

Fourth Year Electives

ANSTH 770 - Anesthesiology Elective

PREREQUISITE: Third year core clerkships and ANSTH700

ANSTH 770 - Anesthesiology Elective - 5 credits

COURSE DIRECTOR: Dr. Len Pott

lpott@hmc.psu.edu 531-8433

Assistant Course Director: Dr. James Rossignol

jrossignol@hmc.psu.edu 531-8433

Course Coordinator: Ms. Pamela Myers

ppmyers@hmc.psu.edu

LOCATION: Hershey, Lehigh (Dr Rafael Martinez)

MAXIMUM NUMBER OF STUDENTS: 6 (HY), 1 (Lehigh)

WHEN OFFERED: All Rotations - July/August/September restricted

LENGTH OF ELECTIVE: 1 Month

PREREQUISITE: Third year core clerkships and ANSTH700.

DESCRIPTION: The course at Lehigh and York will depend on the specific locations. The course at Hershey is designed for senior medical students who are seeking a career in anesthesia. The rotation will have 4th year medical students interested in pursuing a career in anesthesia act as CA-1s. The medical student will have the majority of their time in the OR, ASA, or Acute Pain Team, working with residents, CRNAs, and/or the anesthesia attending. The medical student will be required to read the patient's history the night before and be able to discuss the anesthetic implications with the anesthesia team the day of surgery. They should also formulate and discuss a plan for induction, maintenance, and emergence with the team. At the end of the month, the medical student should know the common drugs in anesthesia including the mechanism of action, dosage, side effects, and indications of use. The medical student should also be able to interpret anesthetic monitors, ventilator management, understand indications for various anesthetic techniques (general anesthesia vs. regional vs. Monitored Anesthesia Care), perform a pre-operative evaluation, and understand anesthetic implications of various diseases and their intra-op management. The student will be required to take overnight call, where they will continue to gain experience in pre-op evaluation, intra-op care, and post-op care of the surgical patient. The student will attend all didactic sessions which the 1st year anesthesia residents attend. The medical student may also receive a number of sessions in the simulation lab. The medical student's evaluation will be based on a written examination and simulation lab or computer simulation of a standard surgical patient. The student's patient-care responsibilities will be determined by their individual experience and educational motivation, as assessed by the supervising anesthesia faculty. Student performance of technical procedures will be encouraged but only within the context of patient safety and the students knowledge of the patient, pertinent anatomy, and the risks and benefits of such procedures. Every effort will be made to "track" students with specific faculty or senior residents to enhance familiarity and, thus, enrich the educational experience.

Note:

Medical Students will be required to take 4 overnight calls during their month rotation. They will be excused from clinical activity post call at 7 a.m., but are expected to return to the hospital for all afternoon lectures.

CAM 742 - Herbal and Natural Products as Therapeutics Elective

PREREQUISITE: Third year core clerkships or approval by course director

CAM 742 - Herbal and Natural Products as Therapeutics Elective - 5 credits

COURSE DIRECTOR: Kelly Karpa, Ph.D kjd136@hmc.psu.edu 717-531-1621

LOCATION: Hershey

MAXIMUM NUMBER OF STUDENTS: 13

WHEN OFFERED: March

LENGTH OF ELECTIVE: 1 Month

PREREQUISITE: Third year core clerkships or approval by course director.

REPORT TO: Kelly Karpa, Ph.D

TIME AND LOCATION: To Be Announced

DESCRIPTION: This course will review pathophysiology of diseases and conventional pharmacology treatment approaches, the focus of this course will be discussion of efficacy, safety, and appropriateness of commonly used herbal and natural products as monotherapy or adjunctive therapies in medical management of disease. These topics will be presented by students, faculty, and guest lecturers using evidence-based medicine principles, and each topic will also be presented using a case-based approach. Additionally, this course will include an experiential component in which students will spend time with practitioners that incorporate herbal and natural products into their clinical practices.

MED 745 - Geriatric Elective

PREREQUISITE: Third year core clerkships

MED 745 - Geriatric Elective - 5 credits

COURSE DIRECTOR: Dr. Noel Ballentine nballentine@psu.edu 717-531-8161

LOCATION: Hershey

MAXIMUM NUMBER OF STUDENTS: 1

WHEN OFFERED: All Rotations

LENGTH OF ELECTIVE: 1 Month

PREREQUISITE: Third year core clerkships.

REPORT TO: Noel Ballentine, MD

TIME AND LOCATION: To Be Announced

DESCRIPTION: Students will be exposed to multiple sites of care for the elderly under faculty supervision from the Division of General Internal Medicine and Family and Community Medicine. Students will see patients in several outpatient geriatric clinics. Under supervision of a geriatric nurse specialist they will perform functional

assessments and develop care plans for hospitalized elders who are transitioning to home or long term care setting. They will attend several geriatric consultative conferences emphasizing a multidisciplinary approach. They will attend geriatric grand rounds. A long term care experience is also provided. In this experience time will be spent with the medical director, the director of nursing and an attending physician seeing patients. A text is provided and there are several required readings from the literature. A short report on a geriatric topic and a course evaluation will be required.

PATH 796 - Individual Studies

PREREQUISITE: Limited to fourth year medicals students enrolled in the Penn State College of Medicine

PATH 796 - Individual Studies Elective - 5 credits

COURSE DIRECTOR: Faculty Research Advisor

LOCATION: N/A

MAXIMUM NUMBER OF STUDENTS: N/A

WHEN OFFERED: All Rotations

LENGTH OF ELECTIVE: 1 Month

PREREQUISITE: Limited to fourth year medical students enrolled in The Pennsylvania State University College of Medicine.

DESCRIPTION: Creative projects including non-thesis research supervised on an individual basis and which fall outside the scope of formal courses.

PATH 797 - Special Topics

PREREQUISITE: Limited to fourth year students enrolled in the Penn State College of Medicine. Arrangements with individual faculty members must be made in advance of registration

PATH 797- Special Topics/Independent Study Elective- 5 credits

COURSE DIRECTOR: Individual Pathology faculty

LOCATION: N/A

MAXIMUM NUMBER OF STUDENTS: N/A

WHEN OFFERED: All Rotations

LENGTH OF ELECTIVE: 1 Month

PREREQUISITE: Limited to students enrolled in The Pennsylvania State University College of Medicine. Offered to students in Year IV only. Arrangements with individual faculty members must be made in advance of registration.

DESCRIPTION: Medical Students will work with an individual faculty member in a Pathology subspecialty area of interest, such as Cytopathology, Advanced Surgical Pathology II (should have taken PATH 770 first), Neuropathology, Gynecologic Pathology, Dermatopathology, Virology, Blood Banking, or Molecular Diagnostics. Rotation will expose the student to routine diagnostic cases as well as to special projects.

PBL 743 - Problem-Based Learning Facilitation

PREREQUISITE: Completion of first three years of medical school

PBL 743 - Problem-Based Learning Facilitation - 5 credits

COURSE DIRECTOR: Carol Whitfield, Ph.D.: cwhitfield@hmc.psu.edu 531-8570

LOCATION: Hershey

WHEN OFFERED: Every month except May, June, July, and December

LENGTH OF SELECTIVE: 1 Month

PREREQUISITE: No course failures. A HP or H grade in 1 course and 1 clerkship. No noted unprofessional behaviors in PBL. A first-time pass in all NBME subject exams and USMLE Step I. A recommendation letter. A course director signature.

Description: This is a one-month elective course for MSIV students who are interested in being a facilitator in the PBL component of Penn State College of Medicine's preclinical curriculum. It may be of special interest to students who are planning to go into an academic medicine setting. The AAMC Project on the Clinical Education of Medical Students recommends that "teaching resident physicians to be teachers should begin in medical school", and that it is beneficial to "provide opportunities for senior students to learn teaching skills, and to gain teaching experience by having them tutor more junior students who are learning clinical skills or serve as co-facilitators for case-based learning exercises". Students who have recently gone through the interview process for residency matching have reported that they were often asked about their teaching experiences. In the past, we have had MSIV students facilitate in the PBL track that existed from 1992-1998, and at the beginning of the new curriculum. The 'student facilitators' enjoyed the experience, and the students in their groups gave very positive evaluations of them.

Goals

At the end of this rotation, students should have gained

1. A basic knowledge of educational theories that are used in the design of problem-based learning.
2. Developed a knowledge of basic skills in facilitating small, student-led groups.
3. Gained practical experience in facilitating PBL sessions.
4. Gained practical experience in assessing student performance in PBL sessions.

Prerequisites for the course:

1. The potential facilitator must be in good academic standing and have completed the required 3rd year clerkships (medicine, surgery, ob/gyn, pediatrics, psychiatry, family medicine).
2. They must have performed well as a student in PBL sessions.
3. There must be a letter of recommendation from a faculty member who has worked closely with the student and who has knowledge of the student's abilities and skills that would be important for someone serving as a facilitator (e.g. sense of responsibility, dependability, professionalism, good knowledge base, interest in inquiry).
4. Enrollment in the course will be limited, relative to the student's qualifications, the need for facilitators and availability of faculty facilitators.

Requirements during the course:

1. The student must attend a facilitator training session, to review the role that the facilitator fulfills in PBL, and to learn some of the skills of facilitation.
2. Assigned readings in PBL, adult learning theory and small group facilitation will be provided.
3. The student is expected to have weekly meetings with the course director to review their experiences, and discuss the reading assignments.

Grading:

1. A brief paper (7-10 pages) containing the following items is also required.
 - a summary of the experience
 - examples of how the lessons in the assigned readings were applied
 - the student's self-evaluation of their facilitation skills
 - suggestions for improving the course

This paper will be the basis for 80% of the course grade

PBL 720 - Case Development in Medical Education

PREREQUISITE: Successful completion of years 1-3 of the medical curriculum

PBL 720 - Case Development in Medical Education - 5 credits

COURSE DIRECTOR: Carol Whitfield, Ph.D.: cwhitfield@hmc.psu.edu 531-8570

LOCATION: Hershey

MAXIMUM NUMBER OF STUDENTS: 2

WHEN OFFERED: All Rotations, except December & July rotation--not offered.

LENGTH OF ELECTIVE: 1 Month

PREREQUISITE: Successful completion of years 1-3 of the medical curriculum.

DESCRIPTION: Students with an interest in academic medicine can have an opportunity to develop clinical cases for use in case-based learning or to develop and/or revise computer-based clinical cases.

STUDENTS MUST CONTACT ONE OF THE COURSE DIRECTORS FOR APPROVAL BEFORE REGISTERING FOR THIS ELECTIVE.

PED 745 - Pediatric Cardiothoracic Surgery Elective

PREREQUISITE: Third year core clerkships

PED 745 - Pediatric Cardiothoracic Surgery Elective - 5 credits

COURSE DIRECTOR: Dr. Brian Clark, jclark7@hmc.psu.edu 717-531-5115

LOCATION: Hershey

MAXIMUM NUMBER OF STUDENTS: 1

WHEN OFFERED: All Rotations

LENGTH OF ELECTIVE: 1 Month

PREREQUISITE: Third year core clerkships.

REPORT TO: Brian Clark, MD

TIME AND LOCATION: To Be Announced

DESCRIPTION: This course is intended as an advanced elective for fourth-year medical students who have a career interest in surgery or pediatrics. The course content will include:

- a. Preoperative evaluation of congenital heart disease as part of the initial surgical consultation. This evaluation will include, when applicable, the review and interpretation of pertinent diagnostic studies, such as chest films, echocardiography, computed tomography, cardiac MRI, and cardiac angiography.
- b. Preoperative decision-making regarding the indication and timing of surgical intervention for congenital heart disease. Students will attend and participate in our weekly pediatric cardiothoracic surgery conference, where cases are reviewed and treatment plans formulated in a consensus, multi-disciplinary fashion.
- c. Participation in the preoperative counseling and informed consent process with the patient and parents.
- d. Targeted reading for the specific upcoming operations. When possible, a lecture on the heart defect and the surgical repair will be given prior to the operation in order to increase the educational yield of the experience.
- e. Daily operative experience as an assistant to open-heart surgery on infants and children. Students will be provided with an explanation of the operation as it progresses, and be able to see the anatomy and the operative repair from a close, first-hand perspective. Students will review real-time intraoperative transesophageal echocardiography, and correlate the images with live appearance of the beating heart. They will further hone their surgical skills during the elective.
- f. Postoperative critical care management of infants and children recovering from heart surgery. Students will participate in daily rounds for the service, and improve their clinical skills in the intensive care setting.

SURG 745 - Pediatric Cardiothoracic Surgery Elective

PREREQUISITE: Third year core clerkships

SURG 745 - Pediatric Cardiothoracic Surgery Elective - 5 credits

COURSE DIRECTOR: Dr. Brian Clark, jclark7@hmc.psu.edu 717-531-5115

LOCATION: Hershey

MAXIMUM NUMBER OF STUDENTS: 1

WHEN OFFERED: All Rotations

LENGTH OF ELECTIVE: 1 Month

PREREQUISITE: Third year core clerkships.

REPORT TO: Brian Clark, MD

TIME AND LOCATION: To Be Announced

DESCRIPTION: This course is intended as an advanced elective for fourth-year medical students who have a career interest in surgery or pediatrics. The course content will include:

- a. Preoperative evaluation of congenital heart disease as part of the initial surgical consultation. This evaluation will include, when applicable, the review and interpretation

of pertinent diagnostic studies, such as chest films, echocardiography, computed tomography, cardiac MRI, and cardiac angiography.

b. Preoperative decision-making regarding the indication and timing of surgical intervention for congenital heart disease. Students will attend and participate in our weekly pediatric cardiothoracic surgery conference, where cases are reviewed and treatment plans formulated in a consensus, multi-disciplinary fashion.

c. Participation in the preoperative counseling and informed consent process with the patient and parents.

d. Targeted reading for the specific upcoming operations. When possible, a lecture on the heart defect and the surgical repair will be given prior to the operation in order to increase the educational yield of the experience.

e. Daily operative experience as an assistant to open-heart surgery on infants and children. Students will be provided with an explanation of the operation as it progresses, and be able to see the anatomy and the operative repair from a close, first-hand perspective. Students will review real-time intraoperative transesophageal echocardiography, and correlate the images with live appearance of the beating heart. They will further hone their surgical skills during the elective.

f. Postoperative critical care management of infants and children recovering from heart surgery. Students will participate in daily rounds for the service, and improve their clinical skills in the intensive care setting.