

Midland College
Syllabus
RSPT 2135
Pediatric Advanced Life Support
(0-2-0)

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Course Description: A comprehensive course designed to develop the cognitive and psychomotor skills necessary for resuscitation of the infant and child. Strategies for preventing cardiopulmonary arrest and identification of high risk infants and children will be presented.

Text, References, and Supplies: Textbook

PALS Provider Manual. American Heart Association. 2015

Kacmarek, Egan's Fundamentals of Respiratory Care. 10th Edition
Elsevier. 2013.

Kacmarek, The Essentials of Respiratory Care, Fourth Edition. Mosby. 2006.

Students MUST actively participate by completing an academic assignment required by the instructor by the official census date. Students who do not actively participate in an academically-related activity will be reported as never attended and dropped from the course.

Course Goals/ Objectives:

Upon successful completion of the course the student will:

1. Discuss the prevention of illness and injury as the most effective component of the Chain of Survival to improve the healthcare status of children
2. Describe the epidemiology and prevention of common childhood injuries and emergencies
3. Discuss how and when to activate the EMS system
4. Define respiratory failure
5. Define shock
6. Define cardiopulmonary failure and cardiac arrest
7. List the components of rapid cardiopulmonary assessment
8. List examinations findings consistent with respiratory compromise
9. List examinations findings consistent with circulatory compromise
10. List the criteria for defining decompensated shock in children of different ages
11. Describe the priorities of BLS treatment for infants and children
12. List the sequence of actions you should perform when you encounter an infant or child in respiratory or cardiac arrest
13. Demonstrate the ABCs of CPR for infants and children
14. List the sequence of interventions for foreign-body airway obstruction (FBAO) in infants and children
15. Describe how the anatomy and physiology of the airway and respiratory system of infants and children differ from that of adults
16. Explain what pulse oximetry measures and its limitations
17. Explain the use of exhaled CO₂ detectors and their limitations
18. Describe common oxygen delivery systems and their effectiveness in

- delivering different oxygen concentrations to infants and children
19. Describe how to select and use oropharyngeal and nasopharyngeal airways
 20. Discuss advantages and disadvantages of self-inflating and flow-inflating manual resuscitators
 21. Describe the techniques of bag-mask ventilation and tracheal intubation
 22. List procedures that should be used to confirm proper position of the tracheal tube
 23. Describe laryngeal mask airway (LMA) insertion
 24. Describe cricothyrotomy
 25. Describe decompression of a pneumothorax
 26. Describe signs of artificial airway obstruction and displacement
 27. Discuss principles of acute fluid resuscitation for a child in shock
 28. Discuss the pharmacology of medication used for a child in cardiac arrest
 29. Describe the indications, doses, and precautions for medications used to prevent progression from shock to cardiac arrest and to treat post-resuscitation myocardial dysfunction
 30. List in order of priority, the sites of vascular access for differing clinical circumstances
 31. Describe the risks and benefits of peripheral venous, central venous, and intraosseous (IO) vascular access
 32. Describe the intraosseous access technique
 33. Describe the clinical signs of shock in infants and children
 34. Describe the clinical classification of shock
 35. Differentiate between decompensated and compensated shock
 36. Discuss the clinical signs of hypovolemic, cardiogenic, and distributive (septic) shock in infants and children
 37. Describe the initial management of hypovolemic, cardiogenic, and distributive (septic) shock in infants and children
 38. Recognize via ECG, unstable cardiac conditions requiring urgent intervention
 39. Describe initial stabilization of the child with an unstable arrhythmia
 40. Discuss indications for and use of vagal maneuvers
 41. Explain defibrillation
 42. Discuss synchronized cardioversion
 43. Discuss cardiac pacing
 44. Discuss indications for and use of automated external defibrillator (AED)
 45. Discuss selection of appropriate medication for treatment of symptomatic bradycardia, tachycardia, and arrest rhythms
 46. Describe the initial approach to assessment and stabilization after cardiopulmonary arrest and in preparation for transport
 47. Describe factors influencing method and mode of transportation within and between hospitals
 48. List potential high-risk problems for children after cardiopulmonary arrest and during transport
 49. Explain a primary survey with cervical spine immobilization
 50. Explain a secondary survey and an environmental examination
 51. Describe the initial approach to assessment and stabilization of a child with special healthcare needs
 52. Describe the clinical signs and symptoms of life-threatening

- poisoning
53. Discuss the pharmacological agents and the rationale for interventions used to treat the toxic manifestations of these types of poisoning
 54. Review neonatal resuscitation
 55. List the steps of rapid sequence intubation
 56. Discuss the difference between sedation and analgesia
 57. List actions healthcare providers can take to help families, themselves, and their colleagues cope with a child's emergency or death
 58. Discuss the legal and ethical implications of caring for a patient who is a child

Course Overview

The goal of the PALS course is to improve the quality of care provided to seriously ill or injured children, resulting in improved outcomes. The PALS course uses a series of videos and simulated pediatric emergencies to reinforce the important concepts of a systematic approach to pediatric assessment, basic life support, PALS treatment algorithms, effective resuscitation, and team dynamics.

The PALS course is designed for healthcare professionals who either direct or participate in the management of respiratory and/or cardiovascular emergencies and cardiopulmonary arrest in pediatric patients. This includes personnel in emergency response, emergency medicine, intensive care, and critical care units -- such as physicians, nurses, and paramedics -- as well as others who need a PALS course completion card for job or other requirements.

Before taking the PALS course, students must pass the online PALS Precourse Self-Assessment with a score of 70% or higher. This test is part of the PALS student Web site (access granted with purchase of the PALS Provider Manual).

After successfully completing the PALS course, students should be able to:

- perform high-quality child CPR AED and infant CPR per American Heart Association basic life support recommendations
- differentiate between patients who do and patients who do not require immediate intervention
- recognize cardiopulmonary arrest early, and begin CPR within 10 seconds
- apply team dynamics
- differentiate between respiratory distress and respiratory failure, and perform early interventions for both
- differentiate between compensated and decompensated (hypotensive) shock, and perform early interventions for the treatment of shock
- differentiate between unstable and stable patients with arrhythmias
- describe clinical characteristics of instability in patients with arrhythmias
- implement post-cardiac-arrest management.

Upon successful completion of the course, including achieving a score of 84% or higher on the course exam, students receive a PALS course completion card that is valid for two years.

Student Contributions and

Each student will spend at least 6 hours per week preparing for class. Attendance is critical in this class. The college attendance policy will be followed.

All classroom performance and behavior will be considered academic.

Class Policies:

Evaluation of Students:

A minimum of four (4) tests will be given including a comprehensive final (unless otherwise designated by the instructor). The final exam will carry the same weight as other exams (not quizzes). Weekly quizzes will be averaged and will equal one exam. Test questions will come from lecture, reading assignments and homework assignments. Most tests will be objective in nature.

1.	Tests (written test, skills tests, megacode)	90%
2.	Attendance, participation and attitude	10%
	Total	100%

Course Schedule:

The class meets for 2 laboratory hours per week. Monday/Wednesday 8-9

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 and drug screen.

AMERICANS WITH DISABILITIES ACT (ADA):

The Americans With Disabilities Act (ADA) and Section 504 of the Rehabilitation Act require that no otherwise qualified person with a disability be denied access to, or the benefits of, or be subjected to discrimination of any program or activity provided by an institution or entity receiving federal financial assistance. It is this Section 504 mandate that has promoted the development of disability support service programs in colleges and universities across the country. Sub-part E of Section 504 deals specifically with this mandate for institutions of higher education.

While it does not require development of special educational programming, for students with disabilities, it does require that an institution (public or private) be prepared to make

appropriate academic adjustments and reasonable accommodations to allow the full participation of students with disabilities in the same programs and activities available to non-disabled students. Disabilities may include things such as physical/mobility problems such as paralysis or academic problems like learning disabilities. Some examples of accommodations are extra time for tests, testing in a quiet location, and providing architectural access to buildings.

Midland College provides services for students with disabilities through Student Services. In order to receive accommodations, students must place documentation on file with the Counselor/Disability Specialist. Students with disabilities should notify Midland College prior to the beginning of each semester. Student Services will provide each student with a letter outlining any reasonable accommodations. The student must present the letter to the instructor at the beginning of the semester.

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 individuals have been designated to handle inquiries regarding the non-discrimination policies:

Tana Baker, Title IX Coordinator/Compliance Officer, 3600 N. Garfield, SSC 242, Midland, TX 79705, (432) 685-4781, tbaker@midland.edu;

Natasha Morgan, Director Human Resources/Payroll, 3600 N. Garfield, PAD 104, Midland, TX 79705, (432) 685-4534, nmorgan@midland.edu. For further information on notice of non-discrimination, visit <http://wdcrobcolp01.ed.gov/CFAPPS/OCR/contactus.cfm> or call 1 (800) 421-3481.

Spanish

Midland College no discrimina por motivos de raza, color, nacionalidad, sexo, discapacidad, o edad en sus programas o actividades. Las siguientes personas han sido designadas para responder a cualquier pregunta o duda sobre estas políticas no discriminatorias:

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**Division
Information**

Division Dean: Dr. Carmen Edwards, DNP, MSN, RN

Division Secretary: Karen Harris, CPS

Division Office Location: 206 DHS

Telephone: 685-4799

Program Chair: Bob Weidmann, M.Ed., RRT, RPFT, RRT-NPS, RCP

Program Office Location: AMS A34

Program Office Telephone: 432/685-5549

Students are encouraged to contact the instructor at any time; however, making an appointment will guarantee the instructor's availability at a specific time