



COURSE BROCHURE Bone Densitometry Limited License School

The Foundation for Osteoporosis Research and Education (FORE) prepares and certifies individuals as ready to take the State of California Radiological Health Branch limited license examination in bone densitometry.

The three-day bone densitometry course includes both didactic and clinical requirements. The course is conducted either in our Oakland offices or at our Santa Maria site. Most courses will be given Friday through Sunday to accommodate the working person.

Lunch is provided each day of the class. You will receive an information packet five weeks before your class date. The packet includes hotel information and materials to prepare you for the school. We accept the first 12 applications. Please supply an email address or fax number for notification.

Course objectives

- To receive all the required didactic classes to qualify to take the State of California Limited License Examination.
- To conduct all of the 20 required bone density scans plus a whole body scan demonstration.
- To successfully pass the FORE course examination.
- To acquire sufficient knowledge of anatomy and bone physiology to have a good working understanding of the clients with whom they will be working.
- Included in the course are the 20 scans that are required by the State of California to be eligible to take the state exam.

Course Fee Schedule

Non-refundable registration fee-----	\$100.00
Tuition-----	\$1,150.00
State application fee-----	\$75.00
Total class fee -----	\$1,325.00

Description of Instructions/Course Curriculum

Module	Content	Hours
X-ray Theory	<ul style="list-style-type: none"> a. <u>Basic radiation physics</u>: Fundamental Concepts, structure & composition of matter, electromagnetic spectrum, electromagnetic waves, electromagnetism, electricity, electric current, transformers, rectification b. <u>Production & properties of X-rays</u>: X-ray tube, X-ray machine, production of X-rays c. <u>Interaction of X-rays with matter</u>: X-ray beam divergence, inverse square law, absorption of X-rays, ionization, filtration d. <u>X-ray bone densitometry equipment and its application</u>: Technique factors, beam quality(HVL), milli-amperage, time and distance e. <u>Radiation Biology, Patient/ Operator Protection</u> <ul style="list-style-type: none"> i. <u>Radiation Biology</u> <ul style="list-style-type: none"> 1. Biological effects of radiation 2. Nature & risks involved 3. Blood cells and their precursors that are radiosensitive 4. Genetic damage 5. Radiosensitivity of body tissues and organs 6. Short & long terms effects of radiation. ii <u>Patient Protection</u>: <ul style="list-style-type: none"> 1. Patient shielding 2. Radiation dose to patient 3. Pregnant patient (query of pregnancy) 4. Artifactual interference (query about presence of prosthetic devises barium of radionuclides). iii. <u>Operator Protection</u>: <ul style="list-style-type: none"> 1. Maximum permissible dose equivalent 2. Methods of monitoring (film TLD badge) 3. Operator station during exposure 4. Pregnant operator 5. Increased distance during exposure 6. Wear lead protective apron 7. Protection against scatter and leakage 	3
Bone Biology, Bone Disease and Therapy	<ul style="list-style-type: none"> a. Etiology of bone b. Diagnosis of osteoporosis c. Epidemiology of the prevalence of the problem d. Prevention e. Approved treatments 	3
X-Ray Bone Densitometry Equipment	<ul style="list-style-type: none"> a. Precision b. Accuracy c. Central vs. peripheral 	4

Component Hardware, Software, Computer Operation, Quality Assurance	<ul style="list-style-type: none"> a. <u>Scan table</u>: power on switch, X-ray on open shutter b. <u>Scan table</u>: power on switch, X-ray on open shutter lights, emergency stop button, reset button and i/o cable, calibration standard, pad, leg block and foot brace c. <u>Computer (controller)</u>: power on switch, rebooting, disk drives, DOS commands d. <u>Printer</u>: power on switch, loading paper, replacing ribbon (cartridge) on- line status e. <u>Monitor</u>: power on switch, brightness and contrast adjustments turn off the monitor at night f. <u>Miscellaneous</u>: isolation transformer, routine maintenance g. 	3
Anatomy and Physiology of the Spine, Hip, and Forearm,	<ul style="list-style-type: none"> a. <u>Anatomy</u>: lumbar vertebrae (transverse processes, intervertebral spaces), iliac crest, ribs, femur: (shaft trochanter, neck, Wards triangle), symphysis pubis b. <u>Physiology</u>: function of bone types of bones; 3. c. <u>Spine Positioning</u>: pre-scan check, general positioning, spine positioning, leg block, longitudinal axis positioning, transverse axis positioning d. <u>Femur Positioning</u>: pre-scan check, general positioning, femur positioning, longitudinal axis positioning, transverse axis positioning, foot brace: e. <u>Total Body Positioning</u>: pre-scan check, general positioning, longitudinal axis positioning, transverse axis positioning, feet & leg straps f. <u>Forearm</u>: anatomy & positioning 	4
Ethics & Patient Handling	<ul style="list-style-type: none"> a. <u>Ethics</u>: medically indicated patients, repeat scans, patient consent, pregnancy, computer placement and spatial restrictions, room restrictions and posting b. <u>Patient Handling</u>: assisting patients onto the table, scan arm precautions, patient positioning, patient comfort, removing the patient from the table, moving components of the scan table, data confidentiality 	1
Laboratory Instruction	<ul style="list-style-type: none"> a. <u>Spine</u>: Normal view, artifactual distortion, b. <u>Hip</u>: Positioning, adjusting for unusual body types c. <u>Extremities</u>: Measurement, how to cope with smaller body types 	4
Clinical Education	<ul style="list-style-type: none"> a. 5 spine scans b. 5 hip scans c. 10 extremity scans 	4

We are registered with the State of California. Registration means we have met certain minimum standards imposed by the state for registered schools on the basis of our written application to the state. Registration does not mean we have met all of the more extensive standards required by the state for schools that are approved to operate or licensed or that the state has verified the information we submitted with our registration form.

Cancellation Policy

FORE shall refund for all students, without penalty or obligation, 100 percent of the amount paid for institutional charges of \$1,250, less FORE's registration fee of \$100, if notice of cancellation is made **prior to or on the first day of instruction**. Any notification of withdrawal or cancellation and any request for a refund is required to be made in writing.

Attendance, dropout and leave of absence policy

To complete the State requirements for limited license certification, the student must finish all didactic and clinical components of the Limited License School. Should circumstances arise that the student is not able to complete the required units during any given course, FORE will offer the student the opportunity to return to the next available course. Since this is a limited three day course, leave of absence constitutes a dropout and would be treated in a similar manner as described above.

Refund Policy

FORE's refund policy for students who have completed 60 percent or less of the course of instruction shall be a pro rata refund. FORE shall deduct a registration fee of \$100 from the total tuition charge of \$1,250; dividing this figure by 26 (the number of hours in the program) creates an hourly charge of \$48.08 for the program. The amount owed by the student for the purposes of calculating a refund is derived by multiplying the total hours attended by the hourly charge of \$48.08 for instruction, plus the registration fee of \$100. The refund shall be any amount in excess of the amount owed by the student from what was paid by the student to FORE and includes the prepaid State Application fee of \$75. FORE shall pay or credit refunds due on a reasonable or timely basis, not to exceed 30 days following the date upon which the student's withdrawal has been determined.

Examples of the application of the cancellation and refund policy

	Cancel prior to or on the first day of instruction	Cancellation after 8 hours of instruction	Cancellation after 14 hours of instruction	Cancellation after 15 hours of instruction
Registration Fee	\$100.00	\$100.00	\$100.00	\$100.00
Tuition Charge	\$875.00	\$875.00	\$875.00	\$875.00
Less Instructional Charge of \$36.46/ hr	\$0.00	\$291.68	\$510.44	\$0.00
State Registration	\$75.00	\$75.00	\$75.00	\$75.00
Refund Due*	\$1,225.00	\$658.32	\$439.56	\$75.00

Frequently Asked Questions

Who is eligible for the course?

Anyone, 18 or older, is eligible to take the course, but a medical background is helpful.

What size are the classes?

The Bone Densitometry course is designed for a small classroom setting and individualized instruction. The course enrolls up to sixteen students.

What kind of machine will the students be using?

Although FORE uses Hologic and GE Lunar DEXA machines, this course is designed to be a companion to the manufacturer's training. Students may indicate their preference and we try to accommodate these requests but do not guarantee them.

What does the license qualify me to do?

A Limited License qualifies a technician to do bone densitometry testing only.

How do I register?

To register for the Limited License School, please go to our website (www.fore.org) and download the registration form and all relevant information. You can also request a registration form be sent to you by fax or mail. Please email beverley@fore.org.

How long does it take to get my Limited License from the time I take the course?

FORE processes all the state required paperwork within one week from the completion of the course. The processing at the state level varies; anticipate approximately two months from completion of the Limited License course to receive your license.

Can I take the state exam without taking a Limited License Bone Densitometry course?

You must successfully complete a Limited License Bone Densitometry course before you apply to take the state exam.

How much does the course cost?

The total cost for the course is \$1,050.00; this includes a non-refundable registration cost of \$100.00, tuition cost of \$875.00 and the state exam application cost of \$75.00. All tuition and applicable fees due at the time of registration..

Is there a wait-list policy?

Due to the limited number of students per school, a waiting list is sometimes necessary. Anyone who is wait-listed for a course will automatically be enrolled in the next school.

Still have more questions?

Please call 510-832-2663 x16 or 888-266-3015 x16.