



# 2009 Candidate Information Bulletin State of Hawaii Plumber Examinations

The State of Hawaii Board of Electricians and Plumbers (the Board) has contracted with Prometric Inc. to conduct its examination program.

## At a glance

This bulletin is your guide to the process of obtaining Hawaii plumber licenses. The steps below summarize the process. For information about a step, go to the page listed.



### To obtain your license

- 1 Obtain an application from the Board. Mail your completed application and fee to the Board at the address below.  
Once the Board approves your application, you will be sent a notice of approval with an exam registration form.
- 2 Submit your exam registration form and the (\$90) exam fee to Prometric by the deadline date.  
In return, you will receive an admission letter and exam appointment—Page 2.
- 3 Prepare for your exam, using this bulletin and other materials—Page 6.
- 4 Present your admission letter and required identification; then take the exam—Page 3.

After passing your exam, you will need to submit your license fees to the Board.



### To get answers not provided in this bulletin

#### For questions about exams:

Prometric  
354 Uluniu Street, Suite 308  
Kailua, HI 96734  
Phone: 808.261.8182  
[www.prometric.com/hawaii](http://www.prometric.com/hawaii)

#### For questions about eligibility requirements and licensing:

State of Hawaii  
Board of Electricians and Plumbers  
P.O. Box 3469  
Honolulu, HI 96801  
Phone: 808.586.3000  
[www.hawaii.gov/dcca/areas/pvl](http://www.hawaii.gov/dcca/areas/pvl)

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## Submitting your license application

You are not allowed to register for your exam until the Board approves your application. You can obtain an application form from the Board or online at [www.hawaii.gov/dcca/areas/pvl](http://www.hawaii.gov/dcca/areas/pvl). When your application is approved, the Board will send you an exam registration form and an approval letter.

## Registering and scheduling exams

Once you receive approval from the Board, you should:

- 1 Complete the exam registration form.  
When completing the registration form, you must provide your contact information, Social Security number, exam scheduling preferences and payment. Prometric will treat your Social Security number as **confidential**. It will be used only as an identification number in maintaining your record and reporting your score to the Board.
- 2 Attach one approval letter to the registration form.
- 3 Mail the registration form, approval letter **and** the exam fee to Prometric at the address shown on the form.



**Note** Your registration form must be **received** by Prometric **on or before** the deadline date or it will be returned.

**Exam dates and registration cutoff dates.** Exams are offered on specific dates each month at several locations. An exam schedule with testing locations, exam dates and registration deadline dates will be sent with your approval information. The 2007 exam schedule is also posted online at [www.prometric.com/hawaii](http://www.prometric.com/hawaii).

If you are unable to take the exam on the scheduled test date because of religious restrictions, submit a letter of explanation with your exam registration form.

**Walk-in testing at the Oahu location.** Walk-in testing is available under certain circumstances. If a candidate has been approved for an exam by the Board, the candidate may take the exam by appointment on a date other than the scheduled testing dates offered. A "walk-in" fee of \$50 is added to the basic exam fee. All other conditions in this bulletin apply.

**Fees.** The exam fee is \$90. Payment can be made by Visa or MasterCard, check or money order. Prometric will charge a **\$20 fee** for any returned check.



**Important** Once you have paid the exam fees, you may not reschedule the exam. Exam registration fees are not refundable or transferable.

## Special consideration

**ADA accommodation.** If you require testing accommodations under the Americans with Disabilities Act (ADA), please call Prometric at 808.261.8182 to obtain an accommodation request form. This form must be submitted, along with written professional verification of your disability, **before** you schedule your exam. Reasonable testing accommodations are provided to allow candidates with documented disabilities recognized under the ADA an opportunity to demonstrate their skills and knowledge.

**ESL note.** If English is your second language, please note that a language barrier is not considered a disability.

## Admission letters

If your registration form and payment are received by the registration deadline, Prometric will send you an admission letter. This letter provides information regarding the specific date, time and location of your exam. You **must** present this letter at the testing center or you will not be allowed to test.

You should receive your admission letter approximately five days before the exam. If you lose your admission letter or have not received it three days before the exam, call Prometric immediately at 808.261.8182.

Be sure to notify Prometric and the Board in **writing** of any change of address.



**Important** If you do not appear for your exam on the date and at the time shown on your admission letter, you forfeit all fees.

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### *Preparing for your exam*

Preparing can help you pass your exam and possibly save time and money needed to take it again. You can use the content outlines in this bulletin (beginning on Page 6) to prepare for your exam. The exams are based on these content outlines.

A list of **Sample Questions** appears on Page 8. You may want to review these samples for the type of questions that may appear on the exam.

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### *What to bring on exam day*

Bring all the following items with you to your exam appointment:

- Your admission letter from Prometric.
- Photo identification.
- Two sharpened No. 2 pencils.
- A silent, nonprinting, nonprogrammable calculator.



**Important** Failure to provide appropriate identification and your admission letter at the time of the exam is considered a missed appointment. If you miss an appointment or arrive late, you forfeit your fees.

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### *Testing regulations*

To ensure that all candidates are tested under equally favorable conditions, the following regulations and procedures will be observed at each testing center. Failure to follow any of these security procedures may result in disqualification of your examination. Prometric reserves the right to audiotape and videotape any examination session.

#### **References**

- No reference materials, papers or study materials are allowed at the test center. If you are found with these or any other aids, you will not be allowed to continue the exam and your answers will not be scored.

#### **Calculators**

- Only silent, handheld, solar or battery-operated, nonprogrammable calculators (without paper tape-printing capabilities or alphabetic keypads) may be used.

#### **Personal items**

We recommend that you avoid bringing personal items to the testing center. Note the following:

- Electronic equipment—cameras, tape recorders, cell phones, PDAs, pagers, etc.—is not permitted in the testing area.
- Pocket items—keys, wallet, etc.—must remain in your pocket during testing.

- Other personal items—briefcases, backpacks, etc.—are not permitted in the testing area. **Note:** It is recommended that purses not be brought to the testing center as access to purses will not be allowed during testing.

**Breaks**

- If you leave the testing room while an exam is in progress, you must sign out/in on the roster and you will lose exam time.
- You are not allowed to use any electronic devices or phones during breaks.

**Visitors**

- No guests, visitors or family members are allowed in the testing area.

**Misconduct or disruptive behavior**

- Candidates who engage in any kind of misconduct or disruptive or offensive behavior may be dismissed from the examination. Examples are: giving or receiving help, taking part in an act of impersonation, removing test materials or notes from the testing room, using rude or offensive language and behavior that delays or interrupts testing.

**Weapons**

- Weapons are not allowed at the testing center.



**Important** Before an exam begins, the test center administrator will inspect briefcases, purses, and so on to ensure that candidates are not in violation of any of these rules. The administrator will collect any materials that violate the rules.

**Copyrighted questions.** All test questions are the copyrighted property of Prometric Inc. It is forbidden under federal copyright law to copy, reproduce, record, distribute or display these test questions by any means, in whole or in part, without our written permission. Doing so may subject you to severe civil and criminal penalties, including up to five years in prison and/or a \$250,000 fine for criminal violations.

**If questions arise.** Test center administrators are not allowed to answer any questions pertaining to the exam content. If you do not understand a question on the examination, you should answer the question to the best of your ability.

If you think there is an error in a question, follow the process outlined in the “Candidate feedback” section on Page 5.

*Your exam results*

A score report will be mailed to you approximately 10 business days after your exam date. Your score report will provide you with information regarding your next step in the licensure process. All score reports are mailed simultaneously. To ensure confidentiality, scores will **not** be disclosed over the phone.

**Passing score.** A score of 70 percent or above is required to pass each exam. Scores are based on the number of questions answered correctly. You will not be given credit for any question answered incorrectly, marked with more than one answer or left blank. There is no penalty for guessing, so be sure to mark an answer for each question.

Exam scores for walk-in testing are **not** released early. Exam scores are reported to the candidate and the Board at the same time scores from the next regularly scheduled exam are released. Do not call the Board for your score.

**Retake information.** If you do not pass the exam, you will receive a retake exam registration form with your score report. To register for the next exam, you must return the form and the exam fee to Prometric.

## Candidate feedback

Candidates have an opportunity to make comments and/or appeals regarding their testing process.

**Candidate support specialists (operational concerns).** If you have a concern or comment regarding the testing process, you may call Prometric at the phone number shown on Page 1. These types of concerns typically involve the scheduling of your exam, your experience at the testing center and your interactions with Prometric personnel.

**Appeal committee (exam concerns).** Our goal is to provide a quality exam and a pleasant testing experience for every candidate. If you are dissatisfied with either and believe we can correct the problem, we would like to hear from you. We provide an opportunity for general comments at the end of your exam. Your comments will be reviewed by our personnel, but you will not receive a direct response.

If you are requesting a response about exam content, registration, scheduling or test administration (testing site procedures, equipment, personnel, etc.), please submit an appeal in writing. Your appeal letter must provide your name and Social Security number, the exam title, the date you tested and the details of your concern, including all relevant facts. Be sure to include your signature and return address. Mail your appeal letter to:

**Prometric**  
**ATTN: Appeals Committee**  
1260 Energy Lane  
St. Paul, MN 55108

The Appeals Committee will review your concern and send you a written response within 10 business days of receipt. Faxed appeals are not accepted because an original signature is required.

## Optional services

### Certificate of achievement

Candidates passing their exams deserve recognition for their accomplishment. Prometric has prepared a beautifully designed 8.5"×11" certificate of achievement. This certificate is suitable for framing and contains your name and the name of the exam you successfully completed in a calligraphy typeface. All passing candidates receive an order form. The cost is \$15.

### Exam reviews

If you do not pass your exam, an exam review is offered once each month. The review is a study session that is conducted much like an exam.

The purpose of a review is **not** to teach you the exam subject matter. Rather, it is an option you may choose for study purposes. You are **not** allowed to bring an advisor or anyone else with you to the review. A review is **not** considered an exam attempt and is not scored. You may **not** remove notes or exam materials from the review room.

The fee for this review is \$50. Call Prometric to schedule an exam review.

## Exam content outlines

Following are the content outlines for the Hawaii plumber exams. These outlines are the basis of the exams and list all subjects covered by each exam. The exams consist of multiple-choice questions, with all questions weighted equally.

Each outline indicates the total questions on the exam and the maximum time allowed. It also lists all topics covered in the exam and the approximate percentage of questions asked about each topic.

**Exam references.** A list of references used to develop the exams can be found on Page 7. These references may **not** contain all the general trade knowledge required to pass the exams. **Some information found in the references does not apply to the exams.**

### Master Plumber Exam Closed Book, 80 questions, 3 hours

1. **Water Supply and Distribution Systems - 25%**  
Knowledge to install, alter and repair water supply and distribution systems. This includes, but is not limited to, sizing, types and uses of materials, and installation methods. Such knowledge includes backflow prevention devices and installations, and the use and installation of fittings, valves, pipe supports, water heating and water treatment.
2. **Drainage Waste and Venting Systems - 25%**  
Knowledge to install, alter and repair drainage waste and vent systems. This includes, but is not limited to, sizing, types and uses of materials, and installation methods. Such knowledge includes special waste piping systems, storm drainage systems, and the use and installation of fittings, traps, pipe supports, cleanout and venting requirements, as well as sewage disposal systems and related structural protection.
3. **Sizing and Estimating - 20%**  
The knowledge and ability to identify supply demands, calculate accruing pressure and volume requirements, and interpretate minimum required pipe sizes. This includes, but is not limited to, drainage waste and vent, water distribution, and fuel gas systems. It also includes knowledge of pipe offsets, tank volume and pressure loss equations.
4. **Fuel Gas Systems - 10%**  
Knowledge to install, alter and repair fuel gas systems. This includes but is not limited to, sizing, types and uses of materials, and installation methods. It takes into account clearances, appliance venting and installations, and the use and installation of fittings, valves, pipe supports and flex connectors.

### 5. Fixtures and Trim - 5%

Knowledge to install and repair plumbing fixtures. This includes, but is not limited to, fixtures, appliances, related equipment, connections and installation methods. It takes into account fixture layout, clearances, and the use and installation of valves, faucets, traps and trim.

### 6. Excavation - 5%

Knowledge of *Uniform Plumbing Code* and *OSHA* requirements for trenching, tunneling, backfilling and compaction, plus general trade excavation knowledge.

### 7. Building Sewers - 5%

Knowledge to install and repair building sewers, storm sewers and private sewage disposal systems. This includes, but is not limited to, sizing, cleanout requirements, grading, types and uses of materials and installation methods.

### 8. Medical Gas Systems - 5%

Knowledge to install, alter and repair medical gas distribution systems. This includes, but is not limited to, sizing, types and uses of materials and installation methods. It take into account material compatibility, control devices, alarm systems, medical vacuum systems, and the use and installation of fittings, valves, piping and equipment.

### Journeyman Plumber Exam Closed Book, 100 questions, 3 hours

### 1. Water Supply and Distribution Systems - 25%

Knowledge to install, alter and repair water supply and distribution systems. This includes, but is not limited to, sizing, types and uses of materials, and installation methods. Such knowledge includes backflow prevention devices and installations, and the use and installation of fittings, valves, pipe supports, water heating and water treatment.

- 2. Drainage Waste and Venting Systems - 25%**  
Knowledge to install, alter and repair drainage waste and vent systems. This includes, but is not limited to, sizing, types and uses of materials, and installation methods. Such knowledge includes special waste piping systems, storm drainage systems, and the use and installation of fittings, traps, pipe supports, cleanout and venting requirements, as well as sewage disposal systems and related structural protection.
- 3. Sizing and Estimating - 12%**  
The knowledge and ability to identify supply demands, calculate accruing pressure and volume requirements, and interpretate minimum required pipe sizes. This includes, but is not limited to, drainage waste and vent, water distribution, and fuel gas systems. It also includes knowledge of pipe offsets, tank volume and pressure loss equations.
- 4. Fuel Gas Systems - 10%**  
Knowledge to install, alter and repair fuel gas systems. This includes but is not limited to, sizing, types and uses of materials, and installation methods. It takes into account clearances, appliance venting and installations, and the use and installation of fittings, valves, pipe supports and flex connectors.
- 5. Building Sewers - 3%**  
Knowledge to install and repair building sewers, storm sewers and private sewage disposal systems. This includes, but is not limited to, sizing, cleanout requirements, grading, types and uses of materials and installation methods.
- 6. Medical Gas Systems - 5%**  
Knowledge to install, alter and repair medical gas distribution systems. This includes, but is not limited to, sizing, types and uses of materials and installation methods. It take into account material compatibility, control devices, alarm systems, medical vacuum systems, and the use and installation of fittings, valves, piping and equipment.

- 7. General Code Knowledge - 10%**  
General knowledge of the *Uniform Plumbing Code*. This includes inspection and testing, definitions, general regulations and installation standards. It takes into account the use of plan reading and layout as well as basic math calculations as they apply to the plumbing trade.
- 8. Indirect and Special Wastes - 10%**  
Knowledge to install, alter and repair indirect and special waste systems. This includes, but is not limited to, indirect waste, island sink venting and combination waste and vent systems.

## References

The reference materials listed below should be helpful to candidates preparing for trade-specific exams. This list is only a small sample of materials that contain the necessary information.

Due to circumstances beyond our control, some of these references may go out of print or be unavailable. Please contact a bookstore or library for similar reference materials. For information on how to obtain the exam references, call toll-free 877.624.2562.

While these references are suggested reading for exam preparation, you are not allowed to use them during the exam.

### References not allowed in the exams

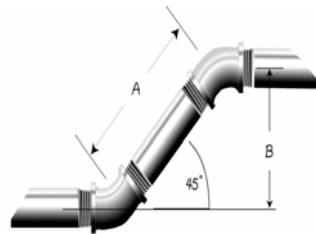
- 1 *Uniform Plumbing Code*, 1997 Edition, International Association of Plumbing and Mechanical Officials, 5001 E. Philadelphia Street, Ontario, CA 91761-2816, [www.iapmo.org](http://www.iapmo.org).
- 2 *The Plumbers Handbook*, 1985, Almond, MacMillan Publishing Company, 866 3rd Avenue, New York, NY 10022.
- 3 *Plumbing*, 1994, Ripka, American Technical Publishers (ATP), 1155 West 175th Street, Homewood, IL 60430, [www.go2atp.com](http://www.go2atp.com).
- 4 *Code of Federal Regulations, Title 29, Part 1926 (OSHA)*, 1995, Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954, [www.access.gpo.gov](http://www.access.gpo.gov).

**Sample Questions**

The following samples may be useful to review for the type of questions that may be included in the exam.

- 1 What is the **MAXIMUM** distance allowed between hangers that support horizontal 3/4" copper tubing?
  - a 4'
  - b 6'
  - c 8'
  - d 10'
- 2 When a drainage vent is installed in a horizontal position, the total horizontal length of the vent shall **NOT** exceed how much of the total allowable length of the vent?
  - a 1/5
  - b 1/4
  - c 1/3
  - d 1/2
- 3 What is required for materials that are used in medical gas piping systems?
  - a Certified corrosion-resistant to medical gas
  - b Pass a 200 psi hydrostatic pressure test
  - c Clean with carbon tetrachloride before start-up
  - d Delivered to job site cleaned and capped
- 4 What is the **MAXIMUM** allowable length of a flexible gas connector that supplies a range?
  - a 3'
  - b 4'
  - c 5'
  - d 6'

- 5 The **MINIMUM** trap size for a "service sink" is
  - a 1-1/2
  - b 2
  - c 2-1/2
  - d 3
- 6 Which of the following listed traps would be permitted only with permission of the Administrative Authority?
  - a "S" traps
  - b Bell traps
  - c Drum traps
  - d Crown-vented traps
- 7 Refer to the figure below.



Given: This offset is in a 1" malleable iron pipe using two 45° elbows with an 8" offset at "B."

What is the center-to-center length of the diagonal at "A"?

- a 8"
- b 10-1/2"
- c 11-5/16"
- d 12"

**Answers to sample questions:** 1-B; 2-C; 3-D; 4-D; 5-B; 6-C; 7-C.