

BUILDING ENERGY EFFICIENT MAINTENANCE SKILLS (BEEMS)

Asian-American Civic Association, Boston, MA

Curriculum Topics

The following is a brief overview of the topics and material that will be covered in class. Not all topics are guaranteed to be covered, depending on scheduling, time, and pace of class.

Technical Training. Mostly To Be Done at Madison Park:

1. Carpentry and General Maintenance

- a. Proper use of hand and power tools and equipment
- b. Framing a wall with an inside and outside corner
- c. Installing, replacing, and finishing sheetrock
- d. Patching holes in walls
- e. Understanding fasteners and anchors and hanging shelves, cabinets, etc.
- f. Vertical and horizontal tile installation, from layout to grout
- g. Locksets and installation of locks and hinges
- h. Hard floor care, including buffing
- i. Cleaning A/C evaporator coils and filters
- j. Installing door sweeps**
- k. Insulation, including “green” insulation**
- l. Caulking and weather-stripping**
- m. “Green” cleaning products**

2. Painting

- a. Proper wall preparation
- b. Painting tools
- c. Understanding basic types of paints and painting terms
- d. Proper painting techniques, including cutting in and rolling
- e. No- and low- Volatile Organic Compound (VOC) paints**

3. Electricity

- a. Basic electrical safety
- b. Electrical tools and terms
- c. Wiring single pole and three way switches
- d. Identify and reset circuit breakers/fuses
- e. Energy efficient fluorescent vs. incandescent bulbs**
- f. Motion-sensor lights**
- h. Installing rubber gaskets behind outlets**

4. Plumbing and Heating

- a. Plumbing tools and hand/power tool safety
- b. Threading steel pipe
- c. Solder copper pipe joints
- d. Names of basic couplings and fittings for copper and PVC pipes
- e. Repairing and installing water closets
- f. Repairing/replacing bathroom and kitchen faucets
- g. Repairing/replacing tubs and shower valves
- h. Installing garbage disposals
- i. Understanding different components of a plumbing system
- j. Basic heating: understanding system and maintaining parts of boilers (thermo-couplings, coils, etc.)
- j. Insulating pipes for greater energy efficiency**
- k. Low-flow shower heads and sink aerators**

5. Appliance Repair

- a. Basic fundamentals of electricity, schematics, tools, materials, and safety of major household appliances

- b. Installing and troubleshooting washers, dryers, dishwashers, garbage disposals, trash compactors, gas ranges and ovens, and electric ranges and ovens
- c. Understanding and using Energy Star appliances (all appliance models will be Energy Star rated)**

6. Energy Efficiency

- a. Building Systems and Controls**
- b. Energy Efficiency Upgrades**
- c. Basic assessment and diagnostic skills**

Basic Skills, Soft Skills, Job Readiness, and Energy Efficiency Concepts, To Be Done At AACA:

7. OSHA 10 Certificate

- a. Standard OSHA 10 Construction curriculum

8. Communication/Vocational English

- a. Tool and materials vocabulary
- b. Trades and industry terminology
- c. Situational/workplace English
 - i. Written and oral communication skills
 - ii. Following orders, asking questions, giving directions, explaining complex tasks, etc.
 - iii. Writing a work order/job log
- d. ESL (for non-native speakers)
 - i. Phrasal verbs, idioms, prepositions, pronunciation, intonations, basic grammar

9. Job Readiness

- a. Resume and cover letter preparation
 - i. Discussion of past skills and work experiences
- b. Collecting and preparing references
- c. Identifying transferable skills
- d. Interview preparation and practice
- e. Soft skills
 - i. Discussion/study of dependability, responsibility, accountability, teamwork, cooperation, professionalism, initiative, flexibility, self-awareness, independence, acceptance of yourself and others, conflict resolution, tolerance, ability to follow instructions, organization, work ethic
 - ii. Situational role-plays
 - iii. American workplace culture
 - iv. Customer service
 - v. Researching companies and potential employers
 - vi. Networking

10. Computers and Internet

- a. Understanding basic components of computers
- b. Using the Internet
 - i. Setting up email accounts and using them to send and receive emails with attachments
 - ii. Searching for information (job openings, search terms, etc.)
- c. Using Microsoft Word to write and edit resumes and cover letters

11. Math and Measurement

- a. Reading a ruler/tape measure (up to 1/16 of an inch)
- b. Basic arithmetic
- c. Adding and subtracting fractions
- d. Construction word problems and estimating



AACA 華美福利會

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FACILITIES MAINTENANCE INTERNSHIP AGREEMENT

This internship agreement is between _____ (the internship host), AACA, and (the intern).

By signing this agreement the internship host agrees to:

- Host intern(s) once beginning mo. _____ yr. _____
- Provide unpaid internship for five weeks with a minimum of twenty hours per week, schedule to be negotiated between supervisor and intern.
Schedule: _____
- Provide valuable professional experience, directly related to training
- Provide adequate supervision and support to intern
- Complete an evaluation of the intern's performance upon completion of internship requirements
- Provide intern with a letter of recommendation and work reference when appropriate
- Refer interns for employment opportunities when appropriate
- *The host Company has the right to terminate the internship agreement at anytime if the intern violates any of the said terms in this agreement*

Internship Supervisor/Contact (Print): _____

Internship Supervisor/Contact (Signature): _____

Phone Number/Email: _____

Date: _____

By signing this agreement AACA agrees to:

- Manage the internship process
- Provide support to interns and internship host
- Maintain regular contact with the intern
- Complete a site visit in the fourth or fifth week to meet the supervisor
- Provide the internship host with feedback on the intern's experience
- *Release the host company from any and all liability in the event the intern sustain injury while working as an intern for said internship host.*

AACA Staff Contact (Print): _____

AACA Staff Contact (Signature): _____

Phone/Email: _____

Date: _____

By signing this agreement, the intern agrees to:

- Identify the best mode of transportation prior to start of internship
- Be punctual – SHOW UP ON TIME!
- If sick, call the internship supervisor & the Employment Specialist at AACA
- Make any necessary arrangements for childcare, with work etc. to ensure excellent attendance
- Show a willingness to learn new skills
- Ask questions when necessary
- Show a willingness to interact positively with co-workers & customers
- Be respectful of co-workers, customers & supervisor

- Release _____ from any and all liability in the event I sustain injury while working as an intern for said internship host.

Intern Name (Print): _____

Intern Signature: _____

Phone Number/Email: _____

Date: _____