Colorado Mountain College

Revised 12/18/12

I. Course and Instructor: *IV Therapy Administration* Jonathan T. Hannum

Format: 33% Classroom, 33% Laboratory, 33% Clinical

Course Information:

Course Title: IV Therapy Administration
Course Code: EMS-130-VE01
Semester: Spring 2013
Synonym Number: 72123
Credits: 1.0
Prerequisite: EMS 125, EMS 170
Meeting Times and Days: Saturday, April 6th, April 13th, April 20th (09:00-17:00)
Class Location: Vail/Eagle Valley Campus
Start Date: April 6th, 2013
End Date: April 20th, 2013
Refund Date: April 8th, 2013
Withdraw Date: April 18th, 2013

Instructor Information:

Instructor Name: Jonathan Hannum
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*Instructor Office Room #:*N/A
*Office Hours :*By Appointment Only

Administrator Information:

Administrator Name: Paula Hauswirth-Cummings
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II. Course Description: Focuses on cognitive and skill practice as required by Colorado Prehospital Care program for EMT Basic level IV approval. Examines criteria, procedures and techniques for IV therapy, discusses fluid and electrolyte balance, medication administration, and principles and treatment for shock.

III. Student Learning Outcomes, Competencies, and Skills:

1. Define the anatomy of the cell and its form and function.
2. Explain the effects of infusion of isotonic, hypertonic, and hypotonic IV solutions upon intracellular, intravascular, and interstitial fluids.
3. Describe the role of each body system, cardiovascular, renal, nervous, and respiratory on body fluid regulation.
4. Define the anatomy of the circulatory system including the components and function of the red blood cell.
5. Define shock and describe the sign and symptoms of internal bleeding.
6. Explain the importance of body substance isolation and the type of equipment necessary when initiating venipuncture.
7. Demonstrate the techniques of locating and preparing the venipuncture site.
8. List the equipment necessary to perform phlebotomy venipuncture and intravenous venipuncture.
9. Demonstrate phlebotomy venipuncture and intravenous venipuncture techniques for adult and pediatric patients.
10. Describe the reasons for combining phlebotomy with IV insertion.
11. Explain how to convert pounds to kilograms and how to calculate medication dosages according to a patients weight.
12. Describe the need to obtain vital signs before and after the application of an IV.
13. Demonstrate how and where to listen to lung sounds and list three indications of fluid overload.
14. Demonstrate three ways to confirm the patency of an IV.
15. Explain the reasons for contacting on line medical control prior to the discontinuing of an IV.

16. Describe the proper equipment for discontinuing an IV and demonstrate removal using an aseptic technique.
17. Discuss the documentation requirements for the establishment of an IV.
18. Describe the legal implications associated with the written report.
19. State the indications for blood glucose testing and appropriate blood glucose levels.
20. Differentiate between hypoglycemia and hyperglycemia.
21. Identify therapeutic effects, indications, contraindications, side effects and complications with the administration of Dextrose in the adult and pediatric patient.
22. State the situations in which physician consultation would be indicated for the administration of Dextrose.
23. Demonstrate the appropriate technique for the administration of oral glucose.
24. Demonstrate the appropriate technique for the administration of Dextrose.
25. Describe the factors that may cause an alteration in a patient's behavior and the patient presentation requiring the administration of Narcan.
26. Discuss the advantages and disadvantages of various routes of Narcan administration.
27. Identify therapeutic effects, indications, contraindications, side effects, and complications with the administration of Narcan.
28. Demonstrate the appropriate technique for the administration of intravenous and intranasal Narcan.
29. Describe the signs and symptoms of a patient in respiratory distress.
30. Identify the indications and patient presentation for the administration of Nebulized Albuterol.
31. Identify therapeutic effects, indications, contraindications, side effects, and complications with the administration of Albuterol.
32. Demonstrate the appropriate technique for the administration of Nebulized Albuterol.

IV. IDEA Objectives

1. Gaining factual knowledge (terminology, classifications, methods, trends).
2. Learning fundamental principles, generalizations, or theories.
3. Learning to apply course material (to improve thinking, problem solving, and decisions).
4. Developing specific skills, competencies, and points of view needed by professionals in the field most closely related to this course.
5. Learning how to find and use resources for answering questions or solving problems.
6. Acquiring an interest in learning more by asking questions and seeking answers.

V. Evaluation Methods:

Evaluation will be based off of three parts: Didactical, Laboratory, and Clinical. The didactical portion can be taken pass/fail or for a grade. The laboratory and clinical portions are only pass/fail. All sections must be passed in order to successfully complete the course.

1. Didactical: This portion will be graded off of a final exam. The final exam is 100 points. The grading system is as follows:
   A: 90% - 100%
   B: 80% - 89%
   F: < 80%
   20% of the final is based off of math questions. If the student receives a 70 – 79% and the instructor feels that this resulted from lack of understanding of the math portion, the student MAY be allowed to pursue extra guidance/tutoring outside of class and re-take a small math portion for the exam. This will be based solely on the instructor's judgment and the effort seen put forth by the student. It is highly advised that the student pursue, if needed, math tutoring prior to the final exam.
2. Laboratory: This portion is judged off of the skills sign off on the mannequin and the successful IV establishment of four "in-class" clients. This portion is pass/fail only. If the student can not pass the skills sign-off with at least an 85% successful completion of all steps the student will not be allowed to pass. If the student does not successfully complete any of the "critical criteria" of the skills sign off, the student will not be allowed to pass. The student will be allowed multiple attempts as long as improvement is seen in the student's performance. After successful completion of the skills competency, the student will be required to establish

four successful "in-class:" IV's. If the primary and/or assistant instructors deem that the student has done anything that was unsafe and/or would have resulted in patient harm, the student will automatically fail.

3. Clinical: This portion is judged based off of the student's successful completion of 6 additional IV establishments in a clinical setting. If the student does not complete these final six clinical IV establishments, the student will fail. If the EMS coordinator receives any report that the student did not follow all of the rules to participating in the clinical experience, the student will fail (see Student Handbook for detail of clinical rules). If the EMS coordinator receives any report that the student did not act in a safe and professional manner while attending their clinical experiences, the student will fail. Please refer to the Student Handbook for further details of clinical experience expectations.

VI. Class Management:

The class will be provided in three days, each approximately six hours long. All three days are mandatory for successful completion of the course.

1. Day 1: Day one will consist of class introduction and lecture. Introduction will include review of the syllabus, class expectations, and requirements for successful completion of the class. The majority of the day will be spent reviewing the didactical portion of the class. The final portion of day 1 will involve practicing the math competencies for successful completion of the class.
2. Day 2: Day two will consist of review and questions concerning day one and any questions concerning the didactical portion of the class. Day two will then review the skills competencies with time to allow students to have practice time with the mannequins and one-on-one time with any of the instructors. Day two should also be used to review math with the instructors on an "as-needed" basis. Any remaining time should be spent by students beginning their four "in-class" IV establishments.
3. Day 3: Day three will consist of a final review. Time will be available before class for any students to come in early with any questions, concerns, or practicing of math prior to class if scheduled with the instructor. Day three will then consist of the final exam. The remaining portion of day three will consist of students finishing their four "in-class" IV establishments.

IMPORTANT:

In order to pass this course, students must successfully complete 6 additional IV establishments in a clinical setting. Students must have all required paperwork including immunization records, proof of CPR for Healthcare Provider certification, background check forms and payment, clinical site orientation forms, and a list of available clinical dates to the program administrator by the last day of class in order to be scheduled for a clinical. Students who do not provide this required paperwork by the last day of class will not be scheduled for a clinical and, therefore, will not pass the course. The program administrator will provide additional information on the first day of class, or please feel free to contact Paula with any questions.

Proof of the following immunizations is required:

- Current season flu shot
- Negative TB test done within the past year (this TB test must be no more than one year old when you do your clinical)
- Evidence of varicella (chickenpox) vaccination, positive immune titer, or reliable history of varicella infections
- Hepatitis B series (declination form is available for this vaccination only)
- Evidence of two doses of MMR vaccine (if born on or after 1957), one dose of MMR vaccine (if born before 1957), or positive measles, mumps, and rubella titers.

NOTICE:

A student judged to have engaged in academic misconduct as defined in the "Academic Policies and Requirements" section of the Colorado Mountain College Student Handbook will, at a minimum, receive a "zero" for the work in question. The student may also be removed from the class, resulting in a failing grade. All student course material may be submitted to turnitin.com (or another anti-plagiarism program) at the instructor's discretion. "Academic Expectations," the "Student Code of Conduct and Judicial Process" and more information about academic misconduct can be found in the Student Handbook.

Students are responsible for course materials from assigned text(s) and reading, lectures, labs, and other assignments as required.

The instructor may alter any, or all, of this syllabus during the semester as the learning environment requires. Students will be notified in writing of changes.

Attendance at all class meetings is expected.

No-show reporting and financial aid: You must attend your first day of class so that the instructor may complete a "no-show" report. If you do not attend class or notify your instructor of a valid reason of why you cannot be there, you will be reported as a no-show and dropped from the course. The resultant loss in credit hours may cause a reduction and/or cancellation of your financial aid award. Neither financial aid awards nor class reinstatement can occur after this point without significant documented extenuating circumstances. If you have questions or concerns about this please contact your campus financial aid specialist. (**http://coloradomtn.edu/financial_aid**)

If you have a disability protected by the Americans with Disabilities Act (ADA) and Section 504 of the Rehabilitation Act and feel you may need classroom accommodations based on the impact of your disability, please contact the Disability Services Coordinator on your campus.

- Alpine and Vail-Eagle Valley Campuses: Deb Farmer at 970-870-4450
- Aspen, Rifle, and Roaring Fork Campuses: Dr. Anne Moll at 970-947-8256
- Summit and Timberline Campuses (including Chaffee County): Sandi Conner at 719-486-4200

Students wishing to withdraw from this course must INITIATE the course withdrawal/drop process at the site Registration Office.

This class could be cancelled one week prior to the census date if a sufficient number of students are not enrolled by that date.

VI. Grading System & Options

Information about grading is available in the Colorado Mountain College catalog. You will receive a grade report for current semester courses at the end of each term. This grade report is mailed to your permanent mailing address. Reports are mailed approximately two weeks after the end of the academic term.

VII. Required Course Materials

1. Textbook (required prior to the first day of class): *Intravenous Therapy for Prehospital Providers*, AAOS. Publisher: Jones and Bartlett Learning, Edition 1E. ISBN: 9780763715793
2. Clinical Immunizations and Paperwork (required prior to the last day of class): see Class Management Section
3. IV Start Kit: Will be provided by the college.
4. Positive Attitude

Colorado Mountain College has chosen to partner with Follett Virtual Bookstore to operate textbook services.

The official textbook list for CMC will be available on Follett's site, www.coloradomtn.bkstr.com. You also can easily access this site by choosing "bookstore" from the Classes tab.

Students and other members of the campus community should sign up for the Online Textbook Store's email mailing list here www.coloradomtn.bkstr.com/email to receive important messages from the CMC Online

Textbook Store.

Why did CMC choose Follett Virtual Bookstores?

- Follett offers its customers the best text rental program in the industry, which saves 50% or more off the cost of a new book.
- The online store also gives CMC students access to the largest supply of money-saving used textbooks, with 2.5 million in stock and ready to ship direct from Follett's warehouse.
- Follett offers the best price when buying back books at the end of the term. Students can sell back books anytime online or in-person at Follett's CMC buyback events. Sign up for the online store's email list at www.coloradomtn.bkstr.com/email for more information on future buyback dates and times.

If you ever have any online bookstore questions, you can email coloradomtn@fvb.follett.com or call 800-621-4088.

VIII. Virtual Library Information http://library.coloradomtn.edu/home

The Virtual Library has its doors open 24/7, providing access to thousands of online journals and newspapers, books and art images, downloadable videos and audio books, career resources and practice tests.

Virtual Library Help Desk
If you need help with the Virtual Library, email reference@coloradomtn.edu or call us at 800-621-8559, extension 2926.