GTRB 2420: CNC for Guitar

A. COURSE DESCRIPTION

Credits: 3
Lecture Hours/Week: 1
Lab Hours/Week: 4
OJT Hours/Week: *.*

Prerequisites:
This course requires any of these four prerequisites
- Pre-Math Level 3
- Math Level 2
- Math Level 1
- Algebra College Level

Corequisites: GTRB 2415 and GTRB 2415

MnTC Goals: None

This course will focus on the use of a three-axis CNC router and Desk CNC CAM/controller software to aid in the creations of the 2d and 3d models created in GTRB2415. (Prerequisites: Concurrent enrollment in GTRB2415) (3 credits: 1 lecture/2 lab)

B. COURSE EFFECTIVE DATES: 06/19/2009 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Learn the basics of CNC operation
2. Apply CNC knowledge to create molds and templates for use in guitar-making

D. LEARNING OUTCOMES (General)

1. Demonstrate professional conduct
2. Demonstrate focused work ethic
3. Demonstrate reliability
4. Identify the components of a CNC machine
5. Examine how a CNC machine functions
6. Examine the use of G-code
7. Examine the functions of Desk CNC
8. Utilize the features of Desk CNC to create toolpaths for routing
9. Create molds for bending
10. Create outside molds and cauls
11. Create templates for manual routing (headstock, bridge, etc.)
12. Create bracing templates
13. Create side templates
14. Slotted fingerboard
15. Create 3D part (bridge, fingerboard, etc.)

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

None
F. LEARNER OUTCOMES ASSESSMENT
   As noted on course syllabus

G. SPECIAL INFORMATION
   None noted