I. **Course Title**
   - Computer Aided Drafting

II. **Course Prefix/Number**
   - PHYS 210

III. **Credit Hours**
   - 3.0

IV. **Prerequisites**
   - None

V. **Catalog Description**
   - This course examines the drafting/design field of mechanically oriented objects. Topics include multi-view drawings, sectioning, auxiliary views, exploded assemblies, working drawings, isometric drawings, oblique drawings, and illustration techniques, and each will be presented within the framework of computer aided drafting and design. No drafting experience is required or assumed. Some freehand drawing and sketching may be covered. This course may require additional laboratory time outside of class.

VI. **Curricular Relationships**
   - The course is designed to be an introduction to mechanical drafting as well as an introduction to computer aided drafting. Students throughout the engineering disciplines are generally required to have at least one semester of formal drafting, this course is intended to fulfill the minimum requirement. With the increasing sophistication of computers and software, the ability to efficiently create technically accurate drawings using computers now overshadows the need for formal pencil and paper construction techniques. Given these constraints, heavy emphasis is placed on the construction of technical drawings using CAD software.

VII. **Student Learning Outcomes**
   - Students will be able to read and comprehend technical engineering drawings.
   - Students will be able to construct multi-view drawings from pictorial drawings, and vice versa using CAD software.

VIII. **Content Outline**
   - Engineering geometry.
   - Multiview drawings.
• Pictorial representation.
• Auxiliary views.
• Sectional views.
• Exploded assemblies.

IX. **Course Procedures/Policies/Grading Scale**
• Homework is assigned and graded on a regular basis.
• A minimum of two examinations will be given during the course of the semester.

X. **Required/Recommended Readings**
• The course will use a standard textbook in drafting or computer aided drafting such as *Fundamentals of Engineering Drawing*, Luzadder and Duff.

XI. **Issues Unique to this Course**
• The nature of this class is aligned more similarly with the laboratory, rather than lecture, format and therefore the class meets 4-hours per week rather than 3. This course may require additional laboratory time outside of class.

XII. **Additional Departmental Issues**
• None