

# NRPM 106L: Airway and Injury Management in the Field Lab Syllabus

[Semester and year]



## Instructor information

Instructor	Email Address	Office hours
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## General information

### Description

In this laboratory course, the paramedic student will apply the principles of patient assessment and the psychomotor skills associated with assuring a patent airway, providing adequate mechanical ventilation, and respiration for patients of all ages and include the use of appropriate pharmacological interventions as necessary. Additionally, students will be expected to implement a comprehensive treatment disposition plan for an acutely injured patient. *Co-Requisite: NRPM 102, NRPM 102L, NRPM 104, NRPM 104L, NRPM 106*

### Expectations and goals

Upon Successful completion of this course, students will be able to:

- Successfully perform the following skills without critical error:
  - PEEP - PPCP
  - Direct Orotracheal Intubation (Adult) - PPCP
  - Direct Orotracheal Intubation (Ped) - PPCP
  - Nasotracheal Intubation - PPCP
  - Needle Cricothyrotomy - PPCP
  - Trauma Adult Physical Assessment - PPCP
  - Trauma Endotracheal Intubation (Adult) - PPCP
  - Pleural Decompression - PPCP
- Identify and explain any special assessment and care considerations for patients with blunt and/or penetrating trauma.
- Describe the epidemiology, including the morbidity/mortality and prevention strategies, for shock and hemorrhage.
- Describe the anatomy, physiology, and pathophysiology of hemorrhage and shock.
- Describe the anatomy and physiology of the skin and remaining human anatomy as they pertain to burn injuries.
- Identify and explain any special assessment and care considerations for patients with burn injuries.
- Identify and explain any special assessment and care considerations for patients with Head, face, neck, or spinal trauma
- Identify and explain any special assessment and care considerations for patients with chest, abdominal, or genitourinary trauma.

- Identify and explain any special assessment and care considerations for patients with orthopedic trauma.
- Identify and describe any special assessment and care considerations for patients who experience environmental emergencies.
- Identify common pathological events that affect the pulmonary system.
- Discuss abnormal assessment findings and compare various airway and ventilation techniques (including medication) used in the management of pulmonary diseases.

## Course Delivery Method: In-Seat

### Course materials

#### Required materials

Computer with Internet capabilities to access:

- <https://CourseSites.com>
- <https://www.platinumplanner.com/>

#### Optional materials

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#### Required text

- Nancy Caroline's Emergency Care in the Streets; 8<sup>th</sup> edition, 2013 by Elling and Smith; Publisher Jones and Bartlett. ISBN: 978-1-284-13718-7 & 978-1-284-13717-0

### Course schedule (\*Weeks correspond to semester schedule)

Week	Topic	Rote Skill Lab with Peer Review sessions	
10-11	<ul style="list-style-type: none"> <li>• Airway Management</li> <li>• Respiration</li> </ul>	Rote Skill Lab: <ul style="list-style-type: none"> <li>• ET (adult/ped)</li> <li>• Trauma ET</li> <li>• Nasotrach. ET</li> </ul> Peer Review Lab: <ul style="list-style-type: none"> <li>• ET (adult/ped)</li> <li>• Trauma ET</li> <li>• Nasotrach. ET</li> </ul>	
12	Artificial Ventilation	Rote Skill Lab: <ul style="list-style-type: none"> <li>• Vent Mgt.</li> <li>• RSI Drugs</li> <li>• PEEP</li> </ul> Scenario Integration Lab: <ul style="list-style-type: none"> <li>• Ventilator Mgt. with RSI Drug, &amp; PEEP</li> </ul>	
13	<ul style="list-style-type: none"> <li>• Trauma Overview</li> <li>• Bleeding</li> </ul>	Rote Skill Lab: <ul style="list-style-type: none"> <li>• Trauma Assessment</li> </ul> Peer Review Lab: <ul style="list-style-type: none"> <li>• Trauma Assessment</li> </ul>	<ul style="list-style-type: none"> <li>• FINAL SUMMATIVE EVAL ALL AIRWAY SKILLS</li> </ul>
14	• Chest Trauma	Rote Skill Lab:	•

	• ABD/GI/GU Trauma	• Pleural Decompression Peer Review Lab: • Pleural Decompression	
15	• Orthopaedic Trauma • Soft Tissue Trauma	Scenario Integration lab: (ortho/chest)	•
16	Head, Facial, & Spinal trauma	Rote Skill Lab: • Needle Cricothyrotomy  Peer Review Lab: Needle Cricothyrotomy	•
17	• Nervous System • Special Considerations in Trauma	Scenario Integration Lab: • Spinal/Facial/CPP	•
18	Multi-System Trauma	Scenario Integration Lab: • Burn, Parkland, Vent mgt., RSI	FINAL SUMMATIVE EVAL ALL Trauma SKILLS

## Procedures for Evaluation

- A. \*Students must complete each NRPM course with a grade point average of at least 70%. Any student who does not have a 70% average at the completion of an NRPM course will not be allowed to continue in the program. The student's academic standing will be discussed with the student periodically throughout the program.
- B. If a student scores below a 70% on a NRPM Cumulative examination, the student will be required to retake the examination until a score of 70% is attained; however, the original score will stand as the recorded score.
- C. Individual skills that comprise a skill lab are mandatory per the National Registry of EMT's. A student must complete each skill with the minimum points required AND the established number of SUCCESSFUL attempts meeting those minimum point standards. A percentage grade will be issued to the student based on the points obtained per attempt, active participation in lab sessions and the accuracy of his/her platinum documentation.
- D. Late submission of platinum documentation will receive a 10-point deduction in grade for each class day in which it wasn't handed in.

**\*NOTE:** NRPM 202 is the exception to this policy. In this course, you must successfully complete each sub-specialty based on the criteria from each governing agency. The final grade issued for this course will be a "pass/fail." If the student is unable to receive a passing grade for this class, the student will NOT be allowed to continue in the Paramedic Program.

## Grading Components and Weights:

The Paramedic Program Student's Classroom Assessment grade will be the sum of the weighted scores comprising the parameters of course work outlined below.

<b>Skill Lab</b>
<b>Skill Lab: Pass/Fail</b> ( <i>minimum points required per skill mandated based on NREMT - PPCP criteria</i> ) <ul style="list-style-type: none"> <li>• Platinum Documentation = 20%</li> <li>• Success Pts/Min Req. Pts = 20%</li> <li>• Instructor Review Skill = 40%</li> </ul>
<b>20% Monthly Behavioral Evaluation</b>

Items required for skill labs	Minimum Points Required	Total Items required in Peer Review	Total Instructor Review
PEEP - PPCP	64	1	
Direct Orotracheal Intubation (Adult) - PPCP	50	9	1
Direct Orotracheal Intubation (Ped) - PPCP	40	2	
Nasotracheal Intubation (Adult - PPCP	42	2	
Needle Cricothyrotomy - PPCP	34	1	1
Trauma Adult Physical Assessment - PPCP	116	2	1
Trauma Endotracheal Intubation (Adult) - PPCP	40	1	
Pleural Decompression - PPCP	30	2	1

### Grading Scale:

**100-90 = A    89-80 = B    79-70 = C    69-60 = D    <59 = F**

All students must maintain a C average in each course to continue throughout the program

### Attendance Policy

All material is important to your success; therefore, students absent more than 5% of the course without a valid excuse will be dismissed from the program of study.

There are two types of absences recognized as a “valid excuse” by Princeton Rescue Squad’s Education Department: (1) absence resulting from participation in an activity where you are officially representing the Education Department; and (2) absence caused by unforeseeable and unavoidable circumstance which is beyond your control. All other absences are considered willful and will not count as excused. It is your responsibility to provide your instructor with a proper explanation and documentation of these valid absences. It is the responsibility of the student to make up any work or testing missed. The missed (comparable) coursework and exams must be completed within 72 hours of the absence and prior to the last date of the class. Tardiness will not be tolerated. Any student who shows up later than 15 minutes into the beginning of a course or leaving a class session 30 minutes or more before the end of the class day will result in the mark of tardy on his/her record. An accumulation of 5 tardies will result in an unexcused absence.

Students may withdraw from the course at any time. Any student that misses more than two (2) consecutive class sessions without contacting the course instructor will be considered to have withdrawn from the course.

### Student Advisory and Evaluation

Faculty will routinely discuss student progress throughout the program of study at regular intervals (increments no longer than 25% of the program) to provide learners with adequate

chances to take corrective actions. During these mandatory meetings with a student item(s) or subject(s) of concern to discuss may include, but are not limited to:

*Excessive absences and tardiness, failure to turn in assignments / clinical rotations on time, classroom / clinical behavior concerns, plagiarism, cheating, struggling or failure to maintain a GPA of 70%, etc.*

A Student Advisory Form will be filled out and signed by both the Faculty member addressing the concern, and the student. Once the concern has been documented, the Program Instructor and student will discuss possible resolutions to the problem and a proposed action plan will be written on the Advisory Form. The student may use the Advisory Form to record a rebuttal against the initial concern or proposed action plan. The instructor will then mark the form “unresolved” and forward it to the Education Director who investigate the matter and make a determination on a second Advisory Form. Copies of these completed Advisory Forms are available to the student; however, originals must and will be retained by the Education Program.

### **Standards of Conduct Regarding Cell Phone Use**

As adults, you are permitted to retain your cellular devices unless during testing. At that time, all cell phones must be placed in a bag away from your testing area or given to your instructor until the testing is complete. It is common during lecture for students to utilize their cell phones to look up information regarding topics discussed in the class session, and this practice is permitted. However, if the instructor or other member of the instructional or administrative staff see that cell phones are being used for other purposes (ie: facebook, messenger, etc.) during lecture, lab, or any other designated course activity then the following discipline policy will take place:

- First offense - verbal warning
- Second offense - written warning
- Third offense - dismissal from the program

### **Academic Dishonesty**

As a student and pre-hospital professional, you are expected to adhere to a professional code of conduct and not engage in plagiarism, cheating, falsifying information or records, or any other such activity. Failure to adhere to this code of conduct will result in disciplinary action up to and including dismissal from the program.

### **Grounds For Dismissal**

A student may be dismissed from the program for the following reasons:

1. Absenteeism greater than 1 unexcused class.
2. Receiving a “D” or “F” as a cumulative grade for the course.
3. Insubordination (in class, lab, or in clinical)
4. The conviction and/or known use of, distribution of, or possession of illegal drugs, or controlled substances.
5. Failure to accomplish clinical assignments and objectives
6. Unprofessional or unethical conduct
7. Cheating in related or professional EMS courses or in clinical documentation.

## NRPM 106 Course Objectives:

1. Demonstrate the assessment and management of a patient with signs and symptoms of soft tissue injury, including:
  - a) Contusion
  - b) Hematoma
  - c) Crushing
  - d) Abrasion
  - e) Laceration
  - f) Avulsion
  - g) Amputation
2. Take body substance isolation procedures during assessment and management of patients with a burn injury.
3. Perform assessment of a patient with a burn injury.
4. Perform management of a thermal burn injury, including airway and ventilation, circulation, pharmacological, non-pharmacological, transport considerations, psychological support/ communication strategies, and other management described by local protocol.
5. Perform management of an inhalation burn injury, including airway and ventilation, circulation, pharmacological, non-pharmacological, transport considerations, psychological support/ communication strategies, and other management described by local protocol.
6. Perform management of a chemical burn injury, including airway and ventilation, circulation, pharmacological, non-pharmacological, transport considerations, psychological support/ communication strategies, and other management described by local protocol.
7. Perform management of an electrical burn injury, including airway and ventilation, circulation, pharmacological, non-pharmacological, transport considerations, psychological support/ communication strategies, and other management described by local protocol.
8. Perform management of a radiation exposure, including airway and ventilation, circulation, pharmacological, non-pharmacological, transport considerations, psychological support/ communication strategies, and other management described by local protocol.
1. Demonstrate a clinical assessment to determine the proper management modality for a patient with a suspected traumatic spinal injury.
2. Demonstrate a clinical assessment to determine the proper management modality for a patient with a suspected non-traumatic spinal injury.
3. Demonstrate immobilization of the urgent and non-urgent patient with assessment findings of spinal injury from the following presentations:
  - a. Supine
  - b. Prone
  - c. Semi-prone
  - d. Sitting
  - e. Standing
4. Demonstrate documentation of suspected spinal cord injury to include:
  - a. General area of spinal cord involved
  - b. Sensation
  - c. Dermatomes
  - d. Motor function
  - e. Area(s) of weakness
5. Demonstrate preferred methods for stabilization of a helmet from a potentially spine injured patient.
6. Demonstrate helmet removal techniques.
9. Demonstrate alternative methods for stabilization of a helmet from a potentially spine injured patient.
10. Demonstrate documentation of assessment before spinal immobilization.
11. Demonstrate documentation of assessment during spinal immobilization.

12. Demonstrate documentation of assessment after spinal immobilization.

Psychomotor-

1. Demonstrate a clinical assessment for a patient with suspected thoracic trauma.
2. Demonstrate the following techniques of management for thoracic injuries:
  - a) Needle decompression
  - b) Fracture stabilization
  - c) Elective intubation
  - d) ECG monitoring
  - e) Oxygenation and ventilation

Psychomotor-

1. Demonstrate a clinical assessment to determine the proper treatment plan for a patient with suspected abdominal trauma.
2. Demonstrate the proper use of PASG in a patient with suspected abdominal trauma.
3. Demonstrate the proper use of PASG in a patient with suspected pelvic fracture.

Psychomotor-

1. Demonstrate a clinical assessment to determine the proper treatment plan for a patient with a suspected musculoskeletal injury.
2. Demonstrate the proper use of fixation, soft and traction splints for a patient with a suspected fracture.

Psychomotor-

1. Demonstrate the assessment of a patient with signs and symptoms of hemorrhagic shock.
2. Demonstrate the management of a patient with signs and symptoms of hemorrhagic shock.
3. Demonstrate the assessment of a patient with signs and symptoms of compensated hemorrhagic shock.
4. Demonstrate the management of a patient with signs and symptoms of compensated hemorrhagic shock.
5. Demonstrate the assessment of a patient with signs and symptoms of decompensated hemorrhagic shock.
6. Demonstrate the management of a patient with signs and symptoms of decompensated hemorrhagic shock.
7. Demonstrate the assessment of a patient with signs and symptoms of external hemorrhage.
8. Demonstrate the management of a patient with signs and symptoms of external hemorrhage.
9. Demonstrate the assessment of a patient with signs and symptoms of internal hemorrhage.
10. Demonstrate the management of a patient with signs and symptoms of internal hemorrhage.

Psychomotor-

1. Perform body substance isolation (BSI) procedures during basic airway management, advanced airway management, and ventilation.
2. Perform pulse oximetry.
3. Perform end-tidal CO<sub>2</sub> detection.
4. Perform peak expiratory flow testing.
5. "Perform manual airway maneuvers, including:
  - a) Opening the mouth
  - b) Head-tilt/ chin-lift maneuver
  - c) Jaw-thrust without head-tilt maneuver
  - d) Modified jaw-thrust maneuver
6. "Perform manual airway maneuvers for pediatric patients, including:
  - a) Opening the mouth
  - b) Head-tilt/ chin-lift maneuver
  - c) Jaw-thrust without head-tilt maneuver
  - d) Modified jaw-thrust maneuver
7. Perform the Sellick maneuver (cricoid pressure).
8. Perform complete airway obstruction maneuvers, including:
  - a. Heimlich maneuver
  - b. Finger sweep
  - c. Chest thrusts

- d. Removal with Magill forceps
- 9. Demonstrate suctioning the upper airway by selecting a suction device, catheter and technique.
- 10. Perform tracheobronchial suctioning in the intubated patient by selecting a suction device, catheter and technique.
- 11. Demonstrate insertion of a nasogastric tube.
- 12. Demonstrate insertion of an orogastric tube.
- 13. Perform gastric decompression by selecting a suction device, catheter and technique.
- 14. Demonstrate insertion of an oropharyngeal airway.
- 15. Demonstrate insertion of a nasopharyngeal airway.
- 16. "Demonstrate ventilating a patient by the following techniques:
  - a. Mouth-to-mask ventilation
  - b. One person bag-valve-mask
  - c. Two person bag-valve-mask
  - d. Three person bag-valve-mask
  - e. Flow-restricted, oxygen-powered ventilation device
  - f. Automatic transport ventilator
  - g. Mouth-to-stoma
  - h. Bag-valve-mask-to-stoma ventilation
- 17. Ventilate a pediatric patient using the one and two person techniques.
- 18. Perform ventilation with a bag-valve-mask with an in-line small-volume nebulizer.
- 19. Perform oxygen delivery from a cylinder and regulator with an oxygen delivery device.
- 20. Perform oxygen delivery with an oxygen humidifier.
- 21. Deliver supplemental oxygen to a breathing patient using the following devices: nasal cannula, simple face mask, partial rebreather mask, non-rebreather mask, and venturi mask
- 22. Perform stoma suctioning.
- 23. Perform retrieval of foreign bodies from the upper airway.
- 24. Perform assessment to confirm correct placement of the endotracheal tube.
- 25. "Intubate the trachea by the following methods:
  - a. Orotracheal intubation
  - b. Nasotracheal intubation
  - c. Multi-lumen airways
  - d. Digital intubation
  - e. Transillumination
  - f. Open cricothyrotomy
- 26. Adequately secure an endotracheal tube.
- 27. Perform endotracheal intubation in the pediatric patient.
- 28. Perform transtracheal catheter ventilation (needle cricothyrotomy).
- 29. Perform extubation.
- 30. Perform replacement of a tracheostomy tube through a stoma.



### Overview of Semester Class Schedule:

	NRPM 101	NRPM 102	NRPM 102L	NPRM 103	NRPM 104	NRPM 104L	NRPM 106	NRPM 106L	Total hrs/day
WEEK #									
1	5				2.5	0.83			8.33
2	5				2.5	0.83			8.33
3	5				2.5	0.83			8.33
4	5				2.5	0.83			8.33
5		2	3		2.5	0.83			8.33
6		2	3		2.5	0.83			8.33
7		2	3		2.5	0.83			8.33
8		2	3		2.5	0.83			8.33
9		2	3		2.5	0.83			8.33
10				2.2	2.5	0.83	1.2	1.6	8.33
11				2.2	2.5	0.83	1.2	1.6	8.33
12				2.2	2.5	0.83	1.2	1.6	8.33
13				2.2	2.5	0.83	1.2	1.6	8.33
14				2.2	2.5	0.83	1.2	1.6	8.33
15				2	2.5	0.83	1.4	1.6	8.33
16				2	2.5	0.85	2	1	8.35
17				2	2.5	0.85	1	2	8.35
18				2	2.5	0.85	0.6	2.4	8.35
	20	10	15	19	45	15	11	15	150

		Classes will meet on Tuesdays	
Course Legend:			
	Req. Hrs:	Start Time	End Time
NRPM 101: Introduction to Emergency Medical Care	20	1300	1800
NRPM 102: Medical Math and Pharmacological Principles	10	1300	1500
NRPM 102L: Pharmacological Techniques	15	1500	1800
NRPM 103: Introduction to Clinical Medicine & Assessment	19	1300	1515
NRPM 104: Anatomy & Physiology for Emergency Medical Care	45	900	1130
NRPM 104L: Anatomy & Physiology for Emergency Medical Care Lab	15	1130	1230
NRPM 106: Airway and Injury Management in the Field	11	1515	1630
NRPM 106L: Airway and Injury Management in the Field Lab	15	1630	1800
	150		