines
   - Dimensions
   - Notes and symbols
5. Understanding supplementary information
   - Scaling
   - Dimensions
   - Holes, fillets, and radii
   - Fastener specifications
   - Title block and bill of materials
   - Alterations and revisions
6. Using special views and assembly drawings
   - Section views
   - Auxiliary views
   - Assembly drawings
   - Gears
7. Understanding materials and processes
   - Basic materials
   - Selection of materials
   - Materials on the blueprint
   - Methods of fabrication
8. Testing on actual production blueprints
9. Reading of industrial blueprints
   - Die castings
   - Aluminum forgings
   - Weldments
   - Plastics
   - Numerical control
   - Metric dimensioning
10. Geometric dimensioning and tolerancing