Wood-Working Equipment

The U-SoA Fabrication Lab will foster a culture of learning through making. Its principal purpose is to serve students and faculty in existing and future research pursuits, by providing robust training and broad access to a host of digital and analog tools. The Lab aims to continually improve, incorporating new technologies and expanding its capacities, growing into a resource equal to the substantial ambitions of a top-tier architecture program.

Edge Sander

Belt Sander – Turn the dust collector on. Turn the belt sander on. Press down on the board as you are pressing it evenly onto the belt sander. If you need to round the corner of the board. press it in slowly and rotate the board. DO NOT press the face of a board on the sander unless it fits entirely on the belt. If you let go of the board the belt will send it flying into the wall and can break or damage your work piece.

DO NOT HOLD YOUR WORK PIECE AS SHOWN BELOW:

Disc Sander

Disc Sander – Turn the dust collector on. Turn the disc sander on. Press down on the board as you are pressing it evenly onto the disc sander. Make sure to only use the left half of the disc. If you need to round the corner of the board. press it in slowly and rotate the board. DO NOT use the right half of the disc or press the face of a board on the sander unless it fits entirely on the disc. Use the red break to stop the disc before walking away.
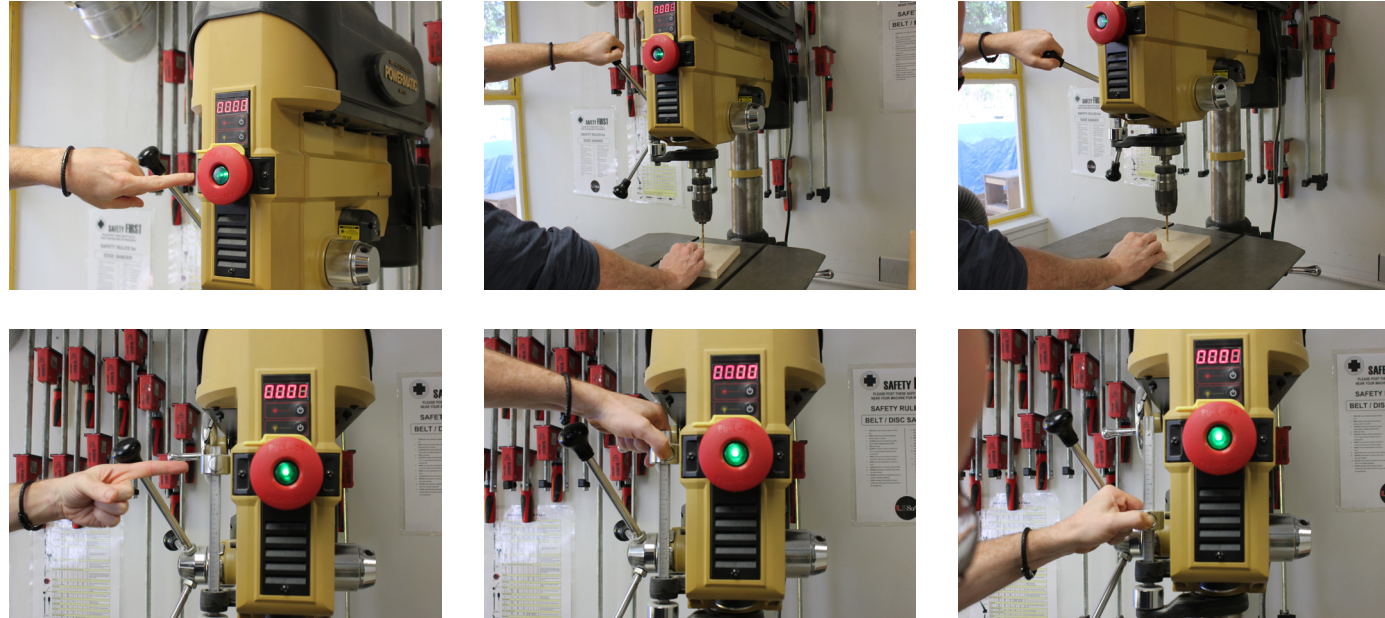

DO NOT HOLD YOUR WORK PIECE AS SHOWN BELOW:

UNIVERSITY OF MIAMI
SCHOOL OF ARCHITECTURE
FABRICATION LAB

FABRICATION RESOURCE
MANUAL
108

UNIVERSITY OF MIAMI
SCHOOL OF ARCHITECTURE
FABRICATION LAB
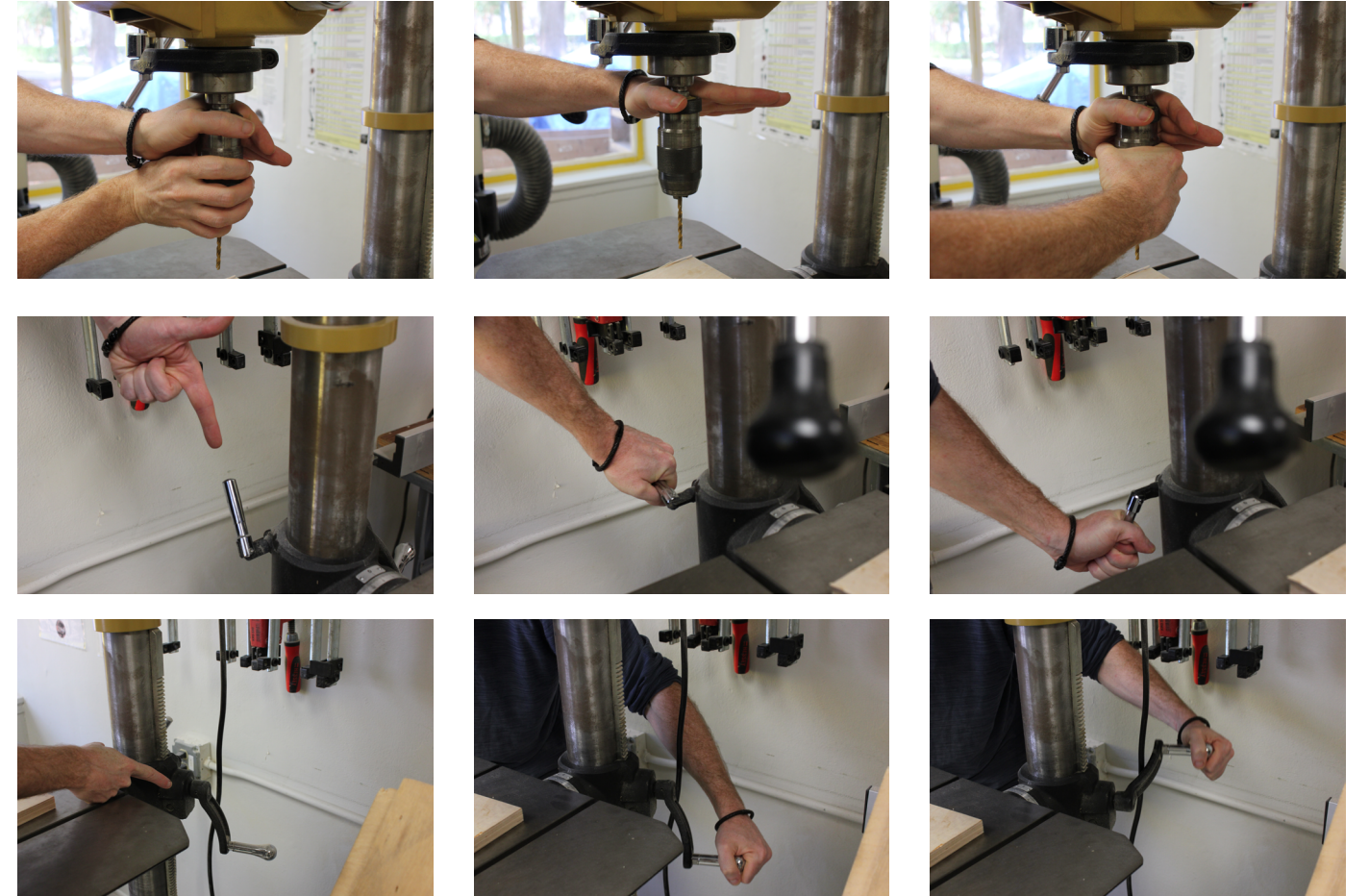
FABRICATION RESOURCE
MANUAL
109

Drill Press

Drill Press – To turn the drill press on, press the red button. To change the bit, grab and hold the upper serrated portion and twist the lower serrated portion until the bit falls out, then put the new bit in and tighten. To adjust the table height, loosen the lever on the left of the main post, then crank the handle down or up to the desired height. To set the safety stop (to prevent you from drilling too far down) adjust the chrome stop by pressing the button and sliding to the desired height. Finally, move your work piece into the correct position below the bit, press the red button to turn the press on, then use the handles on the left to lower the bit to the work piece.

UNIVERSITY OF MIAMI
SCHOOL OF ARCHITECTURE
FABRICATION LAB

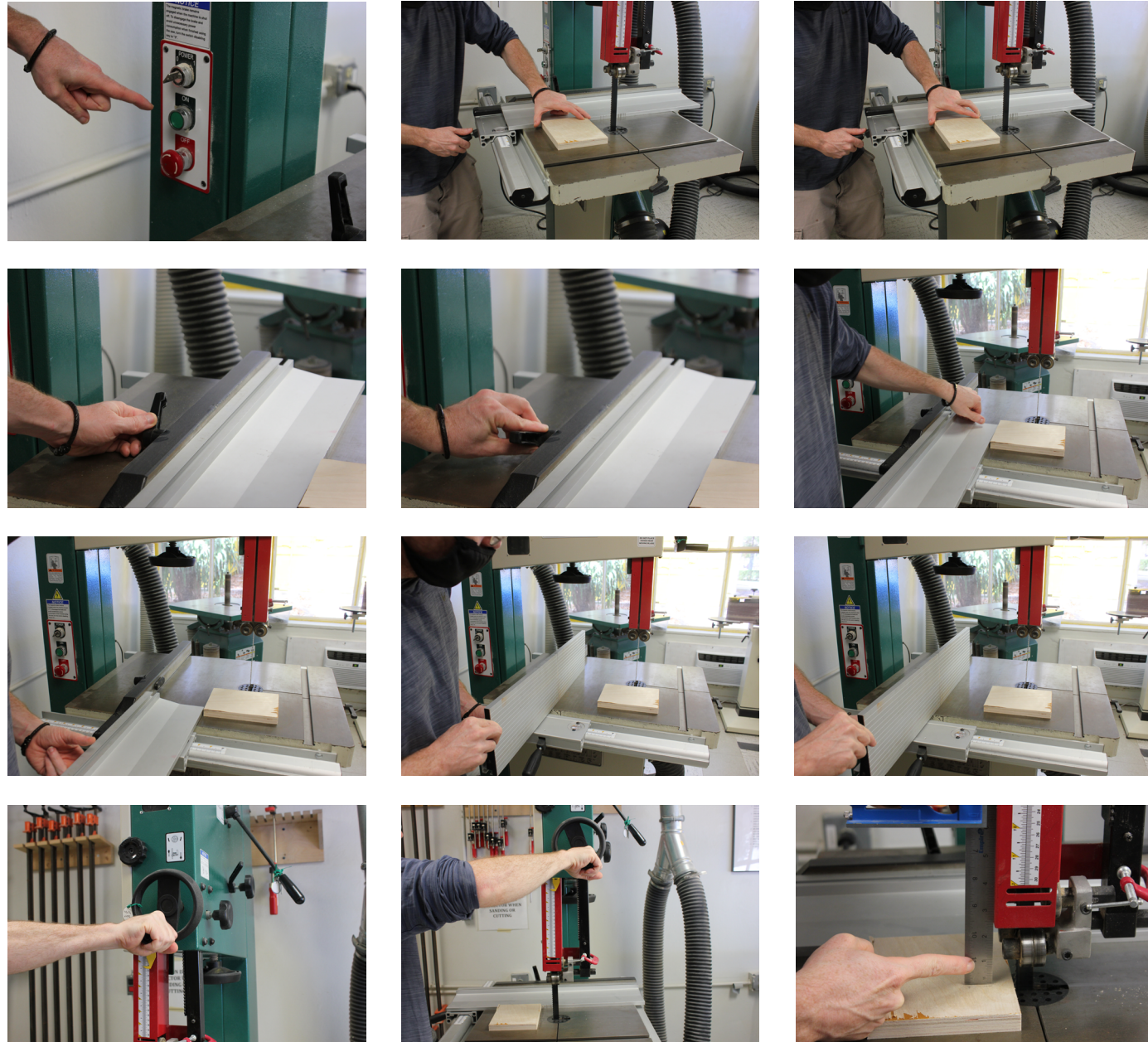FABRICATION RESOURCE
MANUAL
110

Drill Press

To change the bits, turn the machine off and hold the collar while rotating counter clockwise.
To adjust the position of the table, loosen the lever on the back left side of the machine.
To adjust the height of the table, rotate the handle on the back right side of the machine.

UNIVERSITY OF MIAMI
SCHOOL OF ARCHITECTURE
FABRICATION LAB
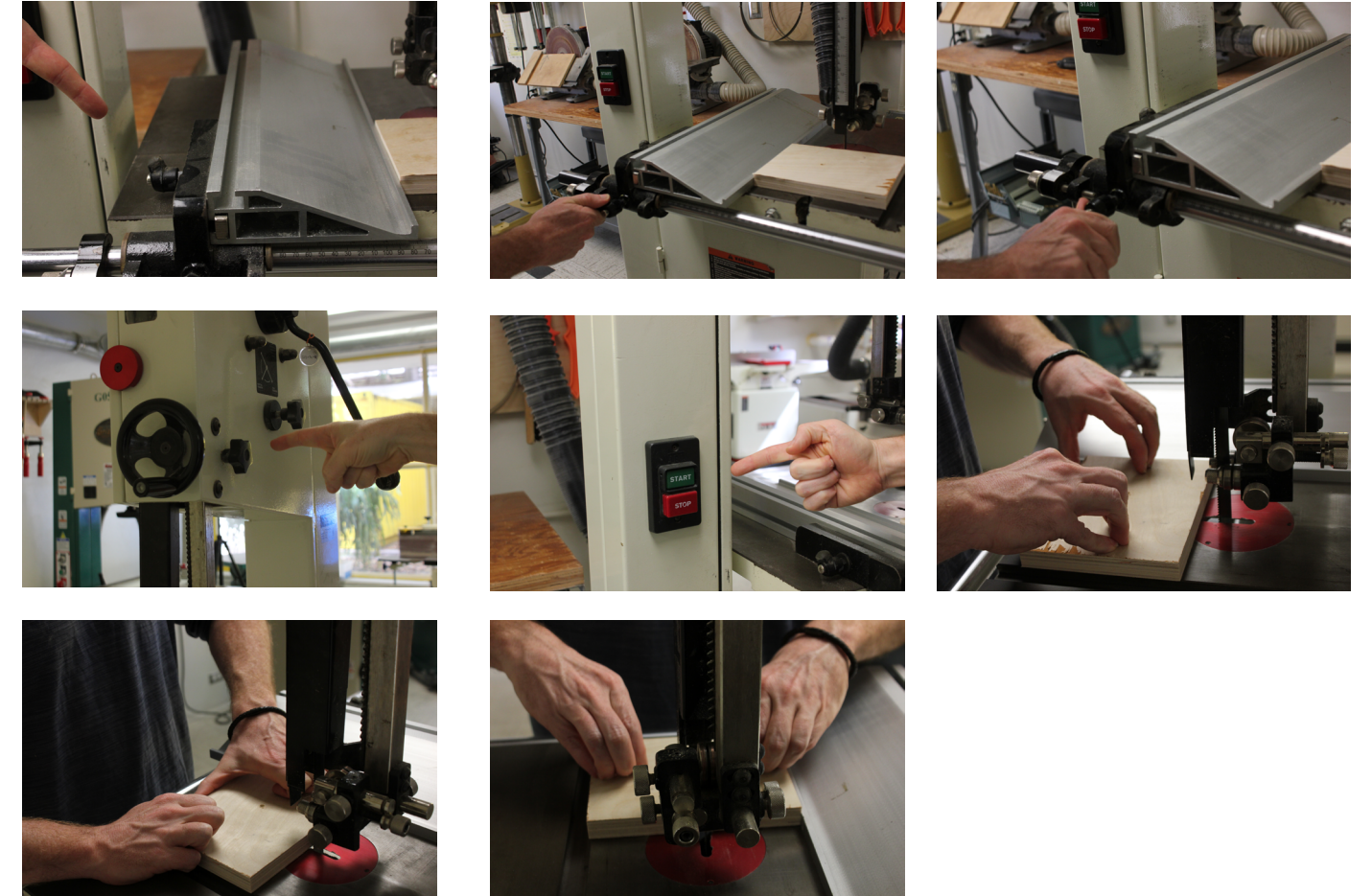
FABRICATION RESOURCE
MANUAL
111

Grizzly Band Saw

Grizzly Band Saw – Turn the dust collector on. First, adjust the fence so it is the correct distance away from the blade by lifting the handle up and sliding the fence. If you need the fence verticle, use the adjustment knob on the left to loosen it, slide the fence off, place fence in the desired direction and retighten knob. Next, The red blade guide needs to be lowered to within 1"-2" of the work piece. Loosen the knob behind the guide, then crank the handle in either direction until it is at the correct height, then retighten the knob. Once all the adjustments are made and you are ready to cut, place your hand on the sides of your work piece (or at least in an area where they will not make contact with the blade) and push the work piece into the blade. DO NOT put your hands in any area that can make contact with the blade, be cautious where your thumbs are.

UNIVERSITY OF MIAMI
SCHOOL OF ARCHITECTURE
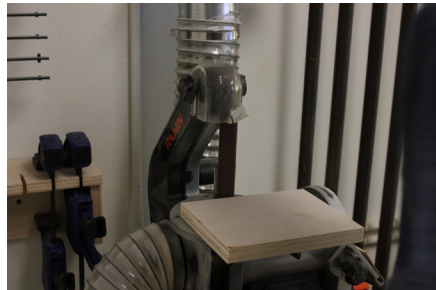FABRICATION LAB

FABRICATION RESOURCE
MANUAL
112

Jet Band Saw

Grizzly Band Saw – Turn the dust collector on. First, adjust the fence so it is the correct distance away from the blade by lifting the handle up and sliding the fence. If you need the fence verticle, use the adjustment knob on the left to loosen it, slide the fence off, place fence in the desired direction and retighten knob. Next, The red blade guide needs to be lowered to within 1"-2" of the work piece. Loosen the knob behind the guide, then crank the handle in either direction until it is at the correct height, then retighten the knob. Once all the adjustments are made and you are ready to cut, place your hand on the sides of your work piece (or at least in an area where they will not make contact with the blade) and push the work piece into the blade. DO NOT put your hands in any area that can make contact with the blade, be cautious where your thumbs are.

UNIVERSITY OF MIAMI
SCHOOL OF ARCHITECTURE
FABRICATION LAB

FABRICATION RESOURCE
MANUAL
113

Grizzly Band Saw

Mini Belt & Disc Sander – Turn the dust collector on. Turn the sander on. Press down on the board as you are pressing it evenly onto the disc or belt. Make sure to only use the left half of the disc. If you need to round the corner of the board. press it in slowly and rotate the board. DO NOT use the right side of the disc.

Spindle Sander

Spindle Sander – Turn the dust collector on. Turn the sander on. Press down on the board as you are pressing it evenly onto the spindle. This sander is best used for sanding smooth curves DO NOT touch the spindle as it is moving.

UNIVERSITY OF MIAMI
SCHOOL OF ARCHITECTURE
FABRICATION LAB

FABRICATION RESOURCE
MANUAL
114

UNIVERSITY OF MIAMI
SCHOOL OF ARCHITECTURE
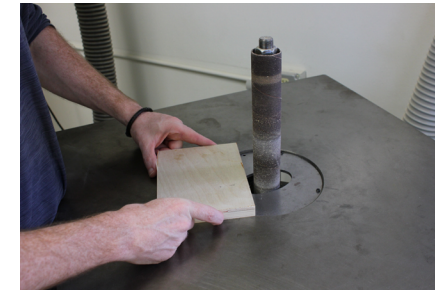FABRICATION LAB
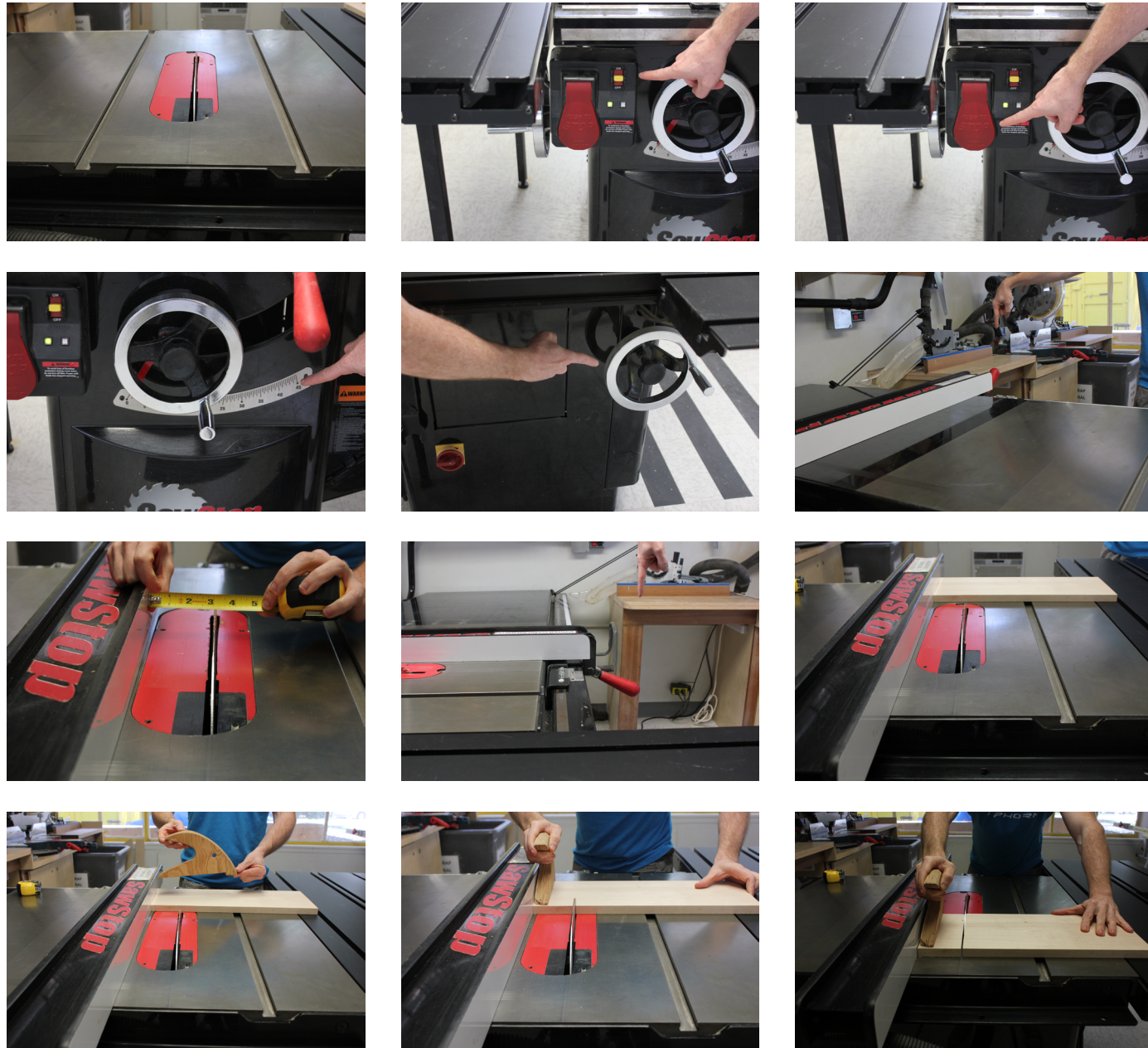
FABRICATION RESOURCE
MANUAL
115

Table Saw

Table Saw – First ensure the power is turend on to the machine and the dust collector. The On/Off switch is the big red pad-dle. Make sure the blade is set to the correct angle. Ensure that the blade is at the correct height for your materail (It should only be high enough to completely cut the material). Lift the red handle on the fence to set it to the correct measurement needed. Use the wooden push guides if there is not enough room for your hands. You can also use the slilding fance. DO NOT put your hands near the blade or in the way of the blade. This machine is equipped with a saw stop, so it will destroy the blade if it detects your hand or body part near the blade.
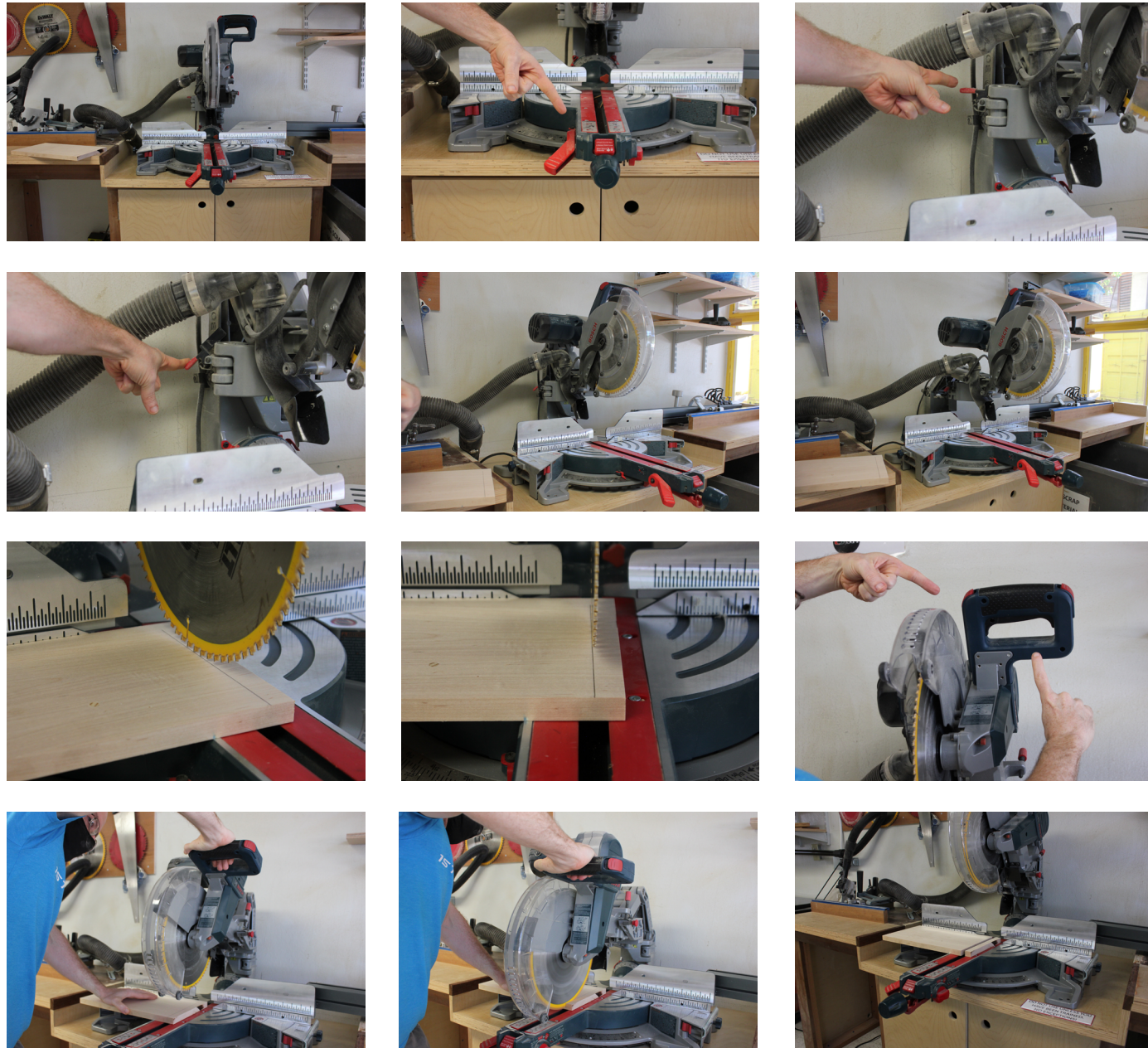
Cross Cuts - Always use a sled to make cross cuts on the table saw to fully support the piece while it cuts across the saw.

UNIVERSITY OF MIAMI
SCHOOL OF ARCHITECTURE
FABRICATION LAB

FABRICATION RESOURCE
MANUAL
116

UNIVERSITY OF MIAMI
SCHOOL OF ARCHITECTURE
FABRICATION LAB
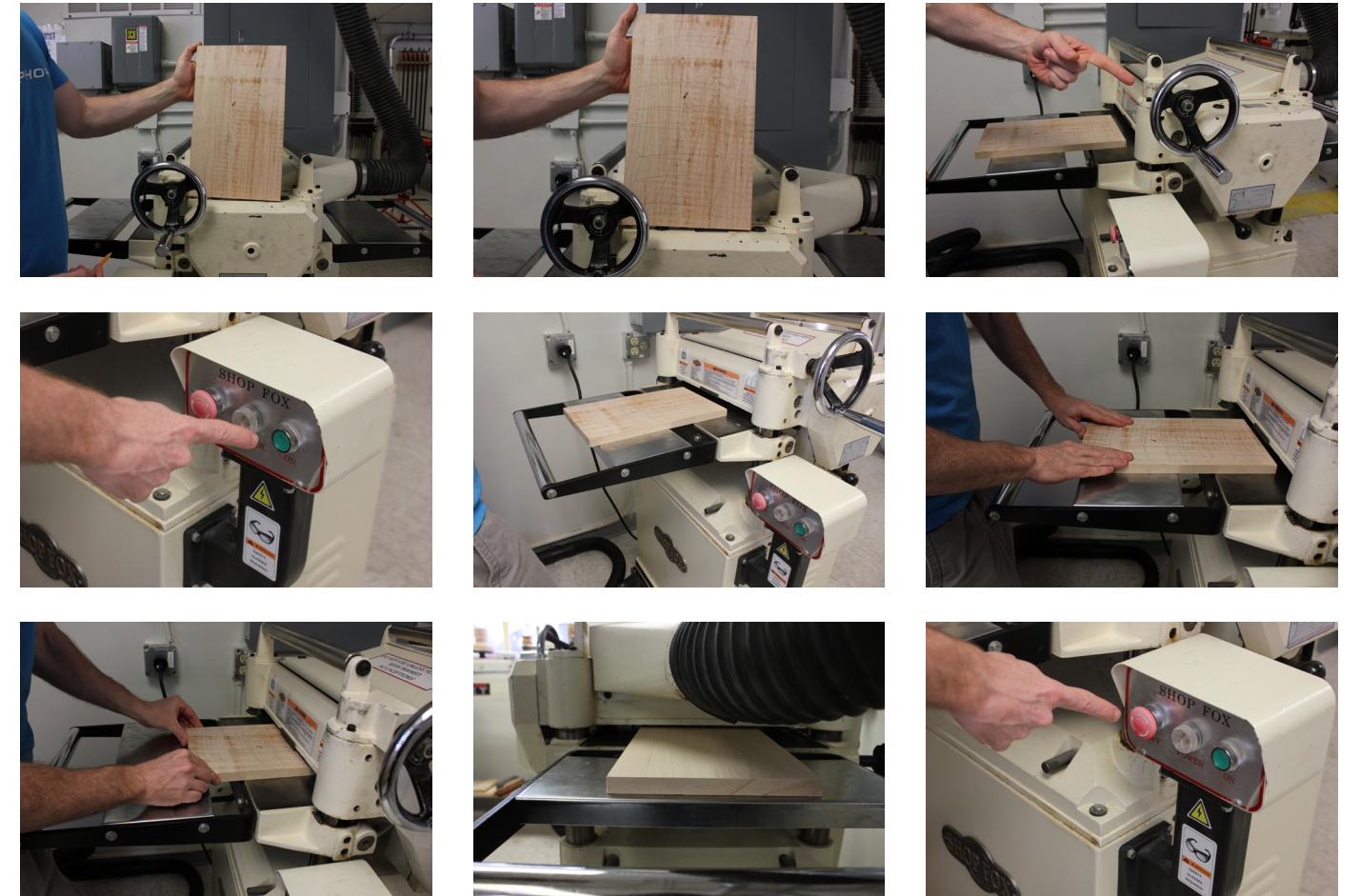
FABRICATION RESOURCE
MANUAL
117

Chop Saw

Chop Saw – First ensure the chop saw is at the correct angle and not set up for a mitre or something similar. Then, check to see if you need to extend the arm to fully cut your piece. If you need to, release the arm so you can extend it further forward. Ensure the blade is lined up correctly on the proper side of your mark. Squeeze the trigger and the red button on the handle at the same time to turn the saw on. While holding both those buttons, bring the saw down to your material to cut it.   DO NOT put your hands where the blade is going to be.
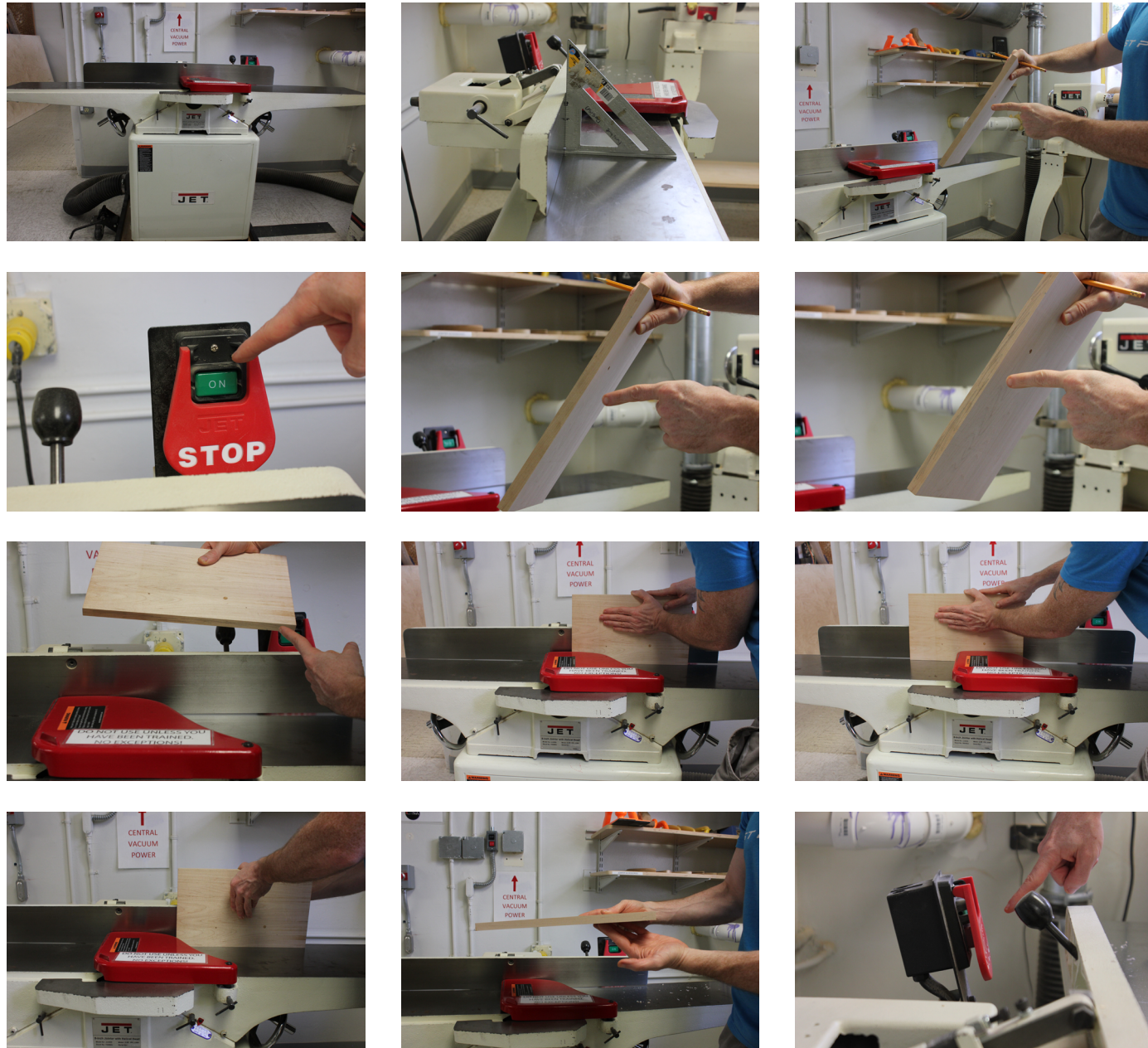

Planar

Planer – First, using pencil, mark the side of the board you will be planing (This will let you know if any spots were missed with each pass). Then set the height of the machine so that it is either 1/64th or 1/32nd below the height of your material. Turn the dust collection system on. Turn the machine on by pressing the green button. Push the board forward until the rollers grab it. It will feed itself through. If spots were missed, set the height down lower by 1/64th or 1/32nd and repeat until the board has no pencil marks. Then turn off the machine with the red button. DO NOT put your hands inside of the machine while it is on or plugged in.

UNIVERSITY OF MIAMI
SCHOOL OF ARCHITECTURE
FABRICATION LAB

FABRICATION RESOURCE
MANUAL
118

UNIVERSITY OF MIAMI
SCHOOL OF ARCHITECTURE
FABRICATION LAB

FABRICATION RESOURCE
MANUAL
119

Jointer

Jointer – First, using pencil, mark the edge of the board you will be jointing (This will let you know if any spots were missed with each pass). Ensure the fence is at 90 degrees using a speed square. Turn the machine and dust colllector on. Place the marked edge down and press the board down and into the fence at the same time. Slide the board past the red guard. Repeat the process if the pencil marks have not all gone away. DO NOT move the red guard with your hands while the machine is running. DO NOT adjust the blade height unless you have spoken to the manager.

Panel Saw

Panel Saw – Locate and move the stop with the red knob to the desired measurement. Then load your material on the red rollers. Turn on the vacuum since it is not hooked up to the dust collection system. Turn the saw on by lifting the red paddle. Pull the saw down to the ground and then turn the saw off. Let the blade come to a complete stop before lifting the saw again. DO NOT put your hand or body parts in the way of the blade.

UNIVERSITY OF MIAMI
SCHOOL OF ARCHITECTURE
FABRICATION LAB

FABRICATION RESOURCE
MANUAL
120

UNIVERSITY OF MIAMI
SCHOOL OF ARCHITECTURE
FABRICATION LAB

FABRICATION RESOURCE
MANUAL
121