4th Year Critical Care Selective Syllabus

Academic Year 2017-2018
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Welcome to the Critical Care Selective. This rotation is designed to introduce students to core critical care principles. The critical care selective is beneficial to the practice of all specialties of medicine, even for students who will be engaged in primary care.

Students will be challenged in areas of medical knowledge, patient care, communication skills, professionalism, critical appraisal, quality improvement, and societal awareness.

Students are expected to achieve an appreciation of the difficulties encountered by patients, families and caregivers in the ICU.

Faculty members, residents and our staff are committed to providing an exceptional education experience and are dedicated to student success. We look forward to working with you and supporting you during your critical care experience.

Robert Raschke, MD
Director, Critical Care Selective
Critical Care Selective Organization and Description

The critical care selective will expose the student to a broad experience in the care of critically ill patients. The clinical site will be a licensed critical care unit (e.g., a medical ICU, surgical ICU, cardiac care unit, neonatal ICU, pediatric ICU, or similar unit). Students will be able to identify preferences for sites from a list of approved critical care rotations and will be assigned to sites based on their preferences and pedagogical and organizational needs. It will be a 4-week rotation, and students will be expected to attend clinical duties full time.

Students will be required to attend weekly academic half-days at the College of Medicine-Phoenix. The didactic curriculum will augment the clinical experiences and provide a unified experience for all students, regardless of their critical care site. The academic half-day will be a combination of simulation exercises, Interactive Learning Sessions and Case-Based Instruction.

The longitudinal themes are integrated as applicable into both clinical and non-clinical components of the selective.

<table>
<thead>
<tr>
<th>Selective</th>
<th>Critical Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Director</td>
<td>Dr. Raschke earned his MD at Rush Medical College, and has a Master’s degree in Biostatistics and Clinical Research Design from the University of Michigan. Dr. Raschke completed Internal Medicine residency training at Good Samaritan Regional Medical Center (now Banner-UMC Phoenix) and Critical Care fellowship at the University of Arizona University Medical Center in Tucson. He has been a practicing bedside intensivist for most of his career, but has been involved in graduate medical education and research since 1989. He has an appointment as a Clinical Professor of Medicine at University of Arizona College of Medicine since 2004. Dr. Raschke also serves as Medical Director for Simulation at Banner health and the Program Director for the Pulmonary Critical Care fellowship at Banner UMC Phoenix. Clinical Professor, Department of Internal Medicine and Biomedical Informatics University of Arizona College of Medicine - Phoenix 435 N. 5th St., HSEB B-578 Phoenix, AZ 85004</td>
</tr>
</tbody>
</table>

Robert Raschke, MD
<table>
<thead>
<tr>
<th>Electives Program Coordinator</th>
<th>Kristen Peña, MA</th>
</tr>
</thead>
</table>

Kristen Peña attended Northern Arizona University where she completed a Bachelor of Arts in Psychology and went on to complete her Master of Arts in Industrial Organizational Psychology at Argosy University. She worked as an Academic Advisor and Department Lead for the Art Institutes and now works in the 4th year Electives unit.

University of Arizona College of Medicine Phoenix 435 N. 5th St., HSEB B-512B
Phoenix, AZ 85004
kristenpena@email.arizona.edu
602-827-2402

<table>
<thead>
<tr>
<th>Length</th>
<th>4 weeks</th>
</tr>
</thead>
</table>
| Orientation             | First Thursday of the rotation, 8-12 p.m.  
College of Medicine-Phoenix |
| Didactics/Interactive Learning Sessions | Weekly, Thursday afternoons, 1-5 p.m.  
College of Medicine-Phoenix |
| Clinical Sites          | Banner Cardon Children’s Medical Center  
Banner Desert Medical Center  
Banner-University Medicine Center Phoenix  
Chandler Regional Medical Center  
Maricopa Integrated Health System  
Phoenix Children’s Hospital  
St. Joseph’s Hospital and Medical Center  
Veteran’s Administration Medical Center |
Educational Program Objectives

As approved by the general faculty, the Educational Policy Committee has established educational program objectives for the program leading to the M.D. degree. The Educational Program Objectives are comprised of competencies and the measureable objectives by which attainment of each competency can be assessed. The full text of the University of Arizona, College of Medicine – Phoenix Educational Program Objectives (EPO) can be accessed at http://phoenixmed.arizona.edu/students/curriculum/educational-program-objectives and require dissemination as noted in the Orientation to EPOs and Course Objectives Policy.

Critical Care Selective Objectives
1. Work effectively in a team with physicians, nurses and other healthcare professionals to optimize survival and minimize patient suffering in the ICU.

2. Perform a complete pertinent history and physical exam on the critically ill patient, synthesizing clinical data to provide a reasonable assessment and treatment plan.

3. Present a service of critically-ill patients effectively at rounds, interpreting clinical data in the context of the patient’s illness and demonstrating an understanding of the most important priorities for the patient’s survival.

4. Demonstrate ability to prevent common complications of critical care including iatrogenic infections, ventilator complications, adverse drug events, and delirium.

5. Use a basic knowledge of shock to guide resuscitation of a critically-ill patient. This includes knowledge of how clinical tests can assist in the classification of shock, determination of the adequacy of oxygen delivery and choice of resuscitative measures.

6. Treat a life-threatening infection using a time-sensitive sepsis bundle and appropriate source control measures.

7. Order simple mechanical ventilator settings appropriately including continuous positive airway pressure, volume control and pressure support. Know when to use low-tidal volume ventilation and know when the patient is ready for extubation.

8. Order drugs effectively and safely in the ICU taking into account the increased risk for adverse drug effects in critically-ill patients.

9. Demonstrate knowledge of when a patient should be transfused with blood products in urgent and non-urgent situations with adequate knowledge of transfusion complications to assist a patient in informed consent.

11. Demonstrate empathy for ICU patients by understanding their particular vulnerability and aspects of suffering inherent in their experience in the ICU.

12. Develop rapport with a patient’s family with consideration of their cultural and spiritual needs adequate to facilitate a difficult discussion such as required to determine code status or withdraw life support.

13. Apply ethical principles in end-of-life decisions including: autonomy of the compromised patient, appropriate surrogacy, determination of futility, and the doctor’s rights in relation to non-malfeasance.

14. Critically appraise a journal article regarding the efficacy of an ICU therapy. Develop an appreciation of the level of evidence for common ICU practices to inform clinical decision-making.

15. Present a topic in Critical Care Medicine incorporating a patient case history and entailing an effective review and appraisal of the literature.

**Critical Care Selective Attendance Requirements**

1. Students are required to work approximately 20 shifts per 4-week rotation. A shift is defined as a normal workday on the clinical service on which a student is rotating with a minimum of 8 hours and a maximum of 24 hours (as long as Duty Hours Policy is followed). Orientation and the academic half-days on the first Thursday count as a whole shift. On subsequent academic half-days, a shift would consist of morning clinical duties plus the afternoon academic half-day. All students are expected to participate in some type of after-hours experience. Some sites require overnight call, but in-house call should not exceed 24 hours, plus four hours for hand-off of patient care. It is the student’s responsibility to make up any clinical shifts they may miss (for instance, on account of interviews) and to notify the Electives Program Coordinator immediately if their schedule will not allow them to complete the required minimum of 20 shifts. Remember that clinical duty hours, orientation and academic half-days are combined when determining overall duty hours, which cannot exceed an average of 80 hours per week. Contact the Critical Care Director immediately if compliance with this requirement is in jeopardy. Orientation and academic half-days count towards the total shift requirement.

2. Orientation and Academic Half-Days: Attendance is mandatory. If a student needs to be excused from orientation or a learning session, contact the Electives Program Coordinator a minimum of 48 hours ahead of time.
   - Orientation: First Thursday of rotation, 8:00 a.m.-12:00 p.m.
   - Academic Half-Day: All Thursdays of the rotation, 1:00-5:00 p.m.

3. Absences from orientation, academic half-days or the required 20 clinical shifts must be remediated in consultation with the Critical Care Director and Academic Affairs; this may include make-up of curricular time (weekends, nights) and/or completion of additional assignments (viewing a video of the missed session and taking a quiz, writing a paper, giving a presentation, etc.). If the absences
cannot be successfully remediated, the rotation must be repeated. Please see the Attendance and Absence-Year 3 and 4 Policy, the Leave of Absence Policy and the Attendance Expectations and Absence Reporting Requirements Policy.

Suggested Texts

Additional Critical Care Requirements
1. Required Online Modules: Virtual Critical Care Rounds are provided through the Society for Critical Care Medicine (SCCM) website. Students are expected to complete all modules in either the VCCR Adult I or VCCR Pediatric II series. Each student will be provided with a login and password for both series, and progress will be monitored by the Critical Care Director. Certain modules should be completed by certain dates (e.g., the module on Shock needs to be completed prior to the on-campus didactic session on Shock). The ICU Orientation (found in the VCCR Adult series) should be completed prior to the rotation by all students.
2. Reflective Writing Assignment: Students will complete a reflective writing assignment related to their experiences on the rotation (or related to experiences with critically ill patients on other clerkships or rotations) prior to the on-campus session entitled “Debriefing on Experiences in Critical Illness” on the fourth Thursday of the rotation. The reflections must be a minimum of one page in length. These will serve to inform the discussion and allow students to thoughtfully reflect on their experiences prior to the discussion. Assignments should be emailed to the Electives Program Coordinator a minimum of 48 hours in advance of the Debriefing session. Please also print them out or bring an e-copy to the session.
3. Final Presentation: Each student will research and present a 20-30 minute presentation on a relevant critical care topic during the final academic session of the rotation. The presentation should be focused, well organized and utilize optimal presentation skills. Content should include a case discussion, pertinent physiology and evidence-based practice. See Presentation Grading Rubric on pg. 16 for more details.
4. Patient Experience and Procedure Logs (PxDx): Students will complete experiential and procedure tracking logs to ensure a complete educational experience in critical care.
5. Nursing Day: Students will be scheduled to spend one day of clinical rotation at their rotation site shadowing an ICU nurse. The purpose of this experience is to better understand the patient’s experience from a nursing standpoint and to build collaboration in bedside patient care.
6. Professionalism and Privacy Practice Issues: Cell phones and other electronic devices should be used appropriately. Photographs of patients are not permitted without written consent. Students are responsible for learning the Privacy Practices for each site. The attending and/or site coordinator will
be familiar with these and can provide guidance. Students should always keep HIPPA in mind and observe all policies and practices. Students should dress professionally.

7. Duty Hours: Students will log duty hours for all days worked and not worked in one45. Violations of Duty Hours Policy (http://phoenixmed.arizona.edu/policy/duty-hours-policy) should be reported immediately to the Critical Care Director.

8. Evaluation of Critical Care selective in one45: Students are required to evaluate their critical care rotation in one45 using the provided form.

**Required Clinical Experience Logs**

A system has been established at the UA COM-P to specify the types of patients or clinical conditions that medical students must encounter and to monitor and verify the medical students' experiences with patients to remedy any identified gaps as detailed in the Core Clinical Skills Observation Policy. For this selective, medical students must encounter the following types of patients and clinical conditions and the indicate the level of student responsibility.

The standardized levels of student responsibility include the following:

1. Observe and Discuss: This may include observing another member of the team interview a patient,perform a procedure or physical exam, etc. and discussion of the case, condition or other relevant components.
2. Actively Participate in Care: This category indicates more active responsibility for the patient, such as performing a physical exam and workup, entering progress notes or H&Ps, presenting the patient on rounds, as scrubbing into a case or counseling or discussing prevention with the patient.
3. Perform Procedure: This is defined as the student performing the procedure with supervision.

Please review the Faculty Supervision of Medical Students in Clinical Learning Situations Policy and the Faculty Supervision of Sensitive Physical Examination Policy. The procedures and clinical conditions will be recorded in the students "Procedure Logs" and reviewed by the Critical Care Director at the end of the rotation.

<table>
<thead>
<tr>
<th>Required Procedures</th>
<th>Clinical Setting</th>
<th>Level of Student Responsibility</th>
<th>Alternative Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transfusion of blood products</td>
<td>Inpatient</td>
<td>Observe &amp; Discuss</td>
<td><a href="https://www.youtube.com/watch?v=tLCI04RNVMQ">https://www.youtube.com/watch?v=tLCI04RNVMQ</a></td>
</tr>
<tr>
<td>Management of elevated intracranial pressure</td>
<td>Inpatient</td>
<td>Observe &amp; Discuss</td>
<td><a href="https://www.youtube.com/watch?v=GaQklopZheU">https://www.youtube.com/watch?v=GaQklopZheU</a></td>
</tr>
<tr>
<td>ABG Interpretation</td>
<td>Inpatient</td>
<td>Observe &amp; Discuss</td>
<td><a href="https://www.thoracic.org/professionals/clinical-resources/critical-care/clinical-education/abgs.php">https://www.thoracic.org/professionals/clinical-resources/critical-care/clinical-education/abgs.php</a></td>
</tr>
<tr>
<td>Arterial line placement</td>
<td>Inpatient</td>
<td>Observe &amp; Discuss</td>
<td>NEJM Videos in Clinical Medicine - Arterial Line Placement</td>
</tr>
<tr>
<td>-------------------------</td>
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<td>-------------------</td>
<td>----------------------------------------------------------</td>
</tr>
<tr>
<td>Chest x-ray interpretation</td>
<td>Inpatient</td>
<td>Observe &amp; Discuss</td>
<td>Complete tutorial: <a href="http://www.mc.uky.edu/education/images/flash/chestnew.swf">http://www.mc.uky.edu/education/images/flash/chestnew.swf</a></td>
</tr>
<tr>
<td>ECG interpretation</td>
<td>Inpatient</td>
<td>Observe &amp; Discuss</td>
<td>Complete tutorial: <a href="http://ecg.utah.edu">http://ecg.utah.edu</a></td>
</tr>
<tr>
<td>Endotracheal intubation</td>
<td>Inpatient</td>
<td>Observe &amp; Discuss</td>
<td>NEJM Videos in Clinical Medicine - Endotracheal Intubation</td>
</tr>
<tr>
<td>Management of mechanical ventilation</td>
<td>Inpatient</td>
<td>Observe &amp; Discuss</td>
<td>Clinical cases in mechanical ventilation online: <a href="https://courses.washington.edu/med610/mechanicalventilation/cases.html">https://courses.washington.edu/med610/mechanicalventilation/cases.html</a></td>
</tr>
<tr>
<td>Obtain informed consent</td>
<td>Inpatient</td>
<td>Observe &amp; Discuss</td>
<td>UpToDate: Informed Consent</td>
</tr>
<tr>
<td>Central venous line placement</td>
<td>Inpatient</td>
<td>Observe &amp; Discuss</td>
<td>NEJM Videos in Clinical Medicine - Central Venous Access</td>
</tr>
<tr>
<td>Thoracentesis/thoracotomy</td>
<td>Inpatient</td>
<td>Observe &amp; Discuss</td>
<td>NEJM Videos in Clinical Medicine - Thoracentesis</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Required Diagnoses</th>
<th>Clinical Setting</th>
<th>Level of Student Responsibility</th>
<th>Alternative Experience/Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respiratory failure</td>
<td>Inpatient</td>
<td>Observe &amp; Discuss</td>
<td><a href="http://www.youtube.com/watch?v=gkQfJAL84">http://www.youtube.com/watch?v=gkQfJAL84</a> (watch all 3 parts of the video)</td>
</tr>
<tr>
<td>Healthcare associated infection</td>
<td>Inpatient</td>
<td>Observe &amp; Discuss</td>
<td><a href="https://www.youtube.com/watch?v=FfMcv8FUX">https://www.youtube.com/watch?v=FfMcv8FUX</a></td>
</tr>
<tr>
<td>Acute kidney injury</td>
<td>Inpatient</td>
<td>Observe &amp; Discuss</td>
<td><a href="http://www.youtube.com/watch?v=DecCzL12jAHw">http://www.youtube.com/watch?v=DecCzL12jAHw</a> (watch all 3 parts of the video)</td>
</tr>
<tr>
<td>Electrolyte derangements</td>
<td>Inpatient</td>
<td>Observe &amp; Discuss</td>
<td>Review ILM by Dr. Brigham Willis (posted to course website)</td>
</tr>
<tr>
<td>Cardiopulmonary interactions - preload limitation/augmentation by intrathoracic pressure changes</td>
<td>Inpatient</td>
<td>Observe &amp; Discuss</td>
<td>Read: Stigall WL, Willis BC. Mechanical Ventilation, Cardiopulmonary Interactions, and Pulmonary Issues in Children with Critical Cardiac Disease, in E.M. da Cruz et al. (eds.), Pediatric and Congenital Cardiology, Cardiac Surgery and Intensive Care, Springer-Verlag London</td>
</tr>
<tr>
<td>Cardiopulmonary interactions - effect of intrathoracic pressure changes and ventilation on right ventricular performance and pulmonary vascular resistance</td>
<td>Inpatient</td>
<td>Observe &amp; Discuss</td>
<td>Read: Stigall WL, Willis BC. Mechanical Ventilation, Cardiopulmonary Interactions, and Pulmonary Issues in Children with Critical Cardiac Disease, in E.M. da Cruz et al. (eds.), Pediatric and Congenital Cardiology, Cardiac Surgery and Intensive Care, Springer-Verlag London</td>
</tr>
<tr>
<td>Cardiopulmonary interactions-left ventricular afterload modulation by intrathoracic pressure changes</td>
<td>Inpatient</td>
<td>Observe &amp; Discuss</td>
<td>Read: Stigall WL, Willis BC. Mechanical Ventilation, Cardiopulmonary Interactions, and Pulmonary Issues in Children with Critical Cardiac Disease, in E.M. da Cruz et al. (eds.), Pediatric and Congenital Cardiology, Cardiac Surgery and Intensive Care, Springer-Verlag London</td>
</tr>
</tbody>
</table>
Alternative Experiences

Students are expected to meet the required clinical experiences and procedures outlined by each selective under the Patient Logs section of the syllabus. If a student does not encounter a patient as identified on the procedures and diagnoses logs the student should be able to remedy the gap by completing the Alternative Experience/Requirement. When logging an alternative experience in one45, choose the appropriate radio button under “Type of Patient Encounter”.

Orientation and Academic Half-Day Schedule

Week 1:
1. Orientation: Case-based instruction that emphasizes vulnerability of the ICU patient, complications of critical care, suffering in the ICU, family care, working with nurses and burn-out among providers.
3. Case-Based Instruction: Shock resuscitation (types of shock, oxygen delivery /consumption, lactic acidosis, fluid resuscitation (sepsis/ARDS), vasopressors, inotropes).
5. Hands-on Workshop: Mechanical Ventilation (how a ventilator works, terminology describing ventilator modes, CPAP, AC, PC, PS. evidence-base related to the selection of ventilator modes, how to determine when a patient is ready for extubation).

Week 2:
6. Case-based Instruction: ICU Pharmacology (sedation drugs, vasopressors, life-threatening ADEs).
7. Hands-on Instruction: Ultrasonography in the ICU (examination of the heart, lungs, abdomen and great vessels).
8. Simulation: Transfusion/life-threatening Hemorrhage (when to transfuse PRBC, platelets and FFP, role of hemoglobin in oxygen delivery, platelets, FFP, complications of transfusing blood products, principles of treating life-threatening hemorrhage, the massive transfusion protocol).

Week 3:
10. Case-based Instruction: Ethics (autonomy of the compromised patient, futility, surrogacy, the doctor’s right to non-malfeasance, cultural values).
11. Critical appraisal of literature in the ICU (understand the level of evidence for common ICU practices and use of the JAMA User’s Guides to the Medical Literature).

13. Simulation: Family Care and Communication in the ICU (DNR discussion and withdrawal of support, cultural aspects of rapport and communication, spiritual care, ethical consideration of surrogate end-of-life decisions, futility, patient suffering, communication, compassion, empathy).

Week 4:

14. Presentations
15. Debriefing on Experiences in Critical Illness
16. Feedback

Urgent/Emergent Health Care Services
For a list of emergency contact numbers please visit the College of Medicine’s website at the following link: http://phoenixmed.arizona.edu/security-emergency-numbers

Students may also contact the Associate Dean of Student Affairs at 602-827-9997.

All sites are assessed for student safety. Details of this assessment are included in the Training Site Safety Policy.

Faculty and Staff shall not provide medical care for students. Please see the Faculty Providing Medical Care for Students Policy and the Faculty Providing Counseling for Students Policy for details and rationale.

COM-P requires that all students have an updated immunization record. Please see the Immunization and Health Screening Policy for details regarding the contents of the record.

Expectations for Mobile Communication
The student must be reachable at all times during usual extended work hours and on-call hours, and if in a clinical setting the student should respond within 15 minutes. The students may choose to not provide their cell phone numbers. In that case, the students will be provided a COM-P pager. Students also have an option to give their mobile number for texts; however, the pager and/or voice portion of the cell phone must still be functional and available i.e., on the student’s person for calls/pages daily. Not responding to calls or pages will be viewed as a deficit in Interpersonal Skills and Communication as well as Professionalism.

Accessibility and Accommodations
Disability Resources (DRC) provides support to faculty in creating access for disabled students both through course design and reasonable accommodations. Please contact them or 621-3268 with questions or visit DRC’s website at http://drc.arizona.edu/instructors for information and resources.
It is the University’s goal that learning experiences be as accessible as possible. If you anticipate or experience physical or academic barriers based on disability or pregnancy, please contact the Associate Dean of Student Affairs, at 602-827-9997 immediately to discuss options. You are also welcome to contact Disability Resources at DRC-Info@email.arizona.edu or (520-621-3268) to establish reasonable accommodations. Please review the Disability Resource Policy for additional detail.

Please be aware that the accessible table and chairs in this room should remain available for students who find that standard classroom seating is not usable.

Instructors are encouraged to provide appropriate individual flexibility to all students. When disability-related accommodations are requested, instructors should consult with DRC staff to identify strategies or accommodations to provide access.

DRC staff is available for individual consultation or to attend departmental meetings to address concerns and provide information. Contact DRC-Info@email.arizona.edu or 621-3268.
Critical Care Selective Assessments, Evaluation and Standardized Grading Process

Assessment Process

Assessment is the mechanism used to measure progress in learning over a given period of time.

A mid-rotation formative assessment by the site director with feedback is strongly suggested for every student. Student progress, achievements, strengths, weaknesses, and areas for improvement should be discussed. If at any point during the selective the student is at risk of not meeting expectations in one or more of the Educational Program Objectives (EPOs), in-person formative feedback with written documentation is required and should be shared with the Critical Care Director. Any significant deficiencies or concern should be communicated to the Critical Care Director, with written documentation that the feedback has been provided to the student. In the event that deficiencies are noted late in the selective, timely feedback will be given.

Additionally, throughout the selective, faculty and residents engaged in student teaching and supervision will provide formative feedback in a variety of formats (e.g. review of progress notes, H&P, direct observation forms, informal verbal feedback and written narratives, etc.) that may be communicated in writing or verbally. The purpose of this feedback is to identify strengths and opportunities for improvement.

One clinical Electives & Selectives Student Assessment: Patient Care per rotation will be submitted for the student's clinical grade by the critical care site director or their appointee. It should be noted that faculty at COM-P who are family members of the student or who have a personal relationship with the student may not be involved in the academic assessment or promotion of the medical student as described in the Conflict of Interest-Assessment and Evaluation Policy.

In instances where the student has worked with several different faculty members over the course of the rotation, multiple student assessment forms may be considered by the site director in completion of one final clinical grade and summative assessment form, providing each assessor has had significant interaction with the student (as defined by the site director in consultation with the Critical Care Director).
When only a single faculty member has had significant interaction with a student, this faculty member will provide an assessment form to the site director for review, modification as necessary, and signature. In all instances, the site director(s) is responsible for determination of each student’s clinical grade and EPO ratings on the summative assessment form.

The Critical Care Final Grade Form (which includes the clinical and non-clinical grades) will be available for viewing by students in one45 by six (6) weeks after the end of the selective, according to the Reporting Timeline for Final Grades policy.

### Standardized Grading Process

The final Critical Care grade will be determined by the Critical Care director using the clinical and non-clinical grades. The final grade will be divided into four categories: Honors, High Pass, Pass, or Fail (H, HP, P, F). Details regarding grading in the selective are included in the Grading and Progression for Electives and Selectives Policy. Below is a listing of the components of the composite score:

I. **Clinical Score**: The clinical score is calculated through assessment of student performance within each individual (Educational Program Objective) EPO. The clinical score is the average of all individual EPO Scores (no rounding) using the following rubric:
   - 2.7-3.0 = Honors
   - 2.4-2.69 = High Pass
   - 2.0-2.39 = Pass
   - <2.0 = Fail

II. **Non-Clinical Score** (100 points):

**Critical Care Observable Learning Activities**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Potential Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Small Group Sessions</strong> (all responses are “yes” or “not applicable” on the Small Group Facilitator form) 3 points are earned for each of 13 sessions plus one extra point if all sessions are satisfactorily completed.</td>
<td>40 points</td>
</tr>
<tr>
<td><strong>On-line modules</strong> through Virtual Critical Care Rounds (21 Adult or 20 Pediatric modules)</td>
<td>100% completion: 20 points</td>
</tr>
<tr>
<td></td>
<td>80%-99% completion: 10 points</td>
</tr>
<tr>
<td></td>
<td>&lt;80% completion: 0 points</td>
</tr>
<tr>
<td><strong>Patient/Procedure Logs</strong> (23 total required diagnoses and procedures)</td>
<td>100%: completion: 10 points</td>
</tr>
<tr>
<td></td>
<td>80%-99% completion: 5 points</td>
</tr>
<tr>
<td></td>
<td>&lt;80% completion: 0 points</td>
</tr>
<tr>
<td><strong>Duty Hours Logging</strong></td>
<td>100% completion: 5 points</td>
</tr>
<tr>
<td></td>
<td>70%-99% completion: 3 points</td>
</tr>
<tr>
<td></td>
<td>&lt;70% completion: 0 points</td>
</tr>
<tr>
<td><strong>Final Presentation</strong> (see grading rubric)</td>
<td>25 points</td>
</tr>
</tbody>
</table>
Final Presentation Grading Rubric:

<table>
<thead>
<tr>
<th>Categories</th>
<th>Standard</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content</td>
<td>Interesting topic covered in appropriate depth, evidence-based.</td>
<td>0-5</td>
</tr>
<tr>
<td>Organization</td>
<td>Structure and timing of talk is logical and easy to follow.</td>
<td>0-5</td>
</tr>
<tr>
<td>Presentation</td>
<td>No technical glitches due to lack of preparation. Slides are simple and</td>
<td>0-5</td>
</tr>
<tr>
<td></td>
<td>clear. Speaker interacts with audience and keeps them interested.</td>
<td></td>
</tr>
<tr>
<td>Patient case</td>
<td>Concise but including all pertinent features, clear that student</td>
<td>0-5</td>
</tr>
<tr>
<td></td>
<td>understands the care the patient received.</td>
<td></td>
</tr>
<tr>
<td>Questions</td>
<td>Mastery of topic and clinical case is apparent.</td>
<td>0-5</td>
</tr>
</tbody>
</table>

For the final non-clinical grade, a percentage will be calculated based on the student’s total points achieved, divided by the total possible (100). The following rubric will be used:

90-100% = Honors  
80-89% = High Pass  
70-79% = Pass  
<70% = Fail
Calculating the Final Grade

The Critical Care Director is responsible for determination of each student’s final grade using the following guide:

<table>
<thead>
<tr>
<th>CLINICAL GRADE</th>
<th>NON-CLINICAL GRADE</th>
<th>FINAL GRADE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Honors</td>
<td>Honors</td>
<td>Honors</td>
</tr>
<tr>
<td>Honors</td>
<td>High Pass</td>
<td>Honors</td>
</tr>
<tr>
<td>High Pass</td>
<td>Honors</td>
<td>Honors</td>
</tr>
<tr>
<td>Honors</td>
<td>Pass</td>
<td>High Pass</td>
</tr>
<tr>
<td>High Pass</td>
<td>High Pass</td>
<td>High Pass</td>
</tr>
<tr>
<td>High Pass</td>
<td>Pass</td>
<td>High Pass</td>
</tr>
<tr>
<td>Pass</td>
<td>Honors</td>
<td>High Pass</td>
</tr>
<tr>
<td>Pass</td>
<td>High Pass</td>
<td>Pass</td>
</tr>
<tr>
<td>Pass</td>
<td>Pass</td>
<td>Pass</td>
</tr>
<tr>
<td>Fail</td>
<td>(Any Grade)</td>
<td>Fail</td>
</tr>
<tr>
<td>(Any Grade)</td>
<td>Fail</td>
<td>Fail</td>
</tr>
</tbody>
</table>

The student will fail the critical care selective if any of the following occur:
1. The clinical score is <2.0, OR
2. Achievement of a level 1 for two or more EPOs, OR
3. Achievement of a total composite score of Fail.

The following requirements should be worked on throughout the month but must be completed by the defined deadline (within 3 days of the end of the selective):
1. Duty hour logging. See the Duty Hours Policy for specifics regarding documentation of hours and a description of a violation.
2. Logging of required clinical encounters (“Procedure logging”).
3. Online modules.
4. Reflective writing assignment.
5. Participation in all on-campus sessions, or completion of approved make-up activities.
6. Final presentation.
7. End of the selective evaluation (see the Course and Faculty Evaluation by Student Policy for additional detail).

If the requirements are not completed by the deadline, the medical student will receive a grade of Incomplete until these assignments are complete. Once completed late, a student will receive a grade no higher than Pass.

Please review the Student Progress Policy for information regarding student progression.
**Critical Care Final Grade Form**

The Critical Care Director will complete a Critical Care Final Grade Form indicating the individual and composite components of the grade. This is the final grade/evaluation form for the student that contains the final recorded transcript grade, comments from the Electives & Selectives Student Assessment form and a separate box with the summarized final comments that will be included in the MSPE (Dean’s letter).

The Critical Care Director has the right to include or not include comments based on his/her interpretation of which comments best summarize the student’s performance over the entirety of the selective. Students may not pick specific comments to be included or excluded in their narrative grade form. Students do not grade or summarize their own performance. Any concerns regarding narrative comments may be addressed to the Critical Care Director or Associate Dean of Student Affairs.

In the case that the student passes a selective, a level 1 may also be given by the Critical Care Director based on prolonged demonstration of performance not meeting expectations, a substantial incident, extreme behavior or other events that warrant the level 1 as determined by the Critical Care Director. In the case that the student received a level 1 but passed the selective, they are eligible for a grade no higher than PASS. See Competency Assessment Policy for more information.

**Required Student Evaluation**

Student evaluation of the selective, faculty and site(s) is required. The student must complete the evaluations online in the required time frame. All comments will be expected to model constructive feedback using the W3 model, and must contain references and comments to specific behaviors and/or events (positive or negative).

If the student does not complete the required evaluations within one week after the mid or end of the selective, the student will be required to submit the missing evaluation data in narrative form within the second week after the selective.

- Once the student has successfully submitted their evaluation in narrative form within the second week after the selective the student will have successfully demonstrated meeting expectations in Professionalism.
- If the student has not successfully submitted their evaluation in narrative form within the second week after the selective the student will be considered as having not met expectations and the Level 1 rating for the EPO targeting giving and receiving constructive feedback, will be automatically assigned resulting in a final grade of no higher than Pass.

For more information, see the Course and Faculty Evaluation by Student Policy.
## Critical Care Selective Additional Information

### Site Information

<table>
<thead>
<tr>
<th>Hospital</th>
<th>Address</th>
<th>Phone</th>
<th>Site Directors</th>
</tr>
</thead>
</table>
| **Banner-University Medical Center Phoenix** | 1111 E. McDowell Road, Phoenix, AZ 85006 | 602-839-2000 | Paul Dabrowski, MD  
SRGP 846A – Surgical Intensive Care Unit  
Roxanne Garcia-Orr, MD  
MIDP 846A – Medical Intensive Care Unit  
Greg Martin, MD  
PEDP 846F – Advanced Neonatology |
| **2601 East Roosevelt Rd., Phoenix, AZ 85008** | 602-344-5678 | Paulo Pieri, MD  
SRGP 846B – Surgical Intensive Care Unit  
Suresh Lal, MD  
PEDP 846A – Pediatric Critical Care  
Pedro Quiroga, MD  
MIDP 846B – Medical Intensive Care  
Mahesh Kotwal, MD  
PEDP 846E – Advanced Neonatology |
350 W. Thomas Road
Phoenix, AZ 85013
602-406-3000

Lawrence Lilien, MD
Site Director
PEDP 846G - Neonatology

1400 S. Dobson Road
Mesa, AZ 85202
480-412-5437

Eunice Yoon, MD
Site Director
PEDP 846D – Clinical Pediatric
Critical Care

Carl T. Hayden
VA Medical Center
650 E. Indian School Rd.
Phoenix, AZ 85012
602-277-5551

Clement Singarajah, MD
Site Director
MIDP 846C – Medical Intensive
Care
Unit/Coronary Care Unit
<table>
<thead>
<tr>
<th>Hospital</th>
<th>Address</th>
<th>Phone</th>
<th>Site Director</th>
<th>Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phoenix Children's Hospital</td>
<td>1919 E. Thomas Road, Phoenix, AZ 85016</td>
<td>602-933-1000</td>
<td>Lisa Grimaldi, MD</td>
<td>PEDP 846B – Pediatric Cardiac Critical Care</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Anthony Willyerd, MD</td>
<td>PEDP 846C – Pediatric Critical Care</td>
</tr>
<tr>
<td>Dignity Health</td>
<td>1955 W. Frye Road, Chandler, AZ 85224</td>
<td>480-728-3000</td>
<td>Dell Moore, MD</td>
<td>SRGP 846C – Surgical Critical Care</td>
</tr>
<tr>
<td>Banner Health Cardon Children's Medical Center</td>
<td>1400 S. Dobson Road, Mesa, AZ 85202</td>
<td>480-412-5437</td>
<td>Zahid Virk, MD</td>
<td>PEDP 846D – Clinical Pediatric Critical Care</td>
</tr>
</tbody>
</table>
Rural Health Professions Program

The Rural Health Professions Program (RHPP) seeks to recognize students demonstrating strong commitment to future rural medical practice. Selected students will be designated RHPP Scholars as they undertake a 4-year course of preparation that includes seminars, mentorship, rural clerkship and pre-clerkship clinical experience among other requirements described in more detail within RHPP-specific materials. In addition to the advanced medical preparation, completion of the Scholar Program will lead to Dean’s Letter notation and Distinction Track in Rural Health recognition on the University of Arizona College of Medicine – Phoenix (COM-P) transcript.

Rural sites may be used for general electives; they may be used for the Core Sub-internship selective requirement only with prior approval by the Director, Electives and the Director, Sub-internship Selective. Students may not use rural sites for their Critical Care selective requirement.
Integrated Courses

During the academic year the student will be required to participate in these integrated courses.

**Longitudinal Patient Care**

The Longitudinal Patient Care Course (LPC) provides students the opportunity to work in interprofessional teams with a community health mentor throughout a two year course in Years 3 and 4 of the medical curriculum. The community health mentor is an adult in the community with a chronic medical condition who is willing to share their experience as a patient with a team of interprofessional students. Students will learn about the community health mentor’s medical condition, barriers to care, effective communication strategies, and interprofessional collaboration. Activities and objectives are designed to prepare students for navigation of the health care system, successful advocacy on behalf of their patients, and to lead interprofessional patient centered care to improve healthcare quality and collaboration.

The students will meet with their community health mentor individually via telephone at designated times throughout the year. The student will not be excused from other rotation responsibilities to complete the assignments. All activities will be conducted independent of their 4th year elective/selective courses. For additional information, please see the Longitudinal Patient Care Course Year 4 syllabus.

Contact information:
Sarah Coles, MD, Course Director
swhitley@email.arizona.edu
Office Hours and Location: HSEB Office B573, by appointment

Mary Blair, Assistant Director
Phone/Email: maryblair@email.arizona.edu
Office Location: HSEB BC503C

Required Assignments and Dates are included within one45.

All LPC sessions are mandatory
Student Responsibilities:

- Students must schedule and participate in telephone sessions with community health mentor once during each designated two-week time frame over the course of the year.
- Students are not excused from their other rotation responsibilities to complete the sessions during the 4th year. Because the sessions occur by telephone and can occur at any point over a two-week time period, there is no need to miss clinical responsibilities.
- Once scheduled, students are not to reschedule with their mentor except in emergencies. Students must be respectful of their mentor’s time and commitments.
- Complete all written assignments by the assigned due date.
- Log participation in all community health mentor sessions.
- Adhere to the Longitudinal Patient Care Course Student Procedures and the Information Protection Protocol.
- Wear professional dress for videoconference sessions and adhere to professional behaviors.
- Students are not engaging in a doctor-patient relationship with the community health mentor. The student may not provide medical advice to the community health mentor. The student may not comment on the health care provided by the community health mentor’s physicians or other healthcare professionals. The student is there to learn from the community health mentor.
- If the student at any point feels unsafe, the student must immediately seek safety and contact emergency personnel (911) as appropriate. The student must contact the Course Director so that alternative arrangements can be made.
- In the event of an emergency, the student must immediately contact 911. The student must contact the Course Director so that alternative arrangements can be made.

For additional information, please see the Longitudinal Patient Care Course syllabus.

**Intersession Course – Year Four Advanced Clinical Skills**

The Year Four Intersession Course is an opportunity to return to campus to learn new skills, longitudinal theme content, and revisit basic sciences after being actively involved in patient care. It is a time to FOCUS on personal and professional goals, and come together as a class for collaborative and reflective time as you continue to progress in your journey of becoming physician.

Intersession II occurs the first 3 weeks of the 4th year and Intersession III is 2 weeks right before match in late February/early March. It is a Pass/Fail mandatory course with attendance and participation the most important keys to success.

Contact Information:

Jayne Peterson, MD, Course Director  Lisa Yanez, MBA, Assistant Director  jmpeterson@email.arizona.edu  lyanez@email.arizona.edu

For additional information, please see the Intersession Course syllabus.
Data Management

One45 is the curricular management system used in the management of assessments about students, and to access learning materials and schedules (if applicable to your role). One45 is accessed at the web address: comphx.one45.com

For Faculty and Site Coordinators

If your role requires you to review elective rotation schedules, you will be able to view these schedules, as organized by the Electives Unit, within one45. These schedules include rosters of students scheduled to rotate to your site for specific dates. Unless special arrangements have been made for your particular site, hourly clinical schedules are not stored in One45, and should be communicated directly to students.

Assessments may be entered electronically via one45 if requested by the course director, with automatic emails sent to course directors with instructions and reminders to complete. A list of pending and completed assessments can be reviewed in one45, if applicable. Course directors should discuss with the Electives Unit if they are interested in this option.

General information about the critical care rotations, such as syllabi, readings, links, etc. may be attached as handouts to the Critical Care selective “course” under Handouts and Links.

Students will also use one45 to log observed procedures and diagnoses at clinical sites. Please note that students are able to use their smartphones to make log entries on-the-go, if allowed by site policy.

For Students

One45 will continue as your curricular management system. One45 will still be used to complete evaluations and access learning materials. It will also house the schedule, objectives, and materials for your didactic sessions, similar to how your blocks were organized in the MS2 year.
Elective and selective rotation schedules will appear to you as a week-by-week lineup of elective/selective rotations, rather than “hour by hour”, because the actual hours you spend at your selective site will be determined and managed by the clinical site coordinators. Those hourly schedules will not appear ahead of time in one45, so you should keep track of your daily schedule on your own. However, you will be asked to record your “duty hours” (hours spent on rotation at the sites) after-the-fact in one45, to maintain compliance with ACGME standards.

One45 will also continue to be the location where you log procedures and diagnoses (as you did in CCE), for the critical care and core subinternship selectives (just as you did in clerkships). Remember that the one45 procedure logging page is mobile-web compatible, for easy logging during your rotations.

General information about the selective rotations, such as syllabi, readings, links, etc. will be attached as handouts to each selective “course” under Handouts and Links.
Professional Resource Office

The Professional Resource Office (the Office) provides guidance, support and information to students on professionalism issues. The Office supports medical students in the development of strong, positive professional practices with peers, faculty, patients and the broader community through effective communication and conflict management.

- Professionalism concerns may be reported directly to the Critical Care Director or included in the student evaluation of the clerkship.
- The Professionalism Conduct Comment Form is an additional mechanism for students to report any concerns, including those about supervision, and it exists across the four-year curriculum. This mechanism ensures anonymity and is collected directly by the Professional Resource Office. This form may be submitted either online or in hard copy to the comment box located on the main floor of the Health Sciences Education Building.

COM-P is committed to creating and maintaining an environment free of discrimination, harassment and retaliation that is unlawful or prohibited by university policy. Please see the Mistreatment of Medical Students Policy, the Anti-Harassment and Nondiscrimination Policy and the Professionalism Policy for additional information. In addition, professional attributes are expected of all students. These attributes are within the Teacher-Learner Compact.

Frequently Asked Questions

What is the Professional Resource Office? The Professional Resource Office at the University of Arizona College of Medicine – Phoenix (College of Medicine) provides education, information and support to students and faculty on professionalism issues. The Office’s activities focus in three areas:

- Outreach and education. The Office provides outreach and education to identify and increase understanding of professional practices and effective communication.
- Support and resources. The Office supports students and faculty seeking to address a particular concern by providing information on policies, procedures, resources, and options. This can include support in handling an issue independently, serving as a neutral in resolving an issue, shuttle diplomacy or facilitating access to other resources.
• **Tracking and feedback.** The Office works with College of Medicine leadership to identify and recognize instances of strong professionalism and to address areas of potential concern or improvement.

**How can I contact the Office?**

Beth Schermer and Rosemarie Christofolo are the liaisons for the Professional Resource Office. Their office is in HSEB A451. You can reach them by telephone, text or email.

Beth Schermer
602-549-9847
scherm@email.arizona.edu

Rosemarie Christofolo
480-862-4963
rchristofolo@email.arizona.edu

You can also provide information through the feedback box located in the student lounge or through the online Professionalism Conduct Comment form at:

http://phoenixmed.arizona.edu/about/college-glance/leadership/deans-office/professional-resource-office/professionalism-conduct

**Are discussions confidential?** The Office will maintain confidentiality concerning matter brought to it to the extent permitted by law and University of Arizona policy unless there appears to be an imminent threat of serious harm or unless given permission from the student to do otherwise. The Office will take all reasonable steps to protect records and files pertaining to confidential discussions, to the extent permitted by law and University of Arizona policy.

**Is the Office the only place to raise professionalism issues?** No. The College of Medicine provides a wide range of resources to its students to address professionalism issues, including the Office of Student Affairs, student mentor programs, wellness programs and professionalism studies integrated into curriculum components. The Office is another portal for students to gain information on professional practices that is independent of student evaluations and review.