UNIT TERMINAL OBJECTIVE
5-4 At the completion of this unit, the EMT-Critical Care Technician student will be able to utilize the assessment findings to formulate a field impression and implement a treatment plan for the patient with an allergic or anaphylactic reaction.

COGNITIVE OBJECTIVES
At the completion of this unit, the EMT-Critical Care Technician student will be able to:

5-4.1 Define allergic reaction. (C-1)
5-4.2 Define anaphylaxis. (C-1)
5-4.3 Define allergens. (C-1)
5-4.4 Describe the common methods of entry of substances into the body. (C-1)
5-4.5 List common antigens most frequently associated with anaphylaxis. (C-1)
5-4.6 Describe physical manifestations in anaphylaxis. (C-1)
5-4.7 Recognize the signs and symptoms related to anaphylaxis. (C-1)
5-4.8 Relate signs and symptoms to other body systems/functions (C-3)
5-4.9 Differentiate among the various treatment and pharmacological interventions used in the management of anaphylaxis. (C-3)
5-4.10 Integrate the pathophysiological principles of the patient with anaphylaxis. (C-3)
5-4.11 Correlate abnormal findings in assessment with the clinical significance in the patient with anaphylaxis. (C-3)
5-4.12 Develop a treatment plan based on field impression in the patient with allergic reaction and anaphylaxis. (C-3)

AFFECTIVE OBJECTIVES
None identified for this unit.

PSYCHOMOTOR OBJECTIVES
None identified for this unit.
DEclarative

I. Introduction
   A. Anatomy
      1. Review of cardiovascular system
      2. Review of respiratory system
   B. Terminology
      1. Allergic reaction
      2. Anaphylaxis
      3. Allergen

II. Pathophysiology
   A. Routes of entry
      1. Oral ingestion
      2. Injected/ envenomation
      3. Inhaled
      4. Topical
   B. Common allergens
      1. Drugs
      2. Insects
      3. Foods
      4. Animals
      5. Other
   C. Allergic response
      1. Histamine or histamine-like substance release
      2. Biphasic response
         a. Acute reaction
         b. Delayed reaction
      3. Immunity
      4. Sensitivity
      5. Hypersensitivity
      6. Redness of skin
      7. Swelling/ edema of the skin
      8. Anaphylactic shock
         a. Cardiovascular system
         b. Respiratory system

III. Assessment findings
   A. Not all signs and symptoms are present in every case
   B. History
      1. Previous exposure
      2. Previous experience to exposure
      3. Onset of symptoms
      4. Dyspnea
   C. Level of consciousness
      1. Unable to speak
      2. Restless
      3. Decreased level of consciousness
      4. Unresponsive
D. Upper airway
1. Hoarseness
2. Stridor
3. Pharyngeal edema/ spasm

E. Lower airway
1. Tachypnea
2. Hypoventilation
3. Labored - accessory muscle use
4. Abnormal retractions
5. Prolonged expirations
6. Wheezes
7. Diminished lung sounds

F. Skin
1. Redness
2. Rashes
3. Edema
4. Moisture
5. Itching
6. Pallor
7. Cyanotic

G. Vital signs
1. Tachycardia
2. Hypotension
3. Assessment tools
4. Cardiac monitor

H. Respiratory system
1. Dyspnea
2. Sneezing, coughing
3. Respiratory distress
4. Complete obstruction

I. Cardiovascular system
1. Vasodilation
2. Increased heart rate
3. Decreased blood pressure

J. Gastrointestinal system
1. Cramping
2. Nausea/vomiting
3. Diarrhea

K. Nervous system
1. Headache
2. Convulsions

IV. Management of anaphylaxis
A. Remove offending agent (i.e., stinger)
B. Airway and ventilation
1. Positioning
2. Oxygen
3. Assist ventilation
4. Advanced airway
C. Circulation
1. Venous access
2. Fluid resuscitation

D. Pharmacological interventions
1. Oxygen
2. Epinephrine - mainstay of treatment
   a. Bronchodilator
   b. Decreases vascular permeability
   c. Vasoconstriction
3. Bronchodilator
4. Antihistamine

E. Transport considerations

F. Psychological support/ communications strategies

V. Management of acute allergic reaction without dyspnea or hypotension
A. Remove offending agent (i.e., stinger)
B. Airway and ventilation
C. Circulation
D. Transport considerations
E. Psychological support/ communications strategies