

**University of Florida College of Medicine  
Department of Anesthesiology Medical Education**

**Fourth-Year Anesthesiology and Critical Care Clerkship ANS R1-7 Syllabus  
2019-2020**



# Contents

<b>CLERKSHIP ORGANIZATION AND LOCATIONS.....</b>	<b>2</b>
Administration.....	2
Gainesville Inpatient Surgical Locations.....	3
ICU Directors and Administrative Contacts.....	4
<b>WELCOME .....</b>	<b>5</b>
<b>MESSAGE FROM THE CHAIR.....</b>	<b>6</b>
<b>COMPETENCIES, GOALS, AND OBJECTIVES.....</b>	<b>7</b>
<b>ASSIGNMENTS .....</b>	<b>9</b>
Case Logs .....	9
Case Review .....	9
Modules .....	12
Evaluations.....	12
Formative Feedback Evaluations.....	12
ICU Evaluation .....	12
Resident/Faculty Evaluation.....	12
Clerkship Evaluation .....	12
<b>LECTURES AND MODULES.....</b>	<b>14</b>
<b>POLICIES AND PROCEDURES.....</b>	<b>15</b>
<b>ANESTHESIOLOGY / CRITICAL CARE RESOURCES .....</b>	<b>17</b>
<b>APPENDIX .....</b>	<b>18</b>
Key Points for Exam: .....	18

## **Clerkship Organization and Locations**

*Gainesville Administration*

Department Chair:

3/7/2019

Tim Morey, MD (352) 273-8610 [tmorey@anest.ufl.edu](mailto:tmorey@anest.ufl.edu)

**Clerkship Director:**

Chris Giordano, MD (352) 222-7855 (c) [cgiordano@anest.ufl.edu](mailto:cgiordano@anest.ufl.edu)

**Clerkship Co-Director:**

Sean Kiley, MD (352) 215-2138 (c) [skiley@anest.ufl.edu](mailto:skiley@anest.ufl.edu)

**Clerkship Coordinator:**

Julianne Veal (352) 265-0077 [jveal@anest.ufl.edu](mailto:jveal@anest.ufl.edu)

**Chief Residents:**

Jordan Brewer, MD 513-646-6488 [jbrewer@anest.ufl.edu](mailto:jbrewer@anest.ufl.edu)  
Katie Dietrich, MD 904-654-4447 [cadietrich@anest.ufl.edu](mailto:cadietrich@anest.ufl.edu)  
Richa Sutaria, MD 573-587-6827 [rsutaria@anest.ufl.edu](mailto:rsutaria@anest.ufl.edu)

***Gainesville Inpatient Surgical Locations***

**Shands Hospital**

1600 SW Archer Road, 32610

**VA Medical Center**

1601 SW Archer Road, 32608

Contact:

Dr. Cummings: Pager 413-2158  
Office 374-7312

**Florida Surgical Center**

3480 Hull Road, 32607

Contact:

Resident you are paired with

**Springhill Pain Clinic**

4037 NW 86th Terrace

Contact:

Ask for Ms. Tracey Hickox 352-265-7777

## ***Gainesville ICU Directors and Administrative Contacts***

### **Cardiovascular ICU**

Sean Kiley, MD

Admin Contact: Nettie Van Wyen 352-273-8298; [NVanWyen@anest.ufl.edu](mailto:NVanWyen@anest.ufl.edu)

### **Medical ICU**

Jorge Lascano, MD

Admin Contact: Amanda Lazenby 352-273-8737 [Amanda.Reed@medicine.ufl.edu](mailto:Amanda.Reed@medicine.ufl.edu)

### **Neruo ICU**

Peggy White, MD

Admin Contact: Nettie Van Wyen 352-273-8298; [NVanWyen@anest.ufl.edu](mailto:NVanWyen@anest.ufl.edu)

### **Pediatric ICU**

Leslie Avery, MD

Admin Contact: Alyssa Shain 265-0462; [shainaa@peds.ufl.edu](mailto:shainaa@peds.ufl.edu)

### **Surgical ICU**

Phil Efron, MD

Admin Contact: Marcil Campbell 273-5670; [Marcil.Campbell@surgery.ufl.edu](mailto:Marcil.Campbell@surgery.ufl.edu)

### **Trauma ICU**

Phil Efron, MD

Admin Contact: Marcil Campbell 273-5670; [Marcil.Campbell@surgery.ufl.edu](mailto:Marcil.Campbell@surgery.ufl.edu)

Caroli Harkness [Caroli.Harkness@surgery.ufl.edu](mailto:Caroli.Harkness@surgery.ufl.edu)

Jamie Williams 273-5670; [Jamie.Williams@surgery.ufl.edu](mailto:Jamie.Williams@surgery.ufl.edu)

### **VA Surgical ICU**

Drs. Hobson and Atteberry

Admin Contact: Linda Kunz 374-6013; [linda.kunz@surgery.ufl.edu](mailto:linda.kunz@surgery.ufl.edu)

# Welcome

---

Welcome to your **Anesthesiology & Critical Care Clerkship** for 4<sup>th</sup> year medical students, which will begin in HME 465 at 8:30 am. This is a four-week required clerkship that is divided into two different components. Two weeks will be dedicated to the Perioperative Management of the surgical patient, including pre-, intra- and post-operative patient care under the direct supervision of a resident or attending. A typical day would include arriving at ~6:00am to help set up the OR, attending conference at 6:30 am (based on didactic usefulness), and starting the first OR case of the day between 7:30 and 8:15am. Typically, there will be several cases throughout the day in which the student will participate. Additionally, a continuity of care is expected by performing or at least reviewing the next day's pre-operative evaluation along with visiting the post-operative patients from the preceding day.

During the other two weeks of the clerkship, the student will participate in their elected or assigned ICU management team. Each team differs slightly in schedule and management styles. Therefore, the specific times and rounding formats are left to each service to define within the framework of achieving the goals and objectives listed below. One-half of the group will start in the operating room for the anesthesiology portion of the clerkship; the other half of the group will start in the ICU. At the two-week interval the groups will switch.

On-line learning modules are required and available for the students to complete on their own time. These will correspond to a simulation or problem-based learning discussion that requires material to be understood in order to critically appraise the patient scenarios. The student must complete the online learning modules **before** the scheduled simulation / problem-based learning session. Lectures and Small Group Discussions are held in the Harrell Medical Building in either the Simulation Lab (Rm. 465), classroom 460, or classroom 331. A complete schedule of lectures is available online, as are all handouts, and necessary paperwork. Evaluation is through objective examinations performed by the residents, Fellows and Attendings.

If your assigned resident in the Operating Room portion of the clerkship is unavailable for any reason, please do the following in order of preference: choose from the alternate resident list, contact Julianne Veal or Dr. Giordano, or call the Attending of the Day (AOD) on 494-4990 who can help assign you to a faculty member to develop your clinical and educational development.

**Chris Giordano, MD**  
Clerkship Director

## **Message from the Chair**

---

Dear Students,

Welcome to the Anesthesiology & Critical Care Clerkship administered by the Department of Anesthesiology. The four-week clerkship for Fourth Year medical students has two primary goals: to educate all physicians in the management of critical care, and to introduce concepts related to perioperative medicine which eventually impacts all medical practitioners. Integral to this education is the understanding and development of the life support skills that physicians need to rescue patients in desperate times, which include establishing intra-vascular access and managing airways.

You will have opportunities to tailor your experience in subspecialty areas and ICUs during this four-week rotation. Regardless of your specialty of choice, the lessons you will learn in this rotation will be of critical value. From basic review and application of pharmacology and physiology to the full range of perioperative medicine and acute and chronic pain management, this rotation in the Department of Anesthesiology cuts across all disciplines in a unique and interesting way. You will learn to perform a variety of procedures and physiologic/pharmacologic therapies from those who do it most often including: airway management, intravenous access, sedation, mechanical ventilation and emergency assessment. Your experience will, in large part, be what you make of it. This is an incredible group of top physicians in the field of anesthesiology and critical care medicine; be assertive and be inquisitive and you will have a wonderful learning experience, and hopefully some fun!

The Department of Anesthesiology provides clinical anesthesia and sedation services at UF Health in the following areas: operating suites in all three UF towers, Labor and Delivery, Burn Unit, Radiology Suite, ECT Suite and Cardiac Catheterization Laboratory. We also provide service to outlying facilities including the Florida Surgical Center, Children's Surgery Center and the VAMC. Additionally, we operate the Acute Pain service and the Chronic Pain clinics at UF Health, along with a preoperative evaluation clinic at both UF and the VAMC. We also provide medical direction in the Post-Anesthesia Care Units of the UF facilities. Our Critical Care Medicine faculty oversees care of patients in the SICU, NICU, BICU, and the CVICU at UF Health.

With warmest regards,

**Timothy Morey, MD**  
Professor and Chair

# **Competencies, Goals, and Objectives**

The Department's expectations of your performance are aligned with the College of Medicine's competency-based curriculum. You will experience, be taught and evaluated specifically on your performance of the following competencies, goals and objectives:

## ***Competencies:***

Patient Care (PC)  
Medical Knowledge (MK)  
Practice-Based Learning (PBL)  
Systems-Based Practice (SBL)  
Professionalism (P)  
Interpersonal and Communication Skills (IC)

## ***Goals & Objectives***

### **1. Understand the Principles and Risks of Airway Management**

- \*Airway evaluation (PC, MK, IC)
- \*Airway control anticipation and resource management (PC, IC, SBL)
- \*Mask ventilation (PC, MK)
- \*Intubation: direct laryngoscopy, fiberoptic intubation, intubating adjuncts (PC, MK)
- \*LMA (PC, MK)

### **2. Understanding the Indications and Different Modes of Mechanical Ventilation**

- \*Oxygenation (MK)
- \*Ventilation (MK)
- \*Respiratory volumes (MK)
- \*Etiologies of respiratory failure (MK, PC)
- \*Modes of mechanical ventilation (MK)
- \*Respiratory adjuncts (MK, PC, SBL)

### **3. Appreciating Various Modalities of Hemodynamic Monitoring**

- \*ECG, pulse oximetry, blood pressure, temperature (MK, SBL)
- \*Arterial line placement and utility (MK, PC)
- \*Central line placement and utility (MK, PC)
- \*Pulmonary artery catheter placement and utility (MK, PC)
- \*Diagnosing different types of shock and their therapies (MK, PC)
- \*Transesophageal echocardiography placement and utility (MK, PC)
- \*Recognizing critical events: PE, hemorrhage, tamponade, MI (MK, PC)

### **4. Appreciate the Scope, Utility and Risks of Procedural Sedation**

- \*Levels of sedation (MK)
- \*Practitioners of procedural sedation (IC, SBL)
- \*Standards of monitoring (PC, SBL)
- \*Guidelines of procedural sedation (PC, SBL)
- \*Describe the elements of informed consent (IC, MK)
- \*Capnography (MK)
- \*Sedation medications and physiologic impact (PC, MK)
- \*Reversal medications (PC, MK)
- \*High-risk sedation patients (PC, MK)
- \*Airway obstruction mitigation maneuvers

### **5. Identifying and Treating Critical Illness**

- \* Defining ARDS and management (PC, MK, SBL)
- \* Evaluate the critically ill patient (MK, PC, SBL)
- \* Different type of shock (MK)
- \* Differentiate SIRS and sepsis (MK, SBL)
- \* Understanding surviving sepsis guidelines (PC, SBL, P)

\* Exposure to interdisciplinary team structure and management (P, IC, SBL)

## **6. Recognizing and Implementing Different Strategies for Acute Pain Management**

- \* Definition and types of pain (PC, MK, IC)
- \* Multimodal pain management (PC, MK, IC)
- \* Regional anesthesia (PC, MK, IC, SBL, P)
- \* Local anesthetics (MK)
- \* Anticoagulation and regional techniques (MK, PC)

## **7. Identifying and Rescuing the Critical Patient in Emergency Assessment**

- \* Review crisis resource management (P, PC, IC, SBL)
- \* BLS utility (PC, IC, P)
- \* ACLS utility (PC, SBL, P)
- \* Acute coronary syndrome causes and treatment (MK, PC)
- \* ECG interpretations (MK, PC)
- \* Peripheral IV placement and utility (PC)
- \* Diagnosis and therapy for elevated intracranial pressure (MK, PC)

## **8. Understanding Blood Component Therapy and the Different Transfusion Triggers**

- \* Physiology of oxygen delivery and consumption (MK)
- \* Blood component storage and handling (MK)
- \* Indications for different blood components: PRBC, Plts, FFP, Cryo (PC, MK)
- \* Risks of different blood components: PRBC, Plts, FFP, Cryo (PC, MK)
- \* Alternative therapies: recombinant factors, prothrombin complex, anti-fibrinolytics (MK)
- \* Risks and decisions for massive transfusion: TRIM, TRALI, TACO, electrolytes, and temperature

## **9. Anesthesia Pharmacology and Management**

- \* Profiles / indication of induction drugs: propofol, ketamine, thiopental, etomidate (MK)
- \* Profiles and indication of muscle relaxants: succinylcholine, rocuronium, vecuronium (MK)
- \* Reversal drugs for opiates, BZDs, muscles relaxants (MK)
- \* Total intravenous anesthesia versus a balanced anesthetic (MK)
- \* Profiles and indication of vasopressors: epi, norepi, ephedrine, neo, vasopressin (MK)
- \* Beta-blockers, nitroglycerin, nitroprusside (MK)
- \* Rapid sequence intubation: indications, drugs, sequence (MK, PC)
- \* Intraoperative recall (MK, PC)

## **10. Perioperative Bedside Ultrasound Assessment**

- \* Introduce ultrasound as a modality and its potential to assist with diagnosis of cardio/pulmonary pathology
- \* Identify cardiac anatomy on standard transthoracic views: parasternal long, parasternal short, apical, subcostal
- \* Discuss findings used to evaluate fluid status and cardiac function using ultrasound
- \* Identify normal and abnormal
- \* Identify normal pleural/interstitial lung US
- \* Identify and discuss US findings associated with lung pathologies

## **11. Cognitive Errors: Behavioral Economics**

- \* Mechanics of Decision-Making (SBL, IC, PBL)
- \* Vulnerabilities of Decision-Making (SBL, IC, PBL)
- \* Definition of Heuristics (SBL, IC, PBL)
- \* Common biases in medical practice (SBL, IC, PBL)
- \* Tools to mitigate decision-making errors (SBL, IC, PBL)

## **12. Team Cognition**

- \* Recognize the Knowledge, Skills, Attitudes (KSAs) that are fundamental to a high performing team (SBL, IC, PBL)
  - KSA Chart attachment which is on page 10 already
- \* Practice the application of these skills to critical events with ad hoc teams (SBL, IC, PBL)
- \* Recognize the interdependent roles and unique roles the interprofessional healthcare system (SBL, IC, PBL)



# Assignments

All assignments are must be submitted via Canvas by 5pm on the last day of the rotation, unless otherwise specified. All assignments submitted after their specified deadlines will lost points. If you are having problems submitting assignments, please contact Ms. Sweet at [jveal@anest.ufl.edu](mailto:jveal@anest.ufl.edu).

## ***Case Logs***

In accordance with the GME and the UF College of Medicine, all medical students are required to keep a log of the patients they encounter. Case Logs must be completed in New Innovations. Make sure to include what procedures you participated in (i.e. peripheral IV, Mask Ventilation, Intubation, LMA insertion, aline, central line, nasogastric tube, IM injection, Foley catheter, ...) Please note, that we will periodically review these logs to evaluate the range of patients and procedures you encounter during your experience. This will allow us to fine tune the experience for each student so that we can maximize your learning opportunity.

## ***Case Review***

During the Anesthesiology two weeks, you will complete one Case Review Form including all of the Perioperative management strategies implemented. This should include a brief review of the patient's history and physical, the anesthetic plan, any remarkable intraoperative events, the post-operative pain plan and dispositional plan. On-line are examples of case-write ups that will correspond to full credit, half credit and no credit. These cases will be submitted for review and be counted as part of your final grade. If you have not started the operating room portion of the clerkship, please write about an interesting ICU case that was remarkable in some way.

## **Team Reflection Piece<sup>i</sup>**

It is pivotal for you to do this piece in order so that you can maximize the value of this exercise.

- a. Please complete prompt 1 by the half way point and upload to canvass accordingly.
- b. Please complete prompt 2 after our Team Training Simulations by the end of the rotation and upload to canvass accordingly.

Prompt 1:

We would like you to reflect upon one of the reflective writing prompts below, your response should be an approximate word count of 250. The purpose of this reflection is two-fold, first to serve as a means of evaluating your growth as a member of a clinical team, second, is to identify strengths and opportunities for growth and improvement within the University of Florida College of Medicine. This can be either a *positive* or *negative* reflective experience. We ask you to think as if you've been hired as an external evaluator in order to assess the collaborative practices at the University of Florida COM. Tell us what is going well and let us know where we need to improve. The piece will be submitted for review and counted as a substantial part of your final grade.

When responding to the reflective writing prompts, please describe your experience with enough detail for the clerkship faculty to understand the context in which the experience occurred, the problem or situation that presented and the resolution that was reached. When writing about your reflections, the following points for consideration may be helpful: analyze and evaluate the experience, as well as any thinking processes that were involved. If possible, explore deeper levels of meaning, i.e., professional, ethical, moral, and/or social issues.

1. Describe a situation during which you observed members of a clinical team behaviors or working well as a team. Describe the specific behaviors that was/were used and the context in which it/they was used. How do you think that the outcomes associated with the situation were enhanced by the use of the skill?
2. Describe a situation during which you members of a clinical team could have benefitted from employing teamwork behaviors. Describe the teamwork behaviors that could have been used and how you think the outcomes may have changed.

Prompt 2:

Reflect on the piece that you submitted at the beginning of this class. Reanalyze the situation you described paying specific attention to the KSAs that were used/absent in this situation. For many, if not all, these KSAs are a new concept and are subsequently attached as a document below. Describe the KSA(s) that was/were used, or could have been used, and the context in which it/they was used. How do you think that the outcomes associated with the situation were enhanced by the use of the skill? Additionally, reflect on how your understanding of this situation has changed as a result of what you have learned in this course. How has this learning changed the way you will respond in the future?

## Teamwork Knowledge, Skills, and Attitudes <sup>1</sup>

Team work	Definition	Behavioral Examples
Team Leadership	Ability to direct and coordinate the activities of other team members; assess team performance, assign tasks, develop team KSA's, motivate team members, plan and organize, and establish a positive atmosphere.	<ul style="list-style-type: none"> <li>• Facilitate team problem solving</li> <li>• Provide performance expectations and acceptable interaction patterns</li> <li>• Synchronize and combine individual team member contributions</li> <li>• Seek and evaluate information that impacts team functioning</li> <li>• Clarify team member roles</li> <li>• Engage in preparatory meetings and feedback sessions with the team</li> </ul>
Mutual Performance Monitoring	The ability to develop common understandings of the team environment and apply appropriate task strategies in order to accurately monitor teammate performance.	<ul style="list-style-type: none"> <li>• Identifying mistakes and lapses in other team member actions</li> <li>• Providing feedback regarding team member actions in order to facilitate self-correction</li> </ul>
Mutual Support/ Back-up Behavior	<ul style="list-style-type: none"> <li>• Ability to anticipate other team member's needs through accurate knowledge about their responsibilities.</li> <li>• The ability to shift workload among members to achieve balance during high periods of workload.</li> </ul>	<ul style="list-style-type: none"> <li>• Recognition by potential back-up providers that there is a workload distribution problem in their team</li> <li>• Shifting of work responsibilities to under-utilized team members</li> <li>• Completion of the whole task or parts of tasks by other team members</li> </ul>
Adaptability	<ul style="list-style-type: none"> <li>• Ability to adjust strategies based on information gathered from the environment through the use of compensatory behavior and reallocation of intra-team resources.</li> <li>• Altering a course of action or team repertoire in response to changing conditions (internal or external).</li> </ul>	<ul style="list-style-type: none"> <li>• Identify cues that a change has occurred, assign meaning to that change, and develop a new plan to deal with the changes</li> <li>• Identify opportunities for improvement and innovation for habitual or routine practices</li> <li>• Remain vigilant to changes in the internal and external environment of the team</li> </ul>
Team/ Collective Orientation	Propensity to take other's behavior into account during group interaction and the belief in the importance of team goals over individual member's goals.	<ul style="list-style-type: none"> <li>• Taking into account alternative solutions provided by teammates and appraising that input to determine what is most correct</li> <li>• Increased task involvement, information sharing, strategizing, and participatory goal setting</li> </ul>
Shared Mental Models	An organizing knowledge structure of the relationships between the task the team is engaged in and how the team members will interact	<ul style="list-style-type: none"> <li>• Anticipating and predicting each other's needs</li> <li>• Identify changes in the team, task, or team- mates and implicitly adjusting strategies as needed</li> </ul>
Mutual Trust	The shared belief that team members will perform their roles and protect the interests of their teammates	<ul style="list-style-type: none"> <li>• Information sharing</li> <li>• Willingness to admit mistakes and accept feedback</li> </ul>
Conflict Resolution	Ability to manage and confront conflict before it interferes with team functioning.	<ul style="list-style-type: none"> <li>• Expressing concerns and suggesting alternatives to a situation</li> <li>• Working on a "win-win" so that a solution is reasonable to everyone involved</li> <li>• Focusing on what is right, not who is right.</li> </ul>
Closed-Loop Communication	The exchange of information between a sender and receiver regardless of medium.	<ul style="list-style-type: none"> <li>• Following up with team members to ensure was received</li> <li>• Acknowledge that message was received</li> <li>• Clarifying with the sender of the message that the message received is the same as the intended message sent</li> </ul>

<sup>1</sup> Adapted From:

Eduardo Salas, Dana E. Sims and C. Shawn Burke Is there a "Big Five" in Teamwork? Small Group Research 2005; 36; 555. <http://sgr.sagepub.com/cgi/content/abstract/36/5/555>

## ***Modules***

Each class-based ***Simulation*** or ***Problem-Based Learning Discussion*** has a corresponding educational module that is designed to introduce medical knowledge to the student **prior** to the start of the corresponding lecture. Refer to the lecture schedule for lecture dates. These modules are accessible on-line and are meant for self-teaching. There are questions infused throughout the module meant to keep you stimulated and to reinforce topics that are critical to appropriately applying during the simulation. These modules have many elements and topics that are controversial and are not necessarily universally applied – as are many things in medicine you will encounter! Please feel free to bring up any questions, uncertainties or ideas that you think need further addressing or explaining during the following class activity. Ideally, these modules will stimulate a dialogue for you to bring up with your resident or Attending in the OR and ICU. Your score on each module does not affect your final grade. . Refer to the Lectures and Modules for the complete list of modules and their associated lecture on page 13.

## ***Evaluations***

### **Formative Feedback Evaluations**

The Formative Feedback form should be completed with your resident (with whomever you spent the most time) at the end of each week. First you should complete the self-assessment portion, then ask your resident to complete their portion.

Since formative feedback is meant to provide you with information to improve, weaknesses and deficiencies should be stressed more than strengths. Formative feedback does not influence your final Summative Evaluation. If you wish to discuss any aspects of your formative feedback, or have any questions about this or any other aspects of the clerkship, please feel free to call Dr. Giordano (222-7855). You are responsible to for making sure each evaluation is completed and turned in on time. Completion and timely submission of these evaluations will count towards your final grade.

### **ICU Evaluation**

The Evaluation form should be completed by a resident (or whomever you spend the most time with) at the end of each week. You are responsible to for making sure each evaluation is completed and turned in on time. Completion and timely submission of these evaluations will count towards your final grade.

### **Resident/Faculty Evaluation**

Evaluations on the residents/faculty/lecturers can be completed in New Innovations. Please make sure to complete evaluations on all of the people you worked with as these help us improve the Clerkship experience.

### **Clerkship Evaluation**

Evaluation of your Clerkship experience is to be completed in New Innovations. Please make sure to complete evaluations on all of the people you worked with as these help us improve the Clerkship experience.

## ***Required Readings***

### **ANS R1 and ANS R2 only**

On your CCM rotations, you will have the opportunity to gain the experience and knowledge base to skillfully care for the critically ill patient in a collaborative, team-oriented and multidisciplinary setting.

Prior to your rotation, complete the following:

- Be Familiar with the ST ICU Handbook (will be provided prior to the start of the rotation)
- **CVL Tutorial** - <http://gme.med.ufl.edu/policy-procedures/continuing-education/central-venous-line-credentialing/>
  - (if that link doesn't work, try this one: <http://gme.med.ufl.edu/policy-procedures/housestaff-training/central-venous-line-credentialing/>)
- The Science of Patient Safety –
  - [http://www.ahrq.gov/professionals/education/curriculumtools/cusptoolkit/videos/04a\\_scisafety/index.html](http://www.ahrq.gov/professionals/education/curriculumtools/cusptoolkit/videos/04a_scisafety/index.html)
  - <https://www.youtube.com/watch?v=GOJJHHm7lnM>
  - <https://www.youtube.com/watch?v=wpzb7nM6oFQ>
  - <https://www.youtube.com/watch?v=6BnXs4KtER8>
- Sepsis readings which will be provided prior to the start of the Rotation

# **Lectures and Modules**

All modules should be available in Canvas. Please let Julianne Veal Julianne Veal know if you cannot access a module.

**Lab: Mask Ventilation & Endotracheal Intubation**

*Module: Airway evaluation*

**Lab: Mechanical Ventilation**

*Module: Mechanical Ventilation*

**Lab: Critical Illness**

*Module: Critical Illness*

**Lab: Transfusion Medicine**

*Module: Transfusion Medicine*

**Lab: Acute Pain**

*Module: Acute Pain Management:*

**Lab: ACLS / Emergency Assessment**

*Module: Perioperative Emergencies*

**Lab: Applied Intravenous Sedation and Analgesia: Physiology and Pharmacology**

*Module: Procedural Sedation*

**Lab: Hemodynamic Monitoring**

*Module: Hemodynamic Monitoring*

**Discussion: Behavioral Economics**

*Module: Cognitive Errors*

**Lab: Team Cognition Basic**

**Lab: Team Cognition Advanced**

# Policies and Procedures

---

## *The University of Florida Honor Code:*

“We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.”

## *Communication*

E-mail is the predominant source of communication regarding updates in the Clerkship. It is expected for you to check your e-mail **daily** since this is our primary means of communication. The Department of Anesthesiology is committed to an excellent student experience and we believe good communication is the principle foundation to achieving this goal.

## *Dress Code:*

Students should come to the hospital dressed professionally. If you will not be seeing any patients until in the Operating Room (when you will dress in scrubs) appropriate casual attire is acceptable (no short shorts, revealed midriffs, etc.). While in the ICU, long sleeve shirts and dress pants will be worn along with white coats; Scrubs may be worn during extensive patient contact. Please never wear scrubs outside of the hospital, as you become a vector transporting microbes in and out of sterile environments in the hospital. Badge identification should be visible at all times.

## *Reporting Problems:*

Problems with your senior, an attending, intern or a general concern should be reported to Dr. Giordano as soon as possible. The Clerkship should be a great experience and all concerns will be addressed appropriately.

## *Attendance*

Attendance is required at all Clerkship activities. In the fourth year clinical Clerkships and electives, daily attendance is required for all aspects of the clinical rotations. During clinical rotations, typical “holidays” are not taken unless specifically mentioned by the Clerkship (Christmas and Thanksgiving are exempt from this rule). Due to the highly interactive nature of this rotation you cannot be absent more than 20% of the days in the rotation. If you have any unexpected or planned absences, you **MUST** notify your resident or ICU Team who you are working with during your clinical experiences and Ms. Julianne VealJulianne Veal ([jveal@anest.ufl.edu](mailto:jveal@anest.ufl.edu)). The official COM policy can be viewed at: <http://medinfo.ufl.edu:8050/year1/secure/ufcom-policy-student-evaluations.pdf>.

In the event of an absence, you will be required to make up the time missed in order to ensure adequate clinical experience. This may require an extra call or weekend experience. Failure to adhere to these policies and procedures will result in a lowered professionalism competency score. Missed days and unexcused absences, which cannot be completed before Clerkship end date, will result in a grade of “Incomplete”.

## *Unplanned Absences*

In the event of a single day, unexpected absence due to illness, you **MUST** notify Ms. Julianne VealJulianne Veal ([jveal@anest.ufl.edu](mailto:jveal@anest.ufl.edu)). You must also contact your assigned resident. Text pages, e-mail, phone call, all forms of communication are acceptable. If you do not communicate with the office regarding your absence and Dr. Giordano cannot reach you, he will notify the office of Medical Education and Dr. Novak that we have been unable to contact you and a search for you will be initiated.

## *Planned Absences*

Students must contact Ms. Julianne Veal ([jveal@anest.ufl.edu](mailto:jveal@anest.ufl.edu)) as far in advance as possible (these requests must be made at least four (4) weeks prior to the beginning of the Clerkship) to discuss and obtain the permission of Dr. Giordano to be absent from assigned responsibilities in the case of planned meetings, events such as weddings or family gatherings, or the observation of a personal religious holiday.

## *Residency Interview Absences*

Here is the link to the policy manual and the specific wording for residency interview absences:

<https://osa.sites.medinfo.ufl.edu/files/2014/10/Policies-and-Procedures-Handbook.pdf>

<http://osa.med.ufl.edu/policies/evaluation-advancement-graduation/>

## *Holidays*

Students are allotted the following holidays: Thanksgiving, Summer Break, and Winter Break. Thanksgiving is defined as beginning 7pm Wednesday and ending 5am Monday. Summer and Winter Break are determined by the UF COM Academic Calendar. The COM recognizes other holidays, both religious and secular, which are of importance to some individuals and groups. Students wishing to observe these holidays must inform Ms. Julianne Veal ([jveal@anest.ufl.edu](mailto:jveal@anest.ufl.edu)) before the clerkship begins. In the event of such request, an alternate assignment or arrangement may be provided to the student to ensure adequate clinical experience.

## *Students with Disabilities*

The University of Florida is committed to providing academic accommodations for students with disabilities. Students requesting accommodations must first register with the Disability Resource Center (DRC) (352-392-8565, [www.dso.ufl.edu/drc/](http://www.dso.ufl.edu/drc/)) by providing appropriate documentation. Once registered, students should present their accommodation letter to the College of Medicine's ADA Representative, Mr. Jim Gorske ([jgorske@ufl.edu](mailto:jgorske@ufl.edu)), who will distribute the accommodation letter to appropriate course and/or clerkship directors, as needed, as well as the testing center. The University encourages students to register with the DRC as soon as they begin medical school or upon the verification of a disability.

## *Counseling Services*

Contact information for the Counseling and Wellness Center: <http://www.counseling.ufl.edu/cwc/Default.aspx>, 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

## *Performance Criteria*

All faculty and residents submit competency-based summative evaluations of students with whom they worked a sufficient amount of time. These evaluations count for a significant portion of your final grade. Written formative feedback is provided at the end of week two via a student self-assessment forms.

## *On-line Course Evaluation*

All students are expected to log into New Innovations and complete a confidential survey regarding your sub-internship experience. These evaluations are vital to the success of the clerkship by ensuring adequate levels of teaching. This feedback is also helpful in resident/faculty evaluations and award nominations.



## Final Grade Composition

In accordance with College of Medicine policy, you are evaluated for this clerkship using a letter grade (A, B, C). The letter grade is based on a mixture of subjective and objective components as follows:

- **Attendance:** 25% (24 points: 2 points signed for each simulation / lecture)
- **Modules:** Honor code of completion signed during attendance lecture
- **Examination:** 30% (84 points)
- **Evaluations:** 30% (9 points)
  - Four Evaluations (3 minimum required – two Formative Feedback and two ICU Evaluations)
- **Case Review:** 5% (10 points)
  - Case Review Form
- **Reflection Piece:** 10% (10 points)
  - One paper with self-evaluation/reflection (10 points)

Policies may also be viewed at <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>.

## Anesthesiology / Critical Care Resources

### Recommended texts:

- *Essential Anesthesia: From science to practice* by Drs. Euliano & Gravenstein. There are numerous copies available in the Health Science Center Library.
- *Civetta, Taylor and Kirby's Critical Care*, 5ed. 2009 (edited by Andrea Gabrielli, MD, FCCM, Joseph Layon, MD, FACP and Mihae Yu, MD).

### Recommended Overviews

- Marino's *The ICU Book*, 4ed. 2013
- Morgan & Mikhail's *Clinical Anesthesiology*, 5ed. 2013 (edited by John F. Butterworth IV, David C. Mackey, John D. Wasnick)

### "First Source" Reference Texts

- *Miller's Anesthesia*, 7ed. 2009 (edited by Ronald Miller, MD, Lars Eriksson, MD, PhD, Lee Fleisher, MD et al.)

### Internet Resources

- Morgan & Mikhail - <http://accessmedicine.mhmedical.com/book.aspx?bookid=564>
- *Principles of Critical Care* - <http://accessmedicine.mhmedical.com/book.aspx?bookid=361>

# Appendix

## *Key Points for Exam:*

4 Stages of sedation  
Sedation medications  
Respiratory depression risks / treatment  
Pulse oximetry  
Capnography  
FRC: CW vs parenchyma  
Closing Capacity: high and low risk populations  
Laplace's law  
Supplemental Oxygen uses  
PEEP  
PCV vs VCV vs. PSV: risks/ benefits  
VQ areas (shunt vs dead space)  
Mechanical ventilation flow wave forms  
PK vs Plt pressure  
Denitrogenation  
Rapid sequence intubation  
difficult intubation predictors  
sniffing position  
difficult airway algorithms  
difficult mask intubation predictors and adjuvants  
NMB uses  
Anemia vs. hypovolemia  
Blood component storage method  
Blood component storage risks (prbc, plts, ffp)  
Indications for PRBC transfusion  
Transfusion risks  
Coagulopathy monitoring tools  
Arterial Gas monitoring  
Indications and types of Shock  
Indication for invasive vs. non-invasive airway management  
SIRS  
ARDS  
Crystalloid types and indications  
Defibrillation vs. synchronized cardioversion: indications and risks  
Chest compressions  
Electrocardiogram ACLS tracings  
Coronary perfusion  
Myocardial infarction  
Central line indications and risks  
Poiseuille's law  
Arterial dampening  
SVR  
PVR  
Pulse pressure  
Types of pain and medication therapies  
Neuroaxial blocks and indications  
Extremity blocks and indications  
Limitations to field blocks  
Anticoagulation and neuroaxial blocks

---

## <sup>i</sup> References

- Baker D, Salas E, King H, et al. The role of teamwork in the professional education of physicians: Current status and assessment recommendations. *Jt Comm J Qual Patient Saf* 2005, 31: 185-202.
- Bandow D. Time to create sound teamwork. *J Qual Participat* 2001; 24: 41-47.
- Barach P, Weingart M. trauma team performance. In: Wilson WC, Grande CM, Hoyt DB, eds. *Trauma: Resuscitation, anesthesia, surgery, and critical care*. New York: Marcel Dekker, Inc., 2003. P. 96-150.
- Cannon-Bowers JA, Tannenbaum SI, Salas E, et al. Defining competencies and establishing team training requirements. In: Guzza RA, Salas E, eds. *Team effectiveness and decision-making in organizations*. San Francisco: Jossey-Bass, 1995. p. 333-380.
- Driskall JE, Salas E. Collective behavior and team performance. *Hum Factors* 1992; 34: 277-288.
- Flin R, Maron N. Identifying and training non-technical skills for teams in acute medicine. *Qual Saf Health Care* 2004, 13 Suppl 1:i80-i84.
- Healey AN, Undre S, Vincent CA. Developing observational measures of performance in surgical teams. *Qual Saf Health Care* 2004, 13 Suppl 1:i33-i40.
- Klein G, Pierce LG. Adaptive teams. Proceedings of the 6<sup>th</sup> ICCRTS Collaboration in the Informative Age, Track 4: C2 Decision making and Cognitive Analysis, 2001.
- Klimoski R, Mohammed S. Team mental model: Construct or metaphor? *J manage* 1994; 20: 403-437.
- Kozlowski SWJ, Gully SM, Nason ER, et al. Developing adaptive teams: A theory of compilation and performance across levels and time. In: Ilgen DR, Pulakos ED, eds. *The changing nature of performance: Implications for staffing, motivation, and development*. San Francisco: Jossey-Bass, 1999. p. 240-292.
- Mathieu JE, Heffner TS, Goodwin GF, et al. The influence of shared mental models on team process and performance. *J Appl Psychol* 2000, 85: 273-283.
- McIntyre MR, Salas E. Measuring and managing for team performance: Emerging principles from complex environments. In: Guzzo RA, Salas E. editors. *Team effectiveness and decision making in organizations*. Mahwah, NJ: Lawrence Erlbaum Associates, Inc.; 1995, p. 194-203.
- Porter COLH, Hollenbeck JR, Ilgen DR, et al. Backup behavior in teams: The role of personality and legitimacy of need. *J Appl Psychol* 2003, 88: 391-403.
- Salas E, Burke CS, Stagl, KC. Developing teams and team leaders: Strategies and principles. In: Demaree RG, Zaccaro SJ, Halpin SM, editors. *Leader development for transforming organizations*. Mahwah, NJ: Lawrence Erlbaum Associates, Inc.; 2004, p. 325-358.
- Shamir B. Calculations, values, and entities: The sources of collective motivation. *Hum Relations* 1990; 43: 313-332.
- Stout RJ, Cannon-Bowers JA, Salas E. The role of shared mental models in developing team situational awareness: Implications for team training. *Traning Res J* 1996; 2: 85-116.
- Thomas EJ, Sexton JB, Helmreich RL. Translating teamwork behaviors from aviation to healthcare: Development of behavioural markers for neonatal resuscitation. *Qual Saf Health Care* 2004, 13 Suppl 1:i57-i64.
- Wagner JA. Studies of individualism-collectivism: Effects on cooperation in groups. *Acad Manage J* 1995; 38: 152-172.
- Webber SS. Leadership and trust facilitating cross-functional team success. *J Manage Develop* 2002; 21: 201-214.