

Midland College  
**MASTER SYLLABUS**

**DMSO 2230: Advanced Ultrasound and Review (2-0-0)**

**COURSE DESCRIPTION**

This course prepares students for medical sonography credentialing exams. Additionally, it covers the knowledge, skills, and professional values within a legal and ethical framework addressing emerging technologies and professional development.

**STUDENT LEARNING OUTCOMES**

Upon successful completion of the course the student will discover and be able to apply problem solving and critical thinking skills in the context of professional transition; and demonstrate registry preparedness. The following learning outcomes will be addressed:

1. Demonstrate the knowledge and ability to write professional papers and case studies for publication in professional journals.
2. Demonstrate knowledge and understanding of the various lab accreditation practices with respect to the practice of diagnostic ultrasound.
3. Demonstrate knowledge and understanding of the legal aspects and implications of the practice of sonography.
4. Demonstrate knowledge and explore the technological advancements in the field of ultrasound including 3D, tissue harmonics, equipment advances and limitations for improved resolution.
5. Demonstrate knowledge and understanding of the use of contrast agents.
6. Demonstrate knowledge and familiarity with intraoperative, intravascular, brachytherapy, cryo ablation techniques and procedures utilizing ultrasound
7. Demonstrate knowledge and understand the importance of coding and reimbursement issues affecting sonography
8. Demonstrate knowledge and awareness of the various aspects of musculoskeletal injuries and ergonomics encountered in ultrasound.
9. Demonstrate knowledge and awareness of our culturally diverse nation and apply this knowledge to clinical practice in sonography and medicine.
10. Demonstrate knowledge of and exhibit professional behavior that is consistent with the profession of sonography.

**STUDENT CONTRIBUTIONS, RESPONSIBILITIES, AND CLASS POLICIES**

Attendance is essential to the student's success and is outlined in the Midland College Catalog and Student Handbook, and the Sonography Program Handbook. The subject matter of the Sonography Program's curricula concerns the health and safety of the patients cared for by the Sonography students and graduates. Thus, it is critical that students are present for all class sessions in their entirety.

It is the student's responsibility to obtain notes and material covered in class during their absence.

The student is expected to participate in class discussions.

Late assignments will not be accepted and will result in a grade of zero (0).

**EVALUATION OF STUDENTS**

Final grade will be a criterion-referenced standard percentage, not curved, composed as follows:

- **Attendance** – 5%

- **Academic Paper** – 25%
- **Assignments** – 30%  
During this course, the student will complete assignments including, but not limited to:
  - Discussion boards
  - Research paper
  - Written Case Study
  - Mock Registry Practice
  - Cultural Diversity Presentation
- **Mock Registry Examinations** – 40%  
Each student will be required to pass a comprehensive examination in each (ultrasound physics and instrumentation, abdomen, and obstetrics) with an 80% or better within three attempts. These will be similar to the registry.

## COURSE SCHEDULE

The student will conduct research on the various topics on their own. Some topics will be presented in a lecture format; in this case, class will meet one hour per week. See attached class schedule for topics to be covered each week.

## NON-DISCRIMINATION STATEMENT

Midland College does not discriminate on the basis of race, color, national origin, sex, disability or age in its programs and activities. The following individual(s) have been designated to handle inquiries regarding the nondiscrimination policies: Nicole Cooper, Title IX Coordinator, 3600 N. Garfield, SSC 129, Midland, Texas 79705, (432) 685-4781, [title9@midland.edu](mailto:title9@midland.edu), or see [Midland College's Nondiscrimination Policies](#). For further information on notice of non-discrimination, visit the [ED.gov Office of Civil Rights website](#), or call 1 (800) 421-3481.

## AMERICANS WITH DISABILITIES ACT (ADA) STATEMENT

Midland College provides services for students with disabilities through Student Services. In order to receive accommodations, students must visit <https://www.midland.edu/services-resources/accommodation-services.php> and complete the [Application for Accommodation Services](#) located under the Apply for Accommodations tab. **Services or accommodations are not automatic, each student must apply each semester and be approved to receive them.** All documentation submitted will be reviewed and a “Notice of Accommodations” letter will be sent to instructors outlining any reasonable accommodations. For more information or questions, please contact Bradley Gyatney, Director of Residence Life and Accommodations, at [bgwatney@midland.edu](mailto:bgwatney@midland.edu) or 432-685-6467.

## GRIEVANCES AND COMPLAINTS

Concerns should be expressed as soon as possible to allow for early resolution. Midland College encourages students to discuss their concerns with their instructor first. If you feel uncomfortable discussing your situation with your instructor, students can discuss their concerns with the Department Chair first, then the Dean of Allied Health. If a resolution is still not possible, students may proceed with the [formal complaint process](#).

## LICENSURE ELIGIBILITY NOTIFICATION

Completion of Midland College degrees and/or certificates does not guarantee eligibility to take a certification/registry/licensure examination. The eligibility of each person is determined on an individual basis by the regulatory body of the specific discipline. If you have a conviction of a crime other than a minor traffic violation, physical or mental disability/illness, hospitalization/treatment for chemical dependency within the past five years, current intemperate use of drugs or alcohol or a previous denial of a licensure or action by a licensing

authority, you will need to contact the specific regulatory body for an individual ruling. Some programs require a criminal background check and urine drug screen.

**OTHER CONTACT INFO**

Dean: Brandi Havner, MS, RDMS, Office: AMS A43, Phone: 432-685-6440

Midland College Police: 432-685-4734