IDPH
IOWA Department of PUBLIC HEALTH

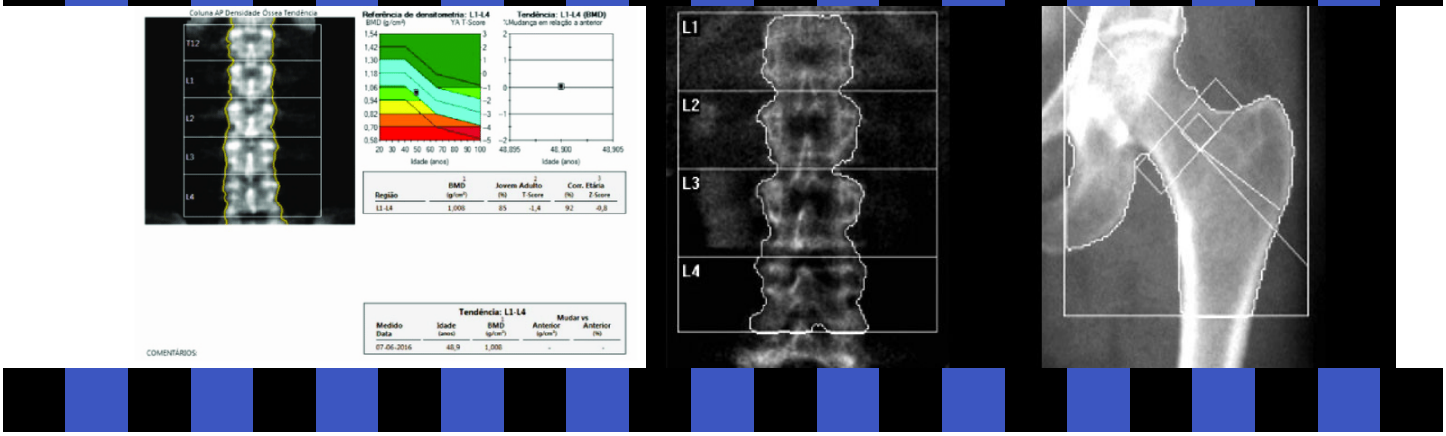
Protecting and Improving the Health of Iowans

Kim Reynolds, Governor | Adam Gregg, Lt. Governor | Kelly Garcia, Interim Director

Bureau of Radiological Health

X-Ray Equipment Operator in Bone Densitometry

Training Manual for Students



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PURPOSE: The Iowa Department of Public Health (IDPH) has established the minimum training standards for limited radiologic technologists. This guide should aid in making application for a training program that will meet IDPH standards. It will also assist in developing the curriculum and classroom and clinical training. This guide does not apply to x-ray equipment operators in podiatry or bone densimetry. The appendices to this guide serve to provide additional information on specific subject areas. Model procedures that the applicant may adopt are provided. The applicant may use the model procedures as an outline to develop alternative procedures for review by the IDPH staff. After review of this guide, if you have specific questions, you may contact:

The Iowa Department of Public Health
Bureau of Radiological Health
Lucas State Office Building, 5th Floor
321 East 12th Street
Des Moines, Iowa 50319-0075
Or, you may call 515-371-9398

APPLICABLE REGULATIONS

In addition to 641-chapter 42(136C), other regulations pertaining to the technologist are found in Chapters 38, 40, and 41 of the IDPH Radiation Machines and Radioactive Materials Rules. You can find the electronic version by going to http://idph.iowa.gov/radiological-health

DEFINITIONS

"Bone Densitometry equipment operator" performs bone densitometry using only dual energy X-ray absorptiometry equipment. Studies using CT, fluoroscopy, or non-dedicated equipment are prohibited.
"Bone Densitometry" means the art and science of applying ionizing radiation to the human body using a dual energy x-ray absorptiometry unit for the sole purpose of measuring bone density.
"ARRT" means the American Registry of Radiologic Technologists.

Excerpted from Chapter 42 Rules.

641—42.33(136C) Standards for formal education for X-ray equipment operators in bone densitometry.

42.33(1) The following are the minimum standards:
a. A principal instructor shall have at least two years of current experience in radiography and bone densitometry and shall:
(1) Be an Iowa-permitted general radiologic technologist; or
(2) Hold a current ARRT registration if the clinical site is located outside of Iowa.
b. A clinical instructor shall have at least two years of current experience in radiography and bone densitometry and shall:
(1) Be an Iowa-permitted limited radiologic technologist; or
(2) Be an Iowa-permitted X-ray equipment operator in bone densitometry; or
(3) Be an Iowa-permitted general radiologic technologist; or
(4) Hold a current ARRT registration if the clinical site is located outside of Iowa.
c. Clinical instructors shall be supervised by the principal instructor.
d. A principal instructor shall also act as clinical instructor, if applicable.
e. The following are classroom and clinical standards:
(1) A minimum of 8.0 hours of classroom instruction to include radiation safety, equipment operation, quality control, patient care, and anatomy.
(2) Clinical instruction to include positioning and a minimum of 10 projections excluding the competency projections.
(3) Clinical competency projections shall include 5 projections.
(4) All competency testing shall be directly supervised by the principal or clinical instructor. IAC 8/2/17 Public Health[641] Ch 42, p.15
(5) Clinical instructors shall directly supervise all students before the student's competency for the specific projection is documented and indirectly supervise after the student's competency for the specific projection is documented.
42.33(2) Department approval is required before implementing any formal education or making any changes to a formal education offering.
42.33(3) Administrative items for all formal education:
a. The department reserves the right to audit or evaluate any aspect of the formal education or student progress.
b. The department may at any time require further documentation.

ONCE THE TRAINING IS COMPLETED

Upon the completion of the training program, the following must be submitted to the agency:

1. A statement of competency from the principal or clinical instructor.

2. Completion certificate for the training program.

3. A completed Testing Proctor Form

Students DO NOT need to wait until the competencies are complete to take the exam. They won't receive their permit however until ALL competencies are completed.

Records of training MUST be retained for three years.

Students must send a copy of the Initial Clinical Site Form prior to starting clinical requirements.

FINAL TESTING OF STUDENT

Final testing will be conducted with a Bureau approved Testing Proctor (See Test Proctor Guide)

REQUIRED FORMS

1. **Initial Clinical Site Form—**This form must be filled out by any clinical site/clinical instructor where the student may be completing Clinical Practices and/or Clinical Competencies. The completed form(s) is returned to the Principle Instructor who then forward them on to the IDPH. **These forms must be reviewed and approved by the IDPH before students can begin their Clinical Practices and/or Clinical Competencies.**

2. **Clinical Practice Record Sheet—**This form is used to keep track of the student's practices in each of the required areas. **This form does not need to be returned to the IDPH but needs to be kept by the students for at least 3 years.** The example in this manual is only an example. Feel free to develop your own.

3. **Clinical Competency Record Sheet**—This form is used to keep track of the student's clinical competencies in each of the required areas. **This form does not need to be returned to the IDPH but needs to be kept by the students for at least 3 years.** The example in this manual is only an example. Feel free to develop your own.

4. **Examination Evaluation from for Final Competency**—The student should have one of these forms for **EACH** Clinical Competency they complete (pass or fail). **This form does not need to be returned to the IDPH but needs to be kept by the students for at least 3 years.** The example in this manual is only an example. Feel free to develop your own.

5. Clinical Competency Statement—After a student has completed ALL Clinical Practices and Clinical Competencies then the Clinical Instructure will need to complete this form. **This form does need to be returned to the IDPH.** If a student has utilized more than one Clinical Instructor (CI), then he or she will have the CI who completed the most number of exams fill out the form.

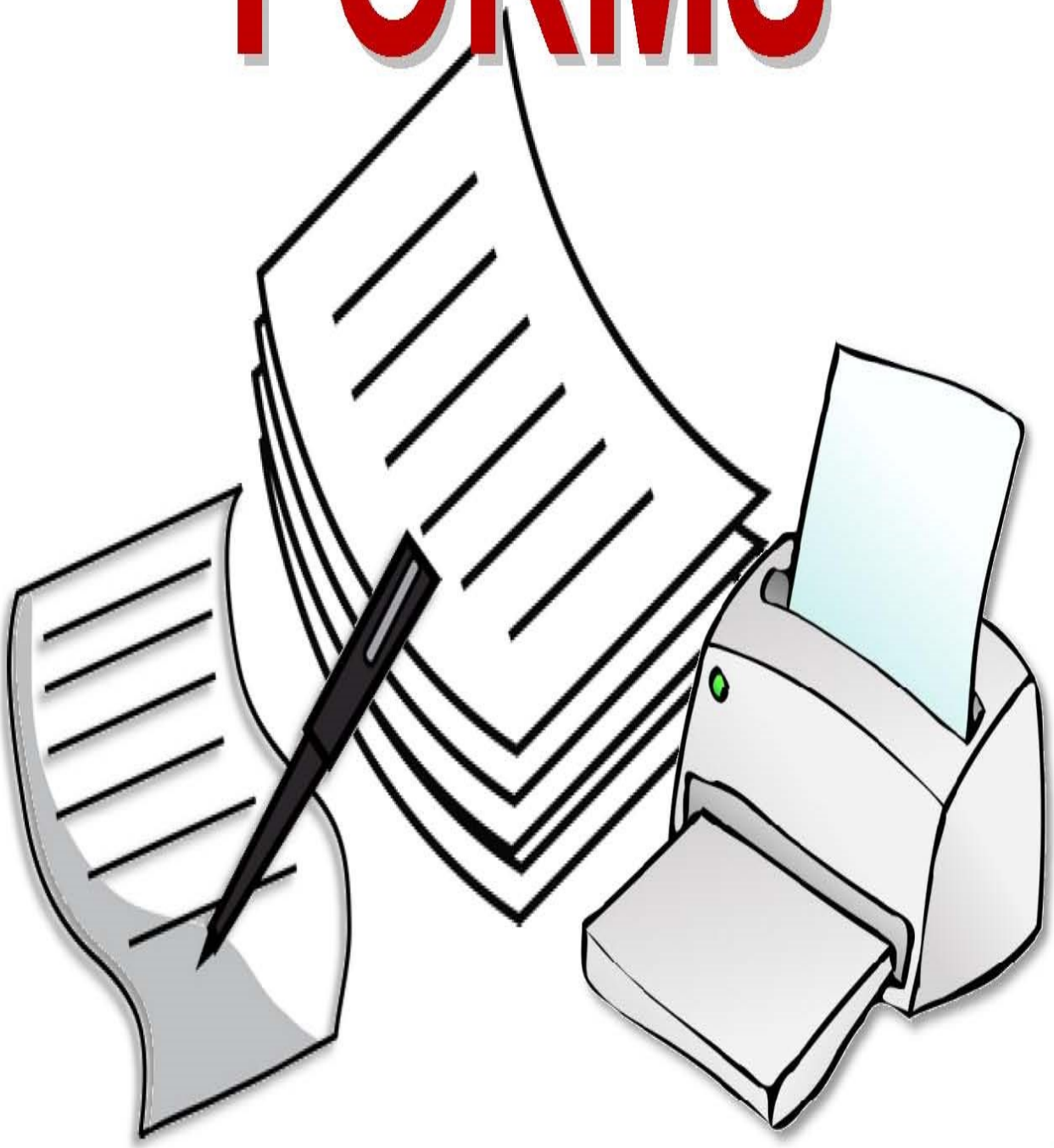
6. Test Proctor Form—Along with Clinical Competency Statement and a Certificate of Completion for the training program, a Test Proctor Form will need to be completed and sent to the IDPH.

7. IDPH Exam Application—Once a Test Proctor has been determined, an IDPH Exam Application must be completed and returned along with the testing fees.

7. Application for State of Iowa Limited Permit to Practice—Once student has received the test results and have passed the Bone Densitometry examination they may apply for their IDPH Permit to Practice. **This process can be completed online and it suggested that one do so at http://idph.iowa.gov/regulatory-programs/permits-to-practice.**

Forms 1, 5, 6, & 7 are also available online at: http://idph.iowa.gov/permits-to-operate/bone-densitometry

FORMS



Bureau of Radiological Health
Lucas State Office Building, 5th Floor
321 East 12th Street, Des Moines, IA 50319
BONE DENSITOMETRY INITIAL CLINICAL SITE FORM

Trainee:_____(print name)

A principal instructor shall have at least two years of current experience in radiography and bone densitometry and shall:

1. Be an Iowa-permitted general radiologic technologist; or
2. Hold a current ARRT registration if the clinical site is located outside of Iowa

A clinical instructor shall have at least two years of current experience in radiography and bone densitometry and shall:

1. Be an Iowa-permitted limited radiologic technologist; or
2. Be an Iowa-permitted X-ray equipment operator in bone densitometry; or
3. Be an Iowa-permitted general radiologic technologist; or
4. Hold a current ARRT registration if the clinical site is located outside of Iowa

Clinical instructors shall be supervised by the principal instructor. A principal instructor may also act as clinical instructor, if applicable. All competency testing for limited radiography shall be directly supervised by the principal or clinical instructor. Clinical instructors shall directly supervise all students before the student's competency for a specific projection is documented and indirectly supervise after the student's competency for a specific projection is documented. By signing below, you are agreeing that you meet these minimum requirements.

Site where clinical education will take place :

_____

_____ _____

Signature of Trainee Date

_____

Principal Instructor Name (printed)

_____ _____

Principal Instructor Signature Date

_____

Clinical Instructor Name (printed)

_____ _____

Clinical Instructor Signature Date

Bone Densitometry Clinical Competency Record Sheet

Clinical Practice Projections

Exam	Projection	Date	Evaluator	Pass	Fail

Clinical Competency Projections

Exam	Projection	Date	Evaluator	Pass	Fail

Competency projections are a clinical exam and shall include ***at least 10 projections*** *with only 2 of any single projection allowed to count toward the competency projections.*

This form must be completed before student is allowed to take IDPH State Examination.

Clinical Evaluator

EXAMINATION EVALUATION FORM FOR FINAL COMPETENCY

Student name_____ Type of Examination_____

Performance Objective: Given a patient and the necessary equipment, the student will demonstrate the ability to:

Examination Preparation

- cassettes, holding devices, etc. available	☐ Yes	☐ No
- laundry stocked in the room and the bathroom	☐ Yes	☐ No
- room and table ready for patient	☐ Yes	☐ No
- necessary supplies available	☐ Yes	☐ No
- equipment set properly	☐ Yes	☐ No
- emergency equipment available for use if necessary	☐ Yes	☐ No

Examination Performance

- patient dressed properly for exam	☐ Yes	☐ No
- checks orders	☐ Yes	☐ No
- explains procedure to patient	☐ Yes	☐ No
- assists patient onto table or examination area	☐ Yes	☐ No
- takes patient history and records it for physician	☐ Yes	☐ No
- gives clear and concise patient instructions	☐ Yes	☐ No
- positions equipment and patient properly	☐ Yes	☐ No
- makes exposure properly	☐ Yes	☐ No
- watches patient closely	☐ Yes	☐ No
- works with speed and efficiency	☐ Yes	☐ No
- is aware of and practices good radiation protection habits	☐ Yes	☐ No

Exam Completion

- critiques final examination	☐ Yes	☐ No
- checks study with Physician as necessary	☐ Yes	☐ No
- produces diagnostic study	☐ Yes	☐ No
- places completed exam in proper area	☐ Yes	☐ No
- returns patient to indicated area (their room, ER, OPT, etc.)	☐ Yes	☐ No
- replaces supplies as necessary	☐ Yes	☐ No
- maintains a clean and neat working area	☐ Yes	☐ No
- makes sure all information is correctly recorded	☐ Yes	☐ No

COMMENTS_____

_____

The evaluator's signature verifies that the procedure was completed satisfactorily.

Signature: _____ Date:_____

Bureau of Radiological Health
Lucas State Office Building, 5th Floor
321 East 12th Street, Des Moines, IA 50319

COMPLETION OF BONE DENSITOMETRY TRAINING AND STATEMENT OF COMPETENCY

Trainee:_____(print name)

As clinical instructor for the above individual, I verify that this individual has:

a. Demonstrated good patient care.
b. Demonstrated appropriate radiation protection for self, staff, and patient.
c. Been supervised by me, a general radiologic technologist, or limited radiologic technologist.
d. Has satisfactorily completed the required competencies with 100% accuracy.

I verify that the above individual is competent to perform bone densitometry according to the Bureau of Radiological Health's requirements.

_____

Clinical Instructor Name (printed)

_____ _____

Clinical Instructor Signature Date

_____

Address

_____

Phone Number

_____

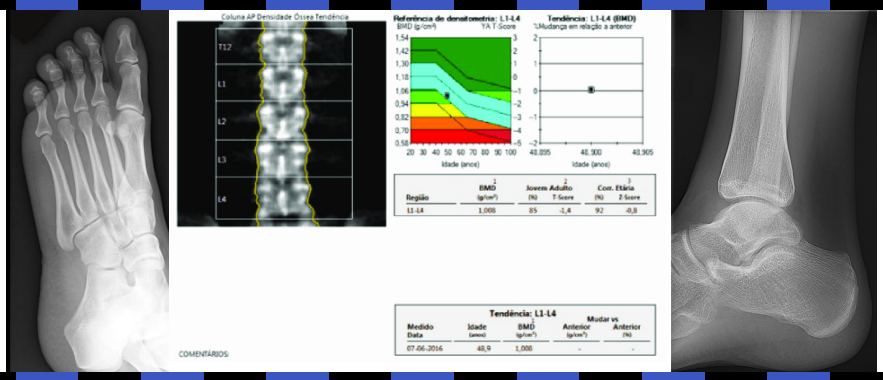
Email Address

Bureau of Radiological Health

Test Proctor Guide

-Podiatry

-Bone Densitometry



A proctor is someone who verifies that your test is administered under the proper conditions. A list of approved proctors may include professional testing centers, college testing centers, professors at colleges or universities, public school teachers, guidance counselors, school principals, school superintendents or librarians. **Proctors must not be related to the applicant, must not be a co-worker or supervisor, and must not be someone who has taken the test previously or who intends to take the test.**

- Please have your test proctor complete the bottom portion of the form after you complete the top portion. Upon completion, please return the form to IDPH.
- After a Test Proctor has been approved by the IDPH, the Test Proctor will be contacted and date for the exam scheduled.
- The exam will then be sent to the Proctor for administering to the student.
- After exam is completed the Test Proctor will return it to the IDPH for grading.
- Results will be sent to the Student within 2—3 weeks.
- ***Three failed attempts on the examination will require the individual to repeat the formal education or complete a department-approved review program.***
- If a student is unable to make the scheduled test date, it is their responsibility to contact the Test Proctor to cancel the appointment of the testing and the Test Proctor will contact the IDPH to set up possible make-up date(s).
- The IDPH will contact to student to rescheduled the exam date and will contact the Test Proctor with the new date.
- All questions concerning the Testing Process should be directed to:

Matthew Millard, Program Planner 3
Bureau of Radiological Health
Phone (515) 725-1077
Fax (515) 281-4529
matthew.millard@idph.iowa.gov

Iowa Department of Public Health Bureau of Radiological Health Testing Proctor Form

TO BE COMPLETED BY THE APPLICANT:

Applicant's Name:_____

Phone: _____ Address: _____

City: _____ State: _____ Zip: _____

Email: _____Test Title_____

Permit # if applicable_____

TO BE COMPLETED BY THE PROPOSED TEST PROCTOR:
I hereby agree to serve as a test proctor for the above applicant. I will provide a quiet atmosphere for them to take the exam, will monitor them during the assessment period, and will mail, fax or email the completed test to IDPH directly.

Proctor's Name:_____

Proctor's Title: _____

Phone: _____Address: _____

City: _____State: _____ Zip: _____

Email: _____

Testing Site:_____

When are you available for the student to take the test? _____

_____ _____

Proctor's Signature Date:

Please return this form by email, fax or mail to:
matthew.millard@idph.iowa.gov
Bureau of Radiological Health
Lucas State Office Building
321 E. 12th Street Des Moines, IA 50319
Fax 515-281-4529

Bureau of Radiological Health
Lucas State Office Building, 5th Floor
321 East 12th Street, Des Moines, IA 50319

APPLICATION FOR X-RAY EQUIPTMENT OPERATOR IN BONE DENSITOMETRY EXAMINATION

INSTRUCTIONS FOR COMPLETING THIS FORM:

Print or type the required information. Send the completed form and $100 nonrefundable examination fee to: **Iowa Department of Public Health Bureau of Radiological Health**

Lucas State Office Building, 5th Floor

321 East 12th Street

Des Moines, IA 50319

If you have any questions, please contact:

Questions: Matthew Millard @ 515-371-9398 Email: matthew.millard@idph.iowa.gov

APPLICANT'S INFORMATION:

First Name: _____

Middle Name: _____

Last Name: _____

Street Address: _____

City: _____ State:_____ Zip: _____

Phone Number: _____ Date of Birth: _____

Email: _____ SSN Number: _____

Clinical Training Site: _____

AFFIRMATION QUESTIONS: ***Please provide responses to "Yes" questions on a separate*** **piece of paper(s).**

Do you have a medical condition, which in any way currently impairs or limits your ability to perform the duties of this profession?

Medical Condition: means any physiological, mental, or psychological condition, impairment, or disorder, including drug addiction and alcoholism. Yes No

If yes, provide a description of your condition and submit a letter from a physician stating how your condition will affect your ability to perform the duties of this profession.

Have you, within the past 5 years, engaged in the illegal or improper use of drugs or other chemical substances?

If yes, provide a statement and a copy of relevant documentation including records from a physician or treatment program. Yes No

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Have you ever been convicted of a misdemeanor or felony crime? (You do not need to answer yes if your sole conviction or convictions are for minor traffic violations with fines under $250).

In answering this question, note that a conviction means a finding, plea, or verdict of guilt made or returned in a criminal proceeding, even if the adjudication of guilt is deferred, withheld, or not entered. This means you must answer yes if a finding or verdict of guilt was returned against you in a criminal proceeding or if you plead guilty, entered a plea of nolo contendere, or entered an Alford plea in a criminal proceeding, even if the court expunged the matter or the court deferred judgment. You must submit the complaint and judgment of conviction for each offense. Yes No

If yes, include the date, location, charging orders, court disposition, and current status (i.e. probation) for each charge.

Has any state or other jurisdiction of the United States or any other nation ever limited, restricted, warned, censured, placed on probation, suspended, revoked, or otherwise disciplined a professional license, permit, registration, or certification issued to you? Yes No

If yes, include the date, location, reason, and resolution.

Have there ever been judgments or settlements paid on your behalf as a result of a professional liability case? Yes No

If yes, include the date, location, reason, and resolution.

Have you ever had a license, permit, registration, or certification denied, suspended, revoked, or otherwise disciplined by a certification body? Yes No

If yes, provide a description of the circumstances.

EMPLOYER INFORMATION: (Use additional pages for employer information if necessary.)

Contact Type (circle one): Current Employer No Employer Previous Employer

First Name: _____ Last Name: _____

Phone Number: _____ Email Address: _____

License Number: _____ Business Name: _____

Street Address: _____

City: _____ State: _____ Zip Code: _____

Comments: _____

Contact Type (circle one): Current Employer No Employer Previous Employer

First Name: _____ Last Name: _____

Phone Number: _____ Email Address: _____

License Number: _____ Business Name: _____

Street Address: _____

City: _____ State: _____ Zip Code: _____

Comments: _____

Privacy Act Notice: Disclosure of your social security number on this application is required by 42 U.S.C. § 666(a)(13) and Iowa Code § 252J.8(1). The number will be used in connection with the collection of child support obligations and as an internal means to accurately identify licensees, and may be shared with taxing authorities as allowed by law including Iowa Code § 421.18.

I hereby certify and declare under penalty of perjury that the information I provided in this document, including any attachments, is true and correct. I am responsible for the accuracy of the information provided regardless of who completes and submits the application. I understand that providing false and misleading information in or concerning my application may be cause for disciplinary action, denial, revocation, and/or criminal prosecution. I also understand that I am required to update answers or information submitted herewith if the response or the information changes.

In submitting this application, I consent to any reasonable inquiry that may be necessary to verify or clarify the information I provided on or in conjunction with this application.

I understand that this information is a public record in accordance with Iowa Code chapter 22 and that application information is public information, subject to the exceptions contained in Iowa law.

I have read the Administrative Rules governing this profession and I agree to comply with those provisions.

_____ _____

SIGNATURE OF APPLICANT DATE

Ensure that all documentation of proof of completion of the didactic and clinical education is included.

Application, fees, and required documentation should be sent to:

Iowa Department of Public Health, Bureau of Radiological Health

Lucas State Office Building, 5th Floor

321 East 12th Street

Des Moines, IA 50319

Iowa Department of Public Health, Bureau of Radiological Health

Application for State of Iowa X-Ray Equipment Operator in Bone Densitometry

*Before submitting this application you are **required** to pass the IDPH Certification Examination.*

***Mailing Address*:**

Iowa Department of Public Health
Bureau of Radiological Health
Lucas State Office Building, 5th Floor
321 East 12th Street

Send the following to the Mailing Address given:

~Your completed application.
~A ***nonrefundable fee*** in a check or money order payable to: **Iowa Department of Public Health.**
~Your Classroom and Clinical Education Completion Documentation. ***(New Applications Only.)***
~Your transcript of CEU hours (if due.)

Questions?

Customer Support Phone: 855-824-4357 Email: adperehreg@idph.iowa.gov

Internet Address: https://idph.iowa.gov/regulatory-programs/permits-to-practice

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APPLICANT'S INFORMATION: *(Type or print the information below.)* ☐ This is a new address

First Name: _____Middle Name: _____

Last Name: _____

Street Address: _____

City: _____ State: _____ Zip: _____

Phone Number: _____ Date of Birth: _____

Email: _____ SSN: _____

Have you held an Iowa Permit to Practice before? Y ☐ N ☐ Permit Number RAD _____

Reinstatement - If you allow your permit to expire you will be required to apply for reinstatement, meaning you will need to pay the $60 fee that would be charged for a new permit. You will also be subject to investigation for working without a permit.

Select Application Type: Your renewal application should be submitted approximately **45 days before** your permit expires.

☐ New or Reinstatement $40 ☐ Renewal $40

AFFIRMATION QUESTIONS: ***Please provide responses to "Yes" questions on a separate*** **piece of paper(s).**

Do you have a medical condition, which in any way currently impairs or limits your ability to perform the duties of this profession?

Medical Condition: means any physiological, mental, or psychological condition, impairment, or disorder, including drug addiction and alcoholism. Yes No

If yes, provide a description of your condition and submit a letter from a physician stating how your condition will affect your ability to perform the duties of this profession.

Have you, within the past 5 years, engaged in the illegal or improper use of drugs or other chemical substances?

If yes, provide a statement and a copy of relevant documentation including records from a physician or treatment program. Yes No

---

Have you ever been convicted of a misdemeanor or felony crime? (You do not need to answer yes if your sole conviction or convictions are for minor traffic violations with fines under $250).

In answering this question, note that a conviction means a finding, plea, or verdict of guilt made or returned in a criminal proceeding, even if the adjudication of guilt is deferred, withheld, or not entered. This means you must answer yes if a finding or verdict of guilt was returned against you in a criminal proceeding or if you plead guilty, entered a plea of nolo contendere, or entered an Alford plea in a criminal proceeding, even if the court expunged the matter or the court deferred judgment. You must submit the complaint and judgment of conviction for each offense. Yes No

If yes, include the date, location, charging orders, court disposition, and current status (i.e. probation) for each charge.

Has any state or other jurisdiction of the United States or any other nation ever limited, restricted, warned, censured, placed on probation, suspended, revoked, or otherwise disciplined a professional license, permit, registration, or certification issued to you? Yes No

If yes, include the date, location, reason, and resolution.

Have there ever been judgments or settlements paid on your behalf as a result of a professional liability case? Yes No

If yes, include the date, location, reason, and resolution.

Have you ever had a license, permit, registration, or certification denied, suspended, revoked, or otherwise disciplined by a certification body? Yes No

EMPLOYER INFORMATION: (leave blank if No Employer)

Current Employer

Supervisor's Name: _____

Phone Number: _____ Email Address:

Business Name: _____ Street Address:

City: _____ State: Zip Code:

Previous Employer (if current employer is less than 1 year)

Supervisor's Name: _____

Phone Number: _____ Email Address:

Business Name: _____ Street Address:

City: _____ State: Zip Code:

☐ **I am submitting CEU's**

4 hours of continuing education is required at the end of your Biennium Date. Include a copy of your transcript showing all courses completed if this is the year you are required to report hours. If the educational organization you are working with does not have a transcript, please send copies of your certificates of completion.

Privacy Act Notice: Disclosure of your social security number on this application is required by 42 U.S.C. § 666(a) (13) and Iowa Code § 252J.8 (1). The number will be used in connection with the collection of child support obligations and as an internal means to accurately identify licensees, and may be shared with taxing authorities as allowed by law including Iowa Code § 421.18.

I hereby certify and declare under penalty of perjury that the information I provided in this document, including any attachments, is true and correct. I am responsible for the accuracy of the information provided regardless of who completes and submits the application. I understand that providing false and misleading information in or concerning my application may be cause for disciplinary action, denial, revocation, and/or criminal prosecution. I also understand that I am required to update answers or information submitted herewith if the response or the information changes.

In submitting this application, I consent to any reasonable inquiry that may be necessary to verify or clarify the information I provided on or in conjunction with this application.

I understand that this information is a public record in accordance with Iowa Code chapter 22 and that application information is public information, subject to the exceptions contained in Iowa law.

I have read the Administrative Rules governing this profession and I agree to comply with those provisions.

_____ _____

Signature of Applicant **(REQUIRED)** Date

rev 26-Mar-19