Interdisciplinary Courses

Return to Doctor of Medicine Core Courses (http://bulletin.wustl.edu/medicine/degrees-offerings/doctor-of-medicine/#corecourses)

M80 InterDis 799 Selective Clerkship

M80 InterDis 807 Physical Medicine and Rehabilitation
The elective is designed to provide the student with a broad introduction to the field of Physical Medicine and Rehabilitation. Major objectives of this clinical elective are to achieve greater knowledge of the neurological and musculoskeletal diseases and their treatment, and gain understanding of basic principles of rehabilitation. The student will learn the clinical and rehabilitative care of patients with strokes, traumatic brain injury, spinal cord trauma and diseases, and limb amputations. Students will gain clinical skills in evaluating in management of functional impairments. Students will be expected to participate in daily rounds on inpatient rehabilitation units with the clinical care team, follow 3-5 patients, attend multidisciplinary team conferences and family meetings, attend outpatient rehabilitation clinics in spinal cord, stroke, traumatic brain injury, and amputee. Teaching and supervision is provided by the physiatry and neurology faculty of the Division of Rehabilitation. Rehabilitation and neurology residents are involved in student teaching as well. Students are required to participate in didactic teaching conferences within the PM&R residency. This rotation is particularly useful for students considering careers in rehabilitation, neurology, geriatrics, primary care, neurosurgery, or any other field that will require experience in the evaluation and management of patients with physical impairment and disabilities.

M80 InterDis 808 Step Preparation
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M80 InterDis 809 Ambulatory Care - Jacqueline Maritz Lung Center
The Jacqueline Maritz Lung Center houses the ambulatory care activities of the Divisions of Pulmonary Medicine, Thoracic Surgery, and Allergy/Immunology, as well as the pulmonary function laboratory. The student will rotate through: 1. both general pulmonary and subspecialty clinics in Pulmonary Medicine (cystic fibrosis, transplantation, emphysema, etc.), 2. the Thoracic Surgery clinic, and 3. the Allergy/Immunology clinic. Students will also interpret pulmonary function tests. Chest imaging is also emphasized in the evaluation process. The rotation can be streamlined to meet areas of emphasis desired by individual students.

M80 InterDis 827 Introduction to Global Health
This is a cross-disciplinary “crash course” in global health for students considering a career in global health and should be particularly useful for those students planning to complete international electives before graduation or during residency. The course consists of a mix of lectures, workshops, discussions, debates, laboratory sessions, clinics, and simulation labs for two weeks. Topics will include significant coverage of high-burden infectious and tropical diseases (primarily case-based) in addition to discussion of emerging and neglected global health topics including mental health, non-communicable diseases, radiology, and maternal health. Active participation in all activities and discussions is expected in order to obtain credit for this course. The course is taught by faculty from around the medical school with extensive experience in global health and will include opportunities to network with faculty and residents actively engaged in clinical, research, policy, and implementation work around the world. This course has been run for two years previously for residents only and now is being opened up to senior medical students as well. No specific clinical requirements or call is required. Attendance and active participation for each session throughout the two weeks is required and students should not schedule residency interviews or other time off during this block.

M80 InterDis 829 Biomedical Innovation and Entrepreneurship
This four-week course will be offered once during the year, from Weeks 25 through 28. The course will serve as both a primer for students interested in medical technology and biotechnology development as well as a hands-on opportunity for them to work directly with teams engaged in clinical problem solving and product development. Students will learn the basics of developing a business plan, market analysis, clinical needs assessment, and project design. Students will split their time between working with an IDEA Labs team, performing independent research, and completing educational modules. During the portion of the year that this course is offered, IDEA Labs teams are beginning their second round of product development. During this process, the teams need to reach out to the clinical community for input on clinical needs and marketability. Fourth-year medical students will work with one IDEA Labs team to help complete the clinical needs assessment and market analysis portions of their business model. They will do this by both reaching out to clinicians and performing the research necessary to complete these portions of the business model. Fourth-year medical students are uniquely qualified to help with the clinical needs assessment given their experiences, clinical knowledge, and connections from their third year of medical school. In addition, during this time, students will also be expected to complete a “passport” of online and hands-on learning modules from an assortment provided by IDEA Labs from which the student may choose. The lectures will consist of online/in-person lectures outlining business development, clinical needs assessment, market analysis, and product development. The hands-on experiences will consist of 3D printing/prototyping and an open-source, single-board microprocessor workshop. Students are not expected to master any one facet of this experience; instead, this course is intended to introduce students to some of the thought processes and techniques behind moving from a clinical problem to a market ready product. Learning Objectives: By the end of this course, students should be able to do the following: (1) Perform a clinical needs assessment of a proposed solution to a clinical problem, including clearly defining the problem at hand, researching current solutions, designing and implementing a needs-based survey, and obtaining expert opinion and consultation. (2) Perform a preliminary market analysis of a proposed solution to a clinical problem, including estimates of market size, market trends, market growth rate, market profitability, industry cost structure, distribution channels, key success factors, key success details, and a SWOT analysis (strengths, weaknesses, opportunities, and threats) of the proposed solution and IDEA Labs team/business as a whole. (3) Participate and engage in clinical problem identification and
solution validation. (4) Print a small 3D object using modern, commercially available 3D printing techniques. This course will be graded on a pass/fail basis. There will be no exam, and the following criteria will be used to determine the final grade: submission of a clinical needs assessment and a market analysis; demonstration of completed passport of experiences, and self-assessment involving the completion of a survey at the beginning and the end of the course reflecting on the knowledge gained during the course.

**M80 InterDis 831 One Health; Comparative and Ecological Medicine**

In this elective, medical students will analyze and evaluate their roles as practitioners of One Health: the collaborative, multisectoral, and transdisciplinary approach to health that optimizes health outcomes by recognizing the interdependence among people, animals, plants, and their shared environment. Students will explore human and animal health overlaps from the perspective of ecological health, and comparative anatomy and pathology. They will also have the chance to learn firsthand from veterinarians and animal health experts the extent to which human health is dependent on the close connections we have to the health of animals and our ecosystems. These learning opportunities will occur in the anatomy lab, in lectures, and alongside animal health care providers and scientists who are working within the fields of pathology, conservation, and zoological medicine. At the completion of this elective, students will turn in a One Health project applying the core concepts of ecological and comparative medicine.

**M80 InterDis 835 Interprofessional Hotspotting**

We are looking for ONE Washington University Medical Student interested in joining an interprofessional team of students that will learn how to take care of patients with complex medical and social needs. This student will join the Interprofessional Student Hotspotting Learning Collaborative (ISHLC), which is an annual program run by the Camden Coalition that trains interprofessional teams of professional students from schools across the country to learn to help patients with complex medical and social needs. The Center for Interprofessional Practice and Education (CIPE) at the Washington University Medical Campus will send ONE team this year to the Interprofessional Student Hotspotting Learning Collaborative. The team will consist of one nursing student from Barnes-Jewish Goldfarb School of Nursing, one occupational therapy student from the WashU OT school, one medical student from WashU School of Medicine, and one pharmacy student from St Louis College of Pharmacy. This team will learn from and take care of high-risk patients from September 2020 through April 2021, with an estimated time commitment of two hours per week.

**M80 InterDis 849 Fourth-Year Capstone**

The fourth-year Capstone course is highly structured. In order to provide students with the absolute best experience possible, students are REQUIRED to attend all sessions. In general, the morning sessions will start at 8:00 am and run until approximately 12 noon. Afternoon sessions will generally run from 1:00 pm until about 5:00 pm. The afternoon sessions are typically hands-on activities which are faculty/staff intensive. By the end of this four-week course, students should be able to demonstrate improved cognitive and clinical skills needed to enter the internship year of graduate medical training. Topics to be covered include acute clinical problems commonly faced on the inpatient service or emergency room, review of key diagnostic testing, basic procedural skills and patient and family communications regarding informed consent and end-of-life issues. Coursework will be divided between self-study, didactic, small group discussions, hands-on skills practice, and simulation. Parts of the course will be tailored to specialty interests. Students will be assessed by performance on simulation exercises and a written exam.

**M80 InterDis 851 The Business of Medicine**

This two-week interactive course enhances medical students’ Healthcare System Literacy, i.e. their understanding of how the healthcare system is structured, financed, operated, and regulated. They will learn how clinical decisions and options are tied to market forces, business structures, and health policy. From clinical practice management issues up to ‘big picture’ views of healthcare, the course modules help prepare students for the challenges they will face in their own practices as well as for leadership roles in improving patient care on a large scale. The course will be a blend of case-method sessions, targeted mini-lectures, expert panels, and field trips, all designed to invite student participation and engagement with representatives from a broad spectrum of the healthcare industry.

**M80 InterDis 863 Mind-Body Stress Reduction**

Mind-Body Stress Reduction is a program that uses intensive training in mindfulness meditation to teach people how to: - Reduce stress and anxiety - Increase focus & concentration - Manage health problems - Live more fully productive lives Mind-Body Stress Reduction utilizes both formal and informal mindfulness meditation practices. Mindfulness can be described as non-judgmental, non-striving, moment-by-moment attention. It is often called present-centered awareness, a state of consciousness that has been shown to have health benefits for the autonomic nervous system, to increase immune function, and to increase alpha and theta brain waves, which are present in deep states of relaxation.

**M80 InterDis 864 Care of the Homeless**

The purpose of this elective is to educate students on the following areas: the causes of homelessness; the health care consequences of homelessness, including medical problems, barriers to care, and distrust of health care providers; the safety net system in St. Louis; and how to provide primary care tailored to the needs of the homeless. The format of the elective will include individual readings (printed/online/Canvas) and viewing of “The Pruitt-Igoe Myth” and other video resources available for free. Zoom conferences with other instructors or community resources may be arranged. Students may be asked to explore online resources for case studies or to make the course more interactive. At the conclusion, students will complete a reflection paper. At the end of the course, the student will be able to assist homeless persons to access services in St. Louis; list and describe barriers to care for homeless persons; list and discuss some of the ways that providers can be more accommodating to homeless patients; formulate treatment plans that address food insecurity, lack of shelter, and other homeless patients’ needs; and understand the special difficulties faced when managing COVID in the homeless population.

**M80 InterDis 875 Medical Education Scholarship**

This two-week virtual elective will introduce types of education scholarship; provide guidance for selecting a topic, writing a question, and developing project objectives; illustrate meaningful outcomes for the evaluation of education scholarship projects; and introduce qualitative and quantitative methods appropriate for education scholarship. We will meet intermittently throughout
the two weeks on a mutually agreed-upon schedule. Much of the work will be done independently, with the instructor available to provide feedback and answer questions. By the end of the elective, the student will be able to define scholarship of teaching, discovery, integration, application, and engagement and provide examples of education scholarship in each type; describe the criteria for evaluating scholarship in medical education; provide examples of education outcomes at each level of Miller's Triangle and Kirkpatrick's Levels of Program Evaluation; and draft a plan for an education scholarship project with clear goals and appropriate plans for adequate preparation, appropriate methods, evaluation of results, dissemination, and reflective critique.

**M80 InterDis 880 Clinical Informatics**

Clinical informatics is the application of information technology and human resources in transforming data, information, and knowledge into meaningful health care improvements. Physicians practicing in this discipline provide oversight in the effective use of information systems and the development of innovative clinical pathways for patient care. During this rotation, trainees will assist in the operations of clinical informatics teams at BJH, SLCH, and WUSM, including information system management (e.g., incident response and improvement requests), reporting (data analysis and visualization), and clinical decision support. Trainees will support teams related to their clinical interests and participate in strategic meetings. Additional training in the use of reporting tools in Epic will be provided. Learning objectives include the following: utilize reporting tools to transform health care data into meaningful information and actionable knowledge; champion the safe and effective use of health care information systems; and apply change management principles to improve clinical processes and workflows.

**M80 InterDis 899T Teaching Elective**

Teaching support for second-year courses