Edward Via College of Osteopathic Medicine

MED 8500
Emergency Medicine
Academic Year 2024 - 2025

ROTATION SYLLABUS

Lynn Campbell, DO
Discipline Chair, Emergency Medicine
Carolinas Campus
Phone: 864-327-9855
lcampbell@carolinas.vcom.edu

Alison LePera, DO
Discipline Chair, Emergency Medicine
Virginia Campus
Phone: 540-231-0375
alepera@vcom.vt.edu

Michael Rommen, DO
Discipline Chair, Emergency Medicine
Louisiana Campus
Phone: 318-342-7113
mrommen@ulm.vcom.edu

Jim Walter, MD
Discipline Chair, Emergency Medicine
Auburn Campus
Phone: 334-430-1486
jwalter@auburn.vcom.edu

I. Rotation Description

During the fourth year of the curriculum, students expand their knowledge of emergent conditions and gain the ability to apply the knowledge in the clinical setting. The curriculum is taught through emergency medicine grand rounds, reading assignments and through the one-on-one student-preceptor experience in caring for patients in the emergency setting. Students are expected to complete their modules and research literature regarding current cases they see in the emergency room.

II. Course Goals and Objectives

A. Goals of the Course

The goal of the Fourth Year Emergency Medicine rotation is to provide learning opportunities that will enable students to develop the knowledge, skills, and attitudes necessary to:

1. Recognize, triage and provide initial management of common urgent and emergent medical/surgical problems in patients of any age or gender.
2. Acquire basic and advanced manual skills in the management of common urgent/emergent medical/surgical problems.
3. Assess patients quickly and efficiently, according to the urgency of the patient's problem.
4. Work as a member of an emergency department team.
5. Understand the role of consultants within the framework of an emergency department.

III. Rotation Design

A. Educational Modules

Educational modules using Society of Academic Emergency Medicine (SAEM) cases are used in the Emergency Medicine rotation. In addition to the experiences received in the clinical training sites, students are expected to read the content of the assigned textbooks and online materials in order to complete the entire curriculum assigned for the clinical module.

B. Formative Evaluation

Student competency-based rating forms are used by the preceptor to evaluate each student's clinical skills and the application of medical knowledge in the clinical setting. These forms are only completed by the clinical faculty member or preceptor. Performance on rotations will be evaluated by the primary clinical faculty member precepting the student. VCOM uses a competency-based evaluation form which includes the osteopathic core competencies. These competencies evaluated include:

a. Medical knowledge;
b. Communication;
c. Physical exam skills;
d. Problem solving and clinical decision making;
e. Professionalism and ethics;
f. Osteopathic specific competencies; and
g. Additional VCOM values.

Student competency is judged on clinical skill performance. Each skill is rated as to how often the student performs the skill appropriately (i.e. never or infrequently, some of the time but less than half the time, greater than half the time, or the majority of the time, etc.).

C. Logging Patient Encounters and Procedures

During the clinical years students need to develop the clinical competencies required for graduation and post-graduate training. These competencies are evaluated in many different ways: by faculty observation during rotations, by examinations, by the COMLEX Level 2 CE examination, and VCOM's OMS 3 summative examinations. In order to develop many of these competencies and meet the objectives required for graduation, VCOM needs to ensure that each student sees enough patients and an appropriate mix of patients during their clinical years. For these reasons, as well as others discussed below and to meet accreditation standards, VCOM has developed requirements to log patient encounters and procedures.

Each day, students are required to log all patient type/clinical conditions and procedures/skills that they encounter that day into the VLMS application.

- Within the daily log, the clinical discipline chairs have also identified a specific set of patient presentations and procedures that each student is expected to see/do during the course of the rotation that should be logged in VLMS as you experience it. Students should be familiar with this list and should actively work to see these patients or be involved in these procedures. The list serves as a guide for the types of patients the clinical faculty think students should

encounter during the rotation. The list does not include every possible diagnosis or even every diagnostic entity students must learn. The list reflects the common and typical clinical entities that the faculty feels VCOM students should experience. The list can be found in VLMS or CANVAS.

- Students must learn more than they will experience during clinical rotations. The log does not reflect the totality of the educational objectives during the rotation. Clinical experience is an important part, but only a part, of your rotation requirement. Students may discover they have not seen some of the presentations/procedures on the list during the rotation; however, they should arrange to see these problems in the fourth year or learn about them in other ways through the other course materials provided. Students need to commit themselves to extensive reading and studying during the clinical years. "Read about patients you see and read about patients you don't see".

One of the competencies students must develop during their clinical training involves documentation. Documentation is an essential and important feature of patient care and learning how and what to document is an important part of medical education. The seriousness and accuracy with which students maintain and update their patient logs are measures of professionalism. Students must review these logs with their preceptor prior to the end of the rotation period, as required by the final preceptor evaluation form. Students are encouraged to periodically review their VLMS entries with their preceptor during the rotation period.

Throughout the year, data is reviewed by Clinical Affairs, the curriculum committees, and administration to ensure the clinical experiences meet the objectives of the rotation and to assess the comparability of experiences at various sites. The logs serve to:

- Demonstrate student exposure to patients with medical problems that support course objectives.
- Demonstrate level of student involvement in the care of patients.
- Demonstrate student exposure to, and participation in, targeted clinical procedures.
- Demonstrate student exposure to patient populations in both inpatient and outpatient settings.
- Demonstrate comparability of experiences at various clinical sites.
- Quantify for students the nature and scope of their clinical education and highlight educational needs for self-directed learning.

IV. Credits

4 credit hours

V. Course Texts and Reference Materials

A. Required Textbooks

- Roberts, J.R., Custalow, C.B., Thomsen, T.W. (Eds.), 7th ed. *Roberts and Hedges' Clinical Procedures in Emergency Medicine and Acute Care*. Philadelphia, PA: Elsevier, 2019. ISBN: 978-0-323354783 (retail price $210.99) – Available in VCOM's eLibrary in Clinical Key
- Tintinalli, J.E. (Ed.). *Tintinalli's Emergency Medicine,* 9th ed. New York, NY: McGraw-Hill Education, 2020. ISBN: 978-1260019933 (retail price $273.00) – Available in VCOM's eLibrary in Access Medicine

B. Recommmended Textbooks

- Hoffman, R.S. et al. (Eds.) *Goldfrank's Clinical Manual of Toxicological Emergencies,* 2nd ed. New York, NY: McGraw-Hill Education, 2024. ISBN: 978-1260474992 (retail price $110.00)

- Walls, R.M. (Ed.) *Rosen's emergency medicine: concepts and clinical practice*, 10th ed. Philadelphia, PA: Elsevier, 2023. ISBN-13: 978-0-323-75789-8 – Available in VCOM eLibrary

VI. Course Grading and Requirements for Successful Completion

A. Requirements

- Attendance according to VCOM and preceptor requirements as defined in the College Catalog and Student Handbook.

- Review of the syllabus topics, learning objectives, and reading assignments:
  - In addition to the learning experience in the clinical site, the clinical curriculum consists of the reading assignments and learning objectives that are included in this syllabus, as well as clinical case modules that are derived from some, but not all, of the learning objectives. A student's success as a physician will depend upon the learning skills they develop during this core rotation, as guided by this syllabus and clinical case modules. National boards, residency in-training examinations, and specialty board examinations require ever increasing sophistication in student's ability to apply and manipulate medical knowledge to the clinical context.

- Completion of a minimum of 10 cases on the SAEM website at: https://www.saem.org/cdem/education/online-education/m4-curriculum and submission of the attestation completion quiz in **Canvas by 5:00pm on the last day of the rotation.**

- Completion of the assigned SAME MS4 National EM exam on the SAEMTests website at: https://saem.youtestme.com/ytm49/login.xhtml **by 5:00pm on the last day of the rotation.**
  - The test consists of 55 questions. The test must be taken in one sitting and cannot be paused.
  - To access the exam, students will receive an email with their SAEM login information. If you do not receive your username and password by the end of the first week please contact the Administrative Assistant for Emergency Medicine.
  - A minimum score of 60% is required for successful completion of the curriculum. Students scoring below 60% will be required to take a second version of the exam.
  - Completion will be reviewed by the online administrator to ensure students have met the completion requirements. You do not have to submit any documents via Canvas for this assignment.

- Logging patient encounters and procedures in VLMS:
  - **Students are required to log daily** - Students are **required to log all patient type/clinical conditions and procedures/skills that they encounter that day** into the VLMS application at: https://vlms.app/login.html
    - Within the daily log, the clinical discipline chairs have also identified a specific set of patient presentations and procedures that each student is expected to see/do during the course of the rotation that should be logged in VLMS as you experience it. Students should be familiar with this list and should actively work to see these patients or be involved in these procedures. The list serves as a guide for the types of patients the clinical faculty think students should encounter during the rotation. The list does not include every possible diagnosis or even every diagnostic entity students must learn. The list reflects the common and typical clinical entities that the faculty feels VCOM students should experience. The list can be found in VLMS or CANVAS.

- Students should log only an encounter with or exposure to a real patient.
  - Simulated patients, case presentations, videos, grand rounds, written clinical vignettes, etc. should not be logged even though they are all important ways to learn clinical medicine. Many of these educational experiences, along with self-directed reading, are necessary preparation for COMLEX Level 2 and postgraduate training. This log, however, focuses on a unique and critical component of clinical training, namely, involvement with "real" patients.
  - Longitudinal care of a patient that results in a new diagnosis or secondary diagnosis should be entered as a new entry instead of editing the original entry.
  - Multiple encounters with the same patient that do not result in a new diagnosis or procedure should not be logged. However, if multiple encounters result in a new diagnosis or a new procedure is performed, these should be entered as a new entry.
  - Student involvement with patients can occur in various ways with different levels of student responsibility. The most "meaningful" learning experience involves the student in the initial history and physical exam and participation in diagnostic decision making and management. A less involved but still meaningful encounter can be seeing a patient presented by someone else at the bedside. Although the level of responsibility in this latter case is less, students should log the diagnoses seen in these clinical encounters. Patient experiences in the operating or delivery room should also be logged.

- All students must review these logs with their preceptors prior to the end of the rotation period, as required by the final preceptor evaluation form. Students are encouraged to periodically review their VLMS entries with their preceptor during the rotation period. These reviews should stimulate discussions about cases and learning objectives, as well as identify curriculum areas the student may still need to complete.

- VLMS can be accessed at: https://vlms.app/login.html
  - Failure to log daily results in the following:
    - First notification: Email warning outlining consequences
    - Second notification: Meeting with the Associate Dean
    - Third notification: Behavioral contract
    - Fourth notification: Students will receive an IP "In-Progress" grade for the rotation until logging for the rotation is completed.
    - Fifth notification: Referral to PESB/Honor Code (whichever is most appropriate), which could lead to sanctions and/or permanent record in the student file or MSPE.

- Rotation Evaluations:
  - Student Site Evaluation: Students must complete and submit at the end of rotation. See the VCOM website at: https://intranet.vcom.edu/clinical to access the evaluation form.
  - Fourth-Year Preceptor Evaluation: It is the student's responsibility to ensure that all clinical evaluation forms are completed and submitted online or turned in to the Site Coordinator or the Clinical Affairs Office at the completion of each rotation. Students should inform the Clinical Affairs Office of any difficulty in obtaining an evaluation by the preceptor at the end of that rotation. See the VCOM website at: https://www.vcom.edu/academics/clinical-education-third-year/forms to access the evaluation form.
  - Mid-Rotation Evaluation: The mid-rotation evaluation form is not required but highly recommended. See the VCOM website at: https://www.vcom.edu/academics/clinical-education-third-year/forms to access the mid-rotation evaluation form.

B. Grading

Students must pass both all components outlined in this syllabus in order to pass the course.

Clinical Grading Scale and GPAs						
OMS 3 and OMS 4 EM End-of-Rotation Exam Grades			**OMS 3 AND OMS 4 Clinical Rotation Grades**		**Other Grades**	
A	90-100	4.0	H	Honors	IP	In Progress
B+	85-89	3.5	HP	High Pass	INC	Incomplete
B	80-84	3.0	P	Pass	CP	Conditional Pass
C+	75-79	2.5	F	Fail	R	Repeat
C	70-74	2.0			Au	Audit
F	<70	0.0				

C. Remediation

Students who fail a clinical rotation will be referred to the Promotion Board. If a student fails the professionalism and ethics portion of the evaluation he or she may be removed from the rotation and referred to the Professional and Ethical Standards Board. No grade will be changed unless the Office of Clinical Affairs certifies to the Registrar, in writing, that an error occurred or that the remediation results in a grade change.

- **Failure of a Rotation**

  If a student fails the clinical rotation evaluation the student will receive an "F" grade for the rotation and will be brought before the Promotion Board. If the student is allowed to repeat the rotation, all components of the rotation must be repeated, and the repeated rotation must be with a different preceptor than the one from the original rotation that the student failed. Once repeated, the transcript will show the initial clinical rotation competency evaluation course, as well as the repeated clinical rotation competency evaluation course. The repeated course will have the letter "R" at the end of the course number to reflect that it is repeated. Both the grade earned for the initial courses and the repeated course will be recorded on the transcript, but only the repeated course will be GPA accountable, regardless of whether the initial or repeated course grade is higher.

- **Failure to Make Academic Progress**

  In general, students should show a progression of improvement in clinical performance throughout rotations. Repeated poor or failing performance in a specific competency area on the evaluation form across more than one rotation may also be a reason for a required remediation at the discretion of the Associate Dean for Clinical Affairs in consultation with the clinical chair, the preceptor, and the Promotion Board. Those students who receive a mere "Pass" on multiple rotations will be counseled about overall performance and may be required to complete an additional rotation at the end of the year. Any additional curriculum or required remediation will be based on the performance measure. Those students who continually score in the "unsatisfactory" category or repeated "performs some of the time, but needs improvement" consistently and do not improve over time or who fail one or more rotations may be deemed as not making academic progress and, as a result, may be referred to the Promotion Board and be required to complete additional curriculum. Multiple rotation failures may result in dismissal.

  Poor ratings on the clinical rotation evaluation in the professional and ethical areas of the assessment are addressed by the Associate Dean for Clinical Affairs. The Associate Dean may design a remediation appropriate to correct the behavior or if needed, may refer the student to the Professional and Ethical Standards Board. In the case of repeated concerns in a professional

and/or ethical area, the Associate Dean for Clinical Affairs may refer the student to the Campus Dean for a referral to the Professional and Ethical Standards Board or Promotion Board. The Campus Dean will act upon this referral depending on the severity and the area of the performance measure. Poor ratings in this area will include comments as to the exact nature of the rating.

VII. Academic Expectations

Grading policies, academic progress, and graduation requirements may be found in the *College Catalog and Student Handbook* at: http://www.vcom.edu/handbooks/catalog/index.html

A. Attendance

Attendance for all clinical rotation days is mandatory. The clinical site will determine the assigned days and hours to be worked within the rotation period. Students are required to attend any orientation the clinical site sets as mandatory prior to any rotation or the clinical year. The orientation sessions vary by site and are required to maintain assignment to the site. Although the clinical site determines the assigned days and hours to be worked, VCOM has established the following guidelines:

- 4-week rotations may not be less than 20, eight-hour days for a total of a minimum of 160 hours and often average 180 hours or greater.
    - Students may be required to work up to 24 days in a 4-week period or 25 days in a 1- month rotation, including call and weekends at the discretion of the clinical site.
    - If the clinical site requires longer daily hours or shift work, the student may complete the required hours in less than 20 days with the following specifications:
        - Students should not work greater than an average of 12 out of every 14 days
        - Student should not work more than 12 hours daily, exclusive of on-call assignments.
        - If on-call hours are required, the student should not be on duty for greater than 30 continuous hours.
        - Students may be required to work weekends but in general should have 2 weekends per month free and an average of 2 of 7 days per week free.

It should be noted that preceptors will have final determination of the distribution of hours, which may vary from this policy but should not in general be less than 160 hours for a 4-week rotation. The institution's DSME and assigned clinical faculty determine clinical duty hours. Students are responsible to the assigned clinical faculty and are expected to comply with the general rules and regulations established by the assigned clinical faculty, and/or the core hospital(s), or facility associated with the rotation.

The average student clinical day begins at 7 am and ends at 7 pm. Students are expected to work if their assigned clinical faculty is working. Some rotations assign students to shifts and in such cases the student may be required to work evening or night hours. If on-call hours are required, the student must take the call; however, the student should not be on duty for greater than 30 continuous hours. Students may be required to work weekends, but in general should have two weekends per month free and two of seven days per week free. Student holidays are determined by the clinical site and follow those of other students and/or residents from the clinical site. Students must be prompt and on time for the clinical rotation.

Students are expected to arrive on time for all clinical rotations. If a student is late, he or she must notify the site coordinator and the preceptor prior to or at the time they are scheduled to arrive. Students must have a reason for being late such as illness or vehicle issues and it is not anticipated that

this would occur more than one occasion AND it is important the student call in prior to being late. Repeated tardiness is considered as unprofessional behavior and is a reason for dismissal from a rotation. Students with repeated tardiness will be referred to the PESB. Tardiness is defined as more than 5 minutes after the scheduled time the preceptor designates as the expected arrival time.

The Office of Clinical Affairs requires that the medical student complete and submit an Excused Absence Clinical Rotations Approval form for any time "away" from clinical rotations. Forms are available at: https://www.vcom.edu/academics/clinical-education-third-year/forms. The student must have this form signed by their preceptor and others designated on the form to obtain an excused absence and must be provided to the DSME and the Office of Clinical Affairs through the site coordinator. The form must be completed prior to the beginning of the leave. If an emergency does not allow the student to submit this prior to the absence, the "Excused Absence Clinical Rotations Approval" form must be submitted as soon as the student is physically able to complete the form. In addition to completion of the form, students must contact the Department of Clinical Affairs, the Site Coordinator, and the preceptor's office by 8:30 AM on the day they will be absent due to an illness or emergency. No excused absence will be granted after the fact, except in emergencies as verified by the Associate Dean for Clinical Affairs.

Regardless of an excused absence, students must still complete a minimum of 160 hours for a 4-week rotation in order to pass the rotation. Any time missed must be remediated during the course of the rotation for credit to be issued. Students may remediate up to four missed days or 48 hours missed during any rotation period by working on normal days off. OMS 3 students who have any unexcused absences will be referred to the PESB.

VIII. Professionalism and Ethics

It is advised that students review and adhere to all behavioral policies including attendance, plagiarism, dress code, and other aspects of professionalism. Behavioral policies may be found in the *College Catalog and Student Handbook* at: http://www.vcom.edu/handbooks/catalog/index.html

A. VCOM Honor Code

The VCOM Honor Code is based on the fundamental belief that every student is worthy of trust and that trusting a student is an integral component in making them worthy of trust. Consistent with honor code policy, by beginning this exam, I certify that I have neither given nor received any unauthorized assistance on this assignment, where "unauthorized assistance" is as defined by the Honor Code Committee. By beginning and submitting this exam, I am confirming adherence to the VCOM Honor Code. A full description of the VCOM Honor Code can be found in the *College Catalog and Student Handbook* at: http://www.vcom.edu/handbooks/catalog/index.html

IX. Clinical Curriculum

A. Objectives of the Course

1. Understanding of the principles of early intervention, including:
    a. Prehospital emergency care.
    b. Emergency medicine concepts.
    c. Prioritization and triage
    d. Stabilization for transport
    e. Simultaneous triage of multiple trauma patients or patients with serious medical illnesses.
    f. Efficient resource utilization
    g. Access to consultants or information

2. Understanding of the assessment and management of emergency situations, including:
    a. Cardiac arrest and resuscitation: organization (coordination, recording, communication), special circumstances (drowning, electrocution/lightning injury hypothermia/hyperthermia, cardiac arrest in pregnancy) immediate post-resuscitative care
    b. Shock: hypovolemic, restrictive, neurogenic, cardiogenic, septic
    c. Arrhythmia recognition and management: asystole, ventricular tachycardia, ventricular fibrillation, bradycardia, supraventricular tachycardia
    d. Cardiovascular emergencies: acute myocardial infarction, cardiogenic shock, unstable angina, acute heart failure, thoracic/abdominal aortic aneurysms and dissection
    e. Acute respiratory distress and airway obstruction
    f. Acute abdominal emergencies: gastrointestinal hemorrhage, pancreatitis, mesenteric ischemia, bowel obstructions
    g. Obstetric and gynecologic emergencies: sexual assault, ectopic pregnancy, miscarriage, preeclampsia and eclampsia, vaginal hemorrhage
    h. Neurologic emergencies: the comatose patient, status epilepticus, spinal cord compression, stroke, syncope, meningitis
    i. Trauma: primary and secondary assessment of a trauma patient with multiple injuries, by mechanism of injury (blunt vs penetrating trauma), by site of injury (head, eye, chest, spinal cord and bony spine, abdomen, extremity, urogenital system)
    j. Burns: classification, outpatient management of first and second degree burns, fluid replacement protocols, indications for hospitalization/consultation
    k. Acid-base issues: metabolic and respiratory acidosis, diabetic ketoacidosis
    l. Psychiatric emergencies: acute psychosis, suicidal patients, situational crisis
    m. Victims of violence and domestic abuse issues
    n. Violent patients
    o. Pediatric emergencies: the injured child, musculoskeletal trauma, acute abdomen, fever and sepsis, metabolic crises, child abuse

3. Identifying those osteopathic clinical skills that provide an advantage in the clinical setting in differential and final diagnosis of cases including:
    a. The osteopathic structural exam
    b. Palpatory and observation skills of structure and function
    c. Advanced musculoskeletal examination skills
    d. Neurologic evaluation skills

4. Providing where appropriate the osteopathic clinical skills in the treatment of:
    a. Somatic dysfunction
    b. Sprains
    c. Muscular strains
    d. Dislocations
    e. Edema reducing techniques

5. Identify in the use of osteopathic principles and concepts the need to:
    a. Assure the patient's psychosocial needs are met
    b. Assure the whole-person concept is realized in that injury or illness in one system may be related to dysfunction in additional systems.

6. Understanding of the interpretation of diagnostics, including:
    a. EKG
    b. Radiographs: cervical spine, chest, abdominal series, pelvis, long bones, basic unenhanced head CT
    c. Monitors (cardiac and pulse oximetry)

7. Understanding of environmental exposures, including:
    a. Bites and stings
    b. Human, dog and cat bites
    c. Poisonous plants
    d. Inhalations
    e. Hypersensitivity/anaphylaxis

8. Understanding of toxicologic emergencies, including:
    a. General approach to the poisoned patient
    b. Access to poison control data bases
    c. Basic decontamination procedures
    d. Consultation/definitive management

9. Understanding of disease prevention, including immunization (active and passive), antibiotic prophylaxis

10. Basic fracture/dislocation management:
    a. Simple dislocations of fingers and toes
    b. Radial head subluxation (nursemaid's elbow)
    c. Anterior glenohumeral dislocation
    d. Patellar dislocation
    e. Fractures of upper extremities: humerus, radia, metacarpals phalanges
    f. Rib fractures
    g. Fractures of lower extremities: hip, femur, tibia, fibula, metatarsals, phalanges
    h. Compression fractures of thoracic and lumbar vertebrae
    i. Undisplaced pubic rami pelvic fracture

11. Identifying and appropriately applying the careful and judicial use of osteopathic manipulation in the department setting.

12. The competence required to achieve the following certifications:
    a. Basic cardiac life support (BCLS)
    b. Advanced cardiac life support (ACLS)
    c. Pediatric advanced life support (PALS)
    d. Advanced life support in obstetrics (ALSO)

13. Proficiency in the following techniques:
    a. Acute MI protocol
    b. Peripheral IV access
    c. Lumbar puncture
    d. Simple laceration repair
    e. Simple splinting of fractures
    f. Local blocks
    g. Cast/splinting
    h. Optimizing airway patency
    i. Bag-valve-mask ventilation

14. Understanding of the following procedures and techniques:
   a. Intraosseous infusion
   b. Central lines with ultrasound guidance
   c. Procedural Sedation
   d. Complex lacerations
   e. Endotracheal intubation
   f. Regional blocks
   g. Defibrillation/cardioversion
   h. Pericardiocentesis
   i. External cardiac pacing

B. Suggested Readings by Topic

Reading can be completed from either Tintinalli's Emergency Medicine text **OR** Rosen's Emergency Medicine

1. Resuscitation

Tintinalli's Emergency Medicine	Rosen's Emergency Medicine
Ch. 11 Sudden Cardiac Death	Ch. 5 Adult Resuscitation
Ch. 12 Approach to Nontraumatic Shock	Ch. 3 Shock
Ch. 13 Approach to Traumatic Shock	Ch. 106 Allergy, Anaphylaxis, and Angioedema
Ch. 14 Allergy and Anaphylaxis	Ch. 127 Sepsis Syndrome
Ch. 151 Sepsis	

Procedures from Roberts and Hedges' Clinical Procedures text:

- Ch. 17 – Cardiopulmonary Resuscitation and Artificial Perfusion During Cardiac Arrest
- Ch. 21 – Peripheral IV Access
- Ch. 22 – Central Venous Catheterization and Central Venous Pressure Monitoring
- Ch. 25 – Intraosseous Infusion

2. Cardiac Emergencies

Tintinalli's Emergency Medicine	Rosen's Emergency Medicine
Ch. 18 Cardiac Rhythm Disturbances	Ch. 65 Dysrhythmias
Ch. 48 Chest Pain	Ch. 22 Chest Pain
Ch. 49 Acute Coronary Syndromes	Ch. 64 Acute Coronary Syndromes
Ch. 50 Cardiogenic Shock	Ch. 67 Heart Failure
Ch. 53 Acute Heart Failure	

Procedures from Roberts and Hedges' Clinical Procedures text:

- Ch. 12 – Defibrillation and Cardioversion
- Ch. 15 – Emergency Cardiac Pacing
- Ch. 16 – Pericardiocentesis

3. Respiratory Emergencies

Tintinalli's Emergency Medicine	Rosen's Emergency Medicine
Ch. 62 Respiratory Distress	Ch. 21 Dyspnea
Ch. 65 Community-Acquired Pneumonia, Aspiration Pneumonia, and Noninfectious Pulmonary Infiltrates	Ch. 62 Pneumonia
Ch. 68 Pneumothorax	Ch. 63 Pleural Disease
Ch. 69 Acute Asthma and Status Asthmaticus	Ch. 59 Asthma
Ch. 70 Chronic Obstructive Pulmonary Disease	Ch. 60 Chronic Obstructive Pulmonary Disease

Procedures from Roberts and Hedges' Clinical Procedures text:

- Ch. 3 – Basic Airway Management and Decision Making
- Ch. 4 – Tracheal Intubation
- Ch. 8 – Mechanical Ventilation
- Ch. 10 – Tube Thoracostomy

4. Abdominal and Genitourinary Emergencies

Tintinalli's Emergency Medicine	Rosen's Emergency Medicine
Ch. 71 Acute Abdominal Pain	Ch. 23 Abdominal Pain
Ch. 75 Upper Gastrointestinal Bleeding	Ch. 26 Gastrointestinal Bleeding
Ch. 76 Lower Gastrointestinal Bleeding	Ch. 85 Urological Disorders
Ch. 91 Urinary Tract Infections and Hematuria	Ch. 30 Vaginal Bleeding
Ch. 96 Abnormal Uterine Bleeding	Ch. 173 Complications of Pregnancy
Ch. 97 Abdominal and Pelvic Pain in the Nonpregnant Female	Ch. 176 Labor and Delivery
Ch. 98 Ectopic Pregnancy and Emergencies in the First 20 Weeks of Pregnancy	Ch. 84 Sexually Transmitted Infections
Ch. 100 Maternal Emergencies After 20 Weeks of Pregnancy and in the Postpartum Period	
Ch. 103 Pelvic Inflammatory Disease	

Procedures from Roberts and Hedges' Clinical Procedures text:

- Ch. 43 – Peritoneal Procedures
- Ch. 55 – Urologic Procedures
- Ch. 57 – Gynecologic Procedures

5. Neurologic Emergencies

Tintinalli's Emergency Medicine	Rosen's Emergency Medicine
Ch. 165 Headache	Ch. 16 Headache
Ch. 167 Stroke Syndromes	Ch. 87 Stroke
Ch. 168 Altered Mental Status and Coma	Ch. 12 Depressed Consciousness and Coma
Ch. 170 Vertigo	Ch. 15 Dizziness and Vertigo
Ch. 171 Seizures and Status Epilepticus	Ch. 14 Seizures
Ch. 52 Syncope	Ch. 11 Syncope

Procedures from Roberts and Hedges' Clinical Procedures text:

- Ch. 60 – Spinal Puncture and Cerebrospinal Fluid Examination

6. Trauma

Tintinalli's Emergency Medicine	**Rosen's Emergency Medicine**
Ch. 254 Trauma in Adults	Ch. 32 Multiple Trauma
	Ch. 41 General Principles of Orthopedic Injuries

Procedures from Roberts and Hedges' Clinical Procedures text:

- Ch. 35 - Methods of Wound Closure
- Ch. 50 – Splinting Techniques
- Ch. 33 – Systemic Analgesia and Sedation for Procedures

7. Toxicology, Endocrine and Psychiatric Emergencies

Tintinalli's Emergency Medicine	**Rosen's Emergency Medicine**
Ch. 225 Diabetic Ketoacidosis	Ch. 115 Diabetes Mellitus and Disorders of Glucose Homeostasis
Ch. 286 Mental Health Disorders: ED Evaluation and Disposition	Ch. 101 Suicidal Behavior
Goldfrank's Clinical Manual of Toxicological Emergencies	
Ch. 1 Initial Evaluation of the Patient: Vital Signs and Toxic Syndromes	
Ch. 2 Principles of Managing the Acutely Poisoned or Overdosed Patient	
Ch. 6 Acetaminophen	
Ch. 9 Opioids	

Procedures from Roberts and Hedges' Clinical Procedures text:

- Ch. 42 – Decontamination of the Poisoned Patient