



*Learning. Caring. Serving. Leading.*

**PAS 7600: Surgery**

**3.0 Credit Hours**

**Designated clinical learning site: Surgical Clinic and Surgical Suite**

Course Coordinator	Office	Phone	Email
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**Course Description:**

The Surgery clinical rotation is designed to give students experience in the care of patients undergoing elective or acute surgical procedures. The student will perform the pre-operative history and physical; assist, when able, in the operating room; be involved in immediate post-operative care and stabilization; and assist with post-operative follow up. Prerequisites: PAS 5000-6480

**Course goals:**

*The goals for this course are for students:*

1. To apply the medical content and principles that define the care of surgical patients.
2. To provide opportunities for each student to develop the core PA competencies in a supervised surgical setting.
3. To expose each student to an experienced and competent medical provider role model for the care of surgical patients.

**Learning Outcomes:**

*Upon completion of this course, students will be able to:*

**A: PA Student Behaviors:**

1. Take a patient-centered and problem-focused history for patients in (a) pre-operative and (b) postoperative settings (1.2a) (2.1)
2. Perform a problem-focused exam for patients in (a) pre-operative and (b) postoperative settings (1.2b) (2.1)
3. Analyze data collected in the history and physical exam to recommend an appropriate lab or diagnostic study for patients in the (a) pre-operative and (b) postoperative settings (1.8) (2.1) (1.6) (2.3) (6.3)
4. Interpret lab and diagnostic studies commonly utilized in the (a) pre-operative and (b) postoperative settings (1.5)
5. Facilitate and participate in intraoperative patient safety (3.1) (7.3) (1.1)
6. In the pre- and/or post-operative environment, prepare appropriate plans of prevention to promote adequate wound healing and prevention of surgical complications based on patient age and other risk factors (1.8) (1.11) (2.4) (7.3)



7. In the post-operative setting, develop a differential diagnosis that is broad and deep enough to ensure appropriate diagnoses are made and/or eliminated. This includes recognize wound infections and post-operative complications (1.4) (1.6) (2.1)
  8. Organize and prioritize responsibilities to provide care that is safe, effective, and efficient (1.3)
  9. Assess the impact of psychosocial and cultural influences on health, disease, care-seeking, care compliance, and barriers to and attitudes toward care (2.5)
  10. Communicate findings effectively with the surgical team and/or additional healthcare team members (4.2)
  11. Summarize messaging for successful communication with patients/families (1.9) (3.7) (4.1)
  12. Facilitate effective patient care through recommended plans of follow up and/or referral (1.10) (2.3) (4.2) (6.2) (7.1) (7.2)
  13. Organize findings into a comprehensive, legible documentation (4.3) (1.1)
- B: Professional Behaviors:**
14. Demonstrate compassion, integrity, and respect for others (5.1)
  15. Demonstrate responsiveness to patient needs (5.2)
  16. Demonstrate respect for patient privacy and autonomy (5.3)
  17. The student demonstrates sensitivity and responsiveness to a diverse patient population, including but not limited to disability or special healthcare needs, ethnicity/race, gender identity, religion/spirituality, sexual orientation, or social determinants of health (5.5)
  18. Facilitate a climate of mutual respect, dignity, diversity, ethical integrity, and trust (7.1)
  19. The student self-evaluates skills, knowledge, and emotional limitations to engage in appropriate help-seeking behaviors (8.1)
  20. Demonstrate the ability to address conflicts between personal and professional responsibilities (8.3)
  21. Apply flexibility and maturity in adjusting to change (8.4)
  22. The student demonstrates self-confidence that puts patients, families, and/or members of the health care team at ease. (8.5)

**Teaching Methodologies:** The content of this course will be explored through hands-on supervised clinical practicums in surgical settings to include the pre-operative, intraoperative, and post-operative environment. Pre-operative learning may happen in the clinic, the ER or hospital room, or the “holding” area. Intraoperative learning happens in the OR (regardless of observation or action). Postoperative learning happens in the PACU (post anesthesia unit), the hospital “ward” (inpatient), or post operative visits in the office.

**Accommodations:** Students requiring academic accommodations must follow the “Academic Support” policy in the Elon University DPAS Student Handbook.

**Academic Honesty:** All Elon PA students acknowledged their commitment to abide by the Elon Honor Code by signing the Honor Pledge during orientation.



## **Use of Generative Artificial Intelligence in the Program**

Becoming a PA requires consistently training one's critical reasoning skills to problem-solve effectively. The use of generative AI in this context can impede your learning. The assignments in our program typically challenge you to develop skills that AI does not have. Our aim is to help you grow, rather than letting technology limit your capacity.

In many contexts AI-assistance can be used as a tool to support and amplify your own skills, and it can sometimes provide us with new understanding. Together we are all learning to navigate complex interactions with AI technologies as they are becoming a crucial component of practicing medicine in the 21<sup>st</sup> century.

***AI-generated text should not be used as the source of content for any assignment in the PA Program unless clearly specified.***

**Diversity and Inclusion Statement:** Elon University's physician assistant program strives to create a learning environment where diversity, equity, and inclusion are paramount. The Program values and supports diversity of thought, perspective, and experience. Physician assistant students, no matter their race, ethnicity, gender identity, socioeconomic class, sexuality, religion, or disability, are both welcomed and valued in this program. Our goal is that all students feel included so that they may have the best learning experience and outcomes possible. To help accomplish this:

- Please let the program administrative assistant and your course directors know of your preferred name and/or pronouns if these differ from that in your official school records.
- If your performance in class is affected by outside experiences, please do not hesitate to talk with your course director. Please know that program faculty and staff are happy to be a healthy resource for you. If you prefer to speak with someone outside of the course, please contact your academic advisor, the Program Director, the Elon Health and Wellness Center, and/or CREDE office.
- We, along with many other folx, are still in the process of expanding our learning about diverse perspectives and identities. If something said in class (by anyone) makes you feel uncomfortable, please talk to your course director.
- As a participant in classroom discussions or assignments, please always strive to honor the diversity of your classmates.
- Please let your course director and/or Program Director know if you observe situations in which the above appears to not be the case.



## Resources:

### **Required:**

1. All required first year text books
2. CURRENT Medical Diagnosis & Treatment: Surgery, 15e

### **Recommended Resources:**

1. Textbooks, reference books, journals, online electronic databases.

### **Other Helpful Resources:**

1. \*Moodle and Exxat: Please check sites frequently for new announcements, updated schedules, assignments and other course communication.
2. Practicing physician assistants, physicians, allied health care providers and laboratory teaching aids.

## Grade Scale and Grade Points:

Percentage	Letter Grade	Grade points
89.50-100.0	A	4.0
85.50-89.49	B+	3.3
79.50-85.49	B	3.0
75.50-79.49	C+	2.3
69.50-75.49	C	2.0
Below 69.50	U	0

Note: For further information regarding academic standing in the Department of Physician Assistant Studies, please see the DPAS Student Handbook.

## Grading Criteria:

1. Demonstrate acquisition of a strong basic science and medical science knowledge base as demonstrated on the written examination/quizzes.  
A blueprint and topic list for the PAEA EOR for pediatrics can be found on the course Moodle page.
2. Demonstrate satisfactory self-directed learning skills, clinical reasoning skills, commitment to patient-centered care and professionalism as evidenced by satisfactory performance on the preceptor evaluation.
3. Demonstrate a commitment to learning and professionalism by actively participating in all clinical activities and exceeding the professional behavior standards and minimum requirements for clinical rotations available in the Elon PA Student Handbook.
4. Demonstrate competency in creating written medical documents for the surgical setting as evidenced by submission of a preoperative note and procedure note.



**Assessment Activities:** Student progress will be assessed in a variety of ways, which include the following:

Assessment component	Outcome(s)	# per course	% each	Total %
PAEA EOR EXAM	1,2,4,5,7,9	1	35%	35
FINAL PRECEPTOR EVALULATION	1-13, 14-22	1	55%	55
Rosh Review Assignment	19	1	5%	5
Written assignment- Preop and procedure notes	3,4,6	1	5%	5
STUDENT SITE EVALUATION	18	1	0 (C/I)	0
LONGITUDINAL SKILLS ASSESSMENT	5,13	1	0	0
<b>TOTAL</b>				<b>100%</b>

**Late/Makeup Work:** The student will contact the Director of Clinical Education to determine the content and due dates for any late or make-up work that may be required.

**Exam Review:** The PAEA EOR exam provides each test-taker with a summary of their performance to guide learning.

**Syllabus Modifications:** Every attempt is made to construct a complete syllabus that provides an accurate overview of the course. However, circumstances and events may make it necessary for the instructor to modify the syllabus during the semester. This may depend, in part, on the progress, needs and experiences of the students. In special circumstances and at the discretion of the course director, assignments or the point distribution that is used to determine students' grades may be modified. In these instances, modifications must be for common benefit, and thus cannot penalize any students or render evaluation (i.e., grading) more severe.



## Instructional Objectives

*Upon completion of the clinical rotation phase physician assistant students will be able to:*

1. Clinical Skills
  - a. Demonstrate the ability to obtain an accurate and appropriate surgical history documenting all information from available sources such as patient and family; recognizing and accounting for comorbid disease states; and taking into account any medications the patient is using.
  - b. Perform and document appropriate physical examination for pre-operative screening and post-operative follow-up.
  - c. Ensure proper pre-operative preparation of the patient.
2. Identify, perform, order and/or interpret appropriate, cost-effective, routine, diagnostic procedures, based on history and physical examination findings, and be able to assist the physician with other diagnostic procedures as directed.
  - a. Identify the appropriate and available diagnostic tests for a particular problem based on the history and physical examination findings.
  - b. Identify and discuss indications and contraindications of diagnostic tests
  - c. Identify and describe the risks, costs, and patient inconvenience of diagnostic tests.
  - d. Demonstrate the skills required to collect routine specimens including bacteriologic samples, venous and arterial blood, sputum, and urine.
3. Discuss the appropriate use of medications in the surgical patient related to such issues as dosage, indications, contraindications, interactions, complications, metabolism and excretion in the following settings:
  - a. Pain management
  - b. Perioperative antibiotic usage
  - c. Chemotherapy
  - d. Inpatient considerations (e.g. sleep medications, anti-emetics, laxatives)
4. Discuss anesthetics, their indications, modes of action, contraindications, complications and combinations in:
  - a. General anesthesia
  - b. Spinal and regional anesthesia
  - c. Regional anesthesia/field blocks
5. Know the composition of fluids that are frequently lost from the body, including urine, gastric secretions, diarrhea, third spaced fluids, and hemorrhage and be able to compensate for the loss of these fluids through the proper utilization of IV fluid, blood or blood product therapy. Understand the role interpreting serum electrolytes plays in determining the replacement fluid.
6. Recognize the signs and clinical manifestations of hypovolemia and hypervolemia and institute corrective measures.



7. Practice proper technique in the following settings:
  - a. Demonstrate knowledge of and ability to scrub and gown for surgery, position patient, maintain sterile technique, tie knots, suture/staple, apply dressings, transfer patient to and from O.R. table, hold retractors.
  - b. Demonstrate ability to set up a sterile field outside the O.R. (for office procedures)
8. Be competent in wound closure techniques
  - a. Know the various techniques for dermal closure
  - b. Discuss the different types of suture materials and their uses including silk, chromic, nylon, and vicryl.
9. Identify and manage problems common to perioperative management of the surgical patient such as DVT/PE prophylaxis, infection, mobility and ambulation, blood conservation and management.
10. Present to the physician a brief synopsis of the patient's illness, pertinent positive and negative findings and the diagnostic and therapeutic regimen instituted.
11. Communicate effectively with the patient and family regarding the disease process, risks, expected outcome, possible side effects, and post-operative care.
12. Document the care of the surgical patient by:
  - a. Writing clear, concise and relevant progress notes and discharge summaries delineating diagnostic, therapeutic and patient education plans
  - b. Maintaining a complete up-to-date problem list
13. Recognize signs and symptoms of common emergencies and take appropriate action to sustain life such as:
  - a. Applying basic techniques of CPR
  - b. Assisting with or perform other techniques frequently indicated in life-threatening situations (e.g. endotracheal/nasogastric intubation; defibrillation/cardioversion; central line insertion, central venous pressure monitoring)
  - c. Initiating hemostasis in a patient with hemorrhage
  - d. Assessing and treat hemorrhagic shock
  - e. Being familiar with triage procedures in mass casualty situations.
  - f. Assessing patients with multiple trauma, skull and/or spinal injuries.
14. Work with medical team and patient to formulate a complete discharge plan anticipating and arranging for discharge medication prescriptions, outpatient or home therapy services, home/self care instructions and scheduling follow-up.
15. Anticipate specific needs of the patient being sensitive to the patient's home environment, change in level of care needed based on post-surgical condition and ability to perform activities of daily living.
16. Coordinate communication with the patient's primary care and/or referring physician to allow for smooth transition of care.
17. Describe the following common surgical problems as defined in the PAEA EOR exam blueprint and topic list, including risk assessment, pathophysiology, diagnosis, treatment, indications and contraindication for surgery and follow-up.
  - a. [PAEA Surgery EOR Blueprint](#)
  - b. [PAEA Surgery EOR Topic List](#)