

IDAHO STATE UNIVERSITY
Department of Radiographic Science
R.S. 4450, Alternate Imaging Modalities
Course Syllabus

Course Credit: 1 Credit
Time and Tuesday, 10- 10:50 a.m.
Location: NURS Rm 120
Instructor: Christopher Wertz, EdD, RT(R)
Phone: 208-282-2871 or 208-282-4042 (Office)
Email: christopherwertz@isu.edu

Course Learning Objectives/Goals: This course will study the Alternate Imaging Modalities of Computed Tomography (CT), Nuclear Medicine (NM), Ultrasonography (US), Magnetic Resonance Imaging (MRI), Angiography, Mammography, and Radiation Therapy (RT). The pedagogy will examine the mechanics and basic physics of each modality. The instruction will involve outside lectures from professionals working in each modality. Additionally, the student will perform qualitative research by writing several papers using “peer reviewed” journals for analysis. The papers will be written in the American Medical Association format (AMA). The course will conclude with a case review and oral presentation of a topic that has been approved by the course instructor.

Main References:

AMA (American Medical Association) Reference Citation Format. This tip sheet contains most frequently requested information. For complete style manual online see: [AMA Manual of Style Online](#) or the print American Medical Association Manual of Style 10th Edition on Reserve in the Health Sciences Library, Call # **WZ 345 A511 2007**.

AMERICAN MEDICAL ASSOCIATION (AMA) CITATION STYLE, PDF file referenced in the Moodle Supplementary Course.

AMA Manual of Style, 10th ed., which is located in the Reference Section of the West Library and online through the Library’s E-resources (<http://westlibrary.txwes.edu/sfind/eresources/3903>). You can also ask one of the librarians (reference@txwes.edu) if you have any specific questions.

Other References that will be helpful:

Bushong, Stewart C. Radiologic Science for Technologists. St. Louis: CV Mosby.

Bontrager, Kenneth L. Textbook of Radiographic Positioning and Related Anatomy, St. Louis: CV Mosby.

Ballinger, Philip W., Frank, Eugene D. Merrill's Atlas of Radiographic Positions and Radiologic Procedures. St. Louis: CV Mosby.

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Method of Presentation: Lecture, Handouts, Computer Presentations

Code of Ethics: RS 4450 adheres to the ISU Code of Conduct. In particular, academic dishonesty, however small, creates a breach in 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 ISU Code of Student Conduct.

The **Secretary's Commission on Achieving Necessary Skills (SCANS)**: This commission was appointed by the Secretary of Labor to determine the skills people need to succeed in the work place. The Commission's fundamental purpose is to encourage a high-performance economy characterized by high-skill, high-wage employment. The Commission's research found that effective job performance is what business calls *workplace know-how*. This know-how has two elements: competencies and a foundation. The SCANS report identifies five competencies and a three-part foundation of skills and personal qualities that lie at the heart of job performance. While the Commission's work ended with the report, its recommendations must be implemented; as the report stated, "...defining competencies and a foundation is not enough. Schools must teach them. Students must learn them."

<http://www.academicinnovations.com/report.html>

Description of SCANS competencies are as follows:

A Three Part Foundation	
1. Basic Skills	reads, writes, performs arithmetic and mathematical operations, listens and speaks
2. Thinking Skills	thinks creatively, makes decisions, solves problems, visualizes, knows how to learn, and reasons
3. Personal Qualities	displays responsibility, self-esteem, sociability, self-management, and integrity and honesty
The Five Competencies	
4. Resources	identifies, organizes, plans and allocates resources
5. Interpersonal	works with others
6. Information	acquires and uses information
7. Systems	understands complex interrelationships
8. Technology	works with a variety of technologies

Each of these foundations and competencies are listed after the objective that meet the competency or skill set described above.

Course Learning Outcomes:

Upon completion of this chapter the student will be able to:	SCANS
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Become acquainted with the research resources available to ISU students in the Obler Library and online.	1,2,3,4,5,6,7,8
Describe the principles of each of the alternate imaging modalities presented in this course and the advances that have been made in each modality during the past few years.	1,2,6
Contrast and compare the advantages and disadvantages of each of the alternate imaging modalities presented in this course.	1,2,6
Develop expertise in APA style of writing.	1,2,4,6,
Write several annotated bibliographies from peer reviewed journals on a topic of research that involves the imaging modalities presented by guest lecturers.	1,2,3,4,6
Write a 8-10 page literature review type paper on a topic relating to radiographic science that has been approved by the instructor.	1,2,3,4,6,7,8
List 2 or 3 of the alternate imaging modalities that he/she may be interested in pursuing during post baccalaureate study.	1,2,6

Academic Dishonesty Policy:

Academic dishonesty (cheating, plagiarism, etc.) will not be tolerated in this class and may result in suspension or dismissal from this course and from the program. Cases will also be referred to the Dean of Students for possible dismissal from the university.

Cheating includes, but is not limited to, (1) use of any unauthorized assistance in taking quizzes, tests, or examinations; (2) dependence upon the aid of sources beyond those authorized by the instructor in writing papers, preparing reports, solving problems, or completing other assignments; or (3) 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 recognition, the published or unpublished works of another person. The use of materials generated by agencies engaged in "selling" term papers is also plagiarism.

Many components RS 4450 are designed to be highly interactive. Students are encouraged to take full advantage of the many resources available including Internet sites, handouts and workbooks, other textbooks and journals, faculty, and peers. This interactive collegial learning environment is conducive for life-long learning.

When students submit their efforts for grading, they are attesting that they have abided by these rules.

Classroom Procedure

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Attendance: A portion of the grade for this class will be on attendance and active participation. **There will be no make-up points available for missing class**, and only extreme cases (i.e. sickness with proof of a doctor’s note, loss of an immediate family member, etc.) will be excused. Each lecture will be worth 100 points (see course grading).

I understand we are in uncharted territory this semester with extra protocol and precautions. You are not expected to come to class or lab if you are exhibiting any symptoms of COVID-19. The key is to communicate early and often with me. I am much more accommodating if you communicate before or as soon as issues arise.

Assignments: Several Annotated Bibliographies will be required for the modalities discussed in this class. The 2nd class period will be spent at the Obler library in the computer lab learning how to find articles from “peer reviewed” journals from the last 5 years. The Annotated Bibliographies will be uploaded into the Moodle site and graded by the instructor and reposted to the site. **No late work will be accepted**, except in cases of emergency with prior arrangement with the instructor. Visit the Web Course for specific information and to see past examples of student work.

Literature Review type Research Paper: A literature review type research paper will compose 25% of the grade for this class. This paper will be written in AMA format. Specific guidelines and instructions will be presented in class and are available for student retrieval and review in the supplementary Moodle site for this course.

Grading Procedure:

Assessment Method	Percentage Value
Annotated Bibliographies	10% (3, 7)
Quizzes	10%
Literature Review type Research Paper	25%
PowerPoint Presentation of Case Study	15%
Guest lecture attendance	40%

This grading Scale will be used:

+/- System			
93-100%	A	73-76%	C
90-92%	A-	70-72%	C-
87-89%	B+	67-69%	D+
83-86%	B	63-66%	D
80-82%	B-	60-62%	D-
77-79%	C+	59% Below	F

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Note: A grade of C or better is required in this course in order to receive a degree from the Department of Radiographic Science.

The minimum requirements to earn a passing grade are successful completion of all assignments (70% minimum). Due dates are posted in the Web Course Calendar and reminders will be given in class.

Cell phone policy: Cell phones should not be used in class. They should be placed in silent or vibrating mode or turned off. Additionally receiving and retrieving text messages should not occur during class or in labs. Failure to follow this policy will result in a deduction of grade up to 10% at the discretion of the instructor. If you need to communicate to someone outside of the class in an emergency situation please inform the instructor so accommodations to this policy may be made.

Electronic Devices: Electronic devices such as laptops and tablets may be used in class for note-taking and academic purposes. If a student is caught using such devices for any other purpose (i.e. social networking, gaming, etc.) the student will be dismissed from the class for that week.

No electronic devices are to be used during guest lectures/presentations.

Disability Services: Students with disabilities who wish to have accommodations provided by the University must self-identify with Disability Services (208-236-3599) in order to have accommodations provided. Information and applications are available in the Center and may be picked up in person or requested by telephone. The URL is <https://www.isu.edu/disabilityservices/>

Statement on Success: Success in this course depends heavily on your personal health and wellbeing. Recognize that stress is an expected part of the college experience, and it often can be compounded by unexpected setbacks or life changes outside the classroom. I encourage you to reframe challenges as an unavoidable pathway to success. Reflect on your role in taking care of yourself throughout the term, before the demands of exams and projects reach their peak. Please feel free to reach out to me about any difficulty you may be having that may impact your performance in this course. If you are experiencing stress in other areas of your campus life, I am happy to help you get in contact with other resources on campus that stand ready to assist you. In addition to your academic advisor, I strongly encourage you to contact the many other support services on campus that are available.

Statement on Services: ISU Counseling and Testing Services (CATS) would like to remind all students who are enrolled in the current semester (part-time or full-time) they are eligible for free, confidential counseling services. CATS offers individual, group, and couples counseling, as well as Biofeedback Training. We also offers crisis intervention services Monday through Friday from 8-5.

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Pocatello location: Graveley Hall, 3rd floor of the south side. To schedule an appointment call 208-282-2130 or just stop by. Walk-ins are welcome Monday-Friday from 8am - 4pm.

COVID 19: Idaho State University requires all faculty, staff, and students to wear face coverings indoors—regardless of vaccination status—unless alone in a private office, campus residence, or workspace. This on-campus face covering requirement for indoor spaces will be reviewed every two weeks and removed as the local situation improves. This precaution will allow us to maintain a safe classroom environment, continue face-to-face instruction, and meet our shared duty to care for others in our community.

The University also strongly encourages all individuals to receive a COVID-19 vaccine. Students who are experiencing COVID-19-like illness should NOT come to class and should contact the COVID Health Committee at COVID@health.isu.edu or (208) 282-2705. All confirmed cases of COVID-19 should be provided to the COVID Health Committee on the self-reporting form. All students are required to fully participate in the university's contact tracing process and follow all instructions related to quarantine and isolation.