



Course Prefix/Number/Title: EMS 220 – Cardiac Emergencies

Number of Credits: 5 Credits

Course Description: This course prepares the student to distinguish between the electrical and mechanical function of the heart and understand how cardiac impulses are formed. Also, understand the heart's electrical conduction system and what influences the rate of cardiac impulse formation. Identify single and multi-lead cardiac rhythms.

This course prepares the student to identify single and multi-lead cardiac rhythms (12 lead interpretation) and treat those rhythms considered to be life threatening.

This course covers all aspects of treating cardiac patients at an advanced level. Completion of this course will result in the awarding of Advanced Cardiac Life Support Certification of Completion valid for the period of two years from the American Heart Association.

This course covers all aspects of treating a pediatric cardiac patient at an advanced level. This course results in the awarding of a Pediatric Advanced Life Support certification from the American Academy of Pediatrics and the American Heart Association.

Teaching-learning methods in this course may include, but are not limited to, assigned readings, independent studies, presentations, discussion, critical thinking exercises, labs, clinicals, and class activities.

Pre-/Co-requisites: EMS 218

Course Objectives: To integrate anatomy, pathophysiology, electrophysiology, and rhythm recognition into the patient assessment.

To integrate patient assessment findings, patient history, knowledge of anatomy, physiology, pathophysiology, electrophysiology, and basic and advanced life support interventions to recognize and manage patients with cardiac disorders.

To integrate knowledge of the AHA ACLS primary and secondary surveys, algorithms and systematic team approach into the assessment and treatments of patients with almost any cardiac conditions and electrical disturbance.

To integrate knowledge of the AHA PALS pediatric patient assessment, algorithms and systematic team approach into the assessment and treatments of pediatric patients with almost any pediatric cardiac conditions and electrical disturbance.

Instructor: Wayne Fahy, Mary Jund and Dr. Kevin Franks

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Lecture/Lab Schedule: Monday and Thursday from 6:15-10:15 PM and Friday from 9:00 AM to 4:00 PM. See the class schedule.

Textbook(s): Walraven, Gail (2017). Basic Arrhythmias, 8th Edition. Pearson Education, New Jersey, Bledsoe's Paramedic Care Principles and Practice, 6th Edition, American Heart Association ACLS and PALS Provider Manual (Current) and Pharmacology for Paramedic Students – an open resource document. Other materials provided by instructors.

Course Requirements: For the AHA courses, students are required to complete a course pre-test prior to the beginning of class. This website and password are found on the front cover of the AHA manual. Attendance is required for the complete course; students must pass the written exam with a score of 84% or better and pass mega mode practical testing.

For the remainder of the course, students will be required to attend class and complete exams in EMStesting on time. Final exams will be worth 40%, additional tests 20%, quizzes 5%, homework 5%, lab/clinical 20% and affective behavior 10%. All final course grades will be calculated on a weighted grading system. See the clinical/lab grading rubric on page 4.

Lab will be graded on a pass/fail system with a passing grade received when all required skills are completed with appropriate, supervised technique. Students will also be required to pass skill sheets and scenario skills sessions per portfolio requirements (where applicable).

Please see DCB Paramedic Handbook for full grading and course requirements.

Tentative Course Outline: Basic Arrhythmias, 8th Edition, Chapters 1-10. Pharmacology for Paramedic Students – open resource, Ch. 7.

TOPIC – CLASSROOM

Basic Arrhythmias, 8th Edition, Chapters 1- 10

Electrophysiology	Ch. 1
Waves and Measurements	Ch. 2
Analyzing EKC Rhythm Strips	Ch. 3
Sinus Rhythms	Ch. 4
Atrial Rhythms	Ch. 5
Junctional Rhythms	Ch. 6
Heart Blocks	Ch. 7
Ventricular Rhythms	Ch. 8
Practice Makes Perfect	Ch. 9
Final Challenge	Ch. 10

Paramedic Care Principles and Practice, 5th Edition. Vol.2, Ch. 33

Cardiology	Ch. 33, Part 1-3
Updated 9/2025	

TOPIC – LAB

See Platinum Planner Student Minimum Requirements

Course objectives details to be covered according to the AHA's instructional guidelines.

Course objectives details to be covered according to the EMS National Standards instructional guidelines.

General Education Competency/Learning Outcome(s) OR CTE Competency/Department Learning Outcome(s): Students will apply knowledge gained in the didactic component of the program to achieve a minimum of 70% proficiency in all of the following curricular levels of EMS Testing exams: 1) airway management, 2) medicine, 3) EMS operations, 4) assessment, 5) preparatory, 6) special patient populations and 7) shock/resuscitation/trauma.

Students will demonstrate proficiency in basic, individual, and pathological laboratory skills, competencies and scenarios.

Relationship to Campus Theme: The goal of the Paramedic Program is to prepare professionals to work in the emergency medical services industry. The Paramedic Program is committed to a hands-on learning environment and uses field experiences and emerging technologies in emergency medical services as common instructional techniques.

Classroom Policies: Dakota College at Bottineau Paramedic Program guides.

Student Email Policy: Dakota College at Bottineau is increasingly dependent upon email as an official form of communication. A student's campus-assigned email address will be the only one recognized by the Campus for official mailings. The liability for missing or not acting upon important information conveyed via campus email rests with the student.

Academic Integrity: According to the DCB Student Handbook, students are responsible for submitting their own work. Students who cooperate on oral or written examinations or work without authorization share the responsibility for violation of academic principles, and the students are subject to disciplinary action even when one of the students is not enrolled in the course where the violation occurred. The Code detailed in the Academic Honesty/Dishonesty section of the Student Handbook will serve as the guideline for cases where cheating, plagiarism or other academic improprieties have occurred.

Disabilities or Special Needs: Students with disabilities or special needs (academic or otherwise) are encouraged to contact the instructor and Disability Support Services within the first two weeks of the semester to line up accommodations.

Title IX: Dakota College at Bottineau (DCB) faculty are committed to helping create a safe learning environment for all students and for the College as a whole. Please be aware that all DCB employees (other than those designated as confidential resources such as advocates, counselors, clergy and healthcare providers) are required to report information about such discrimination and harassment to the College Title IX Coordinator. This means that if a student tells a faculty member about a situation of

sexual harassment or sexual violence, or other related misconduct, the faculty member must share that information with the College's Title IX Coordinator. Students wishing to speak to a confidential employee who does not have this reporting responsibility can find a list of resources on the DCB Title IX Webpage.

AI Student Policy:

Unless otherwise indicated in the course syllabus, or in individual instructions for course assignments, or in the absence of the express consent of the course instructor, students are not allowed to utilize generative AI to help produce any of their academic work. Any violation of this policy will be considered an act of academic dishonesty as outlined within the Dakota College Code of Student Life.

RESPONSIBILITIES

Students	• Responsible to follow the syllabus and assignment instructions regarding use of generative AI for all academic work. • Obtain permission of the instructor prior to the use of generative AI that is outside of the syllabus or assignment instructions. Provide appropriate rationale for how the use of generative AI will enhance the learning experience for the assignment. • In instances where generative AI is permissible, appropriately cite the generative AI program used and indicate where in the assignment it was used, in a brief submission statement.
Faculty	• Determine if the use of generative AI could enhance student learning in any assignment of project. • Clearly indicate in all course syllabi if generative AI is allowable for any academic work. • If allowable, give specific parameters for how and when generative AI may be used. • If a violation of generative AI for the individual course/syllabus is suspected, discuss the concern with the student. If violation is still suspected, inform the appropriate semester coordinator/program director.

Paramedic Clinical/Lab Grading Ruberic

Teacher Name: **W Fahy**

Student Name: _____

CATEGORY	2	1.55	1.15	0.95	0	Score
Timely submission of report	Submits documentation within the 48 hour time window	Submits documentation between 48 and 72 hours	Submits documentation between 72 and 96 hours	Submits documentation between 96 and 120 hours	Submits documentation after 120 hours	0.95
Completeness of the narrative	Narrative is the highest quality, no errors, (spelling or grammatical), a complete history and physical assessment is documented.	Narrative is high quality minor errors, but complete history and assessment.	Narrative is average quality, minor errors, minimunly incomplete history or assessment	Narrative is below average contains errors and incomplete history that needs to be returned for correction	Narrative is incomplete, disorganized, no history or physical assessment	1.15
Professionalism of documentation	Provides work of the highest quality and professionalism.	Provides high quality work and professionalism.	Provides average quality work and professionalism	Provides below average quality work and professionalism	Provides work that is totally unprofessional	1.55
Preceptors evaluation	Ambulance Preceptor evaluation is all 5's with positive comments Hospital Clinical All compentents in the top skills section of evaluation form	Preceptor evaluation is 4's with positive comments Hospital clinical Majority of competents with 1-2 marginal ratings in the top skills section of evaluation form	Preceptor evaluation is 3's with either positive or minor negative comments Hospital clinical 1-2 competents, 2-3 marginals, and 1-2 unsuccessfuls in the top skills section of evaluation form	Preceptor evaluation has a 2 with negative comments Hospital clinical No competents and a mixture of marginal and unsuccessfuls in the top skills section of the evaluation form	Preceptor evaluation has a 1 with negative comments Hospital clinical no competents, and more unsuccessfuls than marginals on the top skills section of the evaluation form	0.95
Affective behavior	highest quality marks in the preceptor evaluation of affective behaviors Hospital clinical all yes's on the bottom section of the evaluation form (except the student left early section)	high quality marks in the preceptor evaluation of affective behavior Hospital Clinical Yes's with 1-2 no's in the bottom section of the evaluation form	Average quality marks in the preceptor evaluation of affective behavior Hospital Clinical Yes's with 2-3 No's in the bottom section of the evaluation form	below average marks in the preceptor evaluation of affective behaviors Hospital clinical yes's with 3-4 no's in the bottom section of the evaluation form	unacceptable marks for affective behavior on the preceptor evaluation Hospital clinical more than 4 no's in the bottom section of the evaluation form	2
Date updated: 05/14/2024 A score of 70% or better is passing						Total 6.6
						Percentage 0.66