

Basic Bowl Turning Class

Introduction: The purpose of this class is to teach you the basic steps to turn a bowl and hopefully finish a bowl in class. It will show a few options available but will concentrate more on the cuts and body motions needed. We will go over a shortcut to creating a bowl curve that can be used on any size bowl.

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Safety Review:

- Face protector
- Dust mask
- Short sleeves/loose clothing, hair tied back, no jewelry, no danglings.
- Fingers behind tool rest
- Move tool rest with lathe off, check clearance before starting
- Know your speed before turning on the lathe

Parts of the lathe:

- Headstock
- Tailstock
- Banjo
- Tool Rest
- Spindle
- Ways

Wood Grain:

Tools:

- Roughing gouge (**NEVER** use on a bowl)
- Bowl Gouge
- Parting Tool
- Scraper
- Skew (scraping in recess only)
- Pencil

ABC's:

- Anchor – anchor your tool on the tool rest. Don't drop off the end!
- Bevel – float the tool on its bevel in order to control the tool
- Cut – begin the cut

Turning a Bowl – Bottom

4-Jaw Chuck Mounting Options: Mortise vs. Tenon

We will be using a mortise.

We need to hold the blank while we “true it up” and cut the mortise

Options:

- a. between centers
- b. attach a faceplate (do not use drywall screws). Attach with sheet metal screws.
- c. screw chuck – this is what we will use today.

A. Prepare the blank:

1. Rough out the blank with a chain saw or band saw. The top side should be as flat as possible.
2. Drill a hole in the center of the top side to match the screw chuck.
3. Mount the four jaw chuck on the lathe spindle. Install the screw chuck in the chuck and tighten the chuck. Thread the bowl blank on the screw chuck making sure it makes complete contact with the jaws of the four jaw chuck. Lock the lathe spindle if needed.
4. Pop out the point on the OneWay live center, install the live center in the tailstock and push the live center against the bowl blank to add support to the blank.

5. Use the bowl gouge to cut the corners off of the edge of the blank and make it round.
6. "True up" the bottom of the bowl making it flat. "True up" the top edge of the bowl if needed.
7. Move the tail stock away and remove the live center. Put the point back into the live center and put it away. Finish "trueing up" the bottom.

B. Cut the mortise

1. Using calipers mark the bottom for a recess to expand the jaws of the four jaw chuck in order to hold the bowl from the bottom. Use the wooden "gauge" to set the calipers.
2. Using a wide parting tool cut a recess inside the circle you just created to a depth of $\frac{1}{4}$ of an inch. Remove the rest of the material inside the recess to match. Use a skew to scrape as needed.
3. Measure $\frac{3}{8}$ " from the recess and mark a circle to designate the edge of the bottom of the bowl ("*bowl bottom edge*").

C. Shape the curve of the bowl:

Simply remove any wood that does not look like a bowl.

Here is a simple method of forming the curve of the bowl using three basic cuts as shown on the diagram attached.

1. *1st Cut* - From the "*bowl bottom edge*" mark another line half way between this line and the outer edge of the bowl blank. On the outer edge of the bowl mark a line half way between the bottom of the bowl and the top of the bowl (see diagram). Remove the wood between these two lines

with a bowl gouge using a push cut or pull cut from the bottom of the bowl to the side of the bowl.

2. *2nd Cut* - Mark a line half way between the "*bowl bottom edge*" and the mark in the previous step on the bottom of the bowl. Mark another line on the edge of the bowl half way between the bottom edge and the cut you made in the previous step (see diagram). Remove the wood between these two lines again working from the bottom of the bowl to the edge.
3. *3rd Cut* - Mark a line on the outer edge of the bowl half way between the top edge of the bowl and the first cut you made on the edge of the bowl. Mark another line on the edge of the bowl at the halfway point between the bottom of the bowl and the first cut on the edge (see diagram). Remove the wood between these two lines again working from the bottom of the bowl to the edge.
4. You now have blocked out the basic shape you need for the bowl. Use either push cuts or pull cuts to finish the shape of the bowl with the cuts again going from the bottom of the bowl to the edge. Take light cuts and take your time getting the shape just right.
5. Once you have the basic curves you want you can start making shear cuts to remove tool marks and any high spots you see.
6. Move your light around in order to see these high spots. You can also use your hand to feel them. Sharpen your gouge if you are not getting the finite shavings off of the shear cut.
7. Sand the bottom of the bowl.

Turning a Bowl – Inside

1. Remove the bowl blank from the screw chuck. Remove the screw chuck from the four jaw chuck and put it away. Secure the bowl to the chuck by expanding the four jaw chuck in the mortise you created. Make sure the jaws are seated firmly in the recess as you tighten the jaws.
2. Using the small parting tool, cut a small recess about 3/8" in from the edge of the bowl on the top side of the bowl. This is to avoid a "skip-back" when using the bowl gouge near the edge.
3. Use a bowl gouge to start removing material from the center cutting from the top edge curving down toward the bottom center. Move outward on subsequent cuts toward the rim cutting from the top edge to the bottom center. Leave about 3/8 inch wall thickness. Follow the outside shape of the bowl on the inside keeping the wall thickness the same throughout the curve. Stop often to measure and check your work.
 - a. Tip: Do finish cuts and scraping on the rim before removing all the material on the bottom of the bowl. This will avoid vibrations in the wood that will affect your cutting and scraping.
4. Continue cutting deeper until drill hole disappears from the center of the bowl. Stop often to measure wall thickness and depth. Remember to allow for the 1/4" recess on the bottom so you don't cut through the bottom. Stop and check often. *There is not a lot of demand for "fancy funnels".*
5. Use the scrapper as needed and sand the inside.
6. Sign and date the bottom.
7. Apply a finish as desired.