



Gunn College of Health Sciences and Human Services
Department of Radiologic Sciences
Bachelor of Science, Radiologic Technology Program
Course Syllabus - Dr. Rodney Fisher

RADS 3853 Bone Densitometry

Section X20 Spring 2026 Online

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WHY ARE YOU TAKING THIS COURSE?

This course will provide radiologic science professionals with knowledge of bone densitometry and its history. This course will cover various topics such as:

- Skeletal anatomy
- Indications for bone density studies
- The pathology of low bone mass and osteoporosis
- Densitometry techniques
- Physics of Dual-energy X-ray Absorption (DXA)
- Statistics and quality control
- Risk fracture prediction
- Radiation exposure in DXA

This course meets the 16 hours of structured education required by the ARRT to sit for the Bone Densitometry Registry, R.T. (BD). You must still satisfy the clinical requirements. All ARRT approvals and requirements are subject to change. If there is a question, please ask the instructor.

WHAT ARE THE TEXTBOOKS YOU WILL NEED?

Your textbook is out of print, but I have made special arrangements to reprint and sell it in the bookstore. It is called a "course pack" because it was made specially for this course. The book is called Bone Densitometry for Technologists (3rd Edition) by Sydney Lou Bonnick and Lori Ann Lewis. You must use the third edition. Previous editions are missing chapters that you will be tested on. The bookstore sent you information about this book, which was included in your tuition. Be sure to follow my posted directions so you can access your textbook.

WHAT ELSE DO I NEED?

You will need a Windows or Mac-based computer. Please note that Chromebooks will not work because they are incompatible with the Respondus Lockdown Browser system used to proctor all tests and the final examination. You will also need a webcam with a working microphone and an adequate Internet connection.

HOW DO YOU CONTACT ME?

I prefer email for most contacts. This gives me a written record of what we discussed so I do not forget anything important. Also, I am often away from my desk and may be hard to reach by telephone. If you need to reach me by phone, please email me to schedule an appointment. The appointment will ensure that I have everything ready for your call, and we will not be disturbed.

HOW OFTEN DO YOU NEED TO LOG IN TO THE COURSE?

Although there is no attendance policy for this course because it is online, it is very important that you log in to D2L at least once a week. I may post news items that will require your attention. It is also good to check your email a few times during the week. Please make sure your email address is kept up to date with the university. You may do this through the MSU Portal.

HOW DO I GRADE THIS COURSE?

I use the following grading scale:

A = 100 – 90

B = 89.99 – 80

C = 79.99 – 70

D = 69.99 – 60

F = 59.99 and below

While I do not round individual assignments, I will round your semester grade up to the next grade if you are within 0.5 points of the next grade. Late assignments are not accepted without my prior approval, and if I do accept any late assignments, they are subject to a late penalty.

Your semester grade will be made up of the following types of assignments:

Unit Quizzes (6) 40 %

Unit 7 DXA Project 20 %

Final Examination 40 %

WHAT IS THE CLASS SCHEDULE / DUE DATES?

All times are MSU campus time

Date	Assignment
January 20	Class opens All quizzes are open until May 1
March 15	Midterm – Unit 4 should be completed to be on track to complete the course on time.
April 1	Both the Unit 7 DXA Project and the Final Examination are open. They are both open until May 1
April 9	Last date to withdraw from this course and receive a “W” by 4:00 pm
May 1	All 6 Unit Quizzes are due by 11:59 PM Project (Quiz 7) is due by 11:59 PM Final is due by 11:59 PM

WHAT WILL WE COVER IN THIS COURSE?

These are the units we will discuss in this course:

Unit 1: Osteoporosis

Unit 2: Introduction to Densitometry and Densitometry Techniques

Unit 3: Skeletal Anatomy and Performing a DXA Exam

Unit 4: Precision in Densitometry and Radiation Safety

Unit 5: Quality Control and Predicting Fracture Risk

Unit 6: Pediatric Bone Densitometry, VFA, Bone Composition Analysis

Unit 7: Final Project

WHAT ARE THE ASSIGNMENTS?

Unit Quizzes should be taken after you have reviewed the chapter in the book and **any course notes**. The tests consist of randomized multiple-choice questions.

Each quiz is timed. The quiz lengths are:

Unit	# of Questions	Maximum Time in Minutes
1	45	90
2	35	60
3	30	60
4	28	60
5	21	60
6	32	60

The Course Project consists of 10 case studies; you will answer questions about them in D2L. This is Quiz 7, but it is not really a quiz. You have unlimited time and can save your progress. Be sure to read the instructions and tips in the course so you do well on this.

The Final Examination can be taken any time between April 1 and May 1. You must complete all module tests prior to taking the final examination. The final examination is a closed-book and notes. It is taken using the Respondus Lockdown Browser with Webcam built into D2L. You must take the appropriate practice quiz

before taking the Final to ensure you know how to use the Response system. The final examination is comprehensive and consists of 83 randomized multiple-choice questions. You will have 120 minutes to complete the final examination.

WHAT IS THE LATE ASSIGNMENT POLICY?

Normally, I do not accept late work. Tests must be done in order, and all tests must be completed before you may take the final examination. This is true even if you are late on a test and receive a “zero” on it. You must still take the test. I do understand that sometimes there are very special situations with extenuating circumstances. If you know you will be late with an assignment, or if something happens and you miss a due date, please email me with the reasons. I may make an exception depending on the specific circumstances, and I reserve the right to impose a late penalty if I do accept late work. **The final examination MUST be completed by the due date without exception. You have a month to take it, so there is no reason for the final to be late.**

Image Acquisition and Processing Course Policy Details

Professional Conduct

All students are expected to comport themselves professionally at all times while in class or working on course projects with other students on or off campus. If students have questions about what proper professional conduct should be, please refer to the University Student Handbook on the Office of Student Rights and Responsibilities website. Violations of these standards or policies may result in grade reduction and referral for disciplinary action.

Attendance

Since this is an online course, attendance is not taken. However, students should check the course at least once a week to stay up to date on any updates or notifications.

Requesting a Withdrawal

The last opportunity to drop this course with a grade of “W” is 4:00 pm on April 9, 2026. The student must initiate all withdrawals. After this date, dropping the course results in a grade of “F.” Withdrawal from this course will result in the student being dismissed from the BSRT program.

In an emergency or extenuating circumstance, a student may request an incomplete grade before grades are submitted. If the professor grants the incomplete, the student has until thirty (30) days after the beginning of the next long semester to complete the course requirements. If the student does not complete the course requirements by the deadline, the incomplete grade will automatically convert to an “F.”

Technical Difficulties

Occasionally, you may experience problems accessing D2L, accessing class files within D2L, connecting to your internet service, or other computer-related issues. Make the professor aware of a technical problem as soon as possible. If a problem occurs due to a system error, such as a D2L failure, a due date extension will typically be granted. **However, remember that it is your responsibility to have (or have access to) a working computer in this class.**

Assignments and tests are due by the due date, and personal computer technical difficulties will not be considered a reason for the instructor to allow students extra time to submit assignments, tests, or discussion postings.

Dropbox assignments that can be attached to an email should be emailed to the professor as soon as a problem is encountered. Failure to do so may result in the loss of points, regardless of connection issues.

For help options:

- For D2L issues, go online go to the Distance Education Helpdesk
- By phone, call the Distance Education office at 940-397-4868 between 8 am and 5 pm.
- Use the D2L help link in D2L.

- Contact your professor.
- For other computer access issues, visit the MSU Information Technology Website online.

Special Needs

In accordance with Section 504 of the Federal Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, Midwestern State University endeavors to make reasonable adjustments in its policies, practices, services, and facilities to ensure equal opportunity for qualified persons with disabilities to participate in all educational programs and activities.

The Office of Disability Services (ODS) provides information and assistance, arranges accommodations, and serves as a liaison for students, professors, and staff. The ODS has assistive devices such as books on tape, recorders, and adaptive software, which can be loaned to qualified individuals. A student/employee who seeks accommodations based on disability must register with the Office of Disability Services in the Counseling Center, Clark Student Center, Room 108. Documentation of disability from a competent professional is required.

Individuals with grievances related to discrimination or a lack of accommodation based on a disability are encouraged to resolve the problem directly with the relevant area. If the matter remains unresolved, the Office of Disability Services will provide advice and/or assistance. The grievance procedure is in the Student Handbook and Activities Calendar.

The Director of the Counseling Center serves as the ADA Coordinator and may be contacted at (940)397-4618, TDD (940)397-4515, or 3410 Taft Blvd., Clark Student Center Room 108.

Administrative Process

Unresolved issues related to this course should be first addressed between the student and the course professor. If there is no resolution, students must follow this sequence:

1. Department Chair – Dr. Lynette Watts (940-397-4845)
2. College Dean - Dr. Jeff Killion (940-397-4594)
3. Dean of Students – Matthew Park (940-397-7500)

Honor System

RADS 3033 adheres to the MSU Code of Conduct.

In particular, academic dishonesty, however minor, breaches academic integrity. A student's participation in this course comes with the expectation that his or her work will be completed in full observance of the MSU Code of Student Conduct. A student should consult the current Student Handbook for answers to any questions about the code.

All components of RADS 3033 are designed to represent each student's individual efforts or, as appropriate, each student group's efforts and are NOT to be shared, copied, or plagiarized from other sources. When students submit their work for grading, they attest that they have abided by this rule.

An online plagiarism/artificial writing detection service may be used in this course. Student assignments may be uploaded to the service for the identification of similarities to other student papers and published works, or the use of artificial writing generators in place of the student's own work.

Cheating includes, but is not limited to

- Use of any unauthorized assistance in taking quizzes, tests, or examinations;
- Dependence upon the aid of sources beyond those authorized by the professor in writing papers, preparing reports, solving problems, or completing other assignments, or
- The acquisition of tests or other academic materials belonging to the university faculty or staff without permission.

Plagiarism includes, but is not limited to

- The use of, by paraphrase or direct quotation, without correct citation in the text and in the reference list,
- The published or unpublished works of another person.
- Students may NOT submit papers and assignments that they have previously submitted

for this or other courses.

- The use of materials generated by agencies engaged in "selling" term papers is also plagiarism.

Artificial Intelligence (AI) Usage Policy

In this course, the use of Generative AI tools (such as ChatGPT, Claude, Gemini, etc.) is permitted with specific limitations to ensure academic integrity and the development of critical research skills.

- **Research & Sourcing:** You may use AI tools for preliminary research and topic exploration. However, to ensure the validity and scholarly weight of your work, at least 50% of the sources cited in any assignment must be retrieved directly from the MSU Moffett Library online databases.
- **Writing & Content:** The use of AI in the writing process is strictly limited to spelling and grammar correction. AI tools are not permitted to generate text, arguments, analysis, or the bulk content of any assignment, including research papers, posters, and discussion board posts.
- **Verification:** To maintain the integrity of your research, you must be prepared to provide PDF copies of all sources used upon request.
- **Consequences:** Failure to adhere to these guidelines will be treated as a violation of academic integrity. A violation will result in a grade of zero for the assignment. Egregious cases of academic dishonesty involving AI may result in a failing grade (F) for the course, and may result in dismissal from the program and university, and an ethics violation referral to the ARRT.

Academic dishonesty (cheating, plagiarism, AI, etc.) will not be tolerated in this class. Whenever a student is unsure of whether a particular situation will be interpreted as academic dishonesty, the student should ask the professor for clarification. If students are guilty of academic dishonesty, a grade of zero (0) will be given for the quiz, assignment, etc., and the student will

not be allowed to resubmit the assignment. Based on the severity of the cheating, plagiarism, or use of AI, the professor reserves the right to fail the student in the course and refer the student to the department chair for further disciplinary action, which could include permanent dismissal from the program. Cases may also be referred to the Dean of Students for possible dismissal from the university and the ARRT as a possible ethics violation.

Students are encouraged to review the tutorials and suggested websites for more information about plagiarism. If you have any questions about what constitutes plagiarism, please consult:

- The University Academic Dishonesty Policy
- The website Plagiarism.Org, or
- The professor

Please Note

By enrolling in this course, the student expressly grants MSU a "limited right" to all intellectual property created by the student for the purpose of this course. The "limited right" shall include, but shall not be limited to, the right to reproduce the student's work/ project in order to verify originality and authenticity and for educational purposes. Specifically, faculty may submit student papers and assignments to an external agency to verify originality and authenticity and to detect plagiarism or the use of artificial writing generators.

Campus Carry / Active Shooter

Campus Carry

Effective August 1, 2016, the Campus Carry law (Senate Bill 11) allows those licensed individuals to carry a concealed handgun in buildings on public university campuses, except in locations the University establishes as prohibited. The new Constitutional Carry law does not change this process. Concealed carry still requires a License to Carry permit, and openly carrying handguns is not allowed on college campuses. For more information, visit [Campus Carry](#).

Active Shooter

The safety and security of our campus is the responsibility of everyone in our community. Each of us has an obligation to be prepared to appropriately respond to threats to our campus, such

as an active aggressor. Please review the information provided by the MSU Police Department regarding the options and strategies we can all use to stay safe during difficult situations. For more information, visit [Safety / Emergency Procedures](#)