Figure 1: Owens Logo.

Course Syllabus
Semester: Fall
School of Nursing and Health Professions
Department of Sonography

Course Name:	**Cardiac Ultrasound for Peds**
Course & Section Number:	**DMS 231**
Meeting Day(s) & Time(s):	
Credits:	**1**
Contact Hours:	**1**
Instructor's Name:	
Office Hours & Location:	
OCC Email:**	
Additional Contact Information:	

**Please use only Owens email for course communications.

Catalog description: Study of fetal heart development and perinatal circulation specific to congenital cardiovascular defects. Explains pediatric protocols and exam considerations for patients with congenital heart abnormalities. Comparison of congenital heart abnormalities will be reviewed through case studies.

Prerequisite/Corequisites:DMS 222/ None

Course Materials:
Palma, Richard. Echocardiographer's Pocket Reference Fifth Edition. Arizona Heart Foundation School of Cardiac and Vascular Ultrasound. 2020 ISBN 0578687178

Dewitt, Susan. Echocardiography…From a Sonographer's Perspective. Launch Printing & Promotions. 2022

Laptop or Tablet for in-class assignments and research

*If a **print book, e-book, or access code** is required for class, you can access the Owens Community College e-Campus Bookstore by accessing the online link, called "Find Books" on the course schedule for each course section.*

What You Will Learn in the Course

Course Objectives:

This course will:

1. Discuss fetal heart development and perinatal circulation.
2. Introduce pediatric scanning protocols for cardiac imaging.
3. Recognize exam considerations for the pediatric patient population.
4. Compare and review cases of congenital heart abnormalities.

Student Learning Outcomes:

Students will:

Outcome	Where Assessed
1.Summarize fetal heart development and fetal circulation.	Workbook, Quizzes, Midterm, Final Exam
2.Explain pediatric scanning protocols for cardiac imaging.	Workbook, Quizzes, Midterm, Final Exam
3.Apply methods for effective patient care and communication for the pediatric population.	Assignments, In-Class Activities, Quizzes
4.Recognize congenital heart anomalies on sonographic imaging.	Assignments, In-Class Activities, Quizzes

Technology, Lab, and File Requirements:

Microsoft Office 365
https://www.owens.edu/office365/

Respondus
https://download.respondus.com/lockdown/download.php?id=139313370

Academic Support

Disability Services Resource Center: If you have a disability or acquire one, you may be entitled to receive reasonable accommodations intended to assure you an equal opportunity to participate in and benefit from the program. To receive more information or to register for accommodations, please contact the Disability Resource Center at 567-661-7007, email disability@owens.edu, visit https://www.owens.edu/disability/, or stop by College Hall 124.

Tutoring Services: Owens Community College offers academic tutoring and assistance in a variety of subjects including: accounting, computing, economics, mathematics, science, and writing. For more information go to: https://www.owens.edu/successcenters/.

Counseling Services: Counseling Services provides assistance to students experiencing personal, educational, interpersonal/relationship, family, social, or psychological difficulties. If you feel you may benefit from this service, please contact them at counselingservices@owens.edu. More information is at https://www.owens.edu/counseling/.

Campus and Community Connections: The Center for Campus and Community Connections (College Hall 123) is a walk-in office created to provide retention support through resource stability initiatives and community connections. Go here for more information: https://www.owens.edu/connection/ or contact connections@owens.edu

Owens Library: The Owens Library offers two locations (Toledo and Findlay) as well as online resources. For more information visit https://www.owens.edu/library/.

Students can find more information on campus resources, student support, student life, and security at this link.

General Information

Student Code of Conduct: All students are expected to follow Owens Community College's Student Code of Conduct, which includes academic honesty, encompassing plagiarism. See the Board Policy for more information.

Anti-Discrimination and Harassment & Title IX/Sexual Misconduct: All students, faculty, and staff are expected to follow Owens Community College's Anti-Discrimination and Harassment Policy and the College's Title IX Policy/Sexual Misconduct Procedures and Guidelines. The College strictly prohibits and will not tolerate harassment, discrimination, intimidation, or hostile/offensive working or learning environments.

Religious Accommodations: A student seeking an accommodation for an absence permitted under Ohio's Testing Your Faith Act must provide the instructor with a written email notice with the specific dates for an absence, and must do so not later than fourteen (14) days after the first day of instruction. Alternative accommodations are not retroactive, and no academic penalty will be imposed for an absence under the policy*. The request for an alternative accommodation will be kept confidential. Students with questions about a religious accommodation under Ohio's Testing your Faith Act may contact the College's Office of Academic Affairs: provost@owens.edu The policy may be found on the Owens website: 3358:11-2-63 Accommodation for a Student

Absence for the Observance of Religious Beliefs and Practices Policy

Document Collection: Throughout the semester, your instructors may ask for a variety of assignments including tests and/or quizzes for student learning of institutional general education competencies or program assessment. Please save all your class materials until the end of the semester.

Classroom Admittance: OCC classes shall only be attended by the officially registered OCC students or perspective students, instructor of record, guest lecturer, or substitute. Visitors are not permitted to be in the classroom and should not be invited to attend or participate in the class. See FERPA regulations for more information.

Use of AI Tools: This course permits you to use artificial intelligence (AI) tools, such as chatbots, text generators, paraphrasers, summarizers, or solvers, to get guidance on assignments, as long as you do so in an ethical and responsible manner. Essentially, you can think of these tools as ways to help you learn but not to entirely create work for assignments like discussion board posts, essays, presentation slides, and so on. AI is more like your tutor or TA, not a replacement for your independent thinking.
This means that you must:

- Not use AI tools to replace your own thinking or analysis or to avoid engaging with the course content.
- Cite or explain any AI tools you use. Provide the name of the AI tool, the date of access, the URL of the interface, and the specific prompt or query you used to generate the output.
- Be transparent and honest about how you used the AI tool and how it contributed to your assignment. Explain what you learned from the AI tool, how you verified its accuracy and reliability, how you integrated its output with your own work, and how you acknowledged its limitations and biases.

You are accountable for any mistakes or errors made by the AI tool. Always check and edit the output before submitting your work. If you discover any inaccuracies or inconsistencies in the output after submission, notify the instructor immediately and correct them as soon as possible. Using AI tools in an unethical or irresponsible manner, such as copying or paraphrasing the output without citation or transparency, using the output as your own work without verification or integration, or using the output to misrepresent your knowledge or skills, is considered a form of academic dishonesty and will result in a zero grade for the assignment and possible disciplinary action. If you have any questions about what constitutes ethical and responsible use of AI tools, please consult with the instructor **before** submitting your work.

Student Responsibilities & Instructor Expectations

Student Responsibilities:

- You are expected to attend weekly classes and arrive on time. If you are going to be absent, please email your instructor before class begins. Afterward, review the assignment calendar to see what was missed and reach out if you have questions.
- You are expected to fully engage with the course material and consistently put forth your best effort in lecture and lab.

- If you are unable to complete an assignment on time, contact your instructor as soon as possible to discuss your options.
- Email is the preferred method of communication outside of office hours. Please include clear and specific details in your message so your instructors can respond efficiently.
- You are encouraged to ask questions or request clarification. Unless we hear otherwise, we will assume you understand the material. Each class builds on previous concepts, so staying current is important.
- Show respect for your instructors, classmates, and the learning environment.
- You are expected to follow all guidelines and procedures outlined in the Sonography Department Procedure Manual.
- For technical issues related to Blackboard, contact the Owens Help Desk.

Instructor Expectations:

- The instructor will be respectful of your time and begin and end class on time. If any changes to class times occur, you will be notified by email.
- Your instructor's goal is to review and return assignments that require student corrections within three days of submission. Assignments that do not require corrections or resubmission may take longer to be fully graded. If it has been more than three days and you are waiting on feedback for an assignment you believe may need revision, please email your instructor.
- Your instructor checks their email several times a day, but also has responsibilities outside of teaching this course. They will do their best to respond to your email with 24 hours on weekdays and within 72 hours on the weekends.
- Office hours are available outside of class time to support you with any questions or concerns related to the course. Please don't hesitate to make use of this time.
- Your instructor welcomes and encourages questions.
- Teaching is a two-way process, and your instructor hopes to learn from your insights, questions, and feedback throughout the course.

How Grades and Determined and Major Assignments

Grading Procedure:

Grades will be calculated on the following scale.

93% and Above	A
85% to 92%	B
76% to 84%	C
60% to 75%	D
59% or Below	F

If the percentage earned is less than 76% for the course, the student will earn a grade of "D or F" for the course and be removed from the program.

The final grade for the course will be computed using the following weights.

Evaluation Measure	Value	Student Learning Outcome Assessed
Midterm	25%	1-4
Final Exam	25%	1-4
Quizzes	20%	1-4
Assignments	15%	1-4
In-Class Activities	15%	1-4

****Please note that ½ point will be deducted from all homework, tests, and assignments for each spelling error. Using abbreviations will also result in a ½ point deduction. ***

Midterm
One midterm will be given and will be worth 25% of the total course grade. Any student who is tardy for the exam will receive a five (5) point deduction on the exam Any student who is unable to take the test as scheduled must notify the course instructor at least 30 minutes prior to the date/time of the test to possibly receive full credit. If no notification is received prior to missing the test a ten (10) point deduction will be taken from the score of the make-up test. The makeup test will be taken within three (3) days of the original test due date, or the score will be reduced by an additional ten (10) points. Make-up tests could have a format of multiple choice, true/false, essay, or fill-in. Make up tests will be completed in the testing center. Please bring your laptop computer or tablet and be prepared to utilize Respondus.

Final Exam
A final exam will be given and will be worth 25% of the total course grade. Any student who is tardy for the exam will receive a five (5) point deduction on the exam. Any student who is unable to take the test as scheduled must notify the course instructor at least 30 minutes prior to the date/time of the test to possibly receive full credit. If no notification is received prior to missing the test a ten (10) point deduction will be taken from the score of the make-up test. The makeup test will be taken within (3) days of the original test due date, or the score will be reduced by an additional ten (10) points. Make-up tests could have a format of multiple choice, true/false, essay, or fill-in. Make up tests will be completed in the testing center. Please bring your laptop computer or tablet and be prepared to utilize Respondus.

Quizzes
Multiple quizzes will be completed on Blackboard. Late quizzes will be accepted at half credit up to 24 hours past the due date. Beyond 24 hours after the due date they will not be accepted without prior approval from the instructor. Students are responsible for reaching out to the instructor before the quiz due date. Quizzes will utilize Respondus.

Homework/In-Class activities
Homework assignments and in-class activities will each be worth 15% of the course grade. Homework assignments can be found on Blackboard and will be submitted via Blackboard. Late assignments will be accepted at half credit up to 24 hours past the due date. Beyond 24 hours after the due date they will not be accepted without prior approval from the instructor. Please bring your laptop computer or tablet to class as you will be doing research.

Lecture Assignment Calendar

Books: Echo Pocket Reference =EPR Echocardiography: A sonographer's perspective = DeWitt

Refer to Blackboard for due dates

READING/VIEWING IS TO BE DONE BEFORE CLASS

Week	SLO	Topic	Reading/Viewing/ Homework
One	1,2	Syllabus Transthoracic Exam for Peds-refer to ASE Guideline Exam Considerations-PPT lecture Fetal Heart Development- PPT lecture and video, (handout, PPT handout on BB) Videos: EMBRYOLOGY: CONGENITAL HEART MALFORMATIONS:	Review the PPTs and videos DeWitt: Ch II EPR:p.1-7 Review DeWitt PPTS on Blackboard Complete questions in the DeWitt workbook Ch. II q. 1-50 ON Blackboard
Two Labor Day No Class	1,2	Videos of congenital heart diseases ECHOCARDIOGRAPHY IN CONGENITAL HEART DISEASE: INTRODUCTION TO PAEDIATRIC / PEDIATRIC ECHOCARDIOGRAMS AND COMMON CRITICAL CONGENITAL HEART DEFECTS	Review the PPTs and videos DeWitt: Ch II EPR: p. 1-7 Review DeWitt PPTS on Blackboard Complete questions in the DeWitt workbook **Ch. II q. 1-50** **DUE**
Three	3,4	Review of DeWitt answers "Holes in the Heart" ASDs- PFO, ostium primum, ostium secundum, sinus venosus Video: HOW TO DETECT PFOS AND ASDS WITH THE HELP OF ECHOCARDIOGRAPHY	DeWitt: Ch XIX EPR: Ch 15, pp 347-392 Outline: Patent foramen ovale (PFO), ostium primum, ostium secundum
Week	**SLO**	**Topic**	**Reading/Viewing/ Homework**
Four	3,4	VSDs- types Muscular VSD , Perimembranous VSD, Atrioventricular canal type VSD, Supracristal septal VSD, single ventricle, inlet VSD Video: VENTRICULAR SEPTAL DEFECT: TYPES, PATHOLOGY, SYMPTOMS & TREATMENT	DeWitt: Ch XIX EPR: Ch 15, pp 347-392 Outline: Perimembranous VSD, Muscular, AV canal defects
Five	3,4	Valvular malformations- bicuspid AV, MVP, parachute MV, cleft MV, Videos: BICUSPID AORTIC VALVE PARACHUTE MITRAL VALVE CLEFT MV	DeWitt: Ch XIX EPR: Ch 15, pp 347-392 Outline: Bicuspid AV, MVP

Six	3,4	Congenital mitral valve stenosis causes, tricuspid stenosis, Ebstein's anomaly Pulmonic stenosis (infundibular, valvular) VIDEO: 2D ECHO OF EBSTEIN ANOMALY	DeWitt: Ch XIX EPR: Ch 15, pp 347-392 Outline: Congenital mitral valve stenosis, Ebstein's anomaly
Seven	1-4	Review for Test 1	DeWitt: Ch XIX EPR: Ch 15, pp 347-392 Study for Midterm
Eight	1-4	**Midterm**	
Nine	3,4	Review Test Begin to discuss more complicated heart defects	292 DeWitt: Ch XIX EPR: Ch 15, pp 347-392
Ten	3,4	Truncus arteriosus Patent ductus arteriosus VIDEO: PATENT DUCTUS	DeWitt: Ch XIX 287 EPR: Ch 15, pp 347-392 Outline: Patent ductus arteriosus
Eleven	3,4	Cyanotic lesions Tetralogy of Fallot Dextroposition VIDEO: TETRALOGY OF FALLOT	DeWitt: Ch XIX EPR: Ch 15, pp 347-392 Outline Tetralogy of Fallot
Twelve	3,4	Transposition of the Great Arteries (TGA)(dextro or d-TGA) versus congenitally corrected TGA (CCTGA or levo-TGA or l-TGA) VIDEO: TRANSPOSITION OF THE GREAT ARTERIES	DeWitt: Ch XIX EPR: Ch 15, pp 347-392 Outline: Transposition of the Great Arteries (d-TGA) versus CCTGA
Thirteen	3,4	Hypoplastic left heart syndrome VIDEO**:** HYPOPLASTIC LEFT HEART SYNDROME	DeWitt: Ch XIX EPR: Ch 15, pp 347-392 Outline Hypoplastic left heart syndrome
Fourteen	3,4	Coarctation of the aorta: preductal and post ductal coarctation Membranes-Cortriatratum, sub aortic membrane VIDEO: AORTIC COARCTATION VIDEO: CORTRIATRIATUM	DeWitt: Ch XIX EPR: Ch 15, pp 347-392 Write a short description of surgical treatments Study for Final Exam

			CH XIX QUESTIONS DUE
Fifteen	1-4	Review for Final Exam	
Sixteen	1-4	Final Exam	

Disclaimer: The instructor reserves the right to amend this syllabus as deemed necessary and will communicate such amendment to the students in the course. Please note that while unlikely, there is a possibility courses might need to change the delivery method due to external issues like public health concerns, weather issues, etc. If this happens, the college will communicate any changes via email and/or other communication methods.