KENNESAW STATE UNIVERSITY
COLLEGE OF ARCHITECTURE AND CONSTRUCTION MANAGEMENT

CNC Guide and FAQ's

The CNC router is mainly used for jobs that require high precision or have a high level of repeatability, for example topographical models or cutting out the same object multiple times. These jobs are usually items that are near impossible to do by hand or would take more time otherwise to complete. This is a guide to answer some of the most asked questions about the CNC and give out some basic information on the CNC. For information on submitting a file and large fabrication projects, use the links listed below.

- CNC Procedure
- Large Project Fabrication Guide

CNC Material list

Materials Allowed for CNC

- Wood and Plywood
- Plastics
- Gatorboard
- Foam – Rigid foams such as pink insulation foam and EPS ("Styrofoam". 3lb density recommended). Other foams include Polyisocyanurate foam sheets (Fibreglast) and Duna foam (Grimco)
- MDF – if you plan on using MDF for your CNC job, you must purchase your own router bits. We can assist you in what router bits to buy

Materials Not Allowed for CNC

- Pressure Treated Wood – Plywood and planks
- Floral Foam

If the material you want use is not on these two lists or you have questions about your material, ask a member of the lab staff and we can assist you.

Frequently Asked Questions

Q: What is the size of the CNC?
A: There are two CNC routers here in the woodshop. The 5-axis can accept material up to 60" × 96" (5' × 8') × 14" in size. The 3-axis can accept material up to 36" × 48" (3' × 4') × 3.5" in size. We ask that you come talk to us before you plan to use the CNC because there may be projects already in the queue to be run.

Q: Is the CNC available to run my job?
A: We usually operate on a first ready, first run basis. This means that your files have been reviewed, the size of your material has been confirmed and it is on site, and the toolpaths have been created. At this point, we will add your job to the queue. Typically the queue is not long but there are busy times of the year that the queue can span 2 work days, usually around architecture midterm reviews and architecture final reviews. Please plan for this time in advance.

Q: How soon can I get my CNC model?
A: When we generate the toolpaths on your model, we will tell you a time estimate for your job. This will roughly tell you the time frame in which your job will be completed. We will notify you that your job is complete once the CNC stops. Understand that if your model is still running at the time for the shop to close, the job will be paused, and you will not get your job back on the same day. There is not a way to make the machine go faster so please plan ahead.

Q: Can I come in later to clean the CNC?
A: We run CNC jobs based on your availability to load, unload, and clean the machine. When we start your job, it is expected that once it finishes, you will come down to clean the machine and the area around it. If you are not able to clean the machine during the time estimate that we give you, we will run the machine based on your availability. **You will have to clean the CNC and have it checked by a shop supervisor before you leave with your model.**

Q: Can I glue up foam to make a larger model?
A: Yes, you can use a foam glue-up in order to make larger models. You must make sure that **ALL** the layers are glued down to assure that it will make it through the CNC process. You can do this by adding some type of weight on top of your material immediately after gluing. Also letting it the glue cure with the weight on it for at least 24 hours is best. Using thicker foam is also better because there are less glue layers.

Q: What type of glue should I use for gluing up foam?
A: The glue that you need to use has to be designed for use with foam. Many other glues exist but the biggest issue is that many times the glue does not cure in the middle. Router bits accumulate the uncured glue on them while running and potentially can ruin the model. For any specific recommendations, come down to the shop.