

COURSE SYLLABUS & SCHEDULE

COURSE: PAS 635 Clinical Experience in General Surgery

ACADEMIC CREDIT: 2 semester hours

COURSE DESCRIPTION: Four week required rotation in a general surgery clinical setting. Students engage in all aspects of patient care, including history taking, physical examination, and treatment plan design and evaluation. Students' application of patient and family education to treatment and preventive measures is emphasized.

COURSE GOAL: The goal of this course is to provide a foundation for the physician assistant student to prepare to enter into general surgery or any other field of surgery following graduation. The knowledge and skills developed during this clinical rotation will prepare the student to enter into clinical practice by exposing the student to a wide diversity of patient populations in the surgical setting of pre-operative, intra-operative and post-operative.

PREREQUISITES: Successful completion of the PA program didactic year.

COURSE COORDINATOR:

Faculty Name and Title: Kelli Huesman, MPAS, PA-C, Associate Professor, Director of Clinical Education

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Phone: 937-229-3281

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Office Hours: Variable, please contact directly for an appointment

Contact policies: Available during office hours, or through email

Faculty Name and Title: Sean Haig, MPAS, PA-C, Clinical Faculty

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Office Hours: Variable, please contact directly for an appointment

Contact policies: Available during office hours, or through email

CLINICAL PRECEPTOR: As assigned by clinical faculty

TIME/LOCATION: Offsite at clinical facility, location TBD, see schedule for definitive information

RECOMMENDED TEXTS:

Anatomy and Physiology:

Moini, Jahangir (2020). *Anatomy & Physiology for Health Professionals* (3rd ed). Burlington, MA: Jones & Bartlett Learning. ISBN: 978-1284151978.

Clinical Medicine:

Papadakis, M.A., McPhee, S.J., & Rabow M.W. (2020) *Current Medical Diagnosis and Treatment 2020*. New York, NY: Lange Medical Books/McGraw Hill. ISBN: 978-1260455281.

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History and Physical Exam:

Bickley, L (2016). *Bates' Guide to Physical Examination and History Taking* (12th ed). Wolters Kluwer Health/Lippincott Williams & Wilkins. ISBN: 978-1469893419

Labs:

Desai, S., Katta, R. (2020). *Clinician's Guide to Laboratory Medicine* (4th ed. Pocket). Houston, TX: MD2B. ISBN: 978-1937978105.

Pharmacology:

Brenner, G.M. & Stevens, C. (2017). *Brenner and Stevens' Pharmacology* (5th ed). Philadelphia, PA: Elsevier. ISBN: 978-0323391665.

Procedures:

Clinical Procedures for Health Professionals (2017). *Clinical Procedures for Health Professionals* (1st ed). Philadelphia, PA: Jones & Bartlett. ISBN: 978-1284032413

Radiology:

Herring, W. (2020). *Learning Radiology: Recognizing the Basics* (4th ed). Philadelphia, PA: Mosby/Elsevier. ISBN: 978-0323567299.

Study System:

Sedrak, M, & Massey, S. (2011). *Classroom to Clinic Study System: Personal Professor for Clinical Rotations and PANCE/PANRE Review*. Philadelphia, PA: F.A. Davis Company. ISBN 978-0803623538.

Brown, P.C., Roediger, H.L., & McDaniel, M.A. (2014). *Make it Stick: The Science of Successful Learning*. United States of America: Library of Congress Cataloging-in-Publication. ISBN: 978-0674729018.

Research:

Blessing, J.D. & Forister, J.G. (2020). *Introduction to Research and Medical Literature for Health Professionals* (5th ed.). Burlington, MA: Jones and Bartlett Learning. ISBN: 9781284153774.

Dermatology:

Habif, M.D., *et al.* (2013). *Skin Disease Diagnosis and Treatment* (4th ed.). Philadelphia, PA: Elsevier, Inc. ISBN: 978-0323442220.

Orthopedics:

Armstrong A.D. & Hubbard M.C. (2015). *Essentials of Musculoskeletal Care* (5th ed.). Rosemont, IL: AAOS. ISBN: 978-1625524157.

Hoppenfeld, S. (1976). *Physical Examination of the Spine & Extremities*. Norwalk, CT: Appleton & Lange. ISBN: 978-0838578537.

Pediatrics:

Marcdante, K.J. & Kliegman, R.M. (2019). *Nelson Essentials of Pediatrics*. Philadelphia, PA: Elsevier, Inc. ISBN: 978-0323511452.

Emergency Medicine:

Cline, D.M., et al. (2013). *Tintinalli's Emergency Medicine Just the Facts*. China: McGraw Hill. ISBN: 978-0071744416.

Women's Health:

Casanova R, Chuang A, Goepfert AR, Hueppchen NA, Weiss PM. (2019) *Beckmann and Ling's Obstetrics and Gynecology, (8th ed)*. Philadelphia: Wolters Kluwer. ISBN: 978-1496353092.

Mental Health:

Black, D.W., & Andreasen, N.C. (2014). *Introductory Textbook of Psychiatry*. 6th ed. Arlington, VA: American Psychiatric Publishing. ISBN 978-1-58562-470-6.

Overall Knowledge, Skills, and Attributes for All Clinical Rotations (SCPEs)

- **Knowledge**
 - Understand and explain the etiologies, risk factors, underlying pathologic processes and epidemiology for the conditions encountered in the clinical experience
 - Demonstrates the appropriate history and physical exam skills, identifying normal and abnormal findings, and is able to counsel patients who present for acute, chronic and preventative conditions
 - Adequately formulates a differential diagnosis based on H&P findings and is able to develop and carry out management plan based on the differential
 - Select and interpret appropriate diagnostic or laboratory studies
 - Manage presenting conditions to include understanding the indications, contraindications, side effects, interactions, and adverse reactions of pharmacological and non-pharmacologic agents
- **Skills Interpersonal and Communication**
 - Appropriately adapts communication style to the context of the individual patient interaction, displaying respect, compassion and integrity, with the ability to show sensitivity and responsiveness to patients' culture, age, gender and disabilities
 - Accurately and adequately document information regarding care process for medical, legal, quality and financial purposes
- **Clinical reasoning and problem solving**
 - Identifies the appropriate site of care for presenting conditions, including the identification of emergent cases and those requiring referral and admission
- **Professionalism**
 - Work effectively with preceptor and other health care professionals to provide patient centered care

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- Promptly completes assigned tasks
- Consistently arrives at appointed time
- Recognizes personal learning needs and limitations, seeks to rectify them
- Accepts and uses constructive criticism from preceptor and staff

LEARNING OUTCOMES SPECIFIC FOR SURGERY

Preoperative Care

- Accurately obtain an appropriate history and perform the appropriate physical exams, including the organ system affected and the heart and lung exam, for the surgical disorders encountered during this rotation
- Appropriately recognize and recommend management of risk factors to surgical patients
- Adequately explain the indications, risks, benefits, and alternatives to a preoperative patient
- Appropriately order and review and interpret preoperative testing ie: EKG, imaging, labs, and clearance
- Adequately explain preoperative medical management of home medications to a surgical patient
- Appropriately make recommendations for preoperative orders in the management of a surgical patient i.e.: prophylactic antibiotics, DVT prophylaxis, and hair removal
- Accurately document a focused surgical H&P

Intra-operative Care

- Properly position a patient for a surgical procedure to avoid pressure points and nerve damage
- Appropriately assist the general surgeon with surgical procedures to include preoperative time out, retraction, electrocautery or suturing
- Perform surgical scrubbing, gowning and gloving while maintaining a sterile technique
- Maintain a sterile field in the operating room during a surgical case or procedure
- Accurately identify as well as appropriately request specific surgical instruments
- Accurately document a brief operative note

Post-Operative Care

- Effectively counsel and educate the patient to perform postoperative wound care
- Appropriately develop a postoperative pain management plan
- Effectively identify, communicate and develop a management plan for avoidance of postoperative complications
- Accurately recognize and treat postoperative side effects and complications
- Appropriately identify safe and viable dispositions in relation to restrictions, wound care and social needs as well as appropriate follow up recommendations for postoperative patients
- Provide recommendations for appropriate postoperative orders for a surgical patient

CLINICAL OBJECTIVES

1. Differentiate between disease etiologies, risk factors, underlying pathologic process and epidemiology for common conditions for pre-operative patients seen in general surgery.
2. Analyze signs and symptoms for commonly seen diseases and disorders encountered in general surgery related to the most frequent presentation for a given disorder.
3. Interpret sufficient, essential, and accurate history to direct an appropriate physical examination and develop correct diagnoses commonly for pre-operative and post-operative patients seen in general surgery

4. Correlate physical findings with patient's history in order to reach a differential diagnosis for a surgical patient.
5. Manage general medical and surgical conditions seen in general surgery to include understanding the indications, contraindications, side effects, interactions and adverse reactions of pharmacological agents and other relevant treatment modalities in the post-operative setting.
6. Analyze how to order and then interpret diagnostic labs and tests, which are commonly used in the surgical setting to include radiographs, ECGs, laboratory tests.
7. Interpret appropriate interventions for prevention of conditions commonly seen in general surgery.
8. Adapt their communication style to the context of all patient interactions in the surgical environment.
9. Develop reliable, accurate, concise, organized documentation for patient interactions to include a pre-operative note, post-operative note, intra-operative note and discharge summary.
10. Communicate effectively in both written and verbal format with all members of the surgical health care team.
11. Conduct respectful interviews of surgical patients, with empathy and sensitivity.
12. Educate patients and their families regarding present surgical conditions.
13. Counsel patients and their families regarding preventive health care in general surgery, i.e.: lifestyle changes, screenings, or post-operative complications.
14. Distinguish between risks, benefits, and alternatives for procedures commonly encountered in general surgery in the pre-operative, intra-operative, and post-operative settings.
15. Analyze competent intra-operative performance in medical and surgical procedures that are considered essential in the area of general surgery.
16. Synthesize abnormal physical examination findings for a surgical patient and correlate these findings to possible diagnoses.
17. Formulate appropriate medical management based on evaluation of the patients who present with an acute surgical problem.
18. Develop appropriate medical management based on evaluation of the patients who present with a chronic surgical problem.
19. Discern level of care and disposition for patients seen in general surgery.
20. Maintain a respectful attitude toward and work appropriately with preceptors, surgical staff and patients at all times.
21. Analyze personal learning needs and limitations while in the surgical setting and seeks to rectify them.
22. Effectively use constructive criticism from preceptors and staff to aid in the development of the medical professional.
23. Maintain timely attendance, dress appropriately, and promptly complete assigned tasks.
24. Differentiate between the different types of surgical procedures to include the indications, contraindications, side effects, complications, patient preparation, and patient education of each.
25. Perform an oral presentation to the preceptor in a clear and concise manner, which will include pertinent patient history, physical exam findings, most likely diagnosis and a proposed management plan.
26. Discern the importance of maintaining a sterile field in the operating room.
27. Distinguish between the different surgical instruments commonly utilized in the operating room in terms of identification and indications for use.
28. Discern the importance of anatomical structures common to general surgery.
29. Distinguish between the different surgical complications to include fever, infection, atelectasis, deep vein thrombosis.
30. Synthesize a management plan to include medications, patient education, activity modifications, dietary considerations, referrals, wound care, and follow-up care

Teaching Methods:

Teaching methods may include any or all of the following:

1. Direct teaching from preceptors
2. Hospital Grand Rounds
3. Reading assignments

ASSESSMENT CRITERIA

Student competency in the Surgery Rotation: Instructional objectives are determined based on the following criteria:

• Written evaluation from preceptor	40%
The preceptor will monitor the student’s clinical skills and knowledge progression with a formative Mid-Rotation Evaluation, and will conduct a formal review of the student’s performance to determine the student’s competence with a summative End of Rotation Evaluation (EOR)	
• PAEA – EOR	40%
• Participation in clinical call back week at End of Rotation	10%
• Mandatory Electronic Entries and Written Assignments	10%
Includes 1 written assignment, weekly reports, student evaluation of preceptor, and patient encounters. EOR Evaluations and Student Evaluations of Preceptor/Site are due no later than 5 pm on the Wednesday following the completion of the rotation.	
TOTAL	100%

This final course grade is a Pass/Fail based on passing the EOR exam with a minimum of a 70%, passing the Final EOR evaluation and completing all the required criteria as directed above.

In order to successfully pass this course, the student must:

- Score a minimum of 3 or higher for each competency on the preceptor evaluation. Any students receiving 1’s or 2’s in the categories of medical knowledge, interpersonal/communication skills, technical and clinical skills, medical decision making, or professionalism may fail the rotation. The final decision will be based on an in-depth conversation with the preceptor, the Director of Clinical Education and the student.
- University of Dayton PA Program utilizes the PAEA EOR exams. The students will take an EOR exam correlating with their current rotation. These exams will require a proctor during the exam, and with the exception of the Orthopedic which is given in Isidore, the testing will be completed through the PAEA Examdriver website. The cost for the EOR exams for each rotation will be covered by the student. The PAEA EOR exams consist of a 120-question exam built on the blueprint and topic list. The exams are peer reviewed by PA educators and statistically validated. The scoring of the PAEA EOR exams are completed on a scaled scoring system. This is based on a nationwide performance of PA students for that specific examination. Those students who fall one standard deviation below the mean will have failed the exam and be required to remediate, see below of remediation details.

- If the student does not pass the exam, he/she will be required to take a remedial exam within 7 days. The student is required to cover the cost of the remedial exam. The student will be allowed to proceed with the next scheduled rotation without delay. If a student fails both the initial EOR exam and the remedial exam within the same course, this will constitute the failure of the clinical course. Failure of a clinical course will delay the student's progression to graduation. The failed course will be repeated in the following clinical year.
- Participate in the Clinical End of Rotation seminars.
- Submit mandatory electronic entries.

****The final grade/decision in regards to the passing of each Clinical Rotation will be made by the Director of Clinical Education (DCE) based on the mid-rotation and end of rotation evaluations, the results of the EOR exams and the communication held between the DCE and the preceptors working with each student.**

EXPECTED CLINICAL PATIENT & PROCEDURAL LOGGING:

There are three (3) required areas of clinical patient logging that will be documented longitudinally throughout the entire clinical year experience. Students are expected to encounter patients across the life span, as well as patient encounters regarding preventive health care, prenatal visits, emergent, acute, and chronic visits. Additionally, specific medical procedures (foley placement, pap smears, pelvic examination, suture, and IV placement) are required to be performed at a level necessary for clinical practice.

1. Students will perform appropriate history and physical examination of patients in the following age groups across the life span:
 - birth-18; 19-64, and over 65
2. Students will evaluate and recommend appropriate treatment for:
 - preventive health care encounters
 - prenatal encounters
 - emergent encounters
 - acute encounters
 - chronic encounters
 - pre-, intra-, post- operative encounters
 - well child encounters
3. Students will efficiently perform the following procedures:
 - foley placement
 - pap smears/pelvic examination
 - suture
 - IV placement/venipunctures

Students will track their progress in meeting these requirements by completing the “Clinical Encounter Booklet”. The Clinical Encounter Booklet contains the forms for preceptors to complete rating the student on his/her performance. Due to the large number of expected encounters for evaluating patients throughout the life span a portion of each target number will be used to evaluate completeness. Students’ progress will be reviewed during call back weeks, and if it is determined the student is at risk to not meet the competencies, he/she will meet with the Director of Clinical Education to address these deficiencies in order to meet the requirements prior to anticipated graduation. Please refer to the table below for details regarding the clinical patient and procedural tracking:

A passing score of a 3 or above on a Likert scale of (1-5) is required for each evaluated encounter to be considered passing.

Clinical Patient & Procedural Tracking	Target Number of Encounters	Minimum Number Required
Life Span		
Birth – 18	25	15
Age 19-64	150	15
Age 65 and above	50	5
Health Care Settings		
Preventive Health	150	15
Prenatal	5	5
Well Child Exams	5	5
Emergent	150	15
Acute	150	15
Chronic	150	15

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Pre, intra, post-operative	50	15 (5 apiece)
Well child	5	5
Procedures		
Foley placement	5	5
Pap smears/Pelvic exam	5	5
Suturing	15	15
IV placement/venipuncture	5	5

DISCLAIMER

This syllabus is intended to give the student guidance regarding what will be covered during the clinical rotation and will be followed as closely as possible. However, the instructor reserves the right to modify, supplement, and make changes in the course as necessary to meet course objectives. Every effort will be made to adhere to the clinical schedule but alternations may be necessary due to unforeseen circumstances. Any changes will be announced via email communication.

ACADEMIC INTEGRITY

From **The University of Dayton Academic Honor Code: A Commitment to Academic Integrity:**

Regardless of motive, student conduct that is academically dishonest, evidences lack of academic integrity or trustworthiness, or unfairly impinges upon the intellectual rights and privileges of others is prohibited. Cheating on examinations or other graded evaluations consists of willfully copying or attempting to consult a notebook, textbook, or any other source of information not authorized by the instructor; willfully aiding, receiving aid or attempting to aid or receive aid from another student during an examination or other evaluation; obtaining or attempting to obtain copies of any part of an examination or other evaluation (without permission on the instructor) before it is given; having another person take the exam; or any act which violates or attempts to violate the stated conditions of an examination or other evaluation. Cheating on an assignment consists of willfully copying or attempting to copy all or part of another student's assignment or having someone else complete the assignment when class assignments are such that students are expected to complete the assignment on their own. It is the responsibility of the student to consult with the instructor concerning what constitutes permissible collaboration and what materials are allowed to be consulted.

PLAGIARISM STATEMENT

Plagiarism is defined in the University of Dayton Student Handbook.

Plagiarism involves:

- Quoting directly from any source of material including other students' work and materials from research consultants without appropriately citing the source and identifying the quote
- Knowingly citing an incorrect source
- Using ideas (other than information that is common knowledge) from any course of material including other students' work and materials from research consultants without citing the source and identifying the borrowed material/ideas
- Faculty may establish additional guidelines for plagiarism – ignorance is no excuse for plagiarism. Students should be aware of their own responsibilities in appropriately quoting and citing sources used.

Additional information on plagiarism is available through the UD Roesch Library website (<http://library.udayton.edu/faqs/howto/plagiarism.php>).

Students should be aware that the University has access to software designed to detect plagiarized passages and work. This software will be applied randomly or at the instructor's discretion. Detection of plagiarized passages or work can result in disciplinary action.

STUDENTS WITH DISABILITIES

If you anticipate or experience physical or academic barriers based on disability, please let me know immediately so that we can discuss options. You are also welcome to contact the LTC's Office of Learning Resources (OLR) to discuss reasonable accommodations. Please contact OLR at 937-229-2066 (TTY 937-229-2059 for deaf/hard of hearing), by email at disabilityservices@udayton.edu or stop by OLR in the LTC, room 023 Roesch Library. If you have an Accommodation Letter provided by OLR, please contact me to discuss. If you need assistance accessing print material including textbooks and electronic material such as PDF documents, please review the OLR website information about alternative formats under Disability Resources.

ON CAMPUS LEARNING SUPPORT

The University of Dayton's Office of Learning Resources (OLR) is a free service for all students seeking to perform their best academically. OLR offers a variety of personalized and structured resources that help students achieve academic excellence, such as tutoring, academic coaching (test taking strategies, time management counseling, and study techniques), Supplemental Instruction (SI), services for international students, and writing support. OLR is located on the ground floor of Roesch Library. If you wish to request a tutor, you must go to go.udayton.edu/tutoring and follow the given instructions. Please contact OLR at 937-229-2066 or learningresources@udayton.edu if you have any questions.

Exam Topic List

The lists below are taken from the PAEA End of Rotation Exam, suggested topic list to study for both the rotation and for the end of rotation exam. This list mirrors the NCCPA blueprint topics and will therefore help prepare students for a successful completion of the PANCE.

Pre-Operative/Post-Operative Care	Gastrointestinal/Nutritional
Risk Assessment:	Abdominal pain
Cardiac disease (history of myocardial infarction, unstable angina, valvular disease, hypertension, arrhythmias, heart failure)	Anorexia
Pulmonary disease (history of asthma, chronic obstructive pulmonary disease)	Heartburn/dyspepsia
Metabolic disease (history of diabetes, adrenal insufficiency)	Nausea/vomiting
Hematologic disease (history of clotting disorders, anticoagulant use)	Jaundice
Tobacco use/dependence	Hematemesis
Fluid/volume disorders (volume overload/depletion)	Diarrhea/constipation/obstipation/change in bowel habits

Post-operative fever	Melena/hematochezia
Wounds infections	Esophageal strictures
Deep venous thrombosis	Esophageal cancer
Fluid/volume disorders (volume overload/depletion)	Hiatal hernia
Electrolyte disorders	Peptic ulcer disease
Acid/base disorders	Gastric cancer
	Pyloric stenosis
	Acute/chronic cholecystitis
Cardiovascular	Cholelithiasis/choledocholithiasis
Chest pain; history of angina	Cholangitis
Syncope	Hepatic carcinoma
Dyspnea on exertion	Acute/chronic pancreatitis
Claudication	Pancreatic pseudocyst
Aortic aneurysm/dissection	Pancreatic carcinoma
Arterial embolism/thrombosis	Appendicitis
Peripheral arterial disease	Inflammatory bowel disease
Arterial/venous ulcer disease	Small bowel carcinoma
Varicose veins	Toxic megacolon
	Colorectal carcinoma
	Diverticular disease
Hematology	Bowel obstruction (small, large, volvulus)
Easy bruising/bleeding	Anal disease (fissures, abscess, fistula)
Anemia	Hemorrhoids
Fatigue	Hernias (inguinal, femoral, incisional)
	Bariatric surgery
Pulmonology	Endocrinology
Shortness of breath	Tremors
Hemoptysis	Fatigue
Weight loss, fatigue	Palpitations
Lung carcinoma	Heat/cold intolerance
Pleural effusion	Hyperparathyroidism
Pneumothorax	Hyperthyroidism
Pneumonia (post-operative)	Thyroid nodules
	Thyroid carcinoma
	Adrenal carcinoma
	Pheochromocytoma
Neurology/Neurosurgery	Obstetrics/Gynecology
Change in vision	Pain
Change in speech	Skin changes
Motor and/or sensory loss	Nipple discharge
Vascular disorders (carotid disease)	Adenopathy
Subarachnoid hemorrhage	Benign breast disease (fibroadenomas, fibrocystic breast disease)
Subdural hematoma	Breast carcinoma

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Epidural hematoma	
Urology/Renal	Dermatology
Edema	Rash
Orthostatic hypotension	Redness/erythema
Dysuria	Discharge
Fluid and electrolyte disorders	Drug eruptions (post-operative)
Acid/base disorders	Urticaria (post-operative)
Testicular carcinoma	Cellulitis
Wilms tumor	Burns
Bladder carcinoma	Pressure ulcers
Renal cell carcinoma	Basal cell carcinoma
Chronic renal failure (shunts/access)	Squamous cell carcinoma
Renal vascular disease	Melanoma
Nephrolithiasis	
Urinary Retention	

DATE OF SYLLABUS REVISION: 11/11/2021/DCE