

Bergen Community College
Division of Health Professions
Department of Diagnostic Medical Sonography

DMS-115 Cross Sectional Anatomy

Course Information

Semester and Year:

Course and Section Number:

Meeting Times and Locations:

Instructor:

Office Location:

Phone:

Departmental Secretary:

Office Hours:

Email Address:

Course Description

This course involves the study of the structure and function of human anatomy in the cross sectional mode. Topics will include the circulatory system, abdomen, thorax, cranium, pelvis, reproductive system and retroperitoneum. Fetal cross-sectional anatomy will also be presented. The course content will be presented through lectures, discussion, and laboratory exercises.

4 Credits

3 Lecture Hours

3 Lab Hours

Prerequisite(s): [BIO-109](#); [DMS-101](#); [DMS-102](#); [DMS-113](#)

Student Learning Outcomes: As a result of meeting the requirements in this course, students will be able to:

1. Identify organs, vasculature, and musculature in relationship to surrounding structures on diagrams, sonograms, and photographs of human specimens.
2. Describe the embryology and anatomy of the human brain.
3. Identify basic fetal/maternal cross-sectional anatomy on sonograms and diagrams.
4. Evaluate human structures in a serial fashion through cross-sectional images.

Means of Assessment: Students will be assessed in the following methods:
Midterm and final examinations, quizzes, lab preparations and assignments

Course Content

Cross Sectional Anatomy is a course that will explore the structure of the human anatomy in all body planes with particular emphasis on the cross-sectional mode. The organs and system relationships are examined, particularly, the abdomen, thorax, cranium, pelvis, reproductive system and lower extremities. Fetal cross-sectional anatomy will also be presented.

Course Texts and/or Other Study Materials

Curry, Reva Arnez and Prince, Marilyn. *Sonography: Introduction to Normal Structure and Function*. Elsevier.

Grading Policy

Assignments will include short writing assignments and quizzes. Guidelines for these assignments will be determined by the instructor. The midterm and final are cumulative.

FINAL GRADE CALCULATION

Quiz average	15%
Test #1	20%
Test #2	20%
Test #3	20%
Lab/homework assignments	5%

NUMERICAL GRADE CALCULATION

92 to 100	A
88 to 91.9	B+
83 to 87.9	B
79 to 82.9	C+
75 to 78.9	C
0 to 74.9	F

Academic Integrity Policy and Attendance Policy

Academic Integrity

Academic dishonesty is a serious violation of BCC policy and personal ethics and will be treated as such if the reason for suspicion should arise. Students should be careful to avoid plagiarism, falsification, and compliance. Academic integrity is vital to an academic community and for fair evaluation of student assessments. All assessments submitted must be your own, completed in accordance with the college's academic policies and the student code of conduct. You may not engage in unauthorized collaboration or make use of any artificial intelligence (AI) composition systems. Academic dishonesty also includes cheating on examinations. Refer to the [BCC student code of conduct](https://catalog.bergen.edu/content.php?catoid=4&navoid=163#academic-dishonesty), student handbook for additional information, and the statement on plagiarism (<https://catalog.bergen.edu/content.php?catoid=4&navoid=163#academic-dishonesty>).

BCC Attendance Policy

All students are expected to attend and be punctual for every scheduled meeting of each course in which the student is registered. Attendance and lateness policies and sanctions are to be determined by the director for each section of each course. These are in writing in the Policy and Procedure Student Handbook and in each course outline.

Other College, Divisional, and/or Departmental Policy Statements

Accommodations for Disabilities

Bergen community college aims to create inclusive learning environments where all students have maximum opportunities for success. Any student who feels he or she may need an accommodation based on a disability should contact the Office of Special Services.

Americans with Disabilities Act: Students who require accommodations by the Americans with Disabilities Act [ADA] can request support services from "The Office of Specialized Services of Bergen Community College] 201-612-5270/5269 or via email at ossinfo@bergen.edu.

Mental Health and Well Being

Mental Health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. Bergen Community College has licensed personal counselors available to assist you with addressing these and other concerns you may be experiencing.

You can learn about the confidential mental health services available on campus via the Health and Wellness Center at www.bergen.edu/personal_counseling.

Student and Faculty Support Services Available Online and On-Campus Resources

[Library- https://bergen.edu/library/](https://bergen.edu/library/)

[Academic support https://bergen.edu/academics/pathway-scholars-program/academic-support](https://bergen.edu/academics/pathway-scholars-program/academic-support)

[The Writing center and Tutoring Center- L-125 https://Bergen.edu/tutoring/writing center/](https://Bergen.edu/tutoring/writing center/)
[OWL\(Online Writing Lab\) http://www.owl.english.perdue](http://www.owl.english.perdue)

[Free Time Computer Labs https://Bergen.edu/technology assistance/computer lab availability/](https://Bergen.edu/technology assistance/computer lab availability/)

[The Center for student A-118 \(Academic, Career, International, and Transfer Counselors\) https://bergen.edu/center-for-student-success/](https://bergen.edu/center-for-student-success/)

[Personal counseling HS-100 https://bergen.edu/health-wellness-and-personal-counseling/personalcounseling/](https://bergen.edu/health-wellness-and-personal-counseling/personalcounseling/)

Sample Course Outline

Week	Topic/Activity	Assignments/Events
1	Lecture 1: Intro to 2D orientation Lab: Introduction to the Ultrasound machine and orientation of probe Lecture 2: Introduction to gross anatomy Lab: Introduction to ultrasound examination of abdominal cavity	
2	Lecture 3: Abdominal aorta and branches Lab: Scan abdominal aorta and branches Lecture 4: Inferior Vena Cava and branches, Portal system Lab: Scan IVC and Portal	<i>Aorta Quiz 1</i>
3	Lecture 5: Liver and spleen Lab: Scan Liver and Spleen Lecture 6: Gallbladder and biliary tract Lab: Activity & Scan liver, GB and biliary tract	<i>Liver Quiz 2</i>
4	Lecture 7: Pancreas Lab: Scan pancreas TEST #1 Includes Lectures 1 through 6	TEST #1 Includes Lectures 1 through 6
5	Lecture 8: Kidneys, Ureters, and Adrenals Lab: Scan kidneys Lecture 9: Peritoneal Cavity, Retroperitoneal Space, and Potential Spaces Lab: Abdominal scan	<i>Pancreas Quiz 3</i>
6	Lecture 10: GI tract and abdominal musculature Lab: Abdominal scan Lecture 11: Anatomy of Pelvis and Male pelvis Lab: Testicular phantom scanning	<i>Peritoneum Quiz 4</i>
7	Lecture 12: Female pelvis Lab: Activity Lecture 13: 1 st Trimester pregnancy Lab: Transvaginal ultrasound scan with 1 st trimester pregnancy calculations	<i>Male Quiz 5</i>
8	TEST #2 Includes Lectures 7 through 12	

9	Lecture 14: Fetal anatomy and fetal circulation Lab: Fetal phantom and 2 nd trimester biometry calculations Lecture 15: The Thorax Lab: Phantom scanning; transvaginal, testicular and 2 nd trimester fetus	<i>1st Trimester Pregnancy Quiz 6</i>
10	Lecture 16: Mediastinum and Respiratory System Lab: Abdominal Scanning CPR 8AM-12PM	CPR 8AM-12PM
11	Lecture 17: Cardiovascular system: The Heart Lab: Echo demo and abdominal scanning Lecture 18: Cardiovascular system: Vessels Lab: Activity and free time scanning	<i>Thorax and Respiratory Quiz 7</i>
12	Mental Health First Aid 8am-4pm ALL DAY EVENT	Mental Health First Aid 8am-4pm ALL DAY EVENT
13	Lecture 19: The Breast /Thyroid Gland Lab: Scan Thyroid	TEST #3 Includes Lectures 13 through 18
14	Lecture 20: The Skull, Meninges, and Ventricular System Lab: Abdominal Scanning Lecture 21: The Brain: Embryology and Anatomy Lab: Abdominal Scanning	<i>Breast and Thyroid Quiz 8</i>
15	Lecture 22: Vasculature of the Head and Neck Lab: Abdominal Scanning Lecture 23: Lower Limb Vasculature Lab: Abdominal Scanning	<i>Brain Quiz 9</i>
16	TEST #4 Includes Lectures 19 through 23 Distribution of grades	TEST #4 Includes Lectures 19 through 23

Note to Students: This Course Outline and Calendar is tentative and subject to change, depending upon the progress of the class.