

## Teaching Requirement

**Purpose:** To provide students with basic skills in teaching and evaluation in a “coached” environment; and to revisit foundation sciences by teaching.

**General description:** Teaching in a VIC foundations course provides an opportunity to learn by teaching. The practicum comprises one month continuous participation as a teaching assistant in foundations courses and completion of teaching workshops during the month. The workshops provide specific instruction tailored to the teaching duties, best practices for active learning, assessment and feedback. Course specific duties and timing are listed below.

**Goals:**

1. To provide students with basic skills in teaching and evaluation in a “coached” environment. (MK, PBL, P)<sup>[2]</sup>
2. To revisit foundation sciences by teaching. (MK, PBL)<sup>[2]</sup>
3. To reinforce longitudinal integration in the VIC by revisiting foundation sciences with clinical perspective. (MK, PBL)<sup>[2]</sup>

**Note:** If you sign up for a teaching month which has a class schedule that is only two or three weeks you are still responsible for being on site and available to do work for the **whole month**. The **ONLY** exception to this is for students who teach in the December courses which may have a shorter month due to the holiday break.

**COURSE NO:** MD 1005  
**Title:** Teaching Requirement  
**Faculty:** Eileen CichoskiKelly, Ph.D., Course Director, Associate Professor, Family Medicine

**Time Commitment:** 1 month. **Permission required contact Teaching Requirement Course Director**  
[\*\*\(Eileen.CichoskiKelly@med.uvm.edu\)\*\*](mailto:Eileen.CichoskiKelly@med.uvm.edu)

**Months Offered:** Variable – see descriptions below  
**Enrollment:** Variable – see descriptions below  
**Visiting Students:** No

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### Course Descriptions

**Foundations of Clinical Science (FoCS):** Available August, September, October, November, December 2019 (variable each month)

Faculty Contact: Drs. Stephen Everse and Ellen Black

This course builds from fundamental concepts of biochemistry, cellular metabolism, and molecular genetics to understand cell biology, pharmacology, embryology and human physiology through an integrated study of normal healthy structure and function by examining microscopic and gross anatomy and interpreting basic radiological images. Appropriately woven throughout the course are skills development in evidence based medicine (EBM) and patient contact (Doctoring Skills curriculum) and practical discussions of ethics. Students learn to apply basic scientific principles and develop frameworks for clinical decision-making and the practice of evidence-based medicine during course activities that include team-based learning, small- and large-group discussions, anatomy and histology labs, interactive modules, lectures, and clinical skills practice with standardized patients. The integrated, interdisciplinary organization of the course highlights clinical, ethical, and public health implications of basic medical sciences. Interactive sessions also include guided practice with a variety of learning strategies to help students develop effective approaches that will prepare them for success in their ongoing studies.

- a) Responsibilities for August (content includes material on Genetics):
- b) Assist with Course setup tasks,
- c) Attend lectures
- d) Co-facilitate small group sessions with a faculty facilitator
- e) Conduct weekly review sessions (as a team)
- f) Assist with COMET modules
- g) Assist with Clinical Correlations
- h) Provide review and tutoring sessions

Responsibilities for September (content includes cell biology):

- a) Attend lectures
- b) Co-facilitate small group sessions with a faculty facilitator
- c) Conduct weekly review sessions (as a team)
- d) Assist with COMET modules
- e) Assist with Clinical Correlations
- f) Provide review and tutoring sessions

Two Student Teaching Teams are available for September-December:

Content focus for each month includes:

September: transition to histology (tissue types) and gross anatomy (back and start of limbs)

October: histology (muscle/nerve, respiratory, Cardiovascular, maybe renal) or Gross Anatomy (rest of limbs, thorax)

November: histology (maybe renal, definitely GI, male and female repro) or Gross Anatomy (abdomen and pelvis)

December: gross: head and cranial nerves

- 1) Anatomic dissection, embryology, and imaging Team (*6 students per month*)  
Responsibilities:
  - a) Dissect and keep ahead of the Foundations students
  - b) Assist in every gross anatomy lab session with dissection, answering questions, integrating embryology and imaging material
  - c) Attend embryology lectures
  - d) Hold review sessions
  - e) Assist in preparation of student "morning reporters"
  - f) Assist faculty with examinations
  - g) Assist with dissection videos for December month TAs
  
- 2) Structure-Function (Histology) Team (*2 students per month for October, November or December*)  
Responsibilities
  - a) Assist in every microanatomy lab session with answering questions and integrating physiology/ cell and organ function
  - b) Attend structure/ function lectures
  - c) Assist with Clinical skills session in Patient-Doctor program
  - d) Run weekly review sessions
  - e) Assist with examinations

**Attacks and Defenses:** Available January 2020 (*4 students*) and February (*2 students*) 2020 to include special teaching project

Faculty contact: Dr. Bill Raszka

Attacks and Defenses is a six-week course designed to integrate studies in the principles of infectious diseases, immunology, hematology and oncology as well as medical conditions of poison, trauma, and shock. This includes

concepts of homeostasis, cell metabolism, and the physical examination and related interviewing, diagnostic testing and imaging.

Responsibilities

- a) Assist in every lab session
- b) Assist with clinical skills
- c) Attend lectures
- d) Co-facilitate small group sessions with a faculty facilitator
- e) Conduct weekly review sessions (as a team of student teachers)

**Nutrition, Metabolism, and the GI System:** Available February 2020 and March 2020 (4 students per month)

Faculty contact: Dr. Rebecca Wilcox

Nutrition, Metabolism and the Gastrointestinal System in Health and Disease is an 8 week course that organizes studies in nutrition, gastrointestinal systems, organ system metabolism and endocrine system through lessons that integrate cell metabolism, normal and pathologic anatomy, pharmacology, physiology, pathophysiology and the physical examination and related interviewing, diagnostic testing and imaging. Learning is facilitated through faculty lectures, computer based tutorials, assigned readings, small group case discussions and workshops for problem solving and skills development. Clinical correlations reinforce the lessons of the community preceptorships. Written examinations are given after each of the modules.

Responsibilities:

- a) Assist pathology lab sessions
- b) Attend lectures
- c) Co-facilitate small group sessions with a faculty facilitator
- d) Conduct weekly review sessions (as a team)
- e) Assist with clinical skills

**Neural Sciences:** Available April 2020 (1 student), May 2020 (4 students), June 2020 (2 students).

Faculty Contact: Dr. Deepak Gupta

Neural Science is a nine week course designed to organize study of the nervous and behavioral system through lessons that integrate cell metabolism, endocrinology, normal and pathologic anatomy, pharmacology, physiology, pathophysiology and the physical examination and related interviewing, diagnostic testing and imaging. Several instructional methods support learning in this course, including lecture, readings from a variety of sources, laboratory sessions, physical examination and interviewing skills sessions, and case discussions prepared by students. Case discussions contain significant unique content and focus on symptoms, differential diagnosis, pathologic anatomy, pathophysiology, genetics, ethics, pharmacology, clinical imaging and laboratory results. Each case will have a videotape case trigger.

Responsibilities:

- a) Assist in all lab sessions
- b) Attend lectures
- c) Assist with instruction in neurologic and mental status examination skills session
- d) Co-facilitate small group sessions with a faculty facilitator
- e) Conduct tutor/ review sessions

**Connections:** Available August 2019 (2 students) **THIS IS A GREAT OPPORTUNITY FOR ANY STUDENTS SPECIALIZING IN ORTHOPEDICS!**

Faculty Contact: Dr. Deborah Cook

Connections is a two week course that organizes the study of skin, connective tissue, and the musculoskeletal system through lessons that integrate cell metabolism, endocrinology, normal and pathologic anatomy, pharmacology, physiology, pathophysiology and the physical examination and related interviewing, diagnostic testing and imaging.

It is a novel course that will introduce students to the study of the orthopedics, rheumatology and dermatology during the basic sciences.

Responsibilities:

- a) Assist clinical skills sessions
- b) Attend lectures
- c) Co-facilitate small group sessions with a faculty facilitator
- d) Conduct weekly review sessions (as a team)

**Cardiovascular, Respiratory, Renal Systems:** Available September 2019, October 2019 (4 students per month)  
Faculty Contact: TBD

Cardiovascular, Respiratory, and Renal Systems is a 9-week course that organizes studies in the cardiovascular, lymphatic, respiratory, renal, and urinary systems through lessons that integrate cell metabolism, endocrinology, normal and pathologic anatomy, pharmacology, physiology, pathophysiology and the physical examination and related interviewing, diagnostic testing and imaging

Responsibilities:

- a) Assist clinical skills sessions
- b) Assist pathology and physiology lab sessions
- c) Attend lectures
- d) Co-facilitate small group sessions with a faculty facilitator
- e) Conduct weekly review sessions (as a team)

### **PCR**

Faculty Contact: Dr. Shaden Eldakar-Hein

PCR TA responsibilities include:

- Curriculum development, which entails reviewing readings and session's activities, generating new readings, topics, and session activities.
- Substituting from time to time for absent preceptors.
- Developing and carrying out detailed evaluation of PCR sessions and curricula, which can include questionnaire development, lit searches, and some writing.

**HDRH (formerly Generations)** Available November and December 2019 (2-4 students per month)

Faculty Contact: Dr. Rachel Humphrey

HDRH (formerly Generations) is an eight week course that organizes studies in reproduction and development including those related to pregnancy and birth, childhood and adolescence, adult life, and aging through lessons that integrate cell and molecular biology, endocrinology, normal and pathologic anatomy, pharmacology, physiology, pathophysiology, the physical examination and related interviewing, diagnostic testing and imaging. This course examines variations in presentation of illness, etiology and pathogenesis across cultures and ages.

Responsibilities:

- a) Assist clinical skills sessions
- b) Assist pathology and physiology lab sessions
- c) Attend lectures
- d) Co-facilitate small group sessions with a faculty facilitator
- e) Conduct weekly review sessions (as a team)

**Special Teaching Project Family Medicine** (1 student per month March, April, May, September 2019)

Faculty Contact: Dr. Martha Seagrave, Dr. Michael Sirois, Dr. John King

This experience will involve in-depth literature review on one aspect of the topic as it relates to family medicine care. In addition the Project focus will be on best practices, identification of community resources, interviews and on-site visitation of primary resources.

**Responsibilities:**

- a) With guidance from the mentor review the literature with a focus on identifying primary care best practices.
- b) Review and update any current practice education materials on topic of focus.
- c) Weekly meetings with FM resident or faculty mentor.
- d) Identification of community resources relevant to the topic.
- e) Interview and on-site visit of available programs if applicable.
- f) Development of an educational product for the office practice. This could include staff and/or physician educational materials and word document that would have regional or national value.
- g) Presentation with resident mentor to FM residents and faculty at education sessions or grand rounds.

**Evaluation:**

- a) Student will be evaluated by FM resident mentor and faculty on reliability, self-direction, collaboration with community partners, effectiveness of deliverables (educational materials)
- b) Materials will be evaluated by community partners as applicable.
- c) Presentation will be evaluated by FM residents and available FM faculty and course directors.

**Special Teaching Project Simulation** Faculty Contact: Dr. Catherine Nicholas

**COURSE NO:** MD2000

**Title:** Simulation Acting Internship

**Faculty:** Cate Nicholas, EdD, MS, PA

Director of Operations

Clinical Simulations Laboratory

**Time Commitment:** 30-37.5 hours/week

**Months Offered:** All months

**Enrollment:** 2 students per month

**Goal:** To provide students with basic skills in simulation based methods of medical education including teaching, formative and summative evaluation.

**General Description:** Simulation is the cutting edge of medical education today, and will likely play a role in your learning experience as a resident. The Simulation month is an opportunity to practice skills that will serve you well in the future. Learn to put in a central line, help run a code, practice delivering babies, work on your laparoscopic skills including the DaVinci robotic trainer, practice intubating and bag masking manikins of all sizes. You can learn what a ruptured eardrum looks like through the scope, perform an endoscopy or colonoscopy...the list goes on and on! During the month, you will develop a training tool for other medical students or residents based on your personal interests as well as Simulation Center needs with the help of the Operations Director, the Senior Simulation

Specialist, and the Faculty. Activities may include Standardized patient teaching or summative assessments, task training activities, hybrid simulation or manikin based team training activities. This rotation meets the teaching requirement for graduation and is a great addition to your curriculum vitae.

**Preparation:** The “Sim-Terns” completes 3 workshops on simulation based medical education methods with the Operations Director:

1. *Basics of simulation based medical education*
2. *Debriefing techniques*
3. *Creating Scenarios*

**Responsibilities:** Each Sim-Tern is expected to:

1. Add to our annotated simulation based medical education bibliography.
2. Choose a procedure that interests them or one that we or a faculty member have identified as a priority, and using a standardized template to develop a workshop or a course that focuses on a specific level of learner. The workshop or course may contain a power point, procedure description, check list appropriate to the learner, video, and references.
3. The senior simulation specialist will assign the Sim-Terns to classes or courses of interest to the student that are taking place in the lab. The Sim-Terns will work side by side with the Sim techs. They will learn how to set up, operate the manikin, and break down the session.
4. The Sim-Terns may teach in any of the Clinical Skills programs that are running within the Foundations course during the month of their rotation working together with the standardized patients.
5. The Sim-Terns may be asked to give feedback on the medical student’s documentation of patient visits within the electronic health record.
6. The Sim-Terns may be called on to role play a 4<sup>th</sup> year medical student or resident in a scenario if needed.
7. The Sim-Tern may be asked to represent the lab during a visit by the press or given tours for visitors during business hours.

Evaluation:

1. Director of Operations will assess quality of article annotation and give the student feedback.
2. Procedural course that is developed is reviewed by an expert and feedback is given directly to students for revision and review.
3. Senior simulation specialist and Sim-terns given Director feedback on Sim-Terns work.

### **TA for Health Economics and/or Research Projects**

Faculty: Dr. Chris Jones [Chris.Jones@vtmednet.org](mailto:Chris.Jones@vtmednet.org)

Months available: March-March Must be available for Wednesday 4-7 class if choosing as a TA month  
One TA per month for teaching or teaching combined with research, one student for research alone

### **TA opportunity:**

Unique opportunity to work as a TA for Health Economics course at UVM and also do research with Dr. Jones Team on Various projects during that TA month(see below). Activities include course preparation, teaching, assessment, review hours, leading class discussions (class size 11 students), assisting with research as needed. Goal of course is to look at health care systems to find where the system could be more efficient while improving outcomes and reducing cost.

### **Research opportunities:**

Work on research during your TA month, or work on research project over time for your Scholarly Project Requirement. Current projects include:

- Research with Surgery Dept. database with predictive modeling
- OBGyn study regarding pregnancy and obesity consequences for weight loss to child
- New partnership with IBM heart failure and COPD, reducing hospitalizations with patients using medical home model.

Note: Currently as VT is preparing for the Single Payer system we have the best data in the country which will be fully cleaned and ready to use by March or April. Great for retrospective analysis.

<sup>[2]</sup> **VIC Curriculum Competencies**

- Medical Knowledge (MK)
- Practice-based Learning and Improvement (BPL)
- Professionalism (P)