



Ohio Institute of Allied Health

School of Integrative Healthcare

School Catalog

Addendum

Diagnostic Medical Sonography
Program (DMS)



Once you're in healthcare, you're always in demand!

Main Campus: 6245 Old Troy Pike, Huber Heights, Ohio 45424

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GENERAL PROGRAM INFORMATION

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Program Name :	Diagnostic Medical Sonography (DMS)
Credential Awarded :	Associate of Applied Science
Program Length :	24 months (96 weeks instructional length)
Delivery Format :	On Campus

ALLIED HEALTH EDUCATION DEPARTMENT MISSION STATEMENT

The mission of the Allied Health Education Department is to prepare competent, ethical, and career-ready healthcare professionals who provide safe, evidence-based services within their respective scopes of practice. The department is committed to developing graduates who demonstrate technical proficiency, professional accountability, critical thinking, and compassionate client-centered care in accordance with applicable state regulations, national standards, and industry best practices.

Through rigorous instruction, hands-on laboratory experiences, supervised clinical education, and measurable learning outcomes, the department prepares graduates to meet the evolving healthcare needs of individuals, families, and communities across diverse healthcare settings. Allied health education within the department recognizes the biological, psychological, social, and cultural dimensions of patient care while emphasizing safety, quality, professionalism, effective communication, and interdisciplinary collaboration.

The department promotes lifelong learning, ethical decision-making, respect for human dignity, and continuous quality improvement to support graduates who contribute to exceptional patient care, improved healthcare outcomes, and the advancement of their respective professions.

ALLIED HEALTH EDUCATION DEPARTMENT GOVERNING VALUES

The following values govern educational practice within the Allied Health Education Department at the Ohio Institute of Allied Health. Faculty and administration ensure these values are integrated throughout the curriculum, reflected in student expectations, and serve as the professional foundation upon which graduates build their healthcare careers.

1. **Patient Safety** - The protection of patients from preventable harm is foundational. All instructional, laboratory, and clinical experiences emphasize safe practices, risk reduction, infection prevention, proper use of equipment, and adherence to established safety protocols.
2. **Evidence-Based Practice** - Educational and clinical instruction are grounded in current research, professional standards, regulatory requirements, and industry best practices to ensure graduates deliver high-quality, patient-centered care.

3. **Technical Competence and Clinical Decision-Making** – All curriculum is designed to develop the knowledge, technical skills, and critical thinking necessary for competent practice within each allied health profession. Students are expected to apply clinical knowledge accurately while recognizing the limits of their scope of practice.
4. **Professional Accountability** - Faculty and students demonstrate integrity, ethical behavior, personal responsibility, and professionalism in all academic and clinical settings. Graduates are expected to uphold the ethical standards and responsibilities of their respective professions.
5. **Respect for Human Dignity** - Patient care is delivered with compassion, cultural humility, and respect for the unique biological, psychological, social, and spiritual needs of every individual. The department fosters an inclusive learning environment that values diversity and promotes equitable healthcare.
6. **Interprofessional Collaboration** - Quality healthcare depends upon effective communication and teamwork. Students develop the skills necessary to collaborate respectfully and professionally to support optimal patient outcomes.
7. **Regulatory Compliance and Professional Standards** - The department operates in accordance with applicable federal and state laws, accrediting agency requirements, and profession-specific standards of practice.
8. **Excellence Through Continuous Quality Improvement** - The department is committed to ongoing evaluation and continuous improvement. Program effectiveness is assessed through measurable outcomes, stakeholder feedback, and data-informed decision-making to enhance student success and the quality of allied health education programs offered.

ALLIED HEALTH EDUCATION DEPARTMENT PHILOSOPHICAL FRAMEWORK

The Allied Health Education Department at the Ohio Institute of Allied Health is grounded in the belief that allied health professions dedicate themselves to providing safe, ethical, evidence-based, and patient-centered healthcare services. Allied health education prepares students to apply scientific knowledge, technical competence, critical thinking, and professional accountability in accordance with applicable state and federal regulations, profession-specific standards of practice, and established ethical principles.

The department affirms that allied health professionals play an essential role in the delivery of quality healthcare by contributing specialized knowledge and technical expertise that support the assessment, diagnosis, treatment, rehabilitation, and ongoing care of individuals across the lifespan. Practice is informed by the biological and behavioral sciences while recognizing the psychological, social, cultural, and spiritual dimensions of health. Through this integrated perspective, graduates contribute to health promotion, disease prevention, accurate diagnosis, therapeutic intervention, and improved patient outcomes.

Contemporary allied health practice requires the ability to gather and interpret information, apply critical thinking, perform technical skills with precision, communicate effectively, and make sound decisions within the individual's defined scope of practice. The educational process emphasizes the development of clinical competence, technical proficiency, professional judgment, and collaboration with interdisciplinary healthcare teams. Classroom instruction, laboratory experiences, simulation, and supervised clinical education are intentionally integrated to prepare graduates for entry-level practice and lifelong professional growth.

The Allied Health Education Department is committed to maintaining a culture of accountability and continuous quality improvement. Program effectiveness is evaluated through systematic analysis of student learning outcomes, credentialing or certification examination performance when applicable, completion rates, graduate and employer feedback, and other established measures of program quality. Data derived from these measures guide curriculum development, instructional effectiveness, and ongoing program improvement to ensure graduates are prepared to meet the evolving needs of healthcare with competence, professionalism, and integrity.

DMS PROGRAM LEARNING OUTCOMES

1. Demonstrate knowledge of human anatomy and physiology and apply this knowledge when identifying normal and abnormal structures during sonographic examinations.
2. Operate diagnostic ultrasound equipment safely and effectively, including selecting appropriate imaging parameters and optimizing image quality.
3. Perform routine diagnostic sonographic procedures including abdominal, obstetrical, gynecological, vascular, and small parts imaging in accordance with established protocols.
4. Apply principles of patient care, including proper patient positioning, infection control practices, and patient communication during imaging procedures.
5. Demonstrate competency in obtaining diagnostic-quality sonographic images that assist physicians and healthcare providers in the evaluation and diagnosis of medical conditions.
6. Recognize normal and abnormal sonographic findings and appropriately document imaging results for physician interpretation.
7. Demonstrate knowledge of ultrasound physics and instrumentation and apply this knowledge to optimize imaging techniques.
8. Maintain professional and ethical standards in accordance with healthcare regulations, patient privacy requirements, and professional codes of conduct.
9. Communicate effectively with patients, physicians, and healthcare team members in a professional clinical environment.
10. Apply critical thinking and problem-solving skills to adapt imaging techniques based on patient condition, anatomy, and clinical indications.

11. Demonstrate readiness for entry-level employment in hospitals, outpatient imaging centers, physician offices, and other healthcare facilities that utilize diagnostic medical sonography.



CURRICULUM INFORMATION

COURSE SEQUENCING

Course Name	Theory Clock Hours	Lab Clock Hours	Clinical Clock Hours	Total Course Clock Hours	Credit Hours
Quarter 1					
ALG 210 College Algebra	30	0	0	30	3
DMS 210 Success Skills	30	20	0	50	4
BIO 210 General Biology	30	20	0	50	4
ENG 210 Basic Composition	20	0	0	20	2
MED 210 Medical Terminology	20	0	0	20	2
Quarter 2					
BIO 220 Anatomy and Physiology I	20	20	0	40	3
COM 220 Professional Communication	20	0	0	20	2
DMS 220 Introduction to Sonography	30	10	0	40	3.5
ENG 220 Advanced Composition	30	0	0	30	3
HOL 220 Holistic Perspectives	10	0	0	10	1
PSY 220 General Psychology	20	0	0	20	2
Quarter 3					
BIO 230 Anatomy and Physiology II	20	20	0	40	3
DMS 230 Small Parts Sonography I	30	60	0	90	6
DMS 231 Abdominal Sonography I	50	60	0	110	8
Quarter 4					
DMS 240 Small Parts Sonography II	30	60	0	90	6
DMS 241 Abdominal Sonography II	50	60	0	110	8
MED 240 Medical Law & Ethics	20	0	0	20	2

Quarter 5					
CLN 250 Clinical Rotation 1	0	0	165	165	5.5
DMS 250 Ultrasound Physics I	30	0	0	30	3
DMS 251 Gynecological Sonography	60	80	0	140	10
Quarter 6					
CLN 260 Clinical Rotation II	0	0	165	165	5.5
DMS 260 Ultrasound Physics II	50	0	0	50	5
DMS 261 Obstetric Sonography	60	80	0	140	10
Quarter 7					
CLN 270 Clinical Rotation III	0	0	240	240	8
DMS 270 Vascular Sonography I	30	80	0	110	7
Quarter 8					
CLN 280 Clinical Rotation IV	0	0	240	240	8
DMS 280 Vascular Sonography II	60	80	0	140	10
TOTALS (Program)	720	650	810	2180	131.5

COURSE DESCRIPTIONS

ALG 210 College Algebra

30 theory hours / 3 credit hours

Course Description: This course provides a working knowledge and application of college-level algebra. The course explores linear and quadratic equations, word problems, polynomials, and rational and radical equations. Students perform operations on real numbers and polynomials and simplify algebraic, rational, and radical expressions. Students examine arithmetic and geometric sequences, linear equations, and inequalities. Students learn to graph linear, quadratic, and piecewise-defined functions and solve exponential and logarithmic equations.

BIO 210 General Biology

30 theory hours / 20 lab hours / 4 credit hours

Course Description: This course introduces components of the biological and physiological domains that impact the overall perception of wellness. The course explores principles of biology, microbiology, chemistry, physics, and nutrition. Students will learn laboratory safety and basic scientific techniques.

BIO 220 Anatomy & Physiology I

20 theory hours / 20 lab hours / 3 credit hours

Course Description: This course introduces the structure and function of major human body systems. The course will discuss the relationship of individual body systems to the overall perception of wellness. Students will visualize major anatomical structures and develop an understanding of integrative function.

BIO 230 Anatomy & Physiology II

20 theory hours / 20 lab hours / 3 credit hours

Course Description: This course introduces the structure and function of major human body systems. The course will discuss the relationship of individual body systems to the overall perception of wellness. Students will visualize major anatomical structures and develop an understanding of integrative function.

CLN 250 Clinical Rotation I

165 clinical hours / 5.5 credit hours

Course Description: During this phase, the student will be placed in an externship/clinical at a hospital, imaging clinic, or doctor's office, where the objective is that the student should be involved with procedures, under the supervision of a physician or sonographer. This course allows the student to experience hands on procedures and observe abnormal pathology.

CLN 260 Clinical Rotation II

165 clinical hours / 5.5 credit hours

Course Description: During this phase, the student will be placed in a clinical/externship at a hospital, imaging clinic, or doctor's office, where the objective is that the student should be involved with procedures, under the supervision of a physician or sonographer. This course allows the student to experience hands on procedures and observe abnormal pathology.

CLN 270 Clinical Rotation III

240 clinical hours / 8 credit hours

Course Description: During this phase, the student will be placed in a clinical/externship at a hospital, imaging clinic, or doctor's office, where the objective is that the student should be involved with procedures, under the supervision of a physician or sonographer. This course allows the student to experience hands on procedures and observe abnormal pathology.

CLN 280 Clinical Rotation IV

240 clinical hours / 8 credit hours

Course Description: During this phase, the student will be placed in a clinical/externship at a hospital, imaging clinic, or doctor's office, where the objective is that the student should be involved with procedures, under the supervision of a physician or sonographer. This course allows the student to experience hands on procedures and observe abnormal pathology.

COM 220 Professional Communication

20 theory hours / 2 credit hours

Course Description: This course reviews basic competencies for communication in nursing and introduces advanced therapeutic communication principles. The course explores providing and accepting feedback, requesting support, navigating difficult conversations, and confronting incivility. Students will develop the skills necessary to support clients and facilitate interdisciplinary collaboration.

DMS 210 Success Skills

30 theory hours / 20 lab hours / 4 credit hours

Course Description: The development of self-reliance through understanding and utilizing the concepts of self-esteem, self-efficacy, goal setting, and accountability. Includes development of study skills, including library utilization, test taking, note taking, time management and critical thinking. This course also teaches introductory Microsoft Word 2013 and Microsoft Office Excel 2013 skills and how to apply them in a medical office setting. As a participant, you will become more prepared for your career as a Medical Professional in learning how to successfully support the front or back office of a clinic or hospital. This course covers the development of basic keyboarding skills to improve speed and accuracy.

DMS 220 Introduction to Sonography

30 theory hours / 10 lab hours / 3.5 credit hours

Course Description: This course provides the new student with a basic knowledge of the history and evolution of sonography, a description of career opportunities for sonographers, and an introduction to the vocabulary, scan planes, ergonomics and landmarks used in sonography as well as demonstrations of basic patient care essentials such as acquiring vital signs and moving patients. Also, the course will provide discussions regarding communication with the patient and infection control.

DMS 230 Small Parts Sonography I 30 theory hours / 60 lab hours / 6 credit hours

Course Description: This course provides the student with an understanding of the anatomy, physiology and common pathology, as well as sonographic appearance of the thyroid and parathyroid glands, the male and female breast, the prostate gland, the scrotum and its contents. There is a lab component of this class involving developing hands-on scanning skills for small part sonography protocols.

DMS 231 Abdominal Sonography I 50 theory hours / 60 lab hours / 8 credit hours

Course Description: This course will give the student knowledge and an understanding of normal sonographic appearance and anatomy of the abdominal structures. Scanning protocols and pathological conditions seen in sonographic procedures are covered. This course will include study of the pancreas, gallbladder, biliary tract, urinary tract, adrenal glands, and abdominal vessels. There is a lab component of this class involving developing hands-on scanning skills for the abdominal sonography protocols

DMS 240 Small Parts Sonography II 30 theory hours / 60 lab hours / 6 credit hours

Course Description: This course provides the student with an understanding of pediatric sonography applications. In addition, the course will provide the student with an understanding of musculoskeletal sonography applications.

DMS 241 Abdominal Sonography II 50 theory hours / 60 lab hours / 8 credit hours

Course Description: This course will give the student knowledge and an understanding of normal sonographic appearance and anatomy of the abdominal structures. Scanning protocols and pathologic conditions seen in sonographic procedures are covered. This course will cover the spleen, gastrointestinal tract, liver, abdominal spaces and pathologies, ultrasound guidance procedures and pleural space sonographic applications. There is a lab component of this class involving developing hands-on scanning skills for abdominal sonography protocols.

DMS 250 Ultrasound Physics I 30 theory hours / 3 credit hours

Course Description: This course provides students with knowledge for the understanding of diagnostic ultrasound physics, by discussing definitions and relationships of ultrasound wave motion, frequency, and wavelength, and interactions with human tissues. This covers the interactive characteristics of refraction, reflection, scattering, absorption, and attenuation, transducer construction and types, machine instrumentation, color and spectral Doppler, and bio-effects.

DMS 251 Gynecological Sonography 60 theory hours / 80 lab hours / 10 credit hours

Course Description: This course covers transabdominal and transvaginal imaging. Sonographic scanning protocols and scanning techniques will be covered for evaluating the non-pregnant female pelvis. Infertility and oncology will be given special attention. There is a lab component of this class involving developing hands-on scanning skills for gynecological sonography protocols.

DMS 260 Ultrasound Physics II 50 theory hours / 5 credit hours

Course Description: This course provides students with knowledge for the understanding of diagnostic ultrasound physics, by discussing definitions and relationships of ultrasound wave motion, frequency, and wavelength, and interactions with human tissues. This covers the interactive characteristics of refraction, reflection, scattering, absorption, and attenuation, transducer construction and types, machine instrumentation, color and spectral Doppler, and bio-effects. Student will provide the student with knowledge to pass the ARDMS SPI registry.

DMS 261 Obstetric Sonography 60 theory hours / 80 lab hours / 10 credit hours

Course Description: This course covers the development of humans from conception to birth. Origin and development of organs and tissues are discussed. Origin of common birth defects regarding timing and various types of insults. Also covered will be the normal anatomy and sonographic appearance of the pregnant uterus, ovaries, placenta, and fetus at all stages of pregnancy. Transabdominal and transvaginal imaging will be discussed. Dating and clinical stages of pregnancy, complications, and possible pathologies will also be covered. The student should have a better understanding of the timing of specific exams utilized in screening the fetus sonographically for birth defects. The role of color Doppler in evaluating the fetus and placenta will also be discussed. Sonographic scanning protocols and scanning techniques will be covered for evaluating fetus at all stages. Multiple gestations, fetal anomalies, will be given specific attention. There is a lab component of this class involving developing hands-on scanning skills for obstetric sonography protocols.

DMS 270 Vascular Sonography I 30 theory hours / 80 lab hours / 7 credit hours

Course Description: The anatomy and physiology of the venous and arterial systems of the upper and lower limbs, abdomen, extracranial and intracranial systems are reviewed, with pathologic processes and ultrasound findings discussed in detail. The course will provide an understanding of hemodynamic flow concepts and sonographic scanning techniques and protocols. There is a lab component of this class involving developing hands-on scanning skills for vascular sonography protocols.

DMS 280 Vascular Sonography II 60 theory hours / 80 lab hours / 10 credit hours

Course Description: The anatomy and physiology of the venous and arterial systems of the upper

and lower limbs, abdomen, extracranial and intracranial systems are reviewed, with pathologic processes and ultrasound findings discussed in detail. The course will provide an understanding of hemodynamic flow concepts and sonographic scanning techniques and protocols. There is a lab component of this class involving developing hands-on scanning skills for vascular sonography protocols.

ENG 210 Basic Composition

20 theory hours / 2 credit hours

Course Description: This course reviews the rules and conventions of writing including grammar, sentence structure, paragraph development, and essay construction. The course prepares students to read critically, summarize, analyze, and interpret texts. Students will identify and appraise information sources and learn to format writing in the current edition of APA style.

ENG 220 Advanced Composition

30 theory hours / 3 credit hours

Course Description: This course reviews essay development, paper construction, and current APA edition formatting. The course allows students the opportunity to appraise evidence, synthesize findings, and produce research-supported papers.

HOL 220 Holistic Perspectives

10 theory hours / 1 credit hour

Course Description: This course reviews holism and integrative practice modalities. The course introduces concepts of holistic leadership, evidence-based holistic nursing practices, and opportunities and challenges in integrative medicine. Students will engage in reflection and metacognitive practices to enhance self-awareness. Students will explore advanced holistic pharmacotherapeutics, cognitive-affective strategies to promote resilience, and integrative approaches to substance use recovery. Students will investigate sacred medicine and the global impact of holistic nursing.

MED 210 Medical Terminology

20 theory hours / 2 credit hours

Course Description: This course introduces basic medical terminology and the central functions of the electronic health record. Students learn to recognize the parts of medical terms that can assist in identifying meanings and definitions. Students discuss the components of a medical chart and practice introductory charting.

MED 240 Medical Law & Ethics

20 theory hours / 2 credit hours

Course Description: This course highlights legal considerations for professional practice in the changing healthcare environment. The course reviews the role of ethics in clinical judgment and decision-making. Students will explore the importance and implications of consistent positive and professional interdisciplinary interaction and communication.

PSY 220 General Psychology

20 theory hours / 2 credit hours

Course Description: This course introduces a variety of medical conditions and diseases and associated impact on psychological health and functioning of affected individuals. The course reviews the use of psychological techniques to improve and change behaviors that impact wellness, effectively manage stress, and cope with chronic or terminal illness. Students will explore cultural considerations that may influence health promotion and illness prevention.