El Paso Community College
Syllabus
Part II
Official Course Description

SUBJECT AREA	**Respiratory Care Technology**
COURSE RUBRIC AND NUMBER	**RSPT 2139**
COURSE TITLE	**Advanced Cardiac Life Support**
COURSE CREDIT HOURS	**1 (Credits) 1 : 1 (Lec Lab)**

I. Catalog Description

Advanced Cardiac Life Support (ACLS) with an emphasis on airway management. Designed to develop skills for resuscitation of the adult. Includes strategies for managing and stabilizing the cardiopulmonary arrested patient. May include certification based on American Heart Association standards. A grade of "C" or better is required in this course to take the next course. **Prerequisites: RSPT 1431 and RSPT 2314. (1:1). Lab fee.**

II. Course Objectives

A. Unit I. Advanced ECG Interpretation

Upon satisfactory completion of this unit, the student will be able to:

1. Describe the value and limitations of the electrocardiogram (ECG).
2. Describe the electrophysiology of cardiac cells.
3. Describe how the cardiac impulse is conducted through the different structures of the heart.
4. Recognize various abnormal ECG recordings, including:

    a. Atrial Flutter
    b. Atrial Fibrillation
    c. Premature Ventricular Contractions
    d. Ventricular Tachycardia, Multifocal VT (Torsade de Pointes)
    e. Ventricular Fibrillation
    f. Asystole
    g. 1st, 2nd, 3rd degree A-V Block
    h. Pulseless Electrical Activity
    i. Paroxysmal Supraventricular Tachycardia
    j. Supraventricular Tachycardia
    k. Location of AMI's
    l. Ischemia, Injury, and Infarction
    m. Pacemaker Rhythms

B. Unit II. Basic Life Support

Upon satisfactory completion of this unit, the student will be able to:

1. Describe the critical actions of the BLS Survey and ACLS Survey
2. Describe assessment and management that occur with each step of the systematic approach
3. Describe how the assessment/management approach is applicable to most cardio-pulmonary emergencies

C. Unit III. Respiratory Arrest Case

Upon satisfactory completion of this unit, the student will be able to:

1. Identify by name the types of airways used in ACLS:
   a. Oral, nasal, pharyngeal
   b. Endotracheal (ETT)
   c. Laryngeal Mask Airway (LMA)
   d. Combitube
2. Describe the indications, contraindications, hazards, and procedure involved for each airway.
3. Identify and explain the use of all accessory and adjunct airway equipment.
4. Demonstrate proper insertion, maintenance, and removal of each airway presented.
5. Verify placement of airways.

D. Unit IV. Drug Pharmacology

Upon satisfactory completion of this unit, the student will be able to:

1. Describe the indications for drugs used in the ACLS Algorithms to include the following drugs.
   a. Adenosine
   b. Amiodarone
   c. Atropine Sulfate
   d. Dopamine
   e. Epinephrine

2. Describe the contraindications/precautions and hazards for drugs used in the ACLS Algorithms to include the following drugs.
   a. Adenosine
   b. Amiodarone
   c. Atropine Sulfate
   d. Dopamine
   e. Epinephrine

3. Describe the adult dosages for drugs used in the ACLS Algorithms to include the following drugs.
   a. Adenosine
   a. Amiodarone
   b. Atropine Sulfate
   c. Dopamine
   d. Epinephrine

E. Unit V. VF/Pulseless VT Case

Upon satisfactory completion of this unit, the student will be able to:

1. Demonstrate the skills and sequence outlined in the BLS Healthcare Textbook Provider's Algorithm, including high-quality CPR and AED use.
2. Implement the BLS Healthcare Provider Algorithm by performing 1 -rescuer CPR
3. Implement the BLS Healthcare Provider Algorithm by operating an AED.
4. Describe signs that the patient is experiencing VF/pulseless VT
5. Recognize VF and VT on the EGG
6. Manage VF/pulseless VT according to the Cardiac Arrest Algorithm
7. Recall indications for drugs recommended for refractory VF/pulseless VT
8. Recall contraindications for drugs recommended for refractory VF/pulseless VT
9. Recall doses for drugs recommended for refractory VF/pulseless VT
10. Recall routes of administration for drugs recommended for refractory VF/pulseless VT
11. State appropriate electrical doses used for VF/pulseless VT arrest
12. Perform defibrillation with minimal (10 seconds or less) interruption of chest compressions
13. Ensure ventilation by using quantitative waveform capnography
14. Consider hypothermia for comatose patients
15. Treat reversible causes

F. Unit VI. PEA and Asystole Case

Upon satisfactory completion of this unit, the student will be able to:

1. Describe signs and symptoms of PEA
2. Demonstrate treatment priorities of individuals experiencing PEA as specified by the Cardiac Arrest Algorithm.
3. State the correct dosage of epinephrine in PEA
4. Recall the correct method of administering epinephrine in PEA
5. State the correct dosage of vasopressin in PEA
6. Describe the target of PEA (treatment of the cause, not the rhythm)
7. Describe the most likely causes of PEA.
8. Discuss when resuscitation should not be initiated, including do-not-attempt-resuscitation (DNAR) orders.
9. Recall why survival from asystole is poor
10. Differentiate asystole and PEA: causes, treatments, and early, diligent search for correctable causes
11. Recall reversible causes of asystole
12. Outline treatments for causes of asystole
13. Describe the Cardiac Arrest Algorithm for asystole
14. Describe correct dosages and administration of epinephrine and vasopressin during cardiac arrest

G. Unit VII. Acute Coronary Syndromes

Upon satisfactory completion of this unit, the student will be able to:

1. Discuss the differential diagnosis of life-threatening chest discomfort
2. Apply the ACS Algorithm for initial use of drugs
3. Apply the ACS Algorithm for initial drug doses
4. Apply the ACS Algorithm for initial resuscitation strategies and triage patient for sudden cardiac death to PCI facilities
5. Explain early identification of patients with ACS
6. Explain risk stratification of patients with ACS
7. Explain initial treatment of patients with ACS
8. Explain actions, indications, precautions, contraindications, dosage, and administration for oxygen, aspirin,

nitroglycerin, morphine, and heparin.
9. Describe guidelines for reperfusion strategies

H. Unit VIII. Bradycardia Cases

Upon satisfactory completion of this unit, the student will be able to:
1. Recognize signs and symptoms of symptomatic bradycardia
2. Recognize causes of symptomatic bradycardia
3. State treatments for symptomatic bradycardia
4. Determine whether signs and symptoms are caused by bradycardia or another condition
5. Identify second- and third-degree AV blocks
6. Describe indications for TCP and doses of drugs used to treat bradycardia: atropine dopamine, and epinephrine

I. Unit IX. Stable and Unstable Tachycardia Cases

Upon satisfactory completion of this unit, the student will be able to:
1. Differentiate characteristics of stable and unstable tachycardias
2. Describe the ACLS priorities of care in the Tachycardia Algorithm
3. Identify unstable patients and follow this arm of the Tachycardia Algorithm
4. Describe energy levels required for electrical cardioversion of tachycardia varieties
5. Demonstrate safety procedures when performing cardioversion
6. Perform an initial patient assessment to identify symptoms of a stable tachycardia
7. Identify sinus tachycardia
8. Realize that treatment of sinus tachycardia involves identification of an underlying cause
9. Differentiate between tachycardias with narrow or wide QRS complexes
10. Treat stable tachycardias by using the Tachycardia Algorithm
11. Verbalize when to consider expert consultation

J. Unit X. Acute Stroke Cases

Upon satisfactory completion of this unit, the student will be able to:

1. Describe the major signs and symptoms of stroke
2. Classify strokes to explain stroke type-specific treatments
3. Demonstrate the use of one of the out-of-hospital stroke scales (screening identify patients with suspected stroke
4. Apply the 8 D's of Stroke Care
5. Explain why timely action is crucial when someone experiences a stroke
6. Follow the Suspected Stroke Algorithm: NINDS time goals
7. Describe why rapid transport to a healthcare facility capable of providing *z* stroke care is recommended
8. Recall general eligibility criteria for fibrinolytic therapy
9. Activate the stroke team

III. THECB Learning Outcomes (WECM)

1. Describe the principles, techniques, and complications of intravenous and electrical therapy, airway control, ventilation and supplemental oxygen.
2. Analyze cardiac dysrhythmias.
3. Integrate basic life support with advanced cardiovascular life support interventions.
4. Summarize airway management principles.

IV. Evaluation

A. The course will have 4 unit exams comprised of 2 Units per exam. The student will also be given a final written exam to determine his/her knowledge of principles/techniques involved in ACLS. If a situation arises which faculty feel is detrimental to the development of a student i.e., destructive criticism, rudeness, or persistent negativism, a written counseling form will be completed, as per College policy.

B. Final grade of 78% or better is required to pass this course. A grade of 85% or better on the Final Exam is required to obtain an ACLS provider card issued from the American Heart Association.

C. Final Evaluation

1. Grading Scale

93-100	A
86 to 92	B
78 to 85	C
70 to 77	D
69 or below	I or F

2. Grade Percentage of final grade

Unit Exams	10%
Megacode	20%
Final Exam	70%
Total	100

V. Disability Statement (Americans with Disabilities Act [Ada])

EPCC offers a variety of services to persons with documented sensory, mental, physical, or temporary disabling conditions to promote success in classes. If you have a disability and believe you may need services, you are encouraged to contact the Center for Students with Disabilities to discuss your needs with a counselor. All discussions and documentation are kept confidential. Offices located: VV Rm C-112 (831-2426); TM Rm 1400 (831-5808); RG Rm B-201 (831-4198); NWC Rm M-54 (831-8815); and MDP Rm A-125 (831-7024).

VI. 6 Drop Rule

Students who began attending Texas public institutions of higher education for the first time during the Fall 2007 semester or later are subject to a 6-Drop limit for all undergraduate classes. Developmental, ESL, Dual Credit and Early College High School classes are exempt from this rule. All students should consult with their instructor before dropping a class. Academic assistance is available. Students are encouraged to see Counseling Services if dropping because exemptions may apply. Refer to the EPCC catalog and website for additional information.