

# CNC

## BARNEYARTLABS.COM



Any questions please email Ila Krishnamoorthy at [ik845@nyu.edu](mailto:ik845@nyu.edu)

**Please read this before any consultation meetings.**

**This packet includes information on:**

- 1) How to Order Materials for the CNC (Piggybacking with NYU Wood orders)
- 2) Frequently Asked Questions (size, bits, file prep)
- 3) Tips for your CNC File
- 4) Consultation Rules and Procedures

For information on consultation hours, please check the bulletin by the CNC (Barney basement) or visit [barneyartlabs.com/cnc](http://barneyartlabs.com/cnc) for more info.

Consultation hours generally mean Ila is around, the CNC room is unlocked and you can stop by to say hi, drop off materials/ files or pick up your work. Unless it's a short question that will take less than 10 minutes, please book a proper appointment slot for project consultation. No walkins.

Appointment slots are scheduled 45 minutes each.

### **SIGNING UP FOR A CONSULTATION APPOINTMENT SLOT**

*(Please read Consultation Rules and Procedures on page 5 for more info)*

You can sign up for an appointment slot through Ila's Google Calendar [link](#).

## HOW TO ORDER SPECIAL MATERIALS FOR THE CNC

Students may use wood from the shop for their CNC project. However, for special materials the following steps are recommended for wood orders because of the streamlined system we already have in place with Prince Lumber. You may order materials from any other lumberyard in the area as well. However, you are responsible for coordinating payment, delivery, and reception of the materials.

1. Go to Prince Lumber at [princelumber.com](http://princelumber.com)
2. Find the material you would like to purchase and its SKU number. In the shop our standards are  $\frac{1}{2}$ " Luan Plywood (12mm) and  $\frac{1}{2}$ " MDF Ultra Light Weight (12mm).
3. Call Prince at (212) 7771150 (ext. 112) ask for Anthony Graviano
4. Let Anthony (or another staff member if Anthony is unavailable) know that you are ordering materials to get delivered to the NYU Art Building. The address is 34 Stuyvesant St, which runs diagonally between 9th and 10th St and the cross streets are 2nd or 3rd Avenue.
5. Request that your order be piggybacked for delivery onto the next weekly NYU Wednesday wood order. Be very specific that your order will be delivered with Gustavo Velazquez's order.
6. Your order must be in by Tuesday before 3 pm at the latest and no earlier than a week before you will use your material. (We will not store materials for longer than a week).
7. You must prepay over the phone with a credit card. You are expected to be in the Barney Basement when the order comes in to help with moving. We will receive the delivery for you if you absolutely cannot make it due to class schedule. Also, thick (3/4" in. +) and any other heavy materials will be left in the loading dock area until you can assist with moving.
8. Finally contact **Gustavo Velazquez**, ([gustabovelazquez@nyu.edu](mailto:gustabovelazquez@nyu.edu)) NYU Sculpture Shop Manager, to inform him of the materials you ordered.

## **ILA'S FREQUENTLY ASKED CNC QUESTIONS**

### **How big is the bed of the CNC Router?**

48 x 96 inches

### **What is the maximum cutting depth of the CNC Router?**

Depends on type of work you'd like to do. Carving the surface can allow for a depth to go up to 6", cutting would be much less as the drill bit is not long enough and would hit the material if it has to go too deep, depth would be around 1.5" max. Ask for more info.

### **What is the minimum project size?**

Your material width/ length should be at least 24". For smaller projects, please book a project consultation on the feasibility of your idea/ if whether the CNC is the right machine for your project.

### **How many axes does the CNC have?**

The CNC has 3 axes – x, y, z.

### **What materials can be cut?**

It can cut plywood, MDF, foam and acrylic.

### **What types of bits are available?**

The smallest bit is 1/8th of an inch and the largest is about 1 inch, some are ball nosed for carving into surfaces, some are V shaped for engraving.

### **Can I drop off a file for you to cut?**

No. You must sign up on the Google Doc for a consultation time. During that time I can approve your file or we can work on the file together. Once it has been approved I will run it. Give yourself ample time before a deadline to draw the file, consult me, test the file, redraw the file, then finally cut the file. This process could take up two weeks.

### **Do you supply the materials?**

No. NYU does not supply the materials for your work unless you are in a class that has CNC routing on the syllabus. You will need to coordinate ordering, paying for, and receiving your own wood or acrylics.

## WHAT TYPE OF FILES CAN I BRING IN TO CNC?

### .ai

Adobe Illustrator closed vector files are the most basic/accessible file type to run on the CNC. Best for cutting the outline of a shape, pocketing the inside of a shape, or doing font engraving.

### .stl/.3dm

3D Modeling files from programs such as Rhino 3D and others are necessary when attempting to carve the surface of a material (e.g. a topographical map). Depending on the object the 3D model may be “flattened” or “sliced” into layers to be assembled post CNC routing.

### .dxf/.dwg

AutoCad file formats are also compatible. If you do not already know how to use AutoCad it may be easier to draw your file in AI or on Rhino which are both more user friendly.

### .pdf

Certain PDF files may be converted to CNC as long as they contain closed vector data. (.ai preferred).

## TIPS FOR CNC FILES

Make sure your files are “clean.” This means they should contain nothing other than the pieces you wish to cut – no hidden layers, no overlapping geometry etc.

The file should contain CLOSED vectors.

The Image size of your file should ideally be the size of your job, in inches, though rescaling is possible when “doctoring” your file with the CNC Router Operator.

## MEETING PROCEDURES

### CNC Consultation Timeline

(generally over a 2 week period)



### 1. SIGN UP

If you're interested in using the CNC machine, or just want to know more about the possibilities this fabrication system entails, please feel free to sign up for an appointment slot on the CNC Consultation Calendar link.

**Consultations are for troubleshooting your project, NOT for cutting. Please leave ample time before your deadline as discussions, file/ material approvals, etc take at least 2 weeks.**

Anytime you are running late/ need to change your appointment time, please email me at [ik845@nyu.edu](mailto:ik845@nyu.edu) If you are 20 minutes late to your appointment, it will be automatically cancelled and you will have to reschedule.

### 2. 1ST CONSULTATION

Once you have signed up, you will get a confirmation email within 24 hours. **If you did not get one, it means our appointment has not been fully registered. Please email me as a reminder just in case.**

If you have something in mind, please have your file/ material ready for the meeting. We will be going over the feasibility of your project and approve your material. If you don't have any clue what you would like to do, just drop by for a chat. This is just the 1st meeting and no fabrication will be done yet.

### 3. 2ND CONSULTATION (*Contingent and not necessarily required, pending on your design progress*)

Once you have signed up, you will get a confirmation email within 24 hours. If you did not get one, it means our appointment has not been fully registered. Please email me as a reminder just in case.

This consultation is for final approvals of the project. You should have an expected date you can pick up your work. If the project still has not been fully approved yet, you might have to sign up for another consultation, pending on the situation.

### 4. FILE PICKUP

Once your project is ready, you will receive an email and will have 3 days to pick up your material. After the 3 days, it will be moved out to somewhere in the storage room and might risk the possibility of getting stolen, taken or thrown away. Please be mindful about this!