



KCEAA CCT Course

Kanawha County Emergency Ambulance Authority will be sponsoring a Critical Care Transport Class beginning Thursday, March 4th, 2010 to run for 12 consecutive weeks with the exception of April 8th (there will be no class that day) and will end on Thursday, May 20th, 2010. We cordially invite anyone interested in taking this challenging class to read the information provided and contact us if you should have any questions. Classes will be conducted every Thursday at KCEAA in our auditorium located at 601 Brooks Street. Final testing will be on Thursday, May 20th, 2010. Information about the course can be found on our website at www.kceaa.org. If you or anyone in your organization would be interested in enrolling for this course please submit the application and course fee to:

KCEAA
P.O. Box 292
Charleston, WV
25321

Attn: Kim Johnson

KCEAA must have a minimum of 20 students registered by Thursday, January 21st, 2010 to sponsor the class. If we do not have enough students enrolled it will be cancelled. All money would be reimbursed.

Once we have received payment for 20 students the money will be nonrefundable.

The Critical Care Transport Course was designed for the EMT-Paramedic and Registered Nurse. Students will obtain the knowledge and skills necessary to manage the critical patient during transfers between hospitals, specialty referral centers and extended care facilities. Individuals interested in CCT Training should contact the KCEAA Training Division at (304) 345-2312, ext. 119. Seating is limited and will be on a first come, first serve basis. Interested applicants must send their application with payment no later than January 21st, 2010. You will not be guaranteed a spot until payment is received.

Tuition for the CCT course will be \$750.00 to be made payable to KCEAA. The program is affiliated with Marshall Community and Technical College and will offer 5 hours of 200 level undergraduate college credit.

The course fee will cover the MU CTC tuition, one clinical shirt, a student photo I.D., course materials and handouts; skills station supplies, and other miscellaneous items.

For more information contact the KCEAA Training Division by [e-mail](#) or by phone at (304) 345-2312

Kim Johnson, ext. 119 kimjohnson@kceaa.org

Mark Kerns, ext. 141 markkerns@kceaa.org

Paramedic/Nurse Requirements to register for this class:

Current certifications in the following:

- ACLS
- ITLS/PHTLS or TNCC
- PEPP

This course is **very** challenging and requires a commitment from the student. It is strongly recommended that each participant report to class on time. In addition to the classroom sessions, each student is required to complete the following prior to completion of the class:

- 16 hours of ride time on a CCT truck (Two 8 hour shifts)
- Clinical Time
 - 4 hours in PICU
 - 4 hours in Labor and Delivery
 - 20 hours in ICU settings

ALL clinical rotations and CCT ride time MUST be completed by May 12th, 2010 and all forms must be completed and turned in to Kim Johnson no later than May 13th, 2010 at 0800. Failure to do so will make the candidate ineligible for testing and would result in failure of the course. It is strongly encouraged and recommended that each student begin clinical rotations and CCT ride time as quickly as possible to meet this requirement. Do not wait until the last minute.

KCEAA Critical Care Transport Course Application

Name: _____	Clinical Shirt Size: _____	
SS#: _____	Date of Birth: _____	
Address: _____		
City, State, Zip Code: _____		
Home Phone #: _____	Work Phone #: _____	
Cell Phone #: _____	Pager #: _____	
Email Address: _____		
Employer/Sponsoring Agency: _____		
Address: _____		
City, State, Zip Code: _____		
Agency Contact Person: _____		
Agency Contact #: _____		
EMT-P #: _____	WVOEMSA/EMSP #: _____	
Driver's License: _____	WVNA Nursing License #: _____	
Years of emergency EMS/Critical Care Experience: _____		

Please mark all that apply:

<input type="checkbox"/> ACLS (Required)	<input type="checkbox"/> ITLS/PHTLS/TNCC (Required)
<input type="checkbox"/> CPR	<input type="checkbox"/> EVOC
<input type="checkbox"/> NRP	<input type="checkbox"/> PEPP (Required)

I certify that I have a valid/current certification in each of the required courses and a copy of the cards will accompany this application.

Method of Payment:

<input type="checkbox"/> VISA	<input type="checkbox"/> Check	Card #: _____
<input type="checkbox"/> Master charge	<input type="checkbox"/> Money Order	Exp. Date: _____

Do you have prehospital experience	Yes _____	No _____
Do you have ER experience?	Yes _____	No _____
Do you have ICU experience	Yes _____	No _____

2010 WVOEMS / KCEAA
Marshall Community and Technical College
Critical Care Transport Course
Student / Instructor Class Outline

Date/Hours	Topic	Instructor
March 4th, 2010	Day 1	
0730-0900	Pictures for ID badges/Clinical Shirts/Parking MCTC Registration	
	Overview of class	Kim Johnson
0900-1000	Introduction to CCT	Mark Kerns
1000-1010	Break	
1010-1100	Introduction to CCT	
1100-1200	Lunch	
1200-1300	Lab Data Interpretation	Dr. Burdette
1300-1310	Break	
1310-1345	Lab data Interpretation	
1345-1355	Break	
1355-1430	ABG Interpretation	Kim Johnson
1430-1600	ETCO2	Kim Johnson or Mark Kerns

WBVBRN hours awarded = 6.6 hours or 330 minutes

March 11th, 2010	Day 2	
0800-0900	Test (Introduction, Lab data and ABG Interpretation)	
0900-1100	Pharmacology	Kim Johnson
1100-1200	Lunch	
1200-1300	Pharmacology	
1300-1310	Break	
1310-1410	Ventilator Management	Nathan Portz
1410-1420	Break	
1420-1620	Medication Calculation	Mark Kerns

WVBRN hours awarded = 7.2 hours or 360 minutes

March 18th, 2010	Day 3	
0800-0900	Test (Pharmacology, Vent management and Medication Calculations)	
0900-1100	Respiratory Management	Kim Johnson
1100-1200	Lunch	
1200-1330	RSI	Kim Johnson
1330-1345	Break	
1345-1630	Skills	
	<ul style="list-style-type: none"> • Surgical Cricothyrotomy • Cook Catheter Chest Tube • Intubation/King airway, PLA • RSI/Pump Setup 	

WVBRN hours awarded = 7.5 hours or 375 minutes

March 25th, 2010

Day 4

0800-0900	Test (Respiratory/Ventilator Management/ETCO2/RSI)	
0900-1100	Cardiac Management/Invasive	Dr. Burdette
1100-1200	Lunch	
1200-1330	Cardiac Management Continued	
1330-1345	Break	
1345-1545	Cardiac Management Continued	

WVBRN hours awarded = 6.6 hours or 330 minutes

April 1st, 2010

Day 5

0800-0900	Test (Cardiac Management)	
0900-1100	12 Lead ECG	Mark Kerns
1100-1200	Lunch	
1200-1330	12 lead ECG continued	Mark Kerns
1330-1630	Skills /Review	
	<ul style="list-style-type: none">• Invasive monitoring• 12 lead ECG	

WVBRN hours awarded = 7.8 hours or 390 minutes

April 8th, 2010

No Class

April 15th, 2010

Day 6

0800-0900	Test (12 Lead ECG)	
0900-1100	GI/GU	Dr. Burdette
1100-1200	Lunch	
1200-1400	Renal	Dr. Burdette
1400-1415	Break	
1415-1630	DKA/DI/SIADH	Dr. Burdette

WVBRN hours awarded = 7.5 hours or 375 minutes

April 22nd, 2010

Day 7

0800-0900	Test (GI/GU/Renal)	
0900-1100	Neurological Management	Candace Burger, RN
1100-1200	Lunch	
1200-1300	Neurological Management	Candace Burger, RN
1300-1315	Break	
1315-1515	OB	Denise Webb, RN
1515-1530	Break	
1530-1630	OB	

WVBRN hours awarded = 7.2 hours or 360 minutes

April 29th, 2010

Day 8

0800-0900	Test (Neuro/OB)	
0900-1100	Shock Management	Dr. Burdette
1100-1200	Lunch	
1200-1300	Pediatric Management	Mark Kerns
1300-1315	Break	
1315-1515	Pediatric Management Continued	
1515-1630	Review	

WVBRN hours awarded = 7.5 hours or 375 minutes

May 6th, 2010

Day 9

0800-0900	Test (Shock/Pediatric)
0900-1000	Burns
1000-1100	Radiology
1100-1200	Lunch
1200-1430	Radiology
1430-1440	Break
1440-1630	Skills

Kim Johnson
Dr. John Burdette

WVBRN hours awarded = 7.6 hours or 380 minutes

May 13th, 2010 Day 10

0900-1000	Test (Radiology/Burns)
1000-1100	Skills Review
1100-1200	Lunch
1200-1600	Skills Review

WVBRN hours awarded = 6.0 hours or 300 minutes

Final Testing-Written and Practical

May 20^h, 2010 Day 11

Clinical Rotation	Total Hours	28
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CAMC PICU / Labor & Delivery
CAMC CCU
CAMC MSICU/NMICU

Critical Care Transport Rides 16 hours

In the event you do your ride time but do not complete a CCT call the preceptors are required to give you simulated calls and allow you to work through them. You must act as the primary provider. These simulated or actual calls must be documented.

Updates to the curriculum/clinical requirements may be made by the State Deputy Medical Director for CCT prior to the start of the class. In that instance, the outline of classes and allotment of times are subject to change.



On behalf of Kanawha County Emergency Ambulance Authority I would like to welcome you to the Critical Care Transport Course sponsored in conjunction with Marshall Community and Technical College. Enclosed you will find the syllabus and course description. The class will begin Thursday, March 4th, 2010 and end Thursday, May 20th, 2010. It will run consecutively for 12 weeks with the exception of April 8th. There will be no class on that day. Class times are 0800-1630. We ask that the first day of class you be here by 0730 so we can take care of a few items (Pictures for ID badges, getting your polo shirt required for unit rotations and orientation to the building). It is strongly recommended that you be at class on time each week so you do not miss valuable information. Any agency sponsoring a student is also strongly encouraged to ensure your employee is able to get to class on time and attend every class.

We are located at 601 Brooks Street in Charleston, WV.

Take the Leon Sullivan Way Exit (Exit 100)

Go to the second stop light and turn left. At the next stoplight turn left. Pass through the next stoplight and before getting onto the entrance ramp to the interstate we are located on the left. There are 3 flagpoles in the front of our building. We are across from the Power Alley ballpark. We ask that you park on the side of the building or at the main entrance, where the circle is located.

No food or drinks are allowed in the auditorium with the exception of bottled water. You are welcome to bring your own or we have a bottled water machine. Please feel free to contact any of the following if you should have any questions:

Kim Johnson 345-2312, ext. 119

Mark Kerns 345-2312, ext. 141

All students are required to bring a calculator to class each week. Strong deficiencies identified in past classes have been medication calculation and 12 lead ECG recognition and treatment. If you are deficient in these areas you are encouraged to take classes on these subjects prior to attending this class. KCEAA does offer classes on these subjects.

Directions to CCT stations for ride time

Belle Medic (59)

From Charleston, follow I-77 South/I-64 East toward Beckley. Take Exit 96 (Belle/Midland Trail) and follow Rt. 60 East for 7.9 miles. Turn left at the Exxon onto Witcher Creek Rd. At the stop sign behind Exxon, turn right. Station is joined with the Belle Fire Dept beside of Witcher Creek Baptist Church. Please do not park on church property.

Station number [304-949-1375](tel:304-949-1375)

Nitro Medic (329)

Take I-64 and get off of the Nitro exit. At the stoplight make a left and go to 19th street. At the stop light make a right and travel approximately 200 yards on Republican Way. The ambulance will be sitting inside the fenced area next to the red brick building.

Station number [304-755-7027](tel:304-755-7027)

KCEAA Communications Center [304-342-1107](tel:304-342-1107) or [1-800-560-2055](tel:1-800-560-2055)
Kim Johnson [304-345-2312](tel:304-345-2312), Ext. 119



WVOEMS / KCEAA

2010 Critical Care Transport

Program



Marshall Community and Technical College

WVOEMS / KCEAA
Marshall Community and Technical College
Critical Care Transport Program

Syllabus

Course:	Critical Care Transport
Instructors:	Dr. John Burdette, M.D. KCEAA Medical Director Candace Burger, RN, Neuro ICU Kimberly Johnson, RN, CCRN, Program Director Mark Kerns, EMT-P, CCT-P Nathan Portz, RN, CCRN Denise Webb, RN, Labor and Delivery, Cabell Huntington
Course Coordinator:	Kim Johnson, RN, CCRN
Office Hours:	0800-1630
Class Location:	KCEAA Central Office, 601 Brooks Street, Charleston, WV
Class Time:	0800-1630
Class Dates:	Thursday, March 4 th , through Thursday, May 20 th with final testing on Thursday, May 20 th , 2010 (No class on April 8th, 2010)
Prerequisites:	Registered Nurse and/or Paramedic with current ACLS, ITLS or (PHTLS or TNCC), and PEPP certifications. It is the responsibility of the STO to ensure all required classes are current so the candidate can take the WVOEMS approved exam.

Program Description:

The Critical Care Transport Course was designed for the EMT-Paramedic and Registered Nurse. You will obtain the knowledge and skills necessary to manage the critical patient during transfers between hospitals, specialty referral centers and extended care facilities.

Instructional Procedures:

The Kanawha County Emergency Ambulance Authority/ Marshall Community and Technical College Critical Care Transport Program will meet once a week at 8-hour sessions for a total of 11 weeks. Classroom sessions will consist of lecture, lab, and self-study sessions. Many types of teaching aids, such as power point presentation, films, overhead and various types of medical equipment will be used in the classroom to facilitate the learning process.

Student Evaluation:

Exams and skill evaluations will be given after each module is completed, with a final written and practical examination. In addition, it will be required that each participant complete 20 hours of clinical rotation, two 8 hour increments of ride time on a designated and approved CCT truck and 8 hours of simulation. Failure to complete clinical requirements by the deadline will result in an incomplete grade and failure of the course. Graded material will be worth the following amounts:

Exams	100 Points
Skill Evaluation	Pass/Fail
Clinical Rotation	Pass/Fail

The total points that the student earns divided by the total points possible will determine the student's final grade. The course grading scale is as follows:

93 – 100	A
85 – 92	B
76 – 84	C
66– 75	D
Below 66	F

Critical Care Transport Written Examination

Introduction

This section describes the Critical Care Transport written examination

Exam Content

The critical care transport written examination consists of 100 multiple choice items contained in 12 module areas based on the 2003 WVOEMS approved Critical Care Transport Curriculum.

Two hours are allowed for the completion of the examination.

Scoring

A passing score requires that the participant obtain a minimum overall score of 76% or greater.

Failure to obtain the minimum overall passing score constitutes complete failure of the written examination.

A student must maintain a final grade of 76% or higher on the combined module quizzes or they will not be eligible to take the final exam. They will not be eligible for testing. They would be required to take another full course.

Retesting opportunities and requirements

Participants that fail the final written examination with a score of 65% or less must complete another approved WVOEMS Critical Care Transport Course.

The passed portion of the examination, either the written or the practical, will remain valid for a 12 month period from the date of the exam, provided all other requirements from WVOEMS are met. Participants not completing the failed portion of the examination within that 12-month period will be required to repeat the complete program.

Participants failing the written examination may re-apply if:

A score on the final written examination of 70% to 75% will allow the participant to re-apply without any additional education by submitting another completed application and fee for re-examination.

A score on written examination of 65% to 69% will allow the participant to re-apply only if they submit documentation verifying that they have successfully completed a WVOEMS Critical Care Transport Refresher Course, and by submitting another completed application and fee for re-examination.

Participants are only allowed one additional opportunity to pass the written examination, provided all other requirements for WVOEMS Critical Care Transport are met.

Participants that fail the second attempt of the written examination must complete another approved WVOEMS Critical Care Transport Course.

Results reporting

Participants should allow three to four weeks from examination date for their examination results. **The results will be issued by the WVOEMS.**

Critical Care Transport Practical Examination

Introduction

This section describes grading policies and results required for certification for the Critical Care Transport practical examination.

Pass/Fail Policies and retesting

Grading of the practical examination is on a Pass/Fail basis. In many cases, retakes of failed skills are allowed.

Failure of 50% or more of the practical skills:

This constitutes failure of the entire practical examination. The participant must complete a new, WVOEMS Critical Care Transport Course.

Failure of less than 50% of the practical skills:

Participant must submit a completed application and fee for practical re-examination.

Participants are allowed three attempts to pass the practical examination (one full attempt is defined as completing all skill stations and two retesting opportunities if so entitled).

Participants failing a second retest must submit documentation verifying that they have successfully completed a WVOEMS Critical Care Transport Provider/Refresher Course, prior to submitting another completed application and fee for re-examination.

Should the participant fail the third and final attempt of the practical examination, the participant must complete a new, WVOEMS Critical Care Transport Course.

Make up exams:

Missed exams must have a valid excuse, and must be made up no later than the next class after the original exam was administered.

Student Contributions:

Each student will be required to do all assignments, be present for all lectures and skill exams, participate in required clinical time, turn in student clinical evaluation sheets, and submit course evaluations when indicated.

Clinical Evaluation Forms:

Each student will be required to complete a clinical evaluation form for each clinical rotation completed. Upon completion of each form, the preceptor should give additional comments to enhance the overall educational experience. All clinical evaluation forms shall be kept in a notebook, and submitted to the course instructor when the rotation is completed. Please do not wait until the end of the class to turn them in. Failure to submit necessary clinical information will constitute course Incompletion or Failure. Incompletion or failure of the course will make the student candidate ineligible for Critical Care Transport testing.

Attendance:

All material is important to your success, both as a student and a healthcare provider. Attendance is a priority. Students absent more than two times without a valid excuse may be dismissed from the program.

Clinical Training:

The Critical Care Transport student will be required to complete **28** hours of clinical (hospital) training during the course. Clinical sessions will be scheduled by the instructor, and announced before you will report to the clinical setting. Before any participant is permitted to perform any clinical skills, they must have passed necessary skill evaluations and any written testing. In addition, the participant must have Critical Care Transport Clinical Evaluation Forms and objectives with them to present to the preceptor for clarification. Attendance for clinical training will follow the same format as any other class session. The clinical evaluation forms and objectives will be available on the KCEAA website at www.kceaa.org

Academic Dishonesty Policy:

If any instructor observes academic dishonesty or any action viewed as unethical on the part of the participant, immediate dismissal from the course will follow. No refunds shall be granted. **At no time will any student be allowed to copy any quiz or exam. Any quiz/exam not returned to the coordinator after viewing will be expelled from class and will not receive a refund.**

Meeting with Instructor:

Every effort is made to be responsive to the student's learning needs. Please arrange a meeting with the course instructor if you have any questions, difficulties, or concerns about your progress in the class.

Student Auditing:

Periodically other students from previous Critical Care Transport Programs may sit in on this course for remediation purposes. When these students are in attendance, they should be treated with the same respect you have with other classmates. These students are possibly completing areas to make them eligible for testing.

Class Outline:

In cases of unforeseen circumstances, the instructors and order in which the lectures are presented are subject to change without notice.

Course Requirements

Clinical requirements are subject to change prior to the start of the class by authority of the state Deputy director for CCT.

MODULE 1

INTRODUCTION TO CRITICAL CARE TRANSPORT (CCT)

Overall Objective: Student will identify, relate and apply the roles and responsibilities involved in being a member of the Critical Care Transport (CCT) team.

Enabling Objectives: Upon completion of this module, the student will be able to:

- 1.1 Describe and define a CCT.
- 1.2 Understand the proper sequence of events that must transpire to initiate and complete a CCT.
- 1.3 Identify personnel requirements for the interfacility transport team.
- 1.4 Define and understand the composition of a critical care transport team, communicator, and medical direction program.
- 1.5 Have the understanding of each team member's scope of practice and responsibilities in the critical care environment.
- 1.6 Recognize and understand terminology used in the critical care environment and define.
- 1.7 Will be able to use the appropriate communication skills before, during, and after the CCT, and have basic knowledge of communication devices.
- 1.8 Will be able to describe and complete the process of obtaining the critical care transfer from the sending facility.
- 1.9 Accurately and concisely describe and complete the necessary documentation involved in a CCT.
- 1.10 Identify the differences and process involved in quality management and continuous quality improvement.

MODULE 2

LAB DATA INTERPRETATION

Overall Objective: Student will gain knowledge of commonly used lab values such as interpretation, signs and symptoms associated with abnormal values, treatment, and therapy involved improving patient outcome.

Enabling Objectives: At the conclusion of this module, the student will be able to:

- 2.1 Define and state the normal lab values and ranges routinely encountered in the critical care setting.
- 2.2 Identify causes of abnormal lab values and how they affect the management of CCT patients.
- 2.3 Interpret arterial blood gas (ABG) levels and the differentiation and implications of:
- 2.4 Identify treatment options for patients with abnormal ABG levels.
- 2.5 List compensatory mechanisms for acid-base disturbances.
- 2.6 Determining the causes of imbalances by utilizing the anion gap

**After completion of this module the participant will be required
Complete a written exam**

Overall Objective: The student will be able to integrate pathophysiological principles of pharmacology and the assessment findings to formulate an impression and implement and/or continue a pharmacological management plans for the CCT patient. They should also be able to calculate medications appropriately and safely for all patients.

Enabling Objectives: At the conclusion of this module, the CCT applicant will be able to:

- 3.1 Discuss and explain the given drug terminology that are necessary to safely interpret information in drug references.
- 3.2 Identify the administration routes and techniques for drug calculation
- 3.3 Identify and explain the CCT Drugs according to their classification, mechanism of action, indications, contraindications, side effects, dosages, and considerations.
- 3.4 Demonstrate proper procedures and techniques used to administer medications.
- 3.5 Perform appropriate drug dosage calculations and conversions accurately and efficiently
- 3.6 Demonstrate knowledge of the abbreviations commonly used
- 3.7 Convert between systems of metric and apothecary without error
- 3.8 Interpret medication orders and perform mathematical calculations and conversions required, correctly
- 3.9 Calculate, without error, drug dosages
- 3.10 Reduce or enlarge formulas to meet specific requirements of medication orders
- 3.11 Display proficiency in calculations of dilution and concentration
- 3.12 Prepare medications for safe administration using selected routes of administration
- 3.13 Manipulate medication delivery systems safely, including intravenous tubing and infusion pumps

After completion of this module the participant will be required

Pass a practical exam on the

➤ **Administering of Drugs**

➤ **Calculation drugs**

Complete a written exam

MODULE4

Respiratory Management

Overall

Objective: Students will understand respiratory system and be able to appropriately manage respiratory complications.

Enabling

Objectives: Upon completion of this module, students will be able to:

- 4.1 Have a better understanding of the functional anatomy of the respiratory system.
- 4.2 Perform an adequate assessment of the respiratory system
- 4.3 Auscultate various normal and abnormal breath sounds
- 4.4 Understand and use respiratory diagnostic and monitoring tools
- 4.5 List the steps in the gas exchange process
- 4.6 Describe the pulmonary blood flow.
- 4.7 Identify various pulmonary complications / obstructive disease processes and the treatment interventions.
- 4.8 Be proficient in Ventilator & Pharmacological Management.
- 4.9 Adequately recognize and treat the compromised respiratory patient.
- 4.10 Understand and state the rationale for the use of RSI
- 4.11 Understand and state the drugs commonly used for RSI
- 4.12 Understand and demonstrate the importance of
 - Proper selection of drugs
 - Proper sequence
 - Proper dosage
 - Proper time
- 4.13 State the appropriate selection of drugs based on the patient's overall condition
- 4.14 Safely administer all drugs
- 4.15 Know the indications and contraindications of all the drugs used for RSI
- 4.16 Discuss the concept of the difficult airway.
- 4.17 Describe which factors may make a patient more difficult to bag
- 4.18 Describe which anatomical factors and which disease states may make laryngoscopy more difficult. Describe the brief pre-intubation examination to identify the difficult laryngoscopy including the Mallampoti classification
- 4.19 Outline indications and contraindications of various routes of tracheal intubation including Rapid Sequence Intubation: Knowledge of the principles, indications, contraindications, and medications.
- 4.20 Describe and define Rapid Sequence Intubation.
- 4.21 Discuss its advantages and disadvantages as compared to awake intubation, use of IV sedation only, and blind nasotracheal intubation.
- 4.22 Discuss the choice of neuromuscular blockers. Describe the contraindications to Succinylcholine. Discuss the use of the following induction agents and their respective advantages and disadvantages; Thiopental, Midazolam, Fentanyl, Etomidate, Ketamine
- 4.23 Describe alternate methods for establishing an airway when endotracheal intubation cannot be accomplished.
- 4.24 Discuss the management of the failed airway (Inability to intubate or bag ventilate)

- 4.25 Describe the difficult airway kit and its contents including the procedure for
- Surgical Cricothyrotomy
 - LMA
 - PLA

After completion of this module the participant will be required

Pass a practical exam

- **Insertion of**
- **Entracheal Tube**
- **Combi-tube**
- **LMA**
- **Operation of ventilator**
- **RSI**

Complete a written exam

MODULE 5

Cardiac Management

Overall

Objective: Students will be able to appropriately manage the cardiovascular patient through physical assessment, interpretation, and utilization of adjunct modalities, including but not limited to, 12-lead ECG monitoring, invasive electrical therapy, balloon pump support, and pharmacological therapies.

Enabling

Objectives: After completion of this module, the student will be able to:

- 5.1 Understand cardiac A & P
- 5.2 Identify variables affecting left ventricular function
- 5.3 Recognition of MI utilizing ECG:
- 5.4 Myocardial Infarctions-Assessment Finding's
- 5.5 Identify Cardiac Arrhythmias
- 5.6 Identify other possible complications encountered with cardiac patients
- 5.7 Identify the purpose and use of other devices that assist the compromised cardiac patient

After completion of this module the participant will be required

Pass a practical exam

- **Static**
- **Dynamic**

Complete a written exam

MODULE 6

SHOCK MANAGEMENT

Overall

Objectives: The student will be familiar with the different types of shock, treatment modalities, pharmacologic resources, and hemodynamic monitoring used for the patient with circulatory compromise.

Enabling

Objectives: After completion of this Module, the student will be able discuss and define the following:

- 6.1 Shock
- 6.2 Three (3) Major Phases Shock is Divided Into
- 6.3 Pathophysiology
- 6.4 Oxygen Transport
- 6.5 Waste Removal
- 6.6 Shock (Hypoperfusion)
- 6.7 Shock is a Complex Phenomenon and the Causes Vary
- 6.8 Forms of Shock
- 6.9 Hypovolemic Shock
- 6.10 Distributive Shock
- 6.11 Anaphylactic Shock
- 6.12 Neurogenic Shock
- 6.13 Septic Shock

After completion of this module the participant will be required

Pass a practical exam

➤ **Hemodynamic monitoring devices**

Complete a written exam

MODULE 7

NEUROLOGICAL MANAGEMENT

Overall

Objective: The student will be able to identify the patient's status and understand appropriate management.

Enabling

Objectives: After completion of this Module, the student will be able to discuss and define the following:

- 7.1 A&P of Neurological System
- 7.2 Neurological Assessment
- 7.3 Neurological Injuries
- 7.4 Stroke
- 7.5 Skull Fracture

- 7.6 Other Neurological Problems
- 7.7 Neurological Diseases

Pass a practical exam

➤ **Hemodynamic monitoring devices**

Complete a written exam

MODULE 8

Obstetrics Management

Overall Objectives: Participants will recognize and manage normal and complicated pregnancies and deliveries through proper assessment of OB patients.

Enabling

Objectives: After completion of this module, the student will be able to:

- 8.1 Define basic anatomy and physiology of the reproductive structures
- 8.2 List the anatomical and physiological changes affecting the Obstetric patient
- 8.3 Describe the assessment method for gynecologic and obstetric patients
- 8.4 Describe the general management of the obstetric patient
- 8.5 Explain the specific complications of pregnancy
- 8.6 Describe a normal childbirth and delivery
- 8.7 Describe deliveries: abnormal presentations
- 8.8 Initiate appropriate interventions of normal care following newborns delivery
- 8.9 Describe appropriate interventions for mother's treatment after birth

Complete a written exam

MODULE 9

GI, GU, RENAL MANAGEMENT

Overall

Objective: The student will be able to assess and manage a critical patient with genitourinary, gastrointestinal and renal complications.

Enabling

Objective: After completion of this module, the student will be able to:

- 9.1 Renal Objectives
 - 9.1.1 Identify the anatomic structures of the urinary tract.
 - 9.1.2 Describe the gross anatomy of the kidney.
 - 9.1.3 Trace the blood flow entering and exiting the kidney.
 - 9.1.4 Describe the structure of the nephron.
 - 9.1.5 Describe the function of the juxtaglomerular apparatus in relation to renal blood flow.
 - 9.1.6 Describe the process of glomerular filtration including the processes that affect filtration.

- 9.1.7 Differentiate between the processes of reabsorption and secretion.
 - 9.1.8 Describe the major functions of the kidney.
 - 9.1.9 Compare and contrast acute and chronic renal failure, including the definition, presenting signs and symptoms, course, and complications.
 - 9.1.10 Identify the etiologies of prerenal, intrarenal, and postrenal failure.
 - 9.1.11 Describe the processes of urine formation (glomerular filtration, tubular reabsorption and tubular secretion).
 - 9.1.12 List three (3) general mechanisms by which the kidneys maintain homeostasis
- 9.2 Gastrointestinal objectives
 - 9.2.1 Identify the anatomic structures of the GI tract
 - 9.2.2 Understand the anatomy and physiology of the GI system
 - 9.2.3 Understand disorders and treatments of the GI system
 - 9.2.4 Understand and perform an adequate assessment of the GI system
 - 9.2.5 Know the proper procedure for insertion of a nasogastric/orogastric tube
 - 9.2.6 Understand the signs and symptoms associated with disorders of the GI system
 - 9.3 Genitourinary Objectives
 - 9.3.1 Identify and understand the structures which comprise the genitourinary system
 - 9.3.2 Understand the anatomy and physiology of the GU system
 - 9.3.3 Understand disorders and treatments of the GU system
 - 9.3.4 Understand and perform an adequate assessment of the GU system
 - 9.3.5 Know the proper insertion technique of a Foley catheter for a male and female patient
 - 9.3.6 Understand signs and symptoms associated with disorders of the GU system

Complete a written exam

MODULE 10

Pediatric Management

Overall

Objective: Student will be able to integrate pathophysiological principles and assessment findings to manage, treat, and transport the critical care pediatric patient with multi-system trauma, end-stage disease presentation, acute presentations of chronic conditions and single- or multi-disease etiologies.

Enabling

Objectives: At the completion of the Module, the student will be able to discuss:

- 10.1 Definitions
- 10.2 Growth and Development Review
- 10.3 Anatomy and Physiology Review
- 10.4 Physical Exam
- 10.5 General Management

- 10.6 Routes of Administering Medications
- 10.7 Respiratory Compromise
- 10.8 Medical Emergencies
- 10.9 Shock

Complete a written exam

MODULE 11

Special Topics

Radiology Review

Overall

Objectives: At the end of this class the participant should understand the basic concepts and skills required to correlate pathological and clinical data with radiographic findings on chest films.

Enabling

Objectives: At the conclusion of this module, the student will be able to:

- 11.1 Identify normal anatomy of the chest as it is seen on the radiograph
- 11.2 Demonstrate a basic knowledge of radiologic interpretation
- 11.3 Gather clinical and radiological data on patients with disease processes
- 11.4 Recognize normal chest and C-spine anatomy and appropriate positions for tubes, catheters and other medical devices on chest and C-spine films
- 11.5 Demonstrate ability to recognize common conditions (e.g. collapsed lobes) and life threatening conditions (e.g. pneumothorax) on chest radiographs
- 11.6 Demonstrate a clinically appropriate diagnostic treatment plan
- 11.7 Understand cardiac and aortic arch great vessel anatomy and the physiologic basis for common diseases (e.g. CHF and pulmonary hypertension, pericardial effusions) and understand the plain film findings in common diseases of the heart and great vessels

Burn Management

Objectives: At the end of this class the participant should be able to:

- 11.8.1 Recognize when responding to burn emergencies airway and C-spine management, oxygenation, and circulatory support as being the highest priority.
- 11.8.2 Recall the anatomy & physiology of the skin
- 11.8.3 Develop an understanding of burn injuries from thermal (heat) sources and (depending upon presentation length) burns from electrical, chemical, and radiation sources

- 11.8.4 Perform appropriate initial and focused assessments of burn injuries, including realistically accurate burn depth and extent estimations
- 11.8.5 Provide appropriate medical and psychological treatment for burn injuries, including decontamination and IV fluid administration using the Parkland formula
- 11.8.6 Make appropriate destination decisions based upon the burn mechanism, injury extent, and patient condition.
- 11.8.7 Understand the importance of evaluation for extremity/chest escharotomy

Hemodynamic Monitoring

Objectives

At the end of this class the student should be able to interpret hemodynamic parameters and recognize treatment of life-threatening conditions. The student should also be able to:

- 11.9.1 Discuss possible contraindications of the pulmonary artery catheter
- 11.9.2 Describe complications associated with the PA catheter
- 11.9.3 Describe and understand hemodynamic physiology including:
 - Cardiac cycle
 - Define preload, afterload and contractility
 - Stroke volume
 - Discuss normal pressures
 - Discuss mechanical ventilation and PA pressure readings
 - Demonstrate measuring cardiac output
- 11.9.4 Waveform recognition and analysis
 - Identify and discuss venous pressures (CVP)
 - Describe right vs. left atrial waveforms
 - Identify and measure pulmonary artery waveforms
 - Identify pulmonary artery wedge pressure and discuss factors that alter the PAWP
 - Describe and discuss arterial pressure waveforms
 - Perform waveform recognition and analysis exercises
 - Discuss arrhythmias and their hemodynamic effects
 - Describe problems in obtaining accurate pressure readings

- Troubleshoot waveform abnormalities

11.9.5 Effects of Pharmacologic Agents on Hemodynamics

- Positive Inotropes & vasoactive drugs
- Describe factors affecting contractility
- Beta Adrenergic Agonists

11.9.6 Diagnosing Life-Threatening Complications

- Diagnose life-threatening complications using PAP, CVP, PAWP readings

11.9.7 Treatment and Clinical Picture of Conditions Requiring Hemodynamic monitoring

- Discuss clinical findings and treatment of cardiac tamponade
- Discuss clinical findings and treatment of cardiac failure, cardiogenic shock and RV infarction
- Discuss clinical findings and treatment of sepsis and septic shock
- Discuss clinical findings and treatment of hypovolemic and hemorrhagic shock

11.9.8 Pulmonary Artery Catheter (Swan-Ganz Catheter)

- Demonstrate set-up and insertion of the PA catheter
- Describe and demonstrate zeroing and leveling the transducer

Complete a written exam

MODULE 12

Clinical Case Scenarios/Putting it all together

Overall: Given critical care transport scenarios, the student will be able to demonstrate the correct management of a patient using advanced knowledge, skills and equipment acquired in this Critical Care Transport Course.

Enabling

Objectives: At the conclusion of this module, the participant will be able to:

- 12.1 Demonstrate advanced airway and ventilation management
 - Oral and nasal Intubations
 - Combitube
 - LMA

- RSI
- Ventilator therapy
- ETCO2 monitoring
- 12.2 Demonstrate proficiency with equipment
 - Invasive monitoring (Swan-Ganz, CVP, arterial line)
 - Cardiac monitoring (12 lead EKG's, fax transmission)
 - Pacing (Transvenous and transcutaneous)
 - IVAC Mini-med pumps
- 12.3 Demonstrate advanced surgical intervention
 - Cricothyrotomy (needle/surgical)
 - Chest tube insertion (Cook Catheter)
 - Arterial line insertion with pressure monitoring
- 12.4 Demonstrate an understanding of any and all medications routinely encountered in the critical care environment. This will include
 - Routes of administration
 - Indication and contraindication
 - Side effects
 - Dosages and Drug calculations

Pass a practical exam

- **Airway Management**
- **Hemodynamic monitoring devices**
- **Administration of Medication**

Complete a written exam

**Kanawha County Emergency Ambulance Authority
Marshall Community and Technical College
Critical Care Transport
Student Clinical Objectives**

Participant Name: _____

All participants reporting to clinical rotations should present to the clinical preceptor a clinical check sheet, a list of clinical area objectives, and be wearing their uniform with nametag. If any participant reports without all the above, the participant shall be dismissed from clinical rotation. The clinical check list will be the guideline that both that participant and preceptor must use during clinical rotation. Rotating areas will consist of MSICU at CAMC General, Coronary Care Unit at CAMC Memorial, PICU and Labor & Delivery at CAMC Women's and Children's Hospital. In these areas the participant needs to accomplish the broad range of objectives listed below:

1. Observe and obtain patients history and complete physical exam.
2. Review chart thoroughly including labs, radiology reports and physicians progress notes.
3. Review any radiology films available
4. Observe and participate with the maintenance of basic and advanced airway management.
 - a. Suctioning
 - i. Orally
 - ii. Nasally
 - iii. Endotracheally
 - iv. Tracheally
 - b. Oxygen administration by various devices
 - c. Incentive Spirometer
 - d. Chest PT
 - e. Administration of Breathing Treatments
5. Observe and assist with peripheral or central IV placement and maintenance, including Swan Ganz Catheters, and focusing on:
 - a. Sterile techniques
 - b. Cardiac output
 - c. Pulmonary artery wedge pressure
 - d. All swan pressure readings and wave forms
6. Observe and assist with administration of medications as well as calculating drug doses on their own and showing work on the skill sheet. Participants must calculate all IV infusions that the patient would be receiving.
7. Observation and assist with Pulse Ox, ETCO₂, pressure reading on ventilators, Accucheck, etc.
8. Read 12 Lead EKG's of patient and compares finding with preceptor and document finding on clinical skills sheets.
9. Observe IABP mechanics, inflation/deflation waveforms, timing ratio, and troubleshooting.
10. Observe ICP pressure monitoring devices, waveforms, maintenance and releasing of pressure.

Clinical Objectives:

1. Participants report to charge nurse to be assigned to clinical preceptor.
2. Participants introduce himself/herself to the clinical preceptor and give a list of objectives
3. Participants receive patient report of assigned patient from the clinical preceptor.
4. Participants receive patient charts from those giving a report from clinical preceptor
5. Participants develop a plan of action (care) and document what interventions would be necessary.
6. Participants collaborate with preceptor in reference to his/her plan of action. Preceptor should also document additional comments.
7. Participants document any additional comments
8. Participants and preceptor complete clinical evaluation sheet for patient contact
9. A minimum of one patient contact should be completed at each rotation
10. Participants must complete a summary sheet for each clinical rotation, and attach to the clinical rotation form.
 - a. Please include the following in the summary sheet:
 - i. Consider the patient you are currently caring for and imagine you have to transport them to another facility 2 hours away. What considerations and concerns would you have? Provide an explanation of how you would complete the transport. Start from beginning to end.
 - ii. Did you feel the clinical rotation time was valuable and if not provide an explanation.
 - iii. Document the patient's TMD (Thyromental distance) and their Mallampoti score (refer to module 4)
 - iv. List possible complications the patient could develop based on their diagnosis and hospital course and what you would do to correct.

ALL clinical rotations and CCT ride time MUST be completed by May 12th, 2010 and all forms must be completed and turned in to Kim Johnson no later than May 13th, 2010 at 0800. Failure to do so will make the candidate ineligible for testing and would result in failure of the course. It is strongly encouraged and recommended that each student begin clinical rotations and CCT ride time as quickly as possible to meet this requirement. Do not wait until the last minute.

**Kanawha County Emergency Ambulance Authority
Marshall Community and Technical College
Critical Care Transport Participant
Clinical Evaluation Form**

Participant Name: _____ Starting Time: _____ Ending Time: _____

Hospital Clinical Area: _____ Date: _____

Patient Chief Complaint: Admitting Diagnosis: _____

Patient Age: _____ Patient Sex: _____ Other Information: _____

Current History:

Past Medical:

Current Medications:

Allergies:

Physical Assessment (Present Complaint)

Plan of Action and Treatment (Care Plan)

Participant's comments

Preceptor's comments

Participant Signature: _____ Date: _____

Preceptor Signature: _____ Date: _____

WVOEMS/KCEAA/MCTC Labor and Delivery Rotations
Kanawha County Emergency Ambulance Authority

Student's Name: _____

Date: _____

Objective	Student Date/Initials	Standard of Practice Intervention/Skills	Validated by Date/Initials
The CCT student will observe in the assessment of the mother and the fetus		Complete Maternal Assessment	
		• Physical status	
		• Fetal status	
		• Labor status	
		• Chief complaint	
		• Fetal movement	
		• Fetal heart rate obtained by Doppler	
		• Uterine Contractions Palpate abdomen for tenderness, contractions, intensity and resting time	
The student will observe in the management of a vaginal/cesarean delivery whenever possible		• Membrane Status Description of fluid (color, odor, volume)	
		• DTR (Deep Tendon Reflexes) in the patient receiving Tocolytic Therapy	

Preceptor Signature: _____

Date: _____

**KCEAA Critical Care Transport
Critical Care Transport Practical Examination
IV Pump Management**

Name: _____ Examiner: _____

Date: _____

Time Start: _____ Time End: _____ **Student has 10 minutes to complete**

You are transporting a 45 year-old female that weighs 100 kg from a small hospital. The patient was admitted for cardiogenic shock. On your arrival you find the following drips running:

- Dopamine 800 mg in 250 ml of NS running at 30 ml/hr. How many mcg/kg/min is the patient receiving?
- Levophed 4 mg in 250 ml and the doctor orders 10 mcg/min. What should the rate be?
- Normal Saline bolus of 500 ml over 30 minutes using a 10-drop set. How many drops per minute?

Answers:

-
-
-

Student must show math work and attach to check sheet

IV Pump Management

Possible Points

Points
Awarded

IV Pump Management	Possible Points	Points Awarded
Problem 1		
Calculate the correct dose of the medication infused	2	
Determine concentration of medication	1	
Set the rate and set the volume	2	
Install the IV tubing	1	
Start the drip	1	
Problem 2		
Calculate the correct dose of the medication	2	
Problem 3		
Calculate the correct dose of the medication	2	
Total Time: _____ Total	11	

Note: This station must be completed within 10 minutes

Critical Criteria:

- _____ Failure to begin administration of medication on pump within 3 minutes
- _____ Failure to calculate 2 out of 3 correct doses of the medication to be infused
- _____ Contaminates equipment or site without appropriately correcting situation
- _____ Performs or orders any harmful or dangerous actions or interventions

Please document your rationale for checking any of the above critical items on the backside of this check sheet

Critical Care Transport
Critical Care Transport Practical Examination
12 Leads ECG

Name: _____ Examiner _____
 Date: _____ Signature: _____

Time Start: _____ Time End: _____ **Student has 10 minutes to complete**

Identify Strip # 1	1	
Treatment	2	

Identify Strip # 2	1	
Treatment	2	

Identify Strip # 3	1	
Treatment	2	

Identify Strip # 4	1	
Treatment	2	

Total

12

Note: No points for treatment may be awarded if the diagnosis is incorrect.
Document all responses in spaces provided.

Critical Care Transport Critical Care Transport Practical Examination Pacemakers

Name: _____ Examiner: _____

Date: _____ Signature: _____

Time Start: _____ Time end: _____ Student has 5 minutes to complete

	Possible Points	Points Awarded
Utilization of Transvenous Pacer		
Identify the need for use	1	
Select proper setting for pacer (Synchronous/Asynchronous)	1	
Selects correct rate	1	
Sets correct milliamps for capture	1	
Starts pacer and makes adjustments as needed	1	
Time end: _____ TOTAL	5	

Note: This station must be completed within 5 minutes

Critical Criteria:

- _____ Failure to select appropriate settings
- _____ Performs or orders any harmful or dangerous actions or interventions

Please document your rationale for checking any of the above critical items on the backside of this check sheet

Critical Care Transport Critical Care Transport Practical Examination Oral Station

Name: _____ Examiner: _____

Date: _____ Signature: _____

Scenario: _____

	Possible Points	Points Awarded
Patient Assessment		
Complete an organized assessment and integrated findings to expand further assessment	3	
Complete init, focused, and ongoing assessments	2	
Performed an incomplete or disorganized assessment	1	
Did not complete an initial assessment	0	
Patient Management		
Managed all aspects of the patient's condition and anticipated further needs	3	
Appropriately managed the patient's presenting condition	2	
Performed an incomplete or disorganized management	1	
Did not manage life-threatening conditions	0	
Interpersonal relations		
Established rapport and interacted in an organized, therapeutic manner	3	
Interacted and responded appropriately with hospital staff, patient, patient family, and crew	2	
Used appropriate communication techniques	1	
Used inappropriate communication techniques	0	
Integration (Impression, verbal report, and transport decision)		
Stated correct impression and pathophysiological basis, provide succinct and accurate verbal report including/psychological concerns, and considered alternate transport destinations	3	
Stated correct impression, provide succinct and accurate verbal report including/psychological concerns, and considered alternate transport destinations	2	
Stated correct impression, provide inappropriate verbal report, or transport destinations	1	
Stated incorrect impression, or did not provide verbal report	0	
TOTAL	12	

Critical Criteria:

- _____ Failure to appropriately address any of the scenario's "Mandatory Actions"
- _____ Performs or orders any harmful or dangerous actions or interventions

Please document your rationale for checking any of the above critical items on the backside of this check sheet

Critical Care Transport Critical Care Transport Practical Examination Surgical Cricothyrotomy

Name: _____ Examiner: _____
Date: _____ Signature: _____

Possible Points Points Awarded

Gather necessary equipment for the procedure and obtain consent if time allows	1	
Place the patient in a supine position with the neck in a neutral position	1	
Palpate the cricothyroid membrane between the thyroid and cricoid membranes for orientation	2	
Prep area (sterile technique) if time allows	1	
Stabilize the thyroid cartilage with non-dominant hand.	1	
Using the supplied 6 cc syringe attached to the 18 gauge TFE catheter introducer needle, advance it through the cricothyroid membrane into the airway at a 45 degree angle to the frontal plane in the midline in a caudad fashion while aspirating	2	
Confirm verification of entrance into the airway by aspiration on the syringe resulting in free air return	1	
Remove the syringe and leaving the TFE catheter or needle in place and advance the soft flexible end of the wire guide through the TFE catheter and into the airway several centimeters.	2	
Remove the TFE catheter or needle, leaving the wire guide in place	1	
Stabilize the cartilage and make a lateral incision in the middle using the #15 short handle scalpel blade.	1	
Advance the lubricated, handled dilator, tapered end first into the connector end of the airway catheter until the handle stops against the connector.	2	
Advance the emergency airway access assembly over the wire guide until the proximal stiff end of the wire guide is completely through and visible at the handle end of the dilator. Maintaining the wire guide position, the participant will advance the emergency airway access assembly over the wire guide with a reciprocating motion and completely into the trachea	1	
The participant will remove the wire guide and dilator simultaneously	1	
The participant will fix the emergency airway catheter in place with the supplied cloth tape strip or the Velcro device in a standard fashion.	2	
Inflate the cuff with the recommended amount of air	1	
Observe lung inflations and auscultate chest for adequate ventilation	1	
Secure tube to prevent inadvertent dislodging and attach dilator to patient	2	
The participant will explain the importance of not discarding the dilator.	1	
TOTAL	24	

Critical Criteria:

- _____ Failure to state the indications/contraindications for the placement of a Cricothyrotomy
- _____ Failure to identify the proper landmarks for insertion of a Cricothyrotomy
- _____ Failure to identify the importance of not discarding the dilator
- _____ Performs or orders any harmful or dangerous actions or interventions

Please document your rationale for checking any of the above critical items on the backside of this check sheet

Critical Care Transport Critical Care Transport Practical Examination Relief of Pneumothorax

Name: _____ Examiner: _____
Date: _____ Signature: _____

Insertion of Cook Catheter	Possible Points	Points Awarded
Identifies the indications/contraindications	1	
Gathers all necessary equipment	1	
Locates the appropriate landmarks for insertion (2 nd intercostal, midclavicular) above the 3 rd rib.	2	
Preps area (Sterile technique) if time allows.	1	
Makes a small incision with scalpel through the skin, subcutaneous tissue, muscle and fascia but not through the parietal pleura	1	
Inserts the device into the pleural cavity at the level of the 2 nd anterior intercostal space just above the upper boarder of the 3 rd rib	1	
Advance the device through the incision into the chest through the pleura while maintaining pressure upon the stylet within the needle cannula	2	
Remove the inner needle and determine whether there is free flow of air	1	
Advance the catheter so that all side ports are within the pleura space. The distal tip should be positioned towards the extreme apex of the pleural space.	1	
Attach the connecting tube and Heimlich valve to the catheter and apply adhesive tape and secure to the chest.	2	
Assess the patient for results.	1	
TOTAL	14	

Note: This station should be completed within 5 minutes

Critical Criteria:

- _____ Failure to state the indications/contraindications for the placement of a cook catheter chest tube
- _____ Failure to identify the proper landmarks for insertion of a chest tube
- _____ Performs or orders any harmful or dangerous actions or interventions

Please document your rationale for checking any of the above critical items on the back side of this check sheet

Critical Care Transport Critical Care Transport Practical Examination Insertion of Cobra PLA/King Airway

Name: _____ Examiner: _____
Date: _____ Signature: _____

	Possible Points	Points Awarded
Insertion of Cobra PLA		
Takes or verbalizes body substance isolation precautions	1	
Hyperoxygenate patient immediately with bag-valve-mask or NRB with 100% oxygen	1	
Gather necessary equipment for the procedure and check for leaks	2	
Select the appropriate size for the patient	1	
Deflate the cuff, fold back the cuff from the Cobra PLA head to facilitate insertion	1	
Lubricate entire end of cuff, front and back prior to insertion	1	
Extend head and advance the Cobra PLA into the hypo-pharynx through the resistance of the soft tissue until moderate resistance is felt, then pull back slightly.	2	
Inflate the cuff. (Only enough air to obtain an appropriate seal)	1	
Observe lung inflation and auscultate chest for adequate ventilation	1	
Select the appropriate size ET tube. Place it through the Cobra PLA after being adequately lubricated.	2	
Inflate the ET tube and auscultate breath sounds bilaterally	1	
Confirms placement of ET. Deflate the cuff to the Cobra PLA and ventilate with BVM.	2	
Secure device and confirm that the device remains properly secured.	1	
TOTAL	17	

Critical Criteria:

- ___ Failure to take or state body substance isolation precautions
- ___ Failure to immediately ventilate the patient
- ___ Failure to deflate the cuff prior to insertion
- ___ Interrupts ventilations for more than 20 seconds
- ___ Performs or orders any harmful or dangerous actions or interventions

Please document your rationale for checking any of the above critical items on the backside of this check sheet

KCEAA Critical Care Transport Critical Care Transport Practical Examination Rapid Sequence Induction

Name: _____ Examiner: _____
Date: _____ Signature: _____

Scenario: _____

	Possible Points	Points Awarded
Monitor ABC's and maintain C-spine control if trauma patient	1	
Monitor ECG and O2 saturations.	1	
Hyper-oxygenate the patient	1	
Assess patient for airway complications (TMD, Mallampoti, sufficient ability to use BVM and oral/nasal airway device)	2	
Prepare necessary equipment for intubation and have BVM and other airway adjunct available	1	
Calculate and draw up correct doses of medications to be used and label (Assures administration of Lidocaine or Atropine if indicated)	3	
Recheck IV site(s) and ensure patency.	1	
Administer sedative and the defasciculating dose of paralytic	1	
After 1 minute, paralyze the patient with Succinylcholine 1.0 - 1.5-mg/kg IV push. Allow paralysis to take effect.	2	
State that the airway would be secured by, (intubation, LMA/PLA, or combitube)	1	
TOTAL	14	

Medication	Dosage	Correct Order
Special Considerations <ul style="list-style-type: none"> • Atropine • Lidocaine 		
Sedative <ul style="list-style-type: none"> • Versed (.05 to 0.1 mg/kg) • Etomidate (0.2 to 0.6 mg/kg) 		
Consider Pain Medication <ul style="list-style-type: none"> • Fentanyl (1-2 mcg/kg) 		
Defasciculating dose of paralytic <ul style="list-style-type: none"> • Norcuron .01 mg/kg • 1/10 the dose 		
Neuromuscular Blocker <ul style="list-style-type: none"> • Succinylcholine 1.0-1.5 mg/kg 		
Paralytic <ul style="list-style-type: none"> • Norcuron (0.1 mg/kg) 		

Critical Criteria:

- _____ Failure to complete an airway assessment for degree of difficulty using BVM/airway adjunct
- _____ Failure to oxygenate the patient before or after administration of paralytic
- _____ Failure to appropriately label all medication prior to administration
- _____ Delivers improper drug or dosage (wrong drug, incorrect amount, or pushes at inappropriate rate)
- _____ Failure to have alternate adjunct airways readily available
- _____ Failure to inquire if patient has any risk factors for malignant hyperthermia or hyperkalemia
- _____ Failure to administer additional sedation once intubation is completed if student elects to paralyze the patient with Norcuron for transport if Etomidate was used

Please document your rationale for checking any of the above critical items on the backside of this check sheet

Critical Care Transport

Practical Examination

Invasive Monitoring

Name: _____ Examiner: _____

Date: _____ Signature: _____

Strip # 1	Right Ventricular Waveform	1	
	Treatment Will cause extensive ectopy if not repositioned. Swan should be pulled back to the right atrium so as to provide a CVP waveform. This will allow safe transport of the Swan. If MD is present he may choose to advance swan back to pulmonary artery.	2	
	Student's interpretation=		
Scale	30		
Strip # 2	Pulmonary Artery Waveform	1	
	Treatment This is correct placement. No treatment is needed. Continue to monitor. Note position of Swan catheter	2	
	Student's interpretation=		
Scale	30		
Strip # 3	Wedge Waveform	1	
	Treatment Need to check and make sure balloon is deflated. If balloon is deflated, then Swan is in too far. It would then need to be pulled back until PA waveform reappears. Must be pulled back slowly.	2	
	Student's interpretation=		
Scale	10-30		
TOTAL		9	

Critical Criteria:

- _____ Failure to identify a Strip
- _____ Performs or orders any harmful or dangerous actions or interventions

Please document your rationale for checking any of the above critical items on the backside of this check sheet

KCEAA Critical Care Transport Critical Care Transport Practical Examination Ventilator

Name: _____ Examiner: _____
Date: _____ Signature: _____

	Possible Points	Points Awarded
Turn machine on	1	
Hook to oxygen	1	
Attach vent tubing to ventilator	1	
Set mode SIMV, AC, CPAP <i>Based on scenario</i>	2	
Set rate (12-20) <i>Based on scenario, ABG results and hemodynamics</i>	1	
Set tidal volume (7-10ml/kg) <i>Based on scenario and hemodynamics</i>	1	
Set peep <i>Based on scenario and hemodynamics</i>	1	
Set FIO2 (21%-100%) <i>Based on scenario</i>	1	
After all settings are completed set the lock/unlock control button	1	
TOTAL	10	

Critical Criteria:

- _____ Failure to obtain correct ventilator settings.
- _____ Failure to attach Oxygen to ventilator
- _____ Failure to select the correct ventilator mode
- _____ Failure to select the correct ventilator FIO2

Please document your rationale for checking any of the above critical items on the backside of this check sheet

Critical Care Transport
Critical Care Transport Practical Examination
Insertion of Laryngeal Mask Airway

Name: _____ Examiner: _____
 Date: _____ Signature: _____

	Possible Points	Points Awarded
--	--------------------	-------------------

Takes or verbalizes body substance isolation precautions	1	
Hyper oxygenate patient immediately with bag-valve-mask or NRB with 100% oxygen	1	
The participant will gather all necessary equipment needed for procedure Gather necessary equipment for the procedure and check for leaks	2	
The participant will press mask tip upwards against the hard palate to flatten it out and advance the mask into the pharynx using the index finger.	1	
With neck of manikin flexed and head extended, press the LMA into the posterior pharyngeal wall using the index finger.	1	
Complete the insertion by exerting cephalad pressure by the nondominant hand prior to removing the index finger (as long as there is no trauma	1	
Inflate LMA and secure in place with tape.	1	
Observe lung inflation and auscultate chest for adequate ventilation.	1	
TOTAL	9	

Critical Criteria:

- _____ Failure to take or state body substance isolation precautions
- _____ Failure to immediately ventilate the patient
- _____ Interrupts ventilations for more than 20 seconds
- _____ Performs or orders any harmful or dangerous actions or interventions

Please document your rationale for checking any of the above critical items on the backside of this check sheet

Critical Care Transport Critical Care Transport Practical Examination Endotracheal Intubation

Name: _____ Examiner: _____

Date: _____ Signature: _____

Possible
Points Points
Awarded

Takes or verbalizes body substance isolation precautions	1	
Opens the airway manually	1	
Ventilate patient immediately with bag-valve-mask with 100% oxygen	1	
Note: Examiner now informs candidate no gag reflex is present and patient accepts adjunct		
Checks equipment for: Cuff leaks (1 point) Laryngoscope operational with bulb tight (1 point)	2	
Positions head properly	1	
Inserts blade while displacing tongue	1	
Elevates mandible with laryngoscope	1	
Introduces ET tube and advances to proper depth	1	
Inflates cuff to proper pressure and disconnects syringe	1	
Direct ventilation of patient	1	
Confirms proper placement by auscultation bilaterally over each lung and over epigastrium	2	
Note: Examiner now asks, "If you had proper placement, what would you expect to hear?"		
Secures ET tube (may be verbalized)	1	
TOTAL	14	

Critical Criteria:

- _____ Failure to take or verbalize body substance isolation precautions
- _____ Failure to initiate ventilations within 30 seconds after applying gloves or interrupts ventilations for greater than 30 seconds at any time
- _____ Failure to voice and ultimately provide high oxygen concentration [at least 85%]
- _____ Failure to ventilate patient at a rate of at least 10/minute
- _____ Failure to provide adequate volumes per breath (maximum 2 errors/minute permissible)
- _____ Failure to hyperventilate patient prior to intubation
- _____ Failure to successfully intubate within 3 attempts or Uses teeth as a fulcrum
- _____ Failure to assure proper tube placement by auscultation bilaterally and over the epigastrium
- _____ Inserts any adjunct in a manner dangerous to the patient

Please document your rationale for checking any of the above critical items on the backside of this check sheet

WVOEMS/KCEAA/MCTC CCT

Training Objectives for Ride-a-long

Name: _____ Date: _____

Objective	Date	Met	Preceptor
The student is aware of the location of all equipment on the CCT truck			
The student can identify the medications supplied and administered to patients based on specific complaints/diagnoses and can safely and accurately administer or can verbalized when given a scenario			
The student can accurately complete a detailed assessment based on specific complaints/diagnoses			
The student has demonstrated to the preceptor the following proficiencies: 1. Surgical Cricothyrotomy (Verbalized) 2. Cook Catheter Chest Tube (Verbalized) 3. Ventilator modalities (verbalized or Performed) 4. Infusion Pump (Performed) 5. Monitor with invasive monitoring and ETCO2 (Performed) 6. Transvenous/transcutaneous Pacemaker (Performed)			
The student can state the indications and contraindications, correct order and dosage for RSI when given a scenario			
The student can accurately complete the necessary documentation for any patient contact/care given on a CCT call			
The student can deliver care to patients consistent within the CCT guidelines			
The student will understand how a CCT call originates and who to contact for further direction in patient care issues			

Please describe how your day went and what you feel you learned.
