Course Number: PHA 520
Course Title: Surgery
Number of Credits: Three credit hours
Day / Time: Thursdays, 6:00-9:00 p.m.
Prerequisites: Successful Completion of Fall 2016 Curriculum

Faculty: James F Ginter, MPAS, PA-C, Course Coordinator
Office Hours: by appointment
Telephone: 414-881-0149
Email: jginter@carrollu.edu

Course Description:
This course is an introduction to the role of the physician assistant in surgery and surgical procedures commonly performed. The course employs a system-oriented, problem-based approach and clinical information is presented in conjunction with appropriate, correlative lectures in anatomy, physiology, pharmacology, pathology, radiology, laboratory diagnostics and nutrition.

Course Content:
This course will be lecture based. Lectures will include power-point and case discussions regarding surgical problems and interventions on care for the surgical patient.

Students will come prepared to class having completed the assigned reading that will be covered in lecture. It is essential that reading be completed before lecture so you have a knowledge base upon which to expand your learning.

Case study assignments will be included as part of this course. These will be assigned as individual or group based worksheets at the time of the assignment.

There will be a suturing lab, surgical scrub session and surgical instrument identification lab in two sessions. You will need to review online videos and readings to prepare for this session prior to that date. These are listed as video assignments under required texts / reading section below.

Knot tying kits will be utilized throughout the course for practice on surgical knot tying. Proficiency in this skill is largely related to time devoted to practice. Students are encouraged to independently practice surgical knot tying outside of class as well. Kits are limited and may be checked out through Kathi Gauger, Administrative Assistant at the Center for Graduate Studies.
Student Expectations:
• demonstrates a positive attitude toward learning
• is on time for all scheduled classes, including timely return from breaks
• completes readings and assignments prior to class
• asks relevant and understandable questions
• takes full responsibility for learning and self-directed learning activities
• shows respect for self, other students and faculty
• refrains from revealing negative feelings through tone of voice or body language
• refrains from disruptive activities during class including eating, talking, getting up and down, use of cell phone, etc.
• relies on personal resources before approaching others for help
• demonstrates cooperation with and mutual respect for peers
• responds to faculty, staff and peers readily and appropriately

Instructor Expectations:
• demonstrates a positive attitude towards the facilitation of learning
• is on time for all scheduled classes
• should the need arise, reschedules class time with appropriate and timely notification to students, faculty and staff
• provides appropriate course materials for class preparation prior to class
• is available for office hours or appointments to assist with questions; responds to faculty, staff and students readily and appropriately
• listens attentively and initiates communication which is appropriate and timely
• identifies limitations in knowledge and provides appropriate resources for student learning
• provides timely and constructive feedback for assignments and assessments
• shows respect for self, students and other faculty
• refrains from revealing negative feelings through tone of voice or body language
• demonstrates cooperation with and mutual respect for students, faculty and staff

Required Text:
PDF download requirement:

Required Video Assignments:
Surgical Hand Scrub Learning Module (11 minutes)
http://www.youtube.com/watch?v=O1sS0ahb4MA

Gloving and Gowning Technique Sterile (10 minutes)
http://www.youtube.com/watch?v=QaB7dCIH8bg

Grading:
The course grade for the semester will be based upon the following:

<table>
<thead>
<tr>
<th>Requirement</th>
<th>% of Final Grade</th>
<th>Date</th>
<th>Linked Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Case Studies (#10)</td>
<td>40%</td>
<td>See syllabus</td>
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<tr>
<td>Mid-term Exam</td>
<td>25%</td>
<td>Feb 29</td>
<td>A-L</td>
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<tr>
<td>Final Exam</td>
<td>25%</td>
<td>May 3</td>
<td>M-R, cumulative</td>
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<tr>
<td>Lab</td>
<td>10%</td>
<td>TBD</td>
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Letter Conversion scale
A 100-93%
AB 92.99-90%
B 89.99-83%
BC 82.99-80%
C 79.99-70%
D 69.99-60%
F 59 and below

Final grades will not be rounded up.

Attendance and Professionalism:
Attendance at all class periods, laboratories, and practical experiences are mandatory unless otherwise indicated. Poor attendance (unexcused absences, tardiness, and unauthorized early departures), lack of preparation, and unprofessional behavior may result in a lower or failing grade and/or be reported to the program progression committee. If you will be absent, tardy, or need to be excused early you must notify the course director via e-mail or phone prior to the scheduled meeting time. Tardiness and unauthorized early departures will be considered unexcused absences unless prior notification is submitted. Unexcused absences of more than 10% of class time may result in a failing grade. Absences are excused only at the discretion of the course director and/or the PA Program Director. Students may be required to make up missed laboratory time (excused
Examinations:
There will be two exams during the semester. Please refer to the schedule for details. Exams are case-vignette multiple-choice exams and are closed book. Exams will be on scantrons. You may make an appointment with me if you desire to view your exam again or go over on an individual basis.

Challenges to examination questions will be accepted for 1 week after the return of the scores. Challenges must be submitted in writing via email with two written sources, at least one from recommended course readings.

No books, papers, notebooks, cell phones, smart phones, iPods, iPads, Blackberry, etc. or backpacks / book bags will be allowed on / near your desk during an examination. You may have a blank sheet of paper for the tests and a writing utensil. The paper must be turned in before you leave the computer lab. Recommend keeping personal belongings in the back of the room or in lockers. Hats are prohibited during an exam. Cell phones, smart phones, iPods, iPads, Blackberry, etc. must be turned OFF during an examination.

Assignments:
Assignments will be required and will be outlined on the LMS course site.

Statement on Academic Integrity:
The Carroll University Academic Integrity Policy is located in the Carroll University Student Handbook. Students are encouraged to familiarize themselves with this policy. If a student violates this policy in any way, the instructor(s) reserve the right to impose a sanction of failure on the assignment / assessment or failure in the course. If you have questions about the appropriate citations, please ask your instructor.

Accommodations for Disabilities:
Any request for accommodation for physical or cognitive disability must be made through the Walter Young Disability Services Coordinator at Carroll University. Appropriate accommodations will be evaluated based on the program technical standards once notification has been received from the Walter Young coordinator. If an individual student has special needs or concerns about course requirements related to religious beliefs, cultural issues, or other issues, the student must contact the Program Director with a request for accommodation.

Modifications to the Syllabus:
The instructor and the University reserves the rights to modify, amend, or change the syllabus (schedule, course requirements, grading policy, etc.) as the curriculum and / or program require(s).
**Remediation:**
Students who receive a D or an F in this or any physician assistant year 1 course will be placed on academic probation.

During the course, a student who scores more than 2 SD below the mean on an exam/assessment may be required to complete additional work. The student will be contacted by the course instructor and asked to meet to discuss the remediation requirements for that particular assessment. Remediation requirements will be determined by the course instructor. When an instructor requires remediation of a student it does not affect the exam/assessment grade, nor does it improve the semester or course grade. Remediation is required to ensure that course objectives are met. It is expected that assigned work for the purpose of remediation be completed in a thorough, professional and timely manner. Satisfactory completion of remediated work will be determined by the course instructor. Students may be required to complete additional work if the original remediation is deemed unsatisfactory.

Students should make every effort to resolve remediation issues with the course director. If a student is unable to resolve such issues s/he may request a review by the Didactic Subcommittee. All decisions made by the subcommittee are final. If remediation is not successfully completed by the end of the course/semester a grade of “Incomplete” will be given until the work is successfully completed. Please note that an incomplete course grade may delay program progression and/or graduation. Information regarding incomplete grades is available in the Graduate Catalog.

**Course Goals:**
1. Have a basic understanding of the operating room, surgical scrub, surgical instruments, knot tying and suturing.
2. Have had practice palming an instrument.
3. Be able to write orders for a patient: admission, pre and post-op orders.
4. Obtain the knowledge to prepare you for clinical rotation in surgery with regards to a pre-op work up, anesthesia, and post op complications.
5. Expand knowledge on problems that need surgical intervention.
6. Expand knowledge on the basics of some surgical procedures along with the relevant anatomy, physiology and pathology.

**Learning Outcomes:**
By the end of the course the student will know or be able to perform:
1. Surgical scrub
2. Basic identification and handling of basic surgical instruments
3. Surgical knot tying
4. Identify common post-operative complications in the surgical patient.
5. Prepare a surgical patient for the OR.
6. Have sufficient knowledge of surgical problems to be an effective team player in clinical rotations for surgery.
7. Be familiar with writing admission orders, pre-op and post-op orders, procedure notes and basic medication orders for surgery.
8. Be able to suggest suture type and for wound closure based on wound location and wound type.
Learning Objectives:

A. Orientation to the Operating Room:
   1. Examine appropriate OR attire.
   2. Demonstrate surgical scrub with gowning and gloving.
   3. Identify basic surgical instruments and become familiar with proper use, including “palming” an instrument.
   4. Practice surgical knot tying on a knot tying kit and in suturing lab.

B. Role of the PA in the Surgical Setting:
   1. Examine the role of the PA in a surgical practice.
   2. Examine the responsibilities of the PA in the role of “first assist”

C. Informed Consent:
   1. Apply the meaning of informed consent and the importance of obtaining informed consent.
   2. Compose the elements which must be included in informed consent and consider potential barriers in obtaining informed consent. (Partner activity)

D. Anesthesia:
   1. Evaluate advantages and disadvantages of regional and general anesthesia for surgical procedures.
   2. Identify risks associated with anesthesia.
   3. Choose methods of monitoring patients who are anesthetized.
   4. Identify toxic doses of anesthetics and symptoms associated with this.

E. Documentation:
   1. Effectively write a surgical SOAP note.
   2. Construct and devise the following types of documentation for surgical patients:
      a. Admission Orders
      b. Operative Note
      c. Progress Note
      d. Informed Consent
      e. Pre-operative Orders
      f. Post-operative Orders
      g. Medication Orders

F. Pre-Operative Preparation:
   1. Identify patients who are at high risk for surgical or post-surgical complications.
   2. Analyze pulmonary, cardiac and nutrition status and how each pertains to the pre-operative evaluations.
   3. Examine surgical risk stratification.
   4. Correctly write pre-operative orders.
5. Evaluate clinical scenarios and formulate diagnosis and treatment plans for the surgical patient. (Case studies in small group format.)

G. Post-Operative Management:
1. Assess and formulate a plan to intervene in common surgical complications.
2. Distinguish the goals of the Recovery Room / Post–Anesthesia Care Unit (PACU).
3. Formulate the differential diagnosis of post-operative fever and the timeline of onset as it plays into the differential diagnosis.
4. Evaluate and interpret the epidemiology, prevention, diagnosis and general management of the following post-operative complications:
   a. Pulmonary: atelectasis, aspiration / pneumonia, PE (DVT)
   b. Cardiac: MI, hypotension / shock
   c. GI: ileus, obstruction, nausea / vomiting, constipation, GI bleeding
   d. GU: urinary retention and UTI
   e. Pain
   f. Wounds
5. Evaluate need and choose appropriate post-hospital care options.
6. Evaluate clinical scenarios and formulate diagnosis and treatment plans for the surgical patient. (Case studies in small group format.)

H. Wounds:
1. Evaluate different classifications of wounds and potential complications with each wound type based on its classification
2. Propose different types of wound closure (suture, staples, steri-strips, surgical glue) for a specific type of wound.
3. Formulate and evaluate appropriate type of wound closure based on location of wound.
4. Contrast tensile strength and wound healing process.

I. Infections in Surgical Patients:
1. Assess appropriate pre-operative antibiotic prophylaxis.
2. Propose indications for pre-operative antibiotic prophylaxis.
3. Examine pre-op, intra-operative, and post-op practices to prevent surgical infections.
4. Differentiate normal wound healing rubor vs surgical site infection.
5. Formulate intervention for a surgical site infection.

J. Nutrition:
1. Differentiate the nutritional needs of surgical patients.
2. Identify the factors to be considered when evaluating a patient’s need for nutritional support.
3. Choose parenteral vs enteral feeding for a surgical patient.
4. Distinguish the advantages, disadvantages and risks of different means of nutritional support.
5. Identify the role of pharmacist in parenteral care.

K. Fluids and Electrolytes:
1. Given a specific surgical patient, assess the electrolyte abnormalities that may arise and means of correction.
2. Assess for “third-space” fluid sequestration and differentiate between intracellular and extracellular fluid loss.
3. Estimate fluid deficits and determine means of replacement along with maintenance IV fluids in the surgical patient.
4. Formulate indications for use of common IV fluids.
5. Correctly write fluid orders for a surgical (or medical) patient.

L. Surgical Lines and Drains:
1. Discuss different types of surgical lines and drains.
2. Discuss appropriate use of surgical lines and drains.
3. Discuss timing for discontinuation of surgical lines and drains.

M. Abdominal Surgery, Urogynecological Surgery:
1. Evaluate common conditions that require surgical intervention in the abdomen.
2. Discuss surgical procedures for surgical problems in the above anatomic locations.
3. Discuss risks related to surgical procedures in these anatomic sites.
4. Evaluate for common post-operative complications as related to surgery in these anatomic sites.

N. Thoracic Surgery and Vascular Surgery
1. Evaluate common conditions that require surgical intervention.
   a. Cardiac, pulmonary
   b. Breast
   c. Vascular
2. Discuss surgical procedures for surgical problems in the cardiopulmonary system, vascular system and in breast diseases.
3. Discuss risks related to surgical procedures within cardiopulmonary, vascular and breast surgery.
4. Evaluate for common post-operative complications as related to cardiopulmonary, vascular and breast surgery.

O. Neck (Thyroid and Parathyroid) Surgery
1. Evaluate common conditions that require surgical intervention in the neck – thyroid/parathyroid
2. Discuss surgical procedures for surgical problems in the neck.
3. Discuss risks related to surgical procedures in the neck.
4. Evaluate for common post-operative complications related to neck surgeries

P. Orthopedic Surgery, Trauma
1. Evaluate common conditions that require surgical intervention.
2. Discuss surgical procedures for surgical problems of the bones
3. Discuss risks related to orthopedic and trauma surgeries.
4. Evaluate for common post-operative complications related to orthopedic and trauma surgeries.

Q. Neurosurgery, et al.
1. Provide a brief overview of common conditions and surgical procedures in neurosurgery and other specialty surgeries.
2. Provide a brief overview of risks and post-operative complications related to neurosurgery and other specialty surgeries.

R. Critical Care Topics:
1. Devise a care plan for a surgical ICU patient.
2. Identify monitoring devices that are typically used in ICUs.
4. Review different types of shock.
5. Discuss ventilator support in the ICU patient.
**Course Schedule:**

*Schedule is subject to change.*

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<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Assignment/Readings</th>
<th>Comments</th>
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<tr>
<td>1/26/17</td>
<td>Intro, Intro to OR Anesthesia</td>
<td>Current pg. 147-163</td>
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<tr>
<td>2/2/17</td>
<td>Pre and Post-op Management</td>
<td>Current pg. 13-61 Case 1</td>
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<td>Lines, Drains Fluids and Electrolytes</td>
<td>Current 104-116 Case 3</td>
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<td>Abdominal Surgery</td>
<td>Current 483-497, 651-656</td>
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<td>3/9/17</td>
<td>Abdominal/Urogyn Surgery</td>
<td>Current 582-650, 956-1060 Case 5</td>
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<td>3/16/17</td>
<td>CU Spring Break!</td>
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<td>Week off</td>
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<td>3/20/17</td>
<td>Knot Tying, Surgical Instruments</td>
<td>Online tools, handouts Lab Practice</td>
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<td>3/23/17</td>
<td>CT Surgery</td>
<td>Current 389-422, 798-850, 331-388 Case 6</td>
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<td>Ortho/Trauma</td>
<td>Current 191-226, 1061-1147, 1191-1212 Case 7</td>
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<td>Neck/Thyroid</td>
<td>Current 277-297 Case 8</td>
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<td>4/13/17</td>
<td>Neuro/et al</td>
<td>Current 298-330, 851-936, 1295-1313 Case 9</td>
<td>Case 8 DUE WAPA</td>
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<td>4/20/17</td>
<td>Critical Care</td>
<td>Current 164-190 Case 10</td>
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<td>4/25/17</td>
<td>Surgical Scrub and Instrument ID</td>
<td>Online tools Lab EXAM</td>
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<td>4/27/17</td>
<td>Complete topics Review: cases &amp; final</td>
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<td>Case 10 DUE</td>
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<td>5/4/17  6-8 p.m.</td>
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<td>FINAL EXAM</td>
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