



The Ace Mission:

Bringing people together to create, learn and solve life's challenges with an amazing array of tools, technology, and project-based education. All in inclusive spaces, serving everybody in Oakland and beyond.

Guide for Ace Tour Guide

YOU have the right to refuse to give a tour to anybody or to require masks. Or to stop the tour anytime you feel unsafe.

Forward	3
Instructions for Tour Guide	3
Introductions	5
Personal Intro	5
Participant Intros	5
Organization Intro	5
Tour Intro	6
Co-Working and Textiles	8
Coworking	8
Textiles	8
Laser	11
Storage and Metalworking	11
Storage	11
Metal Working	11
Clean Fabrication	13
Electronics	13
3D Printing	13
Storage Tag System Explainer	14
Wide format printer	14
Workshops	15
Front	15
Back	16
CNC Machine	17
General Information	18
Social Contract	18
Membership	18
Contribution expectations - ALL MEMBERS	18
Privileges	19
Rates	19
FAQ	20
Joining Ace	20
Storage	20
Certification	20

Forward

Thank you for giving the tour. It is an amazing contribution that goes a long way to keeping Ace healthy and sustainable.

Everyone who gives the tour finds their own cadence for delivering information. Also each tour group may be a little different. Find the right balance that works for you yet sets good and accurate expectations with prospective members.

Instructions for Tour Guide

- Please read through this before giving your first tour. Many of us at Ace know the equipment we work on really well and are not as familiar with the equipment in other spaces. It also would be ideal to do a walkthrough of all the spaces to make sure you understand what equipment exists where
- Please show up to your tour 10 minutes early and make sure you have access to all the rooms. This will also allow you to figure out if any of the rooms are currently being used/ are too loud to give a tour in and make other plans/ communicate with the Ace members that you will be bringing a tour in. For example, if someone is sanding in the woodshop, this allows you to have a conversation with them about if they are happy to pause while you show people around and talk, or if it would be better to stop outside the woodshop and explain what it contains first and then have everyone walk through and look at the things in the shop while it is too loud to talk in there.
- There are copies of these talking points in the stairwell right inside co-working/textiles. Please grab one if you need it and bring it with you as you give the tour. If you want to take notes, please print your own copy or bring paper/ a notebook to jot things down.

- If you have an Ace nametag, please wear it!
- At this time, to find out how many people signed up for the tour, check the <https://www.acemakerspace.org/calendar/> website for the event you are touring. It should either tell you how many people have signed up, or how many more spots are available. To find the number of people who have RSVP'd, subtract the number from 20. This visibility ends when the tour begins, so be sure to check this at least 10 minutes before the tour is supposed to start
- 5 minutes before the tour starts please be in the textiles/coworking room. The front door has a sign with a phone number for people to call when they are showing up for a tour. That number goes to the phone by the couches. When it rings, please pick up and say "Hello, This is Ace Makerspace." You will then have to go down to the front door to let them in. At this time we do not have the ability to buzz the door open through the phone.
 - Alternatively if you would like to hang around the front door to let people in (either inside or outside), that is also great. Just know that once you have gathered people in the textiles room, if the phone rings, you will need to pick it up to let people in
- Please start the tour when you have gathered all the known participants, or 10 minutes have passed.
- If no one shows up after 15 minutes, feel free to leave. Thank you for your work!
- The tools will be formatted as follows:
 - 3 Serger/Overlock machines (cert needed)
 - Juki MO-655N 5 thread serger/overlock
 - Cert class is 'Serger Basics'
 - For finishing seams and sewing knit fabrics
 - You do not need to give them all this information. All you need to do here is tell them we have 3 Serger/Overlock machines. If they have any questions you can refer to the bullet points below to help answer their questions

- *instructions for you will be in italics and in this color*

Introductions

Personal Intro

- Say who you are and that you are leading the tour
 - How long you have been with Ace
 - Pronouns and Title, if any
- Thing you like to do/make here

Participant Intros

Ask each person to say their

- Name
- Pronouns
- How they heard about Ace
- What tools/parts of Ace they are most interested in. Use this to tailor your tour.

You may want to note down any of this to help you as reference during the tour

Organization Intro

- Ace Makerspace
- Member supported 501(c)(3)
- Volunteer-run
 - So when you ask somebody do to do something for you here treat them like you are asking a personal favor - because you actually are
- Ace only works because everybody contributes and everyone takes responsibility for the space
- We have organized our space by tools, areas, and programs spread across 5 distinct areas:
 - CoWorking and Textiles
 - Laser cutting
 - Metal and Project Storage
 - Clean Fabrication (Electronics and 3D Printing + others)

- Workshop and CNC machine
- Each space has a person or team called the Stewards that are responsible for maintenance, certifications, and safety procedures
- All areas of Ace are available to members 24/7 (except when reserved for events, classes, cleanings)
 - This means if you want to use power tools after the people in your household and neighborhood are asleep, you can do that here!
- Many tools need certification
 - To get certified you take a class here at Ace and then can use the tool without supervision at any time. Certification classes range from \$20-90 and need only be taken once
- We also host many classes, both by Ace and other organizations. These are great for getting to know other parts of Ace and learning new skills
- We communicate as a community via Slack
 - Slack is a group messaging platform with sections for each of the spaces here at Ace
 - members and non-members are welcome
 - It is the best place to get highly specific questions answered about tools ie: can I use the laser cutter on x material?
 - Instructions to join at <https://www.acemakerspace.org/contact-us/>
- You can find our wiki at <https://wiki.acemakerspace.org>
 - This is an excellent place to look up information
 - It is user-contributed, so it is not all up-to-date
 - All of the large tools are listed on the wiki and it is a great place to find out more about them

Tour Intro

- This tour will be a walk and talk through each space
- It is an introduction and not a deep dive on any area
 - If you join you should go to New Member Orientation in order to understand the culture and processes we use here at Ace
- Please ask questions as we go along
- Questions are great and we will do our best but if they still have

questions email info@acemakerspace.org or join the Slack and ask them there

Co-Working and Textiles

Coworking

- Is a multi-purpose space that is reconfigured based on how people want to use it
 - Textiles
 - Coworking
 - Classroom
 - Lounge
- Expect a “cafe” like atmosphere when it comes to sound including the heating system running. If you need absolute quiet this is not the place for you
- Bright natural light
- Basic member storage- using our tagging system
- A few lockers for storage -\$15 a month to rent
- Shared environment
- 9 co-working desks
- Good WiFi
- B&W Laser Printer
- Coworking equipment like laptops, keyboards, and mice
- Basic office supplies
- Honor bar with snacks and drinks (pay with fob)
- Ceiling mounted projector

walk everyone over to the far end of the room where the sewing machines are stored/ near the cutting tables

Textiles

- 6 Janome sewing machines on rolling workstations (basic user-friendly sewing machines)
 - HD-3000
 - no cert required
- You can see how clear the labeling system is. Pink is for member use. Green is for org use only and should not be touched without

authorization. This is true throughout all of Ace

- Full complement of sewing tools
- Extra large cutting tables
- Thread and basic fabrics (under the cutting tables)
- Hand leatherworking tools and station
- Assorted knitting and crochet tools
- Monthly sewing classes, sewcial nights, fiber nights
- Buckle-guy presses and hardware (for adding holes, snaps, rivets, grommets to fabric or leather) (cert needed)
 - We stock snaps, rivets, and grommets in a variety of colors and sizes
 - Cert Class: Textile and Hardware Setting Basics
- This room has a number of self-guided project kits that have instructions on the wiki to help you learn how to use the sewing machines. There are also kits like these in laser
- More advanced sewing machines:
 - Coverstitch (for hemming knit fabrics) (cert needed)
 - Juki 735 5-thread Coverstitch
 - Cert class: Serger Basics
 - look at the hem of a t-shirt for what this 2 row stitch looks like
 - 3 serger/overlock machines (for finishing seams neatly, esp on knits) (cert needed)
 - Juki MO-655N 5 thread Serger
 - Cert class: Serger Basics
 - look at the side seam on a t-shirt for an example of what this stitch looks like
 - Walking foot machine (heavy duty) (cert needed)
 - Pfaff 145
 - great for furniture, bags, tarps, tents, and other heavy duty materials too thick to put through a normal sewing machine
 - Cert class: Heavy-Duty Sewing Machine Basics and Certification
 - Walking foot cylinder arm machine (heavy duty leather) (cert needed)
 - Cowboy 227R
 - Sews up to $\frac{7}{8}$ " of leather, the cylinder arm makes it great for sewing shoes, bags, and getting into tight spaces

- Cert class: Heavy-Duty Sewing Machine Basics and Certification
- Mid-arm quilting machine (also show off the long-arm if it's assembled) (cert needed)
 - Pfaff Powerquilter 16.0 Midarm
 - Good for free-motion quilting
 - Cert class: Mid-arm Basics and Certification
 - Long-arm is good for free-motion quilting a full sized quilt. The difference is on the mid-arm you move the fabric, on the long-arm you move the machine

Lead everyone towards the room exit

Show off the display area near the honor with items made by members and items you can learn to make in upcoming classes. Inspire them with the possibilities of what they can make :)

Make your way to Suite 113

Laser

- *Show off projects in the laser space (for example, etched slate, cut acrylic / wood, leather pieces, etched glasses)*
- Certification required for use
 - Class: Laser Basics and Certification
- Specs: (if asked)
 - 100 Watt CO2 Infrared Laser
 - 1300mm by 900mm laser bed
- One of three machines we charge time to use
 - Low cost at 50¢ a min. (firing time)
- Suitable for cutting wood, fabric, acrylic, leather, etc.
- Suitable for etching aluminum, some other metals and some glass.
Information on wiki, ask in Slack if you can't find info on the wiki
- Monthly lab night on 4th Thursday, explores interesting topics: lasering acrylic, lasering food, engraving on glasses, etc.
- We occasionally run a class to learn to use the software to design your own cut files
- Basic member storage for supplies
- All untagged materials in the bins are fair use

Storage and Metalworking

Storage

- Bike Storage
- Basic Member Storage for large items using the storage tag system which we will go into in Clean Fab
- Flex Space for glues ups
 - temporary space to hold projects while they glue
 - instructions on wiki for how to label and communicate with everyone when using the space. Use a Blue Tag

Metal Working

- In order to work in the metal shop you need to take the Shop Basics class to understand safety, Ace procedures, and how to use these tools in a collaborative environment
- Metal working does not currently have a Steward. We do not currently have an instructor for the certification classes
 - Do you know how to use these tools or know someone who does, who would be interested in teaching these classes? Let us know!
- Mini Mill (cert required)
 - Little Machine Shop HiTorque Mini Mill
 - Cert class: CNC Metal Mill Certification
- Jet 9x20 Metal Cutting Lathe (cert required)
 - Cert Class: Metal Lathe Basics and Certification
- Metal band saws (cert required)
 - Cert Class: Metal Shop Basics and Certification
- Standing Drill Press (cert required)
 - Cert Class: Metal Shop Basics and Certification
- Handheld grinding machines
- No hot work is allowed on premises
- For hot metal work look to the Department of Spontaneous Combustion or the Crucible

Make your way up to Suite 214 upstairs

Clean Fabrication

General amenities include:

- Printer Desk, office Supplies, B&W laser printer
- Honor Bar
- Large work surface
- Great place for painting and other art projects. We have some general use supplies, but also perfect if you want to bring your supplies here while you are working

Electronics

- Open Lab 1x per month
- 3 Complete workstations with soldering equipment
- Digital Oscilloscope
 - Hantek DSO5072P, can detect voltage over time
- DC Power Supply
- Microscope
- Parts Bins & Consumables
 - Explain the empty a bin / fill a bin policy that is true throughout much of the space

3D Printing

- *Show off examples of the 3D printed custom legos in the corner as an example of a 3D printing project*
- 2 3D printers (cert required)
 - Prusa i3 Mk2 & Mk2.5
 - Can print PLA and TPU
 - Cert Class: 3D printing night and certification
- Open Lab 1x per month if you want help or to meet people
- Dedicated Mac workstation
- Filament currently free - replace it if you use a significant amount
- We offer Intro to Fusion 360 for learning 3D modeling, which you also need

for using the CNC

Storage Tag System Explainer

- *walk everyone over to the poster above the 3D printers which shows the storage tag system*
 - All members can store things of appropriate sizes in designated spaces for up to two weeks with Blue Tags
 - If stored improperly or left there for longer they are Red Tagged and must be removed
 - Red Tag stuff goes up for grabs periodically
 - Extensions are available (Gold tags)

Wide format printer

- Epson 9880 photo printer, 44 inch wide (cert required)
 - Our supplied paper is heavyweight matte photo paper
 - Cert class: Epson Wide Format Printer Basics and Certification
- Usage fee is \$2 per square foot, honor system, pay online
 - You can use your own paper as long as it follows our guidelines for 50 cents a square foot
- For printing high quality large images onto paper and canvas. For an example, see the portrait project in textiles / coworking

Make your way downstairs to workshop suite

Workshops

Front

- Before you can work in the workshop you need to take the Shop Basics class to understand safety, Ace procedures, and how to use these tools in a collaborative environment
- Safety gear and first aid on wall to left behind door
- You have to pack out all trash, we do provide bags
- To get big pieces in we have loading bay and the large doors
- Note each larger machine has an info pack on it for reference. Feel free to glance through them
- Tools:
 - Jointer (to cut a board so that it has one perfectly flat side, and one perfectly flat edge that are 90 degrees from each other)
 - Powermatic 6 inch helical jointer 54HH
 - Cert Class: Jointer, Planer, and Table Saw Basics
 - Planers (to cut a perfectly flat surface on a board, using the opposite flat side- derived from the jointer- as a reference)
 - DeWalt 13-in Thickness Planer
 - DeWalt 3.24 Hand Planer
 - Cert Class: Jointer, Planer, and Table Saw Basics
 - Jet Drum Sander (to sand smooth a flat surface of wood, such as when two or more boards are glued together)
 - Jet Drum Sander JWDS-1632
 - Cert Class: Jointer, Planer, and Table Saw Basics
 - Table Saw (to cut boards lengthwise or crosswise. Can also make cuts that are angled vertically or horizontally.)
 - Dewalt DW746 Table Saw
 - Cert Class: Jointer, Planer, and Table Saw Basics
 - Routers (to cut, shape and trim wood. Can cut channels or edges of an object)
 - 5-speed Porter Cable 7518 3.25 hp router mounted in a Bench

- Dog Prolift router lift
 - Handheld routers
 - Just need Shop basics for certification
 - Drill Press (to drill a hole precisely)
 - WEN 4225 15-Inch Variable Speed Drill Press
 - Cert Class: Band Saw, Drill Press, and Panel Saw basics
 - Band Saws (resawing wood/or and cutting curves - depending on which band saw)
 - Grizzly 9" Bench-top Bandsaw
 - Laguna 12-14 Bandsaw
 - DeWalt DCS376 Dual Hand Bandsaw
 - Cert Class: Band Saw, Drill Press, and Panel Saw basics
 - Panel Saw (cut sheets of plywood: up to 48" vertically and unlimited length horizontally)
 - Saw Trax 1064 Panel Saw
 - Cert Class: Band Saw, Drill Press, and Panel Saw basics
 - Small scrap storage on wheels, flammable storage box

Back

- Lathe (spinning tool that you can create shapes on lengths of wood, or hollow out bowls, using lathe tools)
 - Nova DVR XP Woodlathe
 - Cert Class: Wood Lathe Basics and Certification
- Miter Saw (for cutting across a board, allows for different angle cuts), Sanding station
 - Bosch 12" Sliding Compound Miter Saw
 - Just need shop basics
- Horizontal and Sheet good storage
- Point out the last two bins in sheet good storage is paid storage
- Dust collection system
- The workshop has a regular volunteer air quality maintenance program to help keep the shop running and safe

CNC Machine

- Computer-controlled tool that carves, etches, and shapes wood and other materials into precise designs.
- Forrest Scientific HSR 48"x96", new in 2022
- Requires certification; CNC Router Basics and Certification
- The last of the three machines that Ace charges a fee for - \$5 per hour
- You must take our class to be certified
 - Class includes file preparation and machine use
 - Additional classes available for learning Fusion 360 to create CNC tool pathways.

Make your way back to textiles/coworking

feel free to lead everyone to the tables to sit down if that feels right

General Information

Social Contract

- No tolerance for bigotries or violence
- Don't be a jerk = transparency and respect
 - Respect = Respect yourself, others and the space
 - Transparency = Say what you are going to do, do what you say, and when it changes say that too.
 - Okay to ask about safety
 - Example: Somebody is using a power tool without safety glasses. Kindly reminding them that at Ace it's important that we all wear safety equipment is okay
 - No Maker-splaining rule
 - Example: If someone is doing something safely that is different from how you would do it, ask them "Would you like to hear how I would do this technique?" before just sharing
- Emphasize coming to Ace Member Orientation to learn the technical and soft skills to have the best experience in the Ace Community

Membership

Contribution expectations - ALL MEMBERS

- Pay dues on time
- Complete a monthly task, be a steward, or be on a stewardship team
- Ace runs on volunteers, so make sure to contribute
- Follow culture and operations guidelines, including: posting "dibs" in Slack, packing out trash, keeping the space cleaner than you found it, following

safety protocols, notifying in the Slack when a machine is down and posting signage, and following storage guidelines

Privileges

- 24/7 Access (check on calendar for when spaces reserved for classes, cleanings, and events)
- Unlimited guest privileges
 - Every guest MUST sign a release of liability beforehand
 - Scenario 1: A teacher can host a group of students to tutor
 - Scenario 2: Hold a meeting or workgroup with friends
 - Scenario 3: Bring your SO when you work
 - Minors must be accompanied by an adult at all times
 - Social Contract applies to your guests' behavior as if they were you
 - It is your job to inform your guests of all relevant Ace policies and expectations
 - There are some spaces (like the workshop) where animals and children are not really safe or welcome.
 - They must be certified on all tools they use. Your certifications do not extend to them

Rates

- \$200 per month
- Membership scholarships available upon request
 - Scholarships for individual classes also available on a limited basis by request if class has enough attendees

FAQ

Joining Ace

Q: How do I join?

A: Join online at acemakerspace.org/membership. Then come to a new member workshop

Q: How do I get a fob?

point out the fob machine with instructions

A: Buy a fob now OR come to a future tour or New Member Orientation to pick one up. Instructions are next to the fobs for how to activate once you become a member

Q: How long does it take to sign up?

A: If you complete all the steps? About 24 hours depending on staff/ volunteer availability

Q. What if I need help?

A: We have a wiki and an AMAZING community on Slack

Storage

Q: Can I rent dedicated storage?

A: Yes, if we have lockers available in co-working. We also have paid storage in workshop for large planes of wood. You can reserve them on the website if there is space

Certification

Q: How do I get certified for a tool?

A: Attend a class:

- Most certification classes offered once a month
- Classes priced to be affordable
- Even if you have experience with the tool, you still need to know Ace's processes and policies

Q: I need a class but don't see it on the calendar. How can I request a class?

A: See the wiki for how to request a class. Ask in the Slack if there are other people interested in the class. If you can find 2 other people, put together a list of three times all three of you can show up and let the steward or certification instructor know. Then they can schedule something