A. COURSE DESCRIPTION

Credits: 3
Lecture Hours/Week: 3
Lab Hours/Week: *.*
OJT Hours/Week: *.*

Prerequisites:
This course requires either of these prerequisite categories
1. All of these four
   GTRB 1440 - Acoustic Guitar Construction Lecture
   GTRB 1445 - Acoustic Guitar Construction Lab
   GTRB 1450 - Introduction to Finishing
   GTRB 1455 - Guitar Repairs
   Or
2. A score of 45 on test Accuplacer Elementary Algebra

Corequisites: GTRB 2425
MnTC Goals: None

This course introduces Rhino 4.0 design software where students will design the outline for their instrument body, headstock, bridge and other design elements. Necessary drawings for templates and molds will also be created for use in GTRB 2420 using Rhino drafting software. (Prerequisites: GTRB 1440, GTRB 1445, GTRB 1450; Concurrent enrollment in GTRB 2420) (3 credits: 3 lecture/0 lab)

B. COURSE EFFECTIVE DATES: 06/16/2009 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Learn Rhinoceros Drafting software
2. Use Rhino to design guitars
3. Rhino drawings will be used to operate CNC for CNC for guitar class
D. LEARNING OUTCOMES (General)
   1. Demonstrate professional conduct
   2. Demonstrate focused work ethic
   3. Demonstrate reliability
   4. Utilize the features of the rhino interface
   5. Create basic graphic objects
   6. Model using coordinate input and object snaps
   7. Modify curves and surfaces using edit commands
   8. Use control point editing to modify curves and surfaces
   9. Create guitar outline using two or more methods
  10. Design guitar blueprint in 2D and 3D
  11. Design molds (bending, outside, cauls)
  12. Design routing templates
  13. Design 3D guitar bridge
  14. Design 3D guitar neck
  15. Design other 3D parts

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies
   None

F. LEARNER OUTCOMES ASSESSMENT
   As noted on course syllabus

G. SPECIAL INFORMATION
   None noted