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| **Course Credit:** | 1 Credit |
| **Time and Location:** | Thursday: Class  NURS Rm 120 or Health West |
| **Instructor:** | Chelsie Wheatley, BSDMS, BSRS, RT(R), RDMS, RVT |
| **Phone:** | 208-282-3311 or 282-4042 (Secretary, Alyssa) |

**Overview:** This course will provide skills needed to apply knowledge learned in class. It will help to develop psychomotor and critical thinking skills required to properly perform commonly ordered sonography examinations. This will include hands on scanning exercises and completion of laboratory assignments and competency assessments. Students will acquire knowledge of anatomical landmarks, standard exam protocols, scanning techniques, patient care skills, and proper machine operation and maintenance.

**Textbooks:** Hagen-Ansert, Sandra. “Textbook of Diagnostic Sonography” Volumes I and II. 8th Edition. St. Louis, MO: Elsevier; 2018.

**Method of Presentation:**  Lecture, SonoSim, Lab scanning

**Code of Ethics:** DMS 4410 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.

**Course Learning Objectives/Goals:** This course has been designed to prepare student sonographers for the clinical field. The student will learn the psychomotor skills needed for quality imaging, knobology, and image techniques. Basic use and maintenance of the machine will be taught. At the conclusion of this course, students will demonstrate understanding of sonographic protocols, image acquisition, scanning techniques, anatomic landmarks, image evaluation, and knobology. Ultimately, the student will gain a better understanding of the process involved in obtaining a technically adequate sonogram. This laboratory understanding prepares the student for the corresponding clinical experience.

**Course Learning Outcomes:**

* Identify the major organs within the abdominal cavity and the major vessel surrounding them.
* Demonstrate competency in scanning the abdominal aorta, IVC, and common iliac arteries and veins.
* Demonstrate competency in scanning the gallbladder in multiple scan planes.
* Identify the main veins of the liver and the parts of the liver each vessel feeds.
* Demonstrate normal waveforms for abdominal vascularity.
* Demonstrate competency in holding the transducer and proper selection.
* Discuss the differences in transducers and which ones are appropriate for differing examinations.
* Identify the three vessels that come off the celiac trunk, and list the order of the arteries that come off of the aorta from the proximal portion to the distal portion.
* Demonstrate competency in scanning the portal triad.
* Compare and contrast the different hepatic vessel appearance sonographically.
* Demonstrate accurate measurement acquisition of the aorta, common iliac arteries, liver, gallbladder wall, common bile duct, and spleen.
* Identify liver pathologies and differing parenchymas sonographically.
* Identify sonographic appearances of portal hypertension.
* Demonstrate scanning competency of the biliary tree.
* Identify sludge, stones, wall thickening, and pericholecystic fluid sonographically.
* Know sonographic appearance of splenic texture and size.
* Demonstrate the pelvic structures sonographically.
* Show competency in measuring the uterus, endometrium, and bilateral ovaries sonographically.
* Discuss protocols for pelvic imaging, as well as the indications and contraindications for transabdominal and transvaginal scanning.
* Identify uterine pathologies sonographically.
* Demonstrate doppler imaging in the pelvis, aorta, IVC, and liver.
* Discuss sonographic findings of the common cystic and complex ovarian masses, common solid masses, and ovarian neoplasms.
* Describe sonographic findings of salpingitis, pyosalpinx, tubo-ovarian abscess, endometrioma, and adenomyosis.

**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 DMS 4410 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:**

1.  **Attendance:**  You are expected to attend lab 100% of the time. If you miss it, you will receive a 0. SonoSim images may be taken on the student’s own time at home but they have to be turned in by the deadline at midnight, MST.

2.  **Grading Procedure:**

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| **Assessment Method** | **Percentage Value** |
| SonoSim Quizzes x 17 | 25% |
| SonoSim Images x 17 | 25% |
| Lab Scanning Images | 40% |
| Lab Quizzes | 10% |
| Total | 100% |

**This grading Scale will be used:**

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| --- | --- |
| +/- 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 |

*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 assigned work (70% minimum).

3.  **Make-up:** If you are unable to sit for a lab, you may request a make-up lab.  You must inform me that you will not be present for the examination **prior** to the scheduled time.  An additional 10% drop in the lab grade will result if prior notification is not given and is not accepted by me prior to the lab.  The highest grade you can receive for a make-up lab is 89% unless you provide me with an acceptable excuse. An acceptable excuse is defined **as very** sick; a death in the immediate family; some unforeseen circumstance that would prohibit you from performing the lab. The key is to communicate with me directly via email, phone, or in person. Do not speak to another faculty member or the department secretary. I’m very easy to catch with email, but make sure your email is received by me prior to the lab.

**Cell phone policy:** Cell phones should not be used in lab. They should be place 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. In the lab setting, images may be taken on your cell phones for the purpose of turning those images in to me for grading.

**Disability Services:** Students with disabilities who wish to have accommodations provided by the University must self-identify with Disability Services (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 <http://www.isu.edu/ada4isu/>