

Minnesota State College Southeast

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 either of these prerequisite categories

1. All of these three

GTRB 1440 - Acoustic Guitar Construction Lecture

GTRB 1445 - Acoustic Guitar Construction Lab

GTRB 1450 - Introduction to Finishing

Or

2. A score of 45 on test Accuplacer Elementary Algebra

Corequisites: GTRB 2425

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: GTRB 1440, GTRB 1445, GTRB 1450; Concurrent enrollment in GTRB 2415) (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