



JOHNS HOPKINS
M E D I C I N E

SPRING 2023 ELECTIVES BOOK

<https://www.hopkinsmedicine.org/som/offices/registrars/med-students/electives.html>

INTRODUCTION AND GENERAL SUMMARY

A minimum of 24.5 weeks/955 hours are required for the M.D. degree. This provides a valuable opportunity for advanced study in the fields of medicine and the biological sciences through a process that is, as far as possible, open to the students' election. The chief constraint sets in when too many students ask for the same course at the same time. The sequence of electives can often be arranged to meet a student's desires and needs.

In addition to the 24.5 weeks of elective credit, **students must also complete two required electives.** These two electives include: one **advanced clerkship** (either the Advanced Clerkship in Critical Care or the Advanced Ambulatory Clerkship), and **one approved Subinternship experience.** Each of these clerkships is 4.5 weeks in length.

Students should consult freely with members of the faculty, the Associate Dean for Medical Student Affairs and Colleges Advisors in developing their programs. The ultimate responsibility for arranging the elective course of study rests with the student.

The electives chosen may be any of those formally listed in the elective book and in the catalog, or they may be developed on an individual basis with members of the faculty at Hopkins or elsewhere (approval of the Associate Dean for Medical Student Affairs is required for elective work carried out at other institutions). Only those electives which are considered to be a sound educational experience whether taken at Hopkins or at another institution will be approved.

The Associate Dean and Assistant Deans for Medical Student Affairs will be glad to help with arrangements for electives in other institutions. Remember that at least 15.5 weeks/605 hours must be taken with Johns Hopkins faculty.

Electives are an integral part of the required curriculum and students must register at the Registrar's Office for programs of study. Evaluation of the student's performance must be provided by the faculty preceptor.

BASIC DEFINITIONS AND RULES

The following information is made as complete as possible to assist in planning an elective program.

Definitions of Terms Used in Guidelines:

Home Department: any officially designated department of the Johns Hopkins University, including the Bloomberg School of Public Health and the Homewood Schools.

Faculty Preceptor: a faculty member who supervises an elective offering. In general, a faculty preceptor will have the rank of assistant professor or higher. The faculty preceptor will also be responsible for providing an evaluation of the student's work at the end of the elective period.

Internship Advisor: a faculty member assigned by a department to provide information about internships in the department and elsewhere. Although not directly responsible for electives, internship advisors

are a valuable additional resource in planning a student's course of action. Internship advisors are listed at the end of these guidelines.

Activities Recommended as Electives: Elective credit will be given for a program of study that is considered by a faculty member to be a valuable intellectual experience and is approved by the department chairperson. Such activities may include advanced clerkships, individually arranged laboratory or clinical research, or advanced elective courses. Students may also undertake projects of their own within the framework of the laboratory or clinical activities of a home department so long as a faculty member approves it. However, unstructured, and unsupervised attendance at seminars and conferences is not acceptable for elective credit.

Research Electives: Research electives are arranged between the student and a faculty preceptor. No specific period of time need be spent on a project, but many faculty preceptors feel that a profitable research experience requires at least one full quarter (nine weeks). Students who undertake research during an elective quarter may also do some clinical work and attend conferences or seminars in any department if approved by their Faculty Preceptor.

Other Activities in the Home Department: During an elective period, students are considered junior members of the home department. As such, they are expected to participate in department conferences and other activities. Their role should be that of an active contributor rather than a passive observer.

Electives Other Academic Institutions: Elective study at other institutions must be approved by the Associate Dean for Medical Student Affairs. A letter of acceptance must be obtained from the sponsor at the outside institution and submitted along with the student's elective registration form and a list of goals and objectives. Assistance in arranging for electives elsewhere is also available in the Office of Medical Student Affairs. In general, externships or clinical clerkships at hospitals not directly affiliated with a medical school will not be approved.

Evaluation of Performance during an Elective: Faculty Preceptors will submit an evaluation and characterization of each student's performance at the end of each elective experience. Satisfactory completion of an elective is required in order to receive credit toward the M.D. degree.

Stipends for Elective Activities: Students may apply toward meeting the required 24.5 weeks/955 hours no more than 13.5 weeks of credit for which they also receive remuneration. Excluded from this limitation are prizes and merit awards (e.g., the Denison Scholarships). However, it is recognized that some sources of funding may prohibit award of academic credit.

Vacation: The curriculum provides flexibility in scheduling vacation periods.

FORMS AND ASSOCIATED DEADLINES AND RULES

Students must complete a registration form for each elective experience in order to receive academic credit. The forms are available on the [JHUSOM Registrar Self-Service portal](#). After completing an elective registration form, the student must have it signed by the course director. If the elective is an experience outside of the Hopkins system, the student will need to obtain the signature of the Associate Dean for Medical Student Affairs. Students are expected to consult with their advisors about their academic program at regular intervals. It is the responsibility of the student to see that the Elective

Registration Form is completed and submitted to the Registrar's Office in a timely manner. The deadline for submission of the elective registration form is prior to the start of the elective. Effective July 1, 2020, the Office of the Registrar will no longer accept retroactive elective registration forms.

Drop Form – within the deadline: The normal deadline for dropping electives is one month prior to the course, with the exception of a two-month deadline for dropping subinternships and certain advanced clerkships. If a student wants to drop a course within the deadline, he or she should submit a drop form to the course director and verify the signed copy has been submitted to the Office of the Registrar prior to submitting a new registration form for that period.

Late Drop Form: Changes will not ordinarily be permitted after the deadlines, though students may petition for such changes by submitting a drop form to the Course Director, and the Associate Dean for Medical Student Affairs. The completed form with appropriate signatures should be submitted to the Registrar's Office. Credit will not be given for course work other than that indicated on the most current registration form. If a student fails to attend a course for which they have registered, an incomplete grade will be recorded on the transcript for that course, and the student will not be given credit for any other course during that time period.

RULES CONCERNING REQUIRED SUBINTERNSHIPS AND CERTAIN ADVANCED CLINICAL ELECTIVES

Certain advanced clinical electives (listed below) are very much in demand. One of the important advantages of these clerkships is the independent responsibility delegated to students so that they play a very active role in patient care. The trade-off is that students registering for these electives must accept the special responsibilities and obligations which they carry to patients, staff, their colleagues, and other members of the health care unit. Last minute dropouts from these courses impose burdens on the clinical unit and often mean lost opportunity for other students who want to participate in the elective. In view of the problems which have resulted from last minute dropouts, the Undergraduate Medical Educational Policy and Curriculum Committee (UMEPCC) adopted the following rules regarding the scheduling process for these rotations:

Students registering for advanced electives with significant patient care responsibilities are obliged to participate in such electives. Changes must be made two months prior to the start of such electives. If a drop is necessary past the deadline, the student may petition for a change by submitting a "Request to Drop Course After Deadline" to the Course Director, and the Associate Dean for Medical Student Affairs, and filing the completed form with the Registrar's Office. Credit will not be given for course work other than that indicated on the most current registration form. If student fails to attend a course for which they have registered, an incomplete grade will be recorded on their transcript for that course, and the student will not be given credit for any other course during that time period.

The following clinical experiences are governed by these rules:

REQUIRED SELECTIVES

Approved Subinternship Experience

Prerequisite(s): Respective Core Clerkship

Availability/Duration: Year-round, 4.5 weeks; follows SOM Academic Calendar quarter dates

Drop Period: All scheduling must occur through the Registrar's Office

Subinternships that fulfill graduation requirements (JHH or Bayview only):

Emergency Medicine (Prerequisite: Emergency Medicine Core Clerkship)

Subinternship in Emergency Medicine (JHH – Dr. Sharon Bord)

Medicine (Prerequisite: Medicine Core Clerkship)

Subinternship in Medicine – Hospitalist Service (JH Bayview Medical Center) (Bayview – Dr. Rupert Hung)

Subinternship in Medicine (JHH – Dr. Amit Pahwa)

Subinternship in Medicine - Bayview Medical Center (Bayview – Dr. Janet Record)

Subinternship in Medicine - Hospitalist Service (JHH – Dr. Padmini Ranasinghe)

Subinternship in Medicine at JH Howard County Medical Center (Howard County – Dr. Bradley Strunk)

Pediatrics (Prerequisite: Pediatrics Core Clerkship)

Harriet Lane Clinic Subinternship (JHH – Dr. Nakiya Showell)

Subinternship in Inpatient Pediatrics (JHH – Dr. Amit Pahwa)

Subinternship in Pediatric Emergency Medicine (JHH – Dr. Lauren Kahl)

Surgery (Prerequisite: Surgery Core Clerkship)

Subinternship in Neurosurgical Surgery (JHH – Dr. Timothy Witham)

Subinternship in Noncardiac Thoracic Surgery (JHH – Dr. Richard Battafarano)

Pediatric Orthopaedic Surgery (JHH – Dr. Paul Sponseller)

Subinternship in Orthopaedic Surgery (Bayview – Dr. Brian Neuman)

Subinternship in Otolaryngology (JHH – Dr. Marietta Tan)

Subinternship in Plastic Surgery (JHH – Dr. Salih Colakoglu)

Subinternship in Surgery (JHH – Dr. Alodia Gabre-Kidan)

Subinternship in Surgery (Bayview – Dr. Alodia Gabre-Kidan)

Subinternship in Urology (JHH – Dr. Sunil Patel)

Women's Health (Prerequisite: Women's Health Core Clerkship)

Subinternship in Gynecologic Oncology (JHH – Dr. Silka Patel) {offered during Summer pds. 1, 2, and 3}

Subinternship in Gynecology (Bayview – Dr. Silka Patel) {only offered during Summer pd. 3}

Subinternship in Gynecology & Obstetrics (JHH – Dr. Silka Patel) {only offered during Summer pd. 3}

Subinternship in Obstetrics/Maternal Fetal Medicine (JHH – Dr. Silka Patel) {offered during Summer pds. 1, 2, and 3}

The following subinternships do not fulfill this requirement: Dermatology, Psychiatry, Neurology, Cardiac Surgery, and Ophthalmology.

Advanced Clerkship in Critical Care

Prerequisite(s): Medicine or Surgery Core Clerkship, except PICU which has a Prerequisite of Pediatrics

Availability/Duration: Year-round, 4.5 weeks; follows SOM Academic Calendar quarter dates

Drop Period: All scheduling must occur through the Registrar's Office

Site Assignments:

Medicine (Prerequisite: Medicine Core Clerkship)

Advanced Clerkship in Critical Care - Coronary Intensive Care (CICU) (Bayview – Dr. Marlene Williams)

Advanced Clerkship in Critical Care - Coronary Intensive Care (CICU) (JHH – Dr. Steve Schulman)

Advanced Clerkship in Critical Care - Medical Intensive Care (MICU) (Bayview – Dr. Souvik Chatterjee)

Advanced Clerkship in Critical Care - Medical Intensive Care (MICU) (JHH – Dr. David Hager)

Pediatrics (Prerequisite: Pediatrics Core Clerkship)

Advanced Clerkship in Critical Care - Pediatric Intensive Care (PICU) (JHH – Dr. Amanda Levin)

Neurology (Prerequisite: Medicine, Neurology, or Surgery Core Clerkships)

Advanced Clerkship in Critical Care - Neurocritical Intensive Care (NCCU) (Bayview – Dr. Jose Suarez)

Advanced Clerkship in Critical Care - Neurocritical Intensive Care (NCCU) (JHH – Dr. Jose Suarez)

Surgery (Prerequisite: Surgery Core Clerkship)

Advanced Clerkship in Critical Care - Cardiac Surgery Intensive Care (CSICU) (JHH – Dr. Glenn Whitman)

Advanced Clerkship in Critical Care - Surgical Intensive Care (SICU) (JHH – Drs. Pamela Lipsett/Brad Winters)

Advanced Clerkship in Critical Care - Weinberg Intensive Care (WICU) (JHH – Drs. Pamela Lipsett/Brad Winters)

Advanced Ambulatory Clerkship

Course Type: Advanced Clinical Clerkship

Department/Division: Internal Medicine

Course Director: Dr. Sujay Pathak

Contact: Ms. Pamela McCann, pmccann3@jhmi.edu

Faculty: Drs. Sujay Pathak, Naomi Cutler, Sara Mixter, Holly Dahlman, Sharon Dlhosh, and others

Availability/Duration: Available year-round, every half-quarter

Prerequisite(s): At least the Medicine Core Clerkship is required; 2-3 clerkships, including Medicine, Pediatrics, or Women's Health preferred.

Drop Period: 1 month

Description: The Advanced Ambulatory Clerkship combines patient care experience in an outpatient primary care practice with additional experiences in the JH Bayview Geriatric Clinics, Memory Clinic, and Home Care visits. In their assigned outpatient primary care practice, students will work directly under the supervision of one (or more) preceptors in the field of General Internal Medicine or Family Practice. There is a curriculum of online modules that provides background in a number of topics that are relevant to primary and preventive care. Each student learns fundamental broad topics necessary to assess and provide care for adult patients along the continuum of aging.

If you have any questions about these rules and procedures, please do not hesitate to contact Dr. Katherine Chretien, Associate Dean for Medical Student Affairs, (410-955-3416), or William Bryant Faust IV, EdD Associate Dean and Registrar, (410-955-3080).

GLOSSARY OF TERMS TO DESCRIBE ELECTIVES

SUBINTERNSHIP:

A rotation in which the student assumes the role of an intern, including primary care of patients and sharing night call

CLINICAL CLERKSHIP:

A rotation similar to a Core clerkship but with more responsibility for patient care and teaching

CONSULT SERVICE:

A rotation in which the student participates in the daily consultative activities of a particular division; may include the selected care of inpatients and outpatients of that division

TUTORIAL:

A rotation in which the student works with one or a very few faculty members in tutorial and didactic settings. May be in a clinical or basic science department

BASIC RESEARCH:

A rotation in which the student is engaged in laboratory research in a basic science department or in a clinical department

CLINICAL RESEARCH:

A rotation in which the student is engaged in research in clinical medicine. May sometimes include laboratory work

RESIDENCY ADVISORS

Anesthesiology & Critical Care Medicine

Dr. Tina Tran

410-955-7615

Bloomberg 6220

Ttran32@jhmi.edu

Dermatology	Dr. Daren Simkin Dsimkin1@jhmi.edu	
Family Practice	Dr. Nancy Barr Franklin Square Hospital nancy.b.barr@medstar.net	
Medicine	Dr. Sanjay V. Desai sanjayvdesai@jhu.edu Dr. Danelle Cayea dcayea1@jhmi.edu	410-955-7910
Neurology	Dr. Raf Llinas rllinas@jhmi.edu Dr. Michael Kornberg michael.kornberg@jhmi.edu Dr. Elisabeth Marsh ebmarsh@jhmi.edu	
Gynecology & Obstetrics	Dr. Betty Chou Phipps 227, JHH bchou1@jhmi.edu	410-955-6710
Ophthalmology	Dr. Henry Jampel Woods 177 hjampel@jhmi.edu	
Orthopaedic Surgery	Dr. Dawn LaPorte dlaport1@jhmi.edu Dr. Michael Ain JHOC 5253 main@jhmi.edu	410-955-9300

Otolaryngology	Dr. Alexander Hillel ahillel@jhmi.edu	
Pathology	Dr. Charles Steenbergen Csteenb1@jhmi.edu	410-502-5982
Pediatrics	Dr. Nicole Shilkofski Bloomberg 8464 nshilko1@jhmi.edu	410-955-2727
Psychiatry	Dr. Vinay Parekh Meyer 4-181, JHH vparekh1@jhmi.edu	410-955-5514
Radiology	Dr. Liliya Solnes lsolnes1@jhmi.edu	
Surgery	Dr. Pamela Lipsett Osler 603 plipsett@jhmi.edu	410-955-3739
Urology	Dr. Marisa Clifton Marburg 144A mmeyer18@jhmi.edu	410-955-2139

Internship advisors are available to assist students seeking post-graduate appointments. Students applying in these areas should make appointments to see at least one of the departmental advisors. Students are encouraged to seek additional advice from a variety of faculty, house staff, college advisors and peers. A broad base of information is helpful.

It may also be helpful to talk to some of our recent graduates who are at other institutions. The Office of Medical Student Affairs can provide names and addresses to assist you.

There are some students who will be going into residencies in disciplines other than those listed. While the Associate Dean of Medical Student Affairs can advise students concerning that process, it is also important that students speak with the department or division director in the discipline in which they have interest.

DEPARTMENTAL RECOMMENDATIONS

The following statements, provided by the clinical departments, suggest curricular choices for students wishing to enter post graduate training in a particular specialty.

ANESTHESIOLOGY

The basic recommendations for entrance into a residency in Anesthesiology and Critical Care Medicine are:

1. An interest and demonstrated proficiency in basic physiological and pharmacological principles.
2. A solid background in internal medicine, surgery, and/or pediatrics. Anesthesiology requires a clinical base year (medicine, surgery, pediatrics, or transitional) which is either a separate preliminary year or twelve months of basic experience incorporated into the residency itself, depending upon the program. The preliminary year focus should be chosen based on your preferences and skills, although internal medicine is often considered most useful. Elective suggestions for medical students include cardiology, pulmonary medicine, emergency medicine, surgical intensive care, and a medicine or surgery sub-internship.
3. A four-week elective in anesthesiology will allow you to develop an informed specialty decision and permit us to support your application as best we can. Further advanced electives in anesthesiology or anesthesia sub-specialties can be helpful to assist in career decisions and can be tailored to your interests but are not necessary. It is typically not helpful to do away or “audition” rotations in anesthesia.
4. Research in any area (basic science, clinical, biomedical engineering, information management, health policy, etc.) can be relevant to anesthesiology and can greatly enhance an application, although it is not expected or required unless you anticipate an academic career.
5. Personal characteristics suggesting promise in anesthesiology, which include an inquisitive nature, dynamic decision-making skills utilizing multiple variables and hypothesis testing, the ability to maintain a high level of vigilance and detail-oriented approach to patient care, good procedural skills, the desire to work as part of a team, a willingness to be flexible and adapt to different work environments and new technology, and the ability to organize resources and maintain a demeanor of effective leadership in crisis situations.

Dr. Colleen Koch

Chair

Department of Anesthesiology and Critical Care Medicine

DERMATOLOGY

We welcome students to take a dermatology clerkship regardless of the medical discipline they intend to pursue. However, this should take place towards the end of their third year after completing several core clerkships including Medicine, Surgery and Pediatrics. We believe students should receive as broad exposure to medicine as possible before taking our introductory clerkship (Clinical Clerkship in Dermatology) and making career decisions. If further experience/learning is desired, we also suggest taking our Advanced Clinical Clerkship in Dermatology. For those students with a career interest in Dermatology, taking electives in related sub-specialties such as Rheumatology, Immunology, and Plastic Surgery are encouraged.

*Dr. Daren Simkin
Assistant Professor, Department of Dermatology
Assistant Residency Program Director
Director of Medical Student Education*

*Medical Student Rotation Coordinator:
Shanika Bennett
sbenne17@jhmi.edu*

EMERGENCY MEDICINE

The student interested in a career in Emergency Medicine is well advised to take advantage of the career counseling services available in the Department of Emergency Medicine to aid them in their decision-making process. Students can be advised in the following areas:

1. Personal life/goal planning
2. Careers in Emergency Medicine
3. Medical school rotations
4. Application preparation
5. Interview skills
6. Research exposure

The Department of Emergency Medicine at Johns Hopkins is particularly interested in those students who wish to pursue academic careers, but department members will be happy to advise students contemplating community hospital or private practice careers.

Medical student rotations should emphasize a well-balanced program including: emergency medicine, pediatric emergencies, general surgery and trauma, internal medicine, cardiology, anesthesia, general pediatrics, obstetrics & gynecology, and intensive care rotations. Other recommended rotations include: psychiatry, ophthalmology, orthopaedics, plastic surgery, otolaryngology, neurology, and pulmonary/critical care medicine. Research experience is highly recommended, and opportunities are offered through the Johns Hopkins Department of Emergency Medicine.

Those interested in applying for the Emergency Medicine training program at Johns Hopkins are advised to arrange elective time in late third year or early fourth year. Since specialty training in Emergency

Medicine is among the most competitive in the country, it may be wise to arrange an elective at another institution also. Faculty members in the Department of Emergency Medicine can advise in this regard.

*Dr. G. D. Kelen
Director
Department of Emergency Medicine*

GYNECOLOGY & OBSTETRICS

For those students who are considering a career in Obstetrics and Gynecology or who desire additional experience in Women's Health, a Subinternship in Obstetrics and/or Gynecology is available. Successful completion of a core clerkship in Obstetrics and Gynecology is a prerequisite for all subinternships.

If the student wishes to take subspecialty electives within the department, there is a choice of gynecology, gynecologic pathology, gynecologic oncology, reproductive endocrinology and infertility, maternal-fetal medicine, family planning, and pelvic medicine and reconstructive surgery, as well as many opportunities for research. Clinical electives are primarily offered when a core clerkship is not in session. Core clerkship dates may be found on the department's medical student website:

www.hopkinsmedicine.org/gynecology_obstetrics/education/medstudents/

Since Obstetrics and Gynecology is a primary care field, the most appropriate use of elective time for students who are committed to specialty training in Obstetrics and Gynecology involves completion of the various subspecialty medical or surgical electives. Although the student is welcome, it is not necessary to take elective courses within the Department of Gynecology and Obstetrics.

All requests for subinternships and electives from the Registrar's Office are initially screened through the department's Office of Medical Student Education (contact Rebecca Slattery at 410-614-0088). All requests for research electives may be directed toward individual faculty, or the student may contact Dr. Silka Patel or Ms. Rebecca Slattery for assistance in finding the appropriate research mentor.

*Dr. Andrew J. Satin
Chair
Department of Gynecology & Obstetrics*

*Dr. Betty Chou
Director of Resident Education
Department of Gynecology & Obstetrics*

*Dr. Silka Patel
Women's Health Clerkship Director
Department of Gynecology & Obstetrics*

INTERNAL MEDICINE

We are looking for people who will become healers and leaders in Internal Medicine. Most successful applicants to the Osler Medical Housestaff Training program will have performed in an outstanding fashion on multiple internal medicine rotations and will have explored beyond the boundaries of the traditional curriculum, e.g., becoming involved in research or community service. We offer a commitment to outstanding patient care, a collegial environment, and an intellectually stimulating experience.

Dr. Sanjay V. Desai
Director
Osler Residency Training Program

NEUROLOGY CORE CLINICAL CLERKSHIP

Neurology is part of the core curriculum at the Johns Hopkins University School of Medicine. It is preferred, but not required that students complete their Medicine clerkship before taking Neurology. The clerkship includes both inpatient and consultation services as well as an outpatient experience. For those with an interest in the area of Pediatric Neurology, a request may be made to be placed on that service.

Several Neurology electives are available which students who are interested in a residency in Neurology have found to be a rewarding experience.

For students with further interest, an elective and sub-I rotations in both Adult and Pediatric Neurology are now available.

Dr. Rachel Salas, Director
Dr. Doris Leung, Co-director
Neurology Core Clerkship

NEUROLOGY RESIDENCY

www.hopkinsmedicine.org/neurology_neurosurgery/education/residencies/neurology_residency/index.html

The residency is a three-year program that follows a required Medicine Internship year. The major goal of the program is to prepare neurologists for a career in academic medicine, beginning with the acquisition of excellent clinical skills. A rich and diversified clinical experience is assured by exposure to several distinct inpatient services, consultative services, and outpatient settings at the three teaching hospitals.

We have agreements with both the Osler Medical Residency and the Bayview Medical Residency to place neurology applicants in their programs. Students who plan to go on to adult neurology directly after internship must have made this career decision by early in the fourth year of medical school. There is a matching system (ERAS) which accompanies the internship application process.

Dr. Rafael Llinas
Director, Neurology Residency Program

Dr. Michael Kornberg
Associate Director, Neurology Residency Program

Dr. Elisabeth Marsh
Associate Director, Neurology Residency Program

Dr. Rachel Salas
Director, Neurology Core Clerkship

Dr. Doris Leung
Associate Director, Neurology Core Clerkship

Dr. Carlos Romo

Program Contact

Sandy Vieyra

Medical Training Program Administrator

410 502 0817

svieyra@jhmi.edu

Pediatric Neurology Residency

www.hopkinsmedicine.org/neurology_neurosurgery/education/residencies/pediatric_neurology/index.html

The Pediatric Neurology residency at Johns Hopkins is a three-year program that follows a one year required Medicine Internship and one year of Pediatrics. It is designed to train a physician in academic and clinical pediatric neurology. The program stresses the development of competence in several areas including clinical neurology (with inpatient, outpatient, and consultative experiences), neurosurgical problems, and the scientific basis of neurology. Furthermore, the program allows pediatricians with diverse backgrounds and interests the opportunity to develop areas of special competence in specific clinical or research areas. All residents are required to participate in at least one research project under the mentorship of a full-time member of the faculty, to be completed and presented in June of their graduating year.

Dr. Eric Kossoff Dr. Adam Hartman

Director, Pediatric Neurology Associate Director, Pediatric Neurology

Residency Program Residency Program

OPHTHALMOLOGY

Students who plan to apply for a residency in Ophthalmology should:

1. Meet with the Director of Medical Student Education in Ophthalmology, Dr. Henry Jampel , to discuss scheduling of clerkships and electives: hjampel@jhmi.edu; 410-955-6052

2. Consider the following scheduling guidelines:

Clerkships in Medicine and Surgery, the General Clinical Elective in Ophthalmology, and any other clerkship or elective in a field that is a possible career choice should be scheduled as early as possible in the third year.

3. Students applying for residency in Ophthalmology should plan to do two or three electives in the field.

Other electives that students going into Ophthalmology have found helpful (but not required) are the Advanced Clerkship in Internal Medicine; Subinternship in Medicine at Good Samaritan (Rheumatology or Pulmonary); Dermatology; Radiology and Infectious Disease.

PATHOLOGY

Electives in Pathology provide students an excellent way of broadening their knowledge of medicine and determining their level of interest in the specialty. Most pathology electives give students firsthand knowledge of the central role pathology plays in the diagnosis of disease, and as such, are valuable for students going into almost any clinical specialty. Both general and subspecialty electives in Pathology are available. Electives in anatomic pathology focus on morphologic and histologic diagnosis; those in the clinical laboratory illustrate the effective use and interpretation of laboratory testing, while others provide insight into basic pathogenesis of disease. Students who have already made a firm decision to enter postgraduate training in Pathology should contact an advisor in the department to gain assistance in planning a balanced elective program.

*Dr. Marc Halushka
Deputy Director for Education*

*Dr. Ralph Hruban
Director
Department of Pathology*

PEDIATRICS

Elective experiences offered in the Department of Pediatrics include subspecialty consultation services, research opportunities and subinternships on a variety of services. Subspecialty electives help the student develop specific skills and knowledge and emphasize the development of an approach to patients who have been referred because of their particular problems. Subinternships, whether in the neonatal intensive care unit, on the general pediatric inpatient units, or in the Harriet Lane Clinic, offer the student an opportunity to manage a variety of patients with a higher level of independence than they experienced during the Core clerkship. A wide range of clinical and laboratory research experiences provide students with a close working relationship with faculty mentors and a chance to help define new knowledge, whether the student is an experienced researcher or a beginner. Members of the pediatric faculty are available to provide guidance and advice for students who seek further experience in pediatrics, whether he/she is certain of the career path or is in the exploration stage. Either Dr. Christopher Golden (Pediatrics Clerkship director) cgolden@jhmi.edu or Dr. Nicole Shilkofski, (Vice-Chair for Pediatric Education) 410-955-2727 would be happy to discuss elective choices.

*Dr. Tina Cheng
Director
Department of Pediatrics*

PSYCHIATRY

Although there are numerous clinical and research electives available in the department, they should not be considered as prerequisites for residency training in psychiatry.

For those students who are considering doing a psychiatry residency, we strongly recommend that they do a subinternship in Psychiatry. However, elective time in psychiatry for these students is also encouraged as it will allow them to clarify their choice and to develop new areas of interest in the field.

We find that the subinternship experience is especially good for those students who wish to find out if they will like psychiatry as a career before making decisions about entering the field. It is also quite helpful for those students who are sure that they are not going into psychiatry but realize that a broadened clinical experience in this field would be useful for them in their chosen specialty. Students who think they might be interested in training in psychiatry should talk with Dr. Vinay Parekh (410-955-5514) as early as possible to get answers to questions and to get advice concerning their educational plans.

*Dr. Vinay Parekh
Director, Psychiatry Clerkship and Clinical Electives*

RADIOLOGY

Opportunities are available for research projects in magnetic resonance spectroscopy, magnetic resonance imaging, neuroradiology, cardiovascular interventional radiology, computed tomography, positron emission tomography, and diagnostic ultrasound. The successful completion of a research project often enhances a student's likelihood of being selected by a Radiology residency program.

*Dr. Karen Horton
Director
Department of Radiology*

SURGERY

Recommended electives: Gastroenterology, Infectious Disease, Nephrology, Cardiology, Pulmonary, and Anesthesiology.

Recommended - Research Experience. This need not be done in a surgical laboratory but may have application to the care of surgical patients. Research in either the laboratory or clinical research setting is acceptable.

Surgery electives that are helpful in making career decisions for other students include: Surgical Subinternship, Surgical Intensive Care, or Elective Clerkships in the Surgical Specialties

Students planning to apply for non-surgical training programs may also find the above surgical electives at Johns Hopkins of benefit to their medical education. Applicants to the Hopkins surgical program are evaluated on an individual basis, and those wishing to be considered for a Hopkins appointment should discuss their decision with either Dr. Alodia Gabre-Kidan (agabrek1@jhmi.edu), or the Director of the appropriate Surgical Specialty Department.

OTOLARYNGOLOGY – HEAD AND NECK SURGERY

Medical students interested in a postgraduate career in Otolaryngology-Head and Neck Surgery should be well grounded in the basic principles of surgery, medicine, and pediatrics. During the third year of medical school, interested students can participate in a two-week elective in Otolaryngology-Head and Neck Surgery during their basic surgical clerkship. The experience gained in this rotation provides front line exposure to all aspects of clinical and surgical care provided within our discipline. For those who are not able to match to that elective, as well as those who wish more of an exposure, there is a senior year

elective option which should be taken early in the year. Other useful related electives include Neurosurgery, Ophthalmology, Plastic Surgery and Anesthesiology.

Throughout the United States today, resident candidates are being advised to pursue a meaningful research experience as a medical student. Exposure to well-designed research rotations provides an opportunity to apply prospective, controlled experimental methodologies, and immeasurably strengthens an application for a residency position in Otolaryngology-Head and Neck Surgery.

Dr. David Eisele
Director
Department of Otolaryngology-Head and Neck Surgery

ORTHOPAEDIC SURGERY

We highly encourage all medical students considering application to an Orthopaedic resident training program to work with our surgeons. All faculty are involved in selecting candidates for post graduate training in Orthopaedics. A student will do best as an Orthopaedic subintern if they are well grounded in surgery and medicine prior to their subinternship. They should take their core clerkships in these fields and exploit the opportunities to learn the fundamentals of Orthopaedics prior to taking an advanced Orthopaedic clerkship. I recommend taking an advanced Orthopaedic clerkship in the institution or with members of the faculty with whom they would like to train. I advise that may take more than an Orthopaedic rotation, Adult Clinical Orthopaedics and Pediatric Orthopaedics. In general, it is best to have electives in two-three training institutions.

Basic medical and surgical clerkships and an advanced Orthopaedic elective should be completed by the end of September of the fourth year, prior to the selection process.

The formal application procedure for the residency, which requires an integrated internship, begins towards the end of the junior year. In addition to obtaining all the relevant application materials, spending time discussing the various programs with myself as well as another Orthopaedic faculty member at Hopkins can be very useful in paring down the application list.

Appropriate curriculum vitae should be given to all those who have been asked to write letters of recommendation, as well as a list of the people and addresses to which these letters should be sent. The appropriate form of this list should be worked out with each individual person who is writing recommendations for you. Inquire about the preferred format individually.

Although some additional Orthopaedic electives can be taken during the fall of the fourth year, the fourth year is an ideal time to focus education in the medical fields for a unique experience during an Orthopaedic residency.

James R. Ficke, M.D.
Director
Department of Orthopaedic Surgery

UROLOGY

Urology is a field which integrates both medical and surgical managements of urinary tract system and the male reproductive organs. Urology has been on the cutting-edge of surgical technology including microsurgery, lasers, and minimally invasive surgery (laparoscopy and surgical robotics). Urology is one of the most competitive and highly sought-after specialties to enter for physicians.

The best preparation for students who are considering a career in Urology is to obtain a strong background in surgery and internal medicine. This includes elective rotations in general surgery, a sub-internship on the Urology service, ICU rotation, and advanced clerkships in internal medicine. We also strongly recommend students to do a research project with our clinical or research faculty. This exposure allows the student an opportunity to complete a project, get exposure to the urology faculty who can then write a strong letter of recommendation and allow the student to assess their own enthusiasm for the field. A strong research project is an invaluable asset when interviewing for residency positions.

*Marisa Clifton, M.D.
Residency Program Director
Department of Urology*

ELECTIVE COURSES BY DEPARTMENT/DIVISION

Department: Anesthesiology and Critical Care Medicine

Division: Anesthesiology and Critical Care Medicine

Course Name: Advanced Clinical Clerkship in Anesthesiology

Course Code (if available): ME.570.699

Course Type: Advanced Clinical Clerkship

Course Description: This clerkship will allow students who have completed a Basic Anesthesiology Clerkship to expand their experiences in anesthesia practice. Students may create their own experience by either choosing to spend the clerkship doing general operating room cases or by seeking to gain experience in sub-specialty areas of anesthesiology including cardiac anesthesia, obstetrics anesthesia, neuroanesthesia, pediatric anesthesia and pain management. The amount of time a student chooses to spend in any one or more of these sub-specialty areas is customizable to meet the student's interests. This elective is recommended for students who are interested in applying to an Anesthesiology residency program. Note: ICU is now a separate elective and no longer available through this course previously neurocritical care and cardiac-surgical critical care were available as an advanced elective through the Anesthesiology and Critical Care Medicine Dept. You must register for an ICU clerkship separately through Dr. Scott Stephens' office.

Course Director(s): Tina Tran, Jed Wolpaw

Faculty: Department of Anesthesiology faculty and staff

Contact Information (if none listed, please reach out to department/division):

Availability and/or Duration: , 4 weeks

Hours Per Week (if specified):

Required Prerequisites: Basic Anesthesiology Clerkship

Recommended Prerequisite:

Drop Period (if specified): 2 months

Enrollment Restrictions:

Department: Anesthesiology and Critical Care Medicine

Division: Anesthesiology and Critical Care Medicine

Course Name: Advanced Clinical Clerkship in Pediatric Anesthesiology

Course Code (if available): ME.570.699

Course Type: Advanced Clinical Clerkship

Course Description: The clerkship in Pediatric Anesthesiology is designed for students interested in pediatrics, pediatric anesthesia, or pediatric surgery, and introduces them to the perioperative anesthetic management of the pediatric patient. Under close supervision by faculty, fellows and residents, students will learn and apply the principles of preoperative evaluation of children, intraoperative monitoring techniques, pharmacology of anesthetic and related drugs, and immediate postoperative management. In addition, students will be exposed to and participate in anesthetic procedures such as airway management and establishment of vascular access. As the clerkship progresses, students will have the opportunity to participate in cases of increasing complexity. Students will participate in the full range of residency didactics including morning lectures, college days, simulation sessions. Students are assigned to the operating rooms at the Charlotte R. Bloomberg Children's Center and are notified by the OR schedulers of the actual daily assignment the night before.

Course Director(s): Samuel Vanderhoek

Faculty: Anesthesiology Staff

Contact Information (if none listed, please reach out to department/division): 410-955-7610

Availability and/or Duration: , 4 weeks

Hours Per Week (if specified):

Required Prerequisites: Pediatrics Core Clerkship and clinical preceptorship in anesthesiology

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Anesthesiology and Critical Care Medicine

Division: Anesthesiology and Critical Care Medicine

Course Name: Anesthesiology Research

Course Code (if available): ME.570.699

Course Type: Basic Research

Course Description: Many opportunities exist within the department for research in areas of basic science (molecular, genetic, cell biology, basic pathophysiology, biochemistry), clinical trials, biomedical engineering, information management, outcomes research and data mining, and health policy & safety initiatives. Specific research opportunities should be reviewed on the departmental website. The interested student should contact the faculty member supervising the research prior to registering for the elective.

Course Director(s): Tina Tran, Jed Wolpaw

Faculty: Anesthesiology faculty

Contact Information (if none listed, please reach out to department/division): ejense11@jhmi.edu

Availability and/or Duration: All year

Hours Per Week (if specified):

Required Prerequisites:

Recommended Prerequisite: Clinical preceptorship in anesthesiology recommended but not required; identifying research mentors prior to the start of elective is highly recommended.

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Anesthesiology and Critical Care Medicine

Division: Anesthesiology and Critical Care Medicine

Course Name: Basic Clerkship in Anesthesiology

Course Code (if available): ME.570.699

Course Type: Clinical Clerkship

Course Description: Students will spend the basic elective working in the general operating rooms directly alongside Anesthesiology providers (attending and residents) applying physiological and pharmacological principles to intra-operative patient care. Cardiovascular and respiratory physiology will be central to this learning process. Students will learn basic airway skills including mask ventilation and intubation, placing intravenous and arterial access and additional appropriate monitoring as dictated by the type of surgery and the patients' co-morbidities. They will also learn the principles of anesthetic management and the interactions between surgical trauma, anesthesia and the patient's baseline medical issues including appropriate pre-operative evaluation, intra-op management and post-op transition. Hemodynamic management including intravenous fluid therapy, vasopressor use and transfusion practice will be emphasized. Students will learn how anesthetic management varies based on patient age, co-morbidities, and the specific surgical procedure such as abdominal surgery and intracranial surgery.

Course Director(s): Tina Tran, Jed Wolpaw

Faculty: Department of Anesthesiology faculty

Contact Information (if none listed, please reach out to department/division): ejense11@jhmi.edu

Availability and/or Duration: , 4 weeks

Hours Per Week (if specified):

Required Prerequisites:

Recommended Prerequisite:

Drop Period (if specified): 2 months

Enrollment Restrictions: Available to Third and Fourth Year Students (last quarter 2nd year)

Department: Anesthesiology and Critical Care Medicine

Division: Anesthesiology and Critical Care Medicine and Emergency Medicine

Course Name: Combined Subinternship in Emergency Medicine and Anesthesiology

Course Code (if available):

Course Type: Subinternship

Course Description: The combined EM/ACCM Advanced Clerkship will provide students with the opportunity to rotate and have clinical experiences in both departments. The fields of EM and anesthesiology have significant overlap in terms of airway management and management of critically ill patients in the ED, OR and ICU settings. This clinical rotation will highlight some of the overlap between these specialties as well as their unique aspects and will help prepare students for the combined EM/Anesthesia residency program. Emed:

This course is about key concepts in the assessment, management, and disposition of patients in the Emergency Department. It builds on what you learned in your prior rotation in Emergency Medicine, allowing you to apply those concepts by serving as the primary provider for acutely ill and injured patients in the ED. What you learn in this clerkship will prepare you not only to evaluate and manage patients in the ED setting, but also to address acute concerns that arise in the care of hospitalized and ambulatory patients. The course primarily focuses on supervised clinical practice, though you will also complete an academic writing exercise, and participate in didactics and Residency Conference.

Overall Course/Clerkship Objectives:

By the end of this clerkship, all students will be able to:

1. Perform a focused history and physical examination based on an emergent chief complaint.
2. Present clinical findings, assessment, and plan in an organized and cohesive fashion.
3. Describe the differential diagnosis, evaluation, and management of common ED presentations including but not limited to: Chest pain, Vaginal bleeding or discharge, Shortness of breath, GI bleeding, Headache, Hyperglycemia, Abdominal pain, Fever, Altered mental status, Seizure, Minor trauma, Acute weakness, Syncope.
4. Interpret common emergency diagnostic tests, including laboratory studies, electrocardiograms, plain films, and CT scans.
5. Manage all aspects of care for assigned patients in the ED, including ordering tests and treatments, communicating with consultants and care team, and planning for disposition.
6. Demonstrate appropriate interpersonal communication skills in interactions with patients, family members, colleagues, and supervisors

7. Describe and/or demonstrate a basic approach to the following procedures when encountered in clinical practice: ABG, IV placement, Central line placement, Lumbar puncture, Endotracheal intubation Nasogastric tube placement, CPR, Decompression of pneumothorax, Pericardiocentesis, Laceration repair, Medical resuscitation, Trauma resuscitation.

8. Participate as a member of the critical care resuscitation team for seriously ill and injured patients.

ACCM:

During the Anesthesiology clerkship, students work directly with a senior anesthesia resident in ORs and procedural suites throughout the hospital to provide general anesthesia and monitored anesthesia care to a wide variety of patients.

Students are active participants in patient care and will perform important life-saving skills including: face mask ventilation, intravenous catheter placement, airway device insertion and management (laryngeal mask airway placement endotracheal intubation), IV medication administration, interpretation of vital signs, hemodynamic changes, and imaging studies. Students may perform or assist with advanced skills such as fiberoptic intubations, arterial line placement central line placement, epidural catheter placement, and ultrasound guided procedures. The skills acquired during the clerkship in anesthesiology are broadly applicable to a wide variety of fields and are particularly useful in rapid response and code situations. Students are active participants in comprehensive perioperative care from conducting the preoperative evaluation prior to induction, to performing procedures and management during and after induction, to signing out to the PACU/ICU team postoperatively. Students receive one-on-one teaching in the operating room from anesthesia residents and attendings who are engaged, active teachers and who view students as integral members of the team. Students learn about physiology and pharmacology in real-time by administering medications and other interventions and observing the changes in hemodynamics. Students are assigned with the overnight call team to give them exposure to emergency cases, traumas, codes, and other types of cases may not occur during the day. Simulation sessions and didactics augment the intraoperative learning experience during the rotation. A case discussion session at the conclusion of the clerkship will include a discussion of fundamental anesthesia concepts and presentation of a medically challenging clinical case. Many students have gone on to present their clinical cases at national and international scientific meetings.

Objectives are cumulative and students will continue to practice and build on clinical skills as the clerkship progresses.

By the end of Week 1, students will:

1. Perform a comprehensive airway anatomy exam prior to induction of anesthesia
2. Assist in the pre-operative OR preparation, including IV set up, airway equipment, medications, and anesthesiology machine and monitor check
3. Perform mask ventilation skills including insertion of airway adjunct devices
4. Learn direct laryngoscopy and LMA placement techniques
5. Learn peripheral IV placement techniques with and without ultrasound guidance
6. Classify patient's health status and medical co-morbidities based on ASA status
7. Understand and research the pharmacology of different medications used for induction, maintenance, and emergence from anesthesia.
8. Perform focused pre-anesthesia assessments and physical exams
9. Attempt arterial line placement and other advanced techniques
10. Interpret intra-operative monitors
11. Develop a perioperative plan for patient management

By the end of week 2, students will:

1. Name criteria for extubation, both clinical and subjective considerations
2. Explain the concept of MAC, particularly how it varies in different patients
3. Identify co-morbidities that may affect anesthetic management
4. Discuss the components of the ASA difficult airway algorithm
5. Perform advanced airway techniques, such as video laryngoscopy
6. Show proficiency and independence in mask ventilation and IV insertion techniques
7. Provide detailed clinical sign out or handoff reports to PACU/ICU teams
8. Independently prepare an OR for the start of a case (including medications, airway equipment, suctioning, IV tubing, etc.)
9. Interpret hemodynamic changes and provide interventions during intraoperative management

Course Director(s): Tina Tran, Jed Wolpaw, ,Sharon Bord,, Amelia Pousson

Faculty: Anesthesiology and Emergency Medicine faculty

Contact Information (if none listed, please reach out to department/division): ejense11@jhmi.edu

Availability and/or Duration: , 3 weeks

Hours Per Week (if specified):

Required Prerequisites: prior Anesthesiology clerkship, prior Emergency Medicine clerkship, evidence of observership, letter of intent/interest by medical students

Recommended Prerequisite:

Department: Biomedical Engineering

Division: Biomedical Engineering

Course Name: Elective in Biomedical Engineering

Course Code (if available): ME.210.699

Course Type: Elective

Course Description: Biomedical Engineering has emerged as one of the most exciting interdisciplinary research fields in modern science. Biomedical engineers apply modern approaches from the experimental life sciences in conjunction with theoretical and computational methods from the disciplines of engineering, mathematics, and computer science. Our unique positioning within the Johns Hopkins Whiting School of Engineering and the Johns Hopkins School of Medicine provides students and faculty with opportunities to engage with other leading engineers, scientists, and physicians. Together, we are developing the disruptive technologies that will transform the practice of medicine and improve human health. Many of these technologies are currently used in the clinic to diagnose and treat diseases, from cardiac arrhythmias and sepsis to Alzheimer's and cancer. Examples of these advances include new drug delivery methods, diagnostic imaging devices, artificial organs and orthopedic implants, prosthetic limbs, and patient-specific quantitative models of disease. A comprehensive list of faculty research is located on the department website www.bme.jhu.edu. Students interested in participating in a research project should contact the faculty member.

Courses offered by the Department of Biomedical Engineering are taught on the Homewood Campus. A full list of courses for each semester can be found on the Registrar's Office website:

<http://web.jhu.edu/registrar>.

Course Director(s):

Faculty:

Contact Information (if none listed, please reach out to department/division):

Availability and/or Duration:

Hours Per Week (if specified):

Required Prerequisites:
Recommended Prerequisite:
Drop Period (if specified):
Enrollment Restrictions: Limited to JHUSOM Students

Department: Biophysics and Biophysical Chemistry
Division: Biophysics and Biophysical Chemistry
Course Name: Advanced Topics in Protein Crystallography
Course Code (if available): ME.100.699
Course Type: Other
Course Description: In a journal club format this course examines standard advanced topics in crystallography as well as aspects of the current literature. Topics may include refinement, approaches to the phase problem, Fourier transform methods etc.
Course Director(s): Departmental Faculty
Faculty: Departmental Faculty
Contact Information (if none listed, please reach out to department/division): 410-955-3955
Availability and/or Duration: Fourth Quarter
Hours Per Week (if specified):
Required Prerequisites: Elementary crystallography
Recommended Prerequisite:
Drop Period (if specified): 1 month
Enrollment Restrictions:

Department: Biophysics and Biophysical Chemistry
Division:
Course Name: Analysis of Macromolecules
Course Code (if available): ME.100.699
Course Type: Biophysics and Biophysical Chemistry
Course Description: The course will cover (1) macromolecules, (2) physical chemical principles dictating their biological behavior, and (3) methods to study them. Macromolecular interactions and functions are interpreted through a framework that combines theoretical concepts with experimental illustrations thereof. Key methods include: X-ray crystallography, nuclear magnetic resonance, cryo-electron microscopy, mass spectrometry, absorption and emission spectroscopies, hydrodynamic methods, and single-molecule approaches. Lectures will focus on practical applications of the methods, experimental design, data collection, and elementary aspects of data analyses.
Course Director(s): Dr. Dominique Frueh
Faculty: Faculty
Contact Information (if none listed, please reach out to department/division): dfrueh@jhmi.edu
Availability and/or Duration: First Quarter
Hours Per Week (if specified): 6 hours per week
Required Prerequisites: None
Recommended Prerequisite:
Drop Period (if specified): Mid-point of the course
Enrollment Restrictions:

Department: Biophysics and Biophysical Chemistry
Division: Biophysics and Biophysical Chemistry
Course Name: Computer Modeling of Biological Macromolecules-Lab

Course Code (if available): ME.100.699

Course Type: Other

Course Description: The Laboratory course will familiarize students with practical aspects of molecular modeling. It teaches tools to create and manipulate computer generated models of biological-interest molecules. Techniques such as comparative modeling will be introduced.

Course Director(s): Dr. Mario A. Blanchet

Faculty: Dr. Mario A. Blanchet

Contact Information (if none listed, please reach out to department/division):

Availability and/or Duration: Second Semester

Hours Per Week (if specified): 2 hours

Required Prerequisites: None

Recommended Prerequisite:

Department: Biophysics and Biophysical Chemistry

Division: Biophysics and Biophysical Chemistry

Course Name: Computer Modeling of Biological Macromolecules-Lecture

Course Code (if available): ME.100.699

Course Type: Other

Course Description: Lectures will offer an introduction to the mathematical aspects of computer representation and manipulation of macromolecules, as well as discussions of important topics in computational chemistry of macromolecules including forces and potential fields, molecular mechanics, electrostatics, Monte Carlo methods, homolog modeling, docking, and other modeling topics.

Course Director(s): Dr. L. Mario Amzel

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division):

Availability and/or Duration: Second Semester

Hours Per Week (if specified): 2 hours per week.

Required Prerequisites: None

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Biophysics and Biophysical Chemistry

Division: Biophysics and Biophysical Chemistry

Course Name: Fundamentals of Protein Crystallography

Course Code (if available): ME.100.699

Course Type: Other

Course Description: An Introductory course designed to present the core knowledge and theoretical underpinnings of protein crystallography necessary to function in the laboratory. Assigned readings and problem sets will be given.

Course Director(s): Dr. L. Mario Amzel

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): 410-955-3955

Availability and/or Duration: 4th Quarter

Hours Per Week (if specified): Two 75-minute lectures per week

Required Prerequisites: Calculus and elementary Physics, or consent of instructor.

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Biophysics and Biophysical Chemistry

Division: Biophysics and Biophysical Chemistry

Course Name: Proteins and Nucleic Acids

Course Code (if available): ME.100.699

Course Type: Other

Course Description: The structure of proteins, DNA and RNA and their functions in living systems. Students are required to participate in class discussions based on readings from primary scientific literature. Weekly problem sets include the analysis of molecular structures with Python PyMOL scripts. Basic knowledge of UNIX and Python scripting required.

Course Director(s): Dr. Sarah Woodson

Faculty: Dr. G. Bowman, Dr. S. Woodson

Contact Information (if none listed, please reach out to department/division): 410-516-2015

Availability and/or Duration: First Semester

Hours Per Week (if specified): 3 hours

Required Prerequisites: See Course Director

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: Enrollment limited to JHUSOM Students.

Department: Biophysics and Biophysical Chemistry

Division: Biophysics and Biophysical Chemistry

Course Name: Proteins and Nucleic Acids II

Course Code (if available): ME.100.699

Course Type: Other

Course Description: Critical reading and analysis of primary source literature is vital to scientific discourse and discovery. Students will be responsible for analyzing and critiquing papers in diverse topics and systems ranging from replication, transcription, translation to enzyme mechanism, drug resistance, innate immunity and signaling, Methods covered will include structural, biochemical, single molecule, single cell, and genomic approaches. Students will deliver analytic presentations on at least two groundbreaking papers relevant to these areas and will be expected to actively participate in class discussion of experimental methodology and logic of other papers assigned in the course.

Course Director(s): Dr. James E. Berger

Faculty: Departmental Faculty

Contact Information (if none listed, please reach out to department/division): 410-955-7163

Availability and/or Duration: Second Semester

Hours Per Week (if specified): 3 hours

Required Prerequisites: Nucleic Acids I

Recommended Prerequisite:

Department: Biophysics and Biophysical Chemistry

Division: Biophysics and Biophysical Chemistry

Course Name: Research Projects in Biochemistry, Biophysics and Molecular Biology

Course Code (if available): ME.100.699

Course Type: Basic Research

Course Description: (Jointly with all the Basic Sciences: Biological Chemistry, Biophysics and Biophysical Chemistry, Cell Biology, Molecular Biology, Neuroscience, Pharmacology, and Physiology). See Biological Chemistry for course description.

Course Director(s): All members of the BCMB Graduate Program

Faculty: All members of the BCMB Program

Contact Information (if none listed, please reach out to department/division):

Availability and/or Duration:

Hours Per Week (if specified):

Required Prerequisites:

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Biophysics and Biophysical Chemistry

Division: Biophysics and Biophysical Chemistry

Course Name: Research Topics in Biophysics

Course Code (if available): ME.100.699

Course Type: Basic Research

Course Description: The department has a particular focus in the molecular structures of proteins and nucleic acids, and their functional interrelationships. Research projects may be arranged with any departmental faculty member. Projects can be laboratory or library based, and of varying lengths.

Course Director(s): Mario Amzel

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division):

Availability and/or Duration: ; This course is also available as an elective to medical students, to postdoctoral students, and to other qualified persons.

Hours Per Week (if specified):

Required Prerequisites:

Recommended Prerequisite:

Drop Period (if specified):

Enrollment Restrictions: Visiting Medical Students must follow JHUSOM quarter dates

Department: Biophysics and Biophysical Chemistry

Division: Biophysics and Biophysical Chemistry

Course Name: Single-Molecule Single-Cell Biophysics

Course Code (if available): ME.100.699

Course Type: Other

Course Description: This elective course offers an introduction to the field of single molecule and single cell biophysics to graduate students in Johns Hopkins University and will be delivered in the School of Medicine. We will examine technologies such as single molecule fluorescence and force measurements, super resolution imaging and single fluorescent detections that enable high precision molecular visualizations in vitro and in cells.

Course Director(s): Dr. Taekjip Ha

Faculty: Dr. Taekjip Ha, Dr. Hue Xial, Dr. Bin Wu

Contact Information (if none listed, please reach out to department/division): tammyhubbe@jhmi.edu

Availability and/or Duration:

Hours Per Week (if specified):

Required Prerequisites: None

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: Students must follow JHUSOM quarter dates/ Limited to 15 students, next offered in 2022

Department: Biophysics and Biophysical Chemistry

Division: Biophysics and Biophysical Chemistry

Course Name: Topics in Macromolecular Structure and Function.

Course Code (if available): ME.100.699

Course Type: Other

Course Description: Seminar Course covering a variety of topics involving the structure and function of proteins and nucleic acids.

Course Director(s): Dr. Bin Wu

Faculty: Departmental Faculty

Contact Information (if none listed, please reach out to department/division): 410-502-4201

Availability and/or Duration: Second Semester

Hours Per Week (if specified): 1 hour

Required Prerequisites: None

Recommended Prerequisite:

Department: Cell Biology

Division: Cell Biology Cell Biology (Physiology, Molecular Biology and Genetics, Neuroscience, and Institute for Genetic Medicine)

Course Name: Developmental Biology

Course Code (if available): ME.110.699

Course Type: Elective

Course Description: A graduate-level course covering the molecular and cellular basis of embryonic development in multicellular organisms.

Course Director(s): Dr. Deborah Andrew

Faculty: Departmental Faculty

Contact Information (if none listed, please reach out to department/division): 443-287-4866

Availability and/or Duration: April 16 - May 16; ; 11 lectures and take home exam

Hours Per Week (if specified): Monday, Wednesday, Friday

Required Prerequisites: Molecular Biology, Cell Biology, and Genetics

Recommended Prerequisite:

Drop Period (if specified): 1 week

Enrollment Restrictions:

Department: Cell Biology

Division: Cell Biology

Course Name: Nuclear Structure and Human Disease

Course Code (if available): ME.110.699

Course Type: Basic Research

Course Description: Structure and functions of the nuclear envelope (NE) including LINC complexes, the nucleoskeleton (lamins, actin/myosins, spetrin/4.1, tintin, NUMA), nuclear pore complexes and nucleocytoplasmic transport, subnuclear organelles, higher-order chromatic organization, signaling in

the nucleus, evolution of the nucleus, and human “laminopathy” diseases including muscular dystrophy, lipodystrophy, and accelerated aging.

Course Director(s): Dr Katherine Wilson

Faculty: DR Wilson and invited experts

Contact Information (if none listed, please reach out to department/division): 410-955-1801

Availability and/or Duration: 4th quarter, 4 weeks

Hours Per Week (if specified):

Required Prerequisites: 4th yr. college; 1st yr. grad level in cell biology, biochemistry, and molecular biology

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: Enrollment limited to JHUSOM Students.

Department: Cell Biology

Division: Cell Biology

Course Name: The Cytoskeleton

Course Code (if available): ME.110.699

Course Type: Basic Research

Course Description: In this course, we will explore the fundamental mechanisms of the cytoskeleton that the cell uses to drive cell motility and dynamic shape changes. We will emphasize the breadth of research on the cytoskeleton ranging from classic studies of muscle, cytoskeletal structure, enzymological, and single molecule studies of motor proteins, rheology, polymer dynamics, cytoskeletal signaling, the cytoskeleton in disease, and chemical approaches to the cytoskeleton. The course format will be a combination of lecture and student-led discussions of hallmark papers.

Course Director(s): Dr. Douglas Robinson

Faculty: Dr. Douglas Robinson and staff

Contact Information (if none listed, please reach out to department/division): 410-502-2850

Availability and/or Duration: Fourth Quarter, 4 weeks

Hours Per Week (if specified):

Required Prerequisites: 4th year College 1st year grad level in cell biology, biochemistry, molecular biology

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: Enrollment limited to JHUSOM Students.

Department: Dermatology

Division: Dermatology

Course Name: Advanced Clinical Clerkship in Dermatology

Course Code (if available): ME.220.699

Course Type: Clinical Clerkship

Course Description: Students who have already taken the Clinical Clerkship in Dermatology at Johns Hopkins and who are interested in a specific area of dermatology or in dermatology research may benefit from this elective. This elective gives the student the opportunity for more “in depth” participation in specific areas of interest within the department of Dermatology under guidance of a faculty mentor. Arrangements have to be made between the interested student and the faculty member who will be mentoring him/her prior to beginning the elective. The main objective is active participation in a small clinical research project, or clinical and scholarly work with a faculty member with a certain specialty focus. The faculty mentor will provide the specific schedule. Students are

encouraged to participate in all didactic activities including Grand Rounds and faculty lectures during the time spent in the department.

Course Director(s): Individual Dermatology Faculty
Faculty:

Contact Information (if none listed, please reach out to department/division): sbenne17@jhmi.edu

Availability and/or Duration: All year, 1-3 months

Hours Per Week (if specified):

Required Prerequisites: Basic Dermatology elective (Clinical Clerkship in Dermatology); Complete at least two of the following clerkships: Internal Medicine, Surgery and Pediatrics

Recommended Prerequisite:

Department: Dermatology

Division: Dermatology

Course Name: Basic Dermatopathology

Course Code (if available): ME.220.699

Course Type: Clinical Clerkship

Course Description: Students may apply for an elective in dermatopathology if they have completed the prerequisites. Students will attend daily sign out where they will be exposed to a large volume of cases. Additional exposure will come through the use of study sets which are available to the students. The students will attend the Dermatology weekly Grand Rounds where they may see patients and participate in the discussion and presentation of the pathology for those patients. Additionally, the students will attend a formal dermatopathology teaching session once per week.

Course Director(s): Dr. Janis Taube, Dr. Inbal Sander

Faculty: Dr. Inbal Sander

Contact Information (if none listed, please reach out to department/division): sbenne17@jhmi.edu

Availability and/or Duration: All year except summer quarter period 2, 1 month

Hours Per Week (if specified):

Required Prerequisites: Internal Medicine, Surgery, and Pediatrics, Pathology, and Clinical Clerkship in Dermatology at Johns Hopkins

Recommended Prerequisite:

Drop Period (if specified): 2 months

Enrollment Restrictions: Visiting medical students must follow JHUSOM quarter dates

Department: Dermatology

Division: Dermatology

Course Name: Clinical Clerkship in Dermatology

Course Code (if available): ME.220.699

Course Type: Clinical Clerkship

Course Description: Students may apply towards the end of their 3rd year or in their 4th year of medical school for a clinical elective in Dermatology where the focus is placed on intensive exposure to a large number of patients in different clinical settings. Students will spend time exclusively at the Johns Hopkins facilities (Outpatient Center, Greenspring Station, and Harriet Lane Pediatrics Center). Our clinical services at these locations provide an excellent opportunity for students to interact with different types of patients and to be exposed to a wide range of skin problems. Parallel to the clinical activities, there are didactic sessions most Wednesday mornings and occasionally on other weekday mornings. Formal lectures on basic Dermatology topics are given by Dermatology residents and sessions

at a more advanced level are taught by faculty members. No formal exam is given and grading is based on the evaluations submitted by residents and faculty members and a short oral presentation.

Course Director(s): Dr. Daren Simkin

Faculty: Full-time Faculty

Contact Information (if none listed, please reach out to department/division): sbenne17@jhmi.edu

Availability and/or Duration: All year except Summer Quarter Period 2, One month

Hours Per Week (if specified):

Required Prerequisites: Internal Medicine, Surgery, and Pediatrics (at least two out of three)

Recommended Prerequisite:

Drop Period (if specified): 2 months

Enrollment Restrictions: Enrollment limited to JHUSOM Students; No more than 4 students per rotation Please email your elective form to coordinator.

Department: Dermatology

Division: Dermatology

Course Name: Elective in Dermatology Clerkship

Course Code (if available): ME.220.699

Course Type: Dermatology Clerkship

Course Description: We welcome students to take a Dermatology clerkship regardless of the medical discipline they intend to pursue. This should take place after completing multiple core clerkships including Medicine, Surgery and Pediatrics. We believe students should receive as broad exposure to medicine as possible before taking our introductory clerkship (Clinical Clerkship in Dermatology) and making career decisions. If further experience/learning is desired, we also suggest taking our Advanced Clinical Clerkship in Dermatology. For those students with a career interest in Dermatology, taking electives in related sub-specialties such as Rheumatology, Immunology, and Plastic Surgery are encouraged.

Course Director(s): Dr. Daren Simkin

Faculty:

Contact Information (if none listed, please reach out to department/division): sbenne17@jhmi.edu

Availability and/or Duration:

Hours Per Week (if specified):

Required Prerequisites: Multiple core clerkships including Medicine, Surgery and Pediatrics

Recommended Prerequisite:

Drop Period (if specified):

Enrollment Restrictions:

Department: Emergency Medicine

Division: Emergency Medicine

Course Name: Advanced Clerkship in Emergency Medicine

Course Code (if available): ME:520.699

Course Type: Subinternship, Approved Sub-I Experience

Course Description: The EM sub-internship will be following the Academic Calendar and policies as issued by the Johns Hopkins University School of Medicine. This may result in a shortened rotation with fewer clinical shifts than what was standard in the past.

Students in the third and fourth years who wish an in-depth experience in emergency medicine may serve as subinterns in the Adult Emergency Department. Further development of clinical reasoning/problem solving skills and selected procedural skills will be emphasized. Upon completion of this elective, students will demonstrate competency in the recognition and initial stabilization of life

threats in trauma and non-trauma patients. Exposure to pre-hospital care can be made available. Sub-interns are required to attend departmental conferences. A formal case write-up, in the form of a Blog may be required.

Applicants limited to LCME-accredited schools only. Due to high demand we are not accepting international medical students for the Advanced Clerkship.

Course Director(s): Dr. Sharon Bord

Faculty: Dr. Bord and Emergency Medicine Faculty

Contact Information (if none listed, please reach out to department/division): 410-955-5107

Availability and/or Duration: ; Students will divide their time between JHH and Bayview

Hours Per Week (if specified):

Required Prerequisites: Core Clerkships in Surgery, Medicine & Emergency Medicine.

Recommended Prerequisite: Women's Medicine strongly recommended

Department: Emergency Medicine

Division: Interdisciplinary

Course Name: Advanced Clinical Elective in Inpatient Covid-19 Care

Course Code (if available): ME:520.699

Course Type: Clinical Clerkship

Course Description: The COVID-19 pandemic is the single greatest public health crisis of our time and is a major defining force in medicine and in public life. As of 12/7/2020, medical students in advanced clerkships have been granted permission to participate in the care of patients with confirmed or suspected COVID-19, and many have demonstrated great interest in this opportunity. As COVID-19 incidence surges in our community, there is a genuine need for clinical work to which senior medical students are to be extremely qualified to contribute, and engagement in this work would provide them with significant educational value.

This course focuses on the clinical care of hospitalized COVID-19 patients across various acuity levels and is a full-time clinical rotation. During their time on the COVID wards, students will be paired with clinicians responsible for admitting new patients and will actively participate in initial assessment and development of diagnostic and management plans. Students will follow their admitted patients throughout their hospitalizations and will serve as a primary source of care continuity in a clinical setting that is reliant on short-term clinician labor provided by physicians who have been redeployed from other activities to aid in the COVID-19 response. Students will also be trained as "Epic Superusers" so that they can take responsibility for order entry, documentation, and medication reconciliation for admitted patients. This will allow them to take meaningful ownership over patient care, while also providing redeployed clinicians with vital assistance, as many are unaccustomed to the inpatient Epic environment. While faculty preceptors may be redeployed from other services, all will be qualified clinicians and full-time faculty members or fellows and will receive specific training in how to work constructively with students and optimize their educational experience.

The clinical experience will be supplemented by online learning activities including case-based discussions and virtual simulation sessions. Peer education will be incorporated with the addition of a student-run journal club, in which students will present research data on novel therapies for COVID-19 in a faculty-moderated format. Assessment will be based primarily on clinical performance evaluations completed by faculty preceptors, with smaller contributions from journal club presentation scores and degree of engagement in learning activities. .

Course Director(s): Dr. Julianna Jung

Faculty: COVID Service Faculty

Contact Information (if none listed, please reach out to department/division): 443-802-6037

Availability and/or Duration:

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Internal Medicine

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: Enrollment limited to M4 JHUSOM Students.

Department: Emergency Medicine

Division: Emergency Medicine and Anesthesiology and Critical Care Medicine

Course Name: Combined Subinternship in Emergency Medicine and Anesthesiology

Course Code (if available): ME:520.699

Course Type: Subinternship

Course Description: The combined EM/ACCM Advanced Clerkship will provide students with the opportunity to rotate and have clinical experiences in both departments. The fields of EM and anesthesiology have significant overlap in terms of airway management and management of critically ill patients in the ED, OR and ICU settings. This clinical rotation will highlight some of the overlap between these specialties as well as their unique aspects and will help prepare students for the combined EM/Anesthesia residency program.

Emed:

This course is about key concepts in the assessment, management, and disposition of patients in the Emergency Department. It builds on what you learned in your prior rotation in Emergency Medicine, allowing you to apply those concepts by serving as the primary provider for acutely ill and injured patients in the ED. What you learn in this clerkship will prepare you not only to evaluate and manage patients in the ED setting, but also to address acute concerns that arise in the care of hospitalized and ambulatory patients. The course primarily focuses on supervised clinical practice, though you will also complete an academic writing exercise, and participate in didactics and Residency Conference.

ACCM:

During the Anesthesiology clerkship, students work directly with a senior anesthesia resident in ORs and procedural suites throughout the hospital to provide general anesthesia and monitored anesthesia care to a wide variety of patients.

Students are active participants in patient care and will perform important life-saving skills including: face mask ventilation, intravenous catheter placement, airway device insertion and management (laryngeal mask airway placement endotracheal intubation), IV medication administration, interpretation of vital signs, hemodynamic changes, and imaging studies. Students may perform or assist with advanced skills such as fiberoptic intubations, arterial line placement central line placement, epidural catheter placement, and ultrasound guided procedures. The skills acquired during the clerkship in anesthesiology are broadly applicable to a wide variety of fields and are particularly useful in rapid response and code situations. Students are active participants in comprehensive perioperative care from conducting the preoperative evaluation prior to induction, to performing procedures and management during and after induction, to signing out to the PACU/ICU team postoperatively. Students receive one-on-one teaching in the operating room from anesthesia residents and attendings who are engaged, active teachers and who view students as integral members of the team. Students learn about physiology and pharmacology in real-time by administering medications and other interventions and observing the changes in hemodynamics. Students are assigned with the overnight call team to give them exposure to emergency cases, traumas, codes, and other types of cases may not occur during the day. Simulation sessions and didactics augment the intraoperative learning experience during the rotation. A case discussion session at the conclusion of the clerkship will include a discussion of fundamental anesthesia concepts and presentation of a medically challenging clinical case. Many students have gone on to present their clinical cases at national and international scientific meetings.

Course Director(s): Tina Tran, MD, Jed Wolpaw, MD

Faculty: Anesthesiology and Emergency Medicine Faculty

Contact Information (if none listed, please reach out to department/division):

Availability and/or Duration: , 3 weeks

Hours Per Week (if specified):

Required Prerequisites: prior Anesthesiology clerkship, prior Emergency Medicine clerkship, evidence of observership, letter of intent/interest by medical students

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Emergency Medicine

Division: Emergency Medicine

Course Name: Emergency Medicine Point of Care Ultrasound Elective

Course Code (if available): ME:520.699

Course Type: Other

Course Description: This course aims to develop the core knowledge base, bedside imaging acquisition/interpretation skills, and framework for clinical integration to allow students to begin using point-of-care ultrasound in patient care. This course builds on what you learned about point-of-care ultrasound in your Emergency Medicine clerkship. What you learn in this elective will prepare you to incorporate point-of-care ultrasound into the evaluation and management of patients in the clinical setting. Educational strategies utilized will include asynchronous readings and/or online modules, hands-on instruction in clinical ultrasonography in the Emergency Department, participation in image review/quality assurance sessions for direct feedback, and delivery of a presentation on a point-of-care ultrasound topic of your interest.

By the end of this elective, students will be able to:

1. Explain the clinical indications for point-of-care ultrasound in the ED setting
2. Demonstrate proficiency of ultrasound "knobology" including transducer selection, appropriate adjustment of gain, depth, labelling, and saving images/clips
3. Accurately perform image acquisition and interpretation of the basic and lifesaving emergency ultrasound applications relevant to student interest and future career including (but not limited to) EFAST, Cardiac, Thoracic, AAA, Biliary, Renal/Urinary Tract, and Ultrasound-guided vascular access
4. Demonstrate proficiency in using QpathE ultrasound management software
5. Demonstrate appropriate interpersonal communication skills in interactions with patients, family members, colleagues, and supervisors.

Course Director(s): Randall T. Rhyne, MD, Tiffany Fong, MD

Faculty: Randall T. Rhyne, MD, Tiffany Fong, MD

Contact Information (if none listed, please reach out to department/division): rryne@jhmi.edu; tfong3@jhmi.edu

Availability and/or Duration: All year, Two-weeks

Hours Per Week (if specified):

Required Prerequisites: Emergency medicine clerkship

Recommended Prerequisite: Please contact Dr. Rhyne or Dr. Fong directly to discuss elective availability prior to enrolling with the Registrar's Office. In your email, please include your planned career trajectory and goals, any specific interests in POCUS, and prior training in

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Emergency Medicine
Division: Emergency Medicine
Course Name: Emergency Medicine Research
Course Code (if available): ME:520.699
Course Type: Clinical Research
Course Description: General research elective tailored to individual student interest and background. The student should expect some level of continuous participation beyond basic requirements to gain the maximum learning experience, including interest in writing and being part of a research team/program.
Course Director(s): Dr. Richard Rothman, Dr. Jeremiah Hinson
Faculty: Dr. Richard Rothman, Dr. Jeremiah Hinson
Contact Information (if none listed, please reach out to department/division): gavornu1@jhmi.edu
Availability and/or Duration: All year, 8 weeks
Hours Per Week (if specified):
Required Prerequisites: Prefer students with basic understanding and some experience in research. Must be highly motivated.
Recommended Prerequisite:

Department: Emergency Medicine
Division: Emergency Medicine
Course Name: Emergency Medicine Summer Research
Course Code (if available): ME:520.699
Course Type: Clinical Research
Course Description: Special summer research program teaches the fundamentals of clinical research from idea to study to analysis to medical writing. Program is only offered in certain years based on research priorities of the department and level of engagement of a student research group.
Course Director(s): Dr. Gabor D. Kelen, Dr. Richard Rothman
Faculty: Dr. Gabor D. Kelen, Dr. Richard Rothman, Dr. Jeremiah Hinson
Contact Information (if none listed, please reach out to department/division): gavornu1@jhmi.edu
Availability and/or Duration: Summer Session, 9 weeks
Hours Per Week (if specified):
Required Prerequisites: Prefer students with some research experience. Only highly motivated and engaged students should apply.
Recommended Prerequisite:
Drop Period (if specified): 2 months
Enrollment Restrictions: visiting medical students must follow JHUSOM quarter dates

Department: Family Medicine
Division: Department of Family Medicine at Franklin Square Hospital
Course Name: Clinical Clerkship in Family Medicine - Franklin Square Hospital
Course Code (if available):
Course Type: Clinical Clerkship
Course Description: This four-week rotation introduces students to the wide scope of practice inherent to family medicine. Students are given an opportunity to see patients in the family health center clinic. Additional clinical opportunities include home visits. Students participate in daily morning reports and weekly didactic sessions. Student also have the opportunity to work with an electronic health record while improving their clinical note writing skills.
Course Director(s): Dr. Nancy Barr
Faculty: Dr. Barr and associates

Contact Information (if none listed, please reach out to department/division):

kathy.whelan@medstar.net

Availability and/or Duration: All year (based upon availability), 4 weeks

Hours Per Week (if specified):

Required Prerequisites: Any student interested in a career in family medicine/primary care. Fourth year students applying to family medicine with an interest in the residency program are also welcome.

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: Enrollment limited to JHUSOM Students.

Department: Family Medicine

Division: Family Practice

Course Name: Family Practice Ambulatory Clerkship

Course Code (if available):

Course Type: Clinical Clerkship

Course Description: This elective offers the student experience in a busy family practice setting in either the Altoona Family Physicians Residency Program in Altoona, PA or in a rural setting in Williamsburg, PA. Students will manage outpatients under the supervision of the family medicine faculty and residents.

Both sites provide an insight into the different roles of the family practice physician in the community.

www.altoonafp.org

Under the guidance of a faculty preceptor, each student will be given the opportunity to experience the many educational aspects of the practice, including office practice management and utilization of computer technology. Individual conferences are arranged with members of the practice. Housing and meals are provided. See additional information in the Office of Student Affairs.

Course Director(s): Dr. Terry Ruhl

Faculty: Board Certified members of the Altoona Family Physicians Residency Program

Contact Information (if none listed, please reach out to department/division): fickescj@upmc.edu

Availability and/or Duration: All year, 4-6 weeks

Hours Per Week (if specified):

Required Prerequisites: Completion of the second-year coursework, affiliation agreement, clearances, PPD, transportation

Recommended Prerequisite:

Drop Period (if specified): At least 1 month preferable more since housing arrangements are provided.

Enrollment Restrictions:

Department: Family Medicine

Division: Family Medicine

Course Name: Senior Outpatient Elective in Family Medicine - York Hospital Family Medicine Residency Program

Course Code (if available):

Course Type: Subinternship

Course Description: This fourth-year elective in outpatient family medicine is a great educational experience which highlights many aspects of family medicine. Students have the choice of participating in various experiences including having their own patients at the Thomas Hart Family Practice Center (the outpatient offices of the residency), providing care in the Health Connect Van (a mobile unit that provides outreach care), nursing home care, private office family medicine, and other experiences. York Hospital is located in York County, Pennsylvania. York County has a diverse population of approximately 380,000 people. The Family Medicine Residency Program in York was one of the original family

medicine programs in the country. Teaching opportunities include Morning Report, Grand Rounds, and Thursday morning conferences. Family medicine inpatient electives are also available. The Thomas Hart Family Practice Center has been using an electronic health record since 2006.

The hospital provides free parking in a restricted lot and free shared room and bath. Housing is adjacent to the hospital and includes a washer, dryer, refrigerator, computer access, linens, stove/oven, microwave, television, telephone, and exercise equipment.

Course Director(s): Dr. Stacey Robert

Faculty: Dr. Mark Goedecker

Contact Information (if none listed, please reach out to department/division): 717-851-2753

Availability and/or Duration: All year

Hours Per Week (if specified):

Required Prerequisites: Completion of all required third year clerkships

Recommended Prerequisite:

Department: Genetic Medicine

Division: Medicine/General Internal Medicine

Course Name: Adult Genetics in Ambulatory Internal Medicine

Course Code (if available): ME:250.699

Course Type: Clinical Clerkship

Course Description: This elective is based primarily at Green Spring Station, in an outpatient internal medicine primary care practice. There is extensive experience with routine adult primary care.

Additional clinical experiences include: acquiring, recording, and interpreting a family history; genetic risk assessment for multifactorial conditions; genetic factors in prevention, treatment, and differential diagnosis of common medical conditions; ordering and interpreting genetic tests; consultative diagnostic evaluation and longitudinal primary care management of adults with traditional single-gene disorders (especially Ehlers Danlos syndrome). There is also the opportunity to interact with other geneticists in the McKusick-Nathans Institute of Genetic Medicine, depending upon the student's particular interests.

Course Director(s): Dr. Howard Levy

Faculty: Dr. Levy

Contact Information (if none listed, please reach out to department/division): hlevy3@jhmi.edu

Availability and/or Duration:

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Medicine

Recommended Prerequisite:

Drop Period (if specified): 2 months

Enrollment Restrictions:

Department: Genetic Medicine

Division: Medicine/Medical Genetics

Course Name: Advanced Topics in Human Genetics

Course Code (if available):

Course Type: Tutorial

Course Description: This lecture/discussion course is a research-oriented introduction to principles of human genetics based on fundamental knowledge introduced in prior courses. Emphasis is placed on recent advances in knowledge, evolving techniques, and the design of research strategies, in the context of the current biomedical literature. Topics include: chromosome structure and function; chromosome aberrations; gene mapping; mutation; sex determination; inborn errors of metabolism; genetic

heterogeneity; genotype environment interaction in health and disease; aneuploidy; carcinogenesis and ethical issues surrounding modern genetic medicine.

Course Director(s): Dr. Roger Reeves, Dr. Kirby Smith, ,Dr. Michael Parsons

Faculty: Dr. Reeves, Dr. Smith, Dr. Parsons

Contact Information (if none listed, please reach out to department/division): rreeves@jhmi.edu

Availability and/or Duration: Quarter 3

Hours Per Week (if specified): Monday, Wednesday, Friday

Required Prerequisites: Fundamentals of Genetics; Molecules and Cells and permission of instructor

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Genetic Medicine

Division: Dept. of Genetic Medicine

Course Name: Clinical Clerkship in Genetics

Course Code (if available):

Course Type: Clinical Clerkship

Course Description: The Dept. of Genetic Medicine provides genetic services to patients and families across the lifespan and can tailor your learning experience to your interests and learning needs. A team approach including geneticists – both MD and PhD laboratory and quantitative experts, genetic counselors, nurse practitioners, dietitians, coordinators, and other specialists provides both inpatient and outpatient exposure to a broad range of clinical concerns. A weekly case conference and multiple other conferences provide didactic learning and discussion and are integrated with multiple other learning resources, including on-line resources for lifelong learning. Students will learn the application of the fundamentals of medical genetics and human variation in the individual and family clinical, biochemical, cytogenetic, and molecular levels. Practical experience in clinical genetics, genetic counseling, and the application of laboratory methods to clinical problems are emphasized, with the possibility of tailoring and developing projects in line with individual interests. Patients are seen from preconception to palliative care to autopsy with an emphasis on prenatal diagnosis, newborn screening, congenital anomalies, neurodevelopmental disabilities, connective tissue conditions, neurosensory conditions, skeletal dysplasias, epigenetic conditions, and the integration of genetic understanding across all medicine. The opportunity to participate in case reports and clinical/educational research can be available with multiple publications being developed with students over the years. Clinical responsibilities, all under the direct supervision of a fellow, genetic counselor, and an attending physician, include: an active inpatient consultation service, daily clinical outpatient clinical activities, and an inpatient genetics service that focuses on inborn errors of metabolism.

Course Director(s): Dr. Joann Bodurtha

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): jbodurt1@jhmi.edu

Availability and/or Duration: All year, 2-4 weeks

Hours Per Week (if specified):

Required Prerequisites:

Recommended Prerequisite: It is helpful to have at least one core clerkship prior to this elective

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Gynecology and Obstetrics

Division: Gynecology and Obstetrics

Course Name: Elective in Family Planning and Reproductive Choice

Course Code (if available):

Course Type: Elective

Course Description: In this clinical experience the student will function as a house officer at the first level on the family planning service. Students will participate in contraceptive and pregnancy options counseling. Students will be exposed to a breadth of family planning procedures including IUD insertion, contraceptive implant placement/removal, sterilization, and both medical and surgical abortion. A research component is encouraged.

Course Director(s): Dr. Jennifer Robinson

Faculty: Staff of the division of Family Planning

Contact Information (if none listed, please reach out to department/division): 410-550-8498

Availability and/or Duration: Summer session III; Could be offered during other times of the year as basic Women's Health Clerkship schedules will allow., 3- 4 weeks

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Ob/Gyn

Recommended Prerequisite:

Department: Gynecology and Obstetrics

Division: Gynecology and Obstetrics

Course Name: Elective in HIV infection in Women

Course Code (if available):

Course Type: Elective

Course Description: Students will participate in the obstetric and gynecological care of HIV-positive women. A research component is encouraged.

Course Director(s): TBA contact Dr. Patel

Faculty: Attending Faculty

Contact Information (if none listed, please reach out to department/division): rslatte1@jhmi.edu

Availability and/or Duration: , 3-4 weeks

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Ob/Gyn and an interview

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Gynecology and Obstetrics

Division: Gynecology and Obstetrics

Course Name: Elective in Reproductive endocrinology

Course Code (if available):

Course Type: Subinternship

Course Description: In this clinical experience the student will function as a house office at the first-year level on the reproductive endocrinology service. The student will be responsible for providing inpatient and outpatient care to the patients who present to the respective services for care. A research component is encouraged.

Course Director(s): Dr. Mindy Christianson

Faculty: Staff of the division of Reproductive Endocrinology

Contact Information (if none listed, please reach out to department/division): rslatte1@jhmi.edu

Availability and/or Duration: Summer session III; Could be offered during other times of the year as basic Women's Health Clerkship schedules will allow., 3- 4 weeks

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Ob/Gyn

Recommended Prerequisite:

Drop Period (if specified): 2 months

Enrollment Restrictions:

Department: Gynecology and Obstetrics

Division: Gynecology and Obstetrics/Gynecologic Oncology

Course Name: Gynecologic Oncology Research

Course Code (if available):

Course Type: Basic or Clinical Research

Course Description: Research projects on malignancies of the reproductive tract

Course Director(s): Dr. Amanda Fader

Faculty: Dr. Fader and attending Faculty

Contact Information (if none listed, please reach out to department/division): 410-955-8240

Availability and/or Duration: All year, 3-4 weeks

Hours Per Week (if specified):

Required Prerequisites: Agreement with faculty mentor regarding research plan

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Gynecology and Obstetrics

Division: Gynecology and Obstetrics

Course Name: Gynecologic Pathology

Course Code (if available):

Course Type: Clinical Research

Course Description: Consideration is given to the gross and histologic pathology of lesions of the reproductive tract, with opportunity for special investigative work in areas such as papilloma virus, tumors of the female genital tract, and gestational trophoblastic disease.

Course Director(s): Dr. Russel Vang

Faculty: Staff of the division of Gynecologic Pathology.

Contact Information (if none listed, please reach out to department/division): 410-955-0471

Availability and/or Duration: All year, 3-4 weeks

Hours Per Week (if specified):

Required Prerequisites: Consent of instructor

Recommended Prerequisite:

Department: Gynecology and Obstetrics

Division: Gynecology and Obstetrics

Course Name: Johns Hopkins Howard County medical Center GYN/OB Labor and Delivery Elective

Course Code (if available):

Course Type: Subinternship

Course Description: A third or fourth medical student will take an advanced elective on labor and delivery at Howard County Medical Center who have completed the core clerkship rotation. The student

will obtain and demonstrate intern level knowledge, responsibilities, and clinical skills. The student will evaluate, admit, obtain diagnoses, create plans, execute clinical duties, and document appropriately for an intern level. The student will be responsible for appropriately informing the supervising physician of patients and their clinical concerns. The student will be responsible for writing clinical notes and obtaining the appropriate co-signatures. The student will be part of the team in relaying and receiving communication. The student will demonstrate knowledge of social determinants, its historical relevance, impact on patients, and integrate concepts into appropriate patient care.

Course Director(s): Dr. Nia Jewell Leak

Faculty: Dr. Nia Jewell Leak, Dr. Andrea Kwong, Dr. Karen Wang

Contact Information (if none listed, please reach out to department/division): Dr. Nia Jewell Leak, 410-720-7148, nleak1@jhmi.edu

Availability and/or Duration:

Hours Per Week (if specified):

Required Prerequisites:

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Gynecology and Obstetrics

Division: Gynecology and Obstetrics/Maternal Fetal Medicine

Course Name: Maternal Fetal Medicine Research

Course Code (if available):

Course Type: Basic or Clinical Research

Course Description: Research projects on perinatal genetics, high risk obstetrics, and prenatal diagnosis

Course Director(s): Dr. Karin Blakemore

Faculty: Dr. Karin Blakemore and attending faculty

Contact Information (if none listed, please reach out to department/division): 410-955-8496

Availability and/or Duration: All year, 3-4 weeks

Hours Per Week (if specified):

Required Prerequisites: Agreement with faculty mentor regarding research plan

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Gynecology and Obstetrics

Division: Gynecology and Obstetrics/Urogynecology

Course Name: Pelvic Medicine and Reconstructive Surgery (Urogyn) Research

Course Code (if available):

Course Type: Basic or Clinical Research

Course Description: Research projects including, but not limited to pelvic pain, bladder pain, pelvic reconstruction, urinary and fecal incontinence, pelvic trauma, obstetric fistula, and surgical skills assessment/surgical education.

Course Director(s): Dr. Grace Chen

Faculty: Dr. Grace Chen and attending faculty

Contact Information (if none listed, please reach out to department/division): 410-550-2787

Availability and/or Duration: All year, 4 weeks or 8 weeks

Hours Per Week (if specified):

Required Prerequisites: Agreement with faculty mentor regarding research plan

Recommended Prerequisite:
Drop Period (if specified): 1 month
Enrollment Restrictions:

Department: Gynecology and Obstetrics
Division: Gynecology and Obstetrics/Reproductive Sciences
Course Name: Reproductive Endocrinology Research
Course Code (if available):
Course Type: Basic Research
Course Description: Research on topics related to reproduction, infertility, and embryology, includes but not limited to ovulation, IVF, pre-implantation genetics and embryology.
Course Director(s): Dr. James Segars
Faculty: Attending Faculty
Contact Information (if none listed, please reach out to department/division): 410-583-2761
Availability and/or Duration: All year, 3-4 weeks
Hours Per Week (if specified):
Required Prerequisites: Agreement with faculty mentor regarding research plan
Recommended Prerequisite:
Drop Period (if specified): 1 month
Enrollment Restrictions:

Department: Gynecology and Obstetrics
Division: Gynecology and Obstetrics
Course Name: Subinternship in Gynecologic Oncology
Course Code (if available):
Course Type: Subinternship, Approved Sub-I Experience
Course Description: In this clinical experience the student will function as a house officer at the first-year level on the gynecologic oncology service. The student will be responsible for providing inpatient and outpatient care to the patients who present to the service for care.
Course Director(s): Dr. Silka Patel
Faculty: Staff of the division of Gynecologic Oncology
Contact Information (if none listed, please reach out to department/division): rslatte1@jhmi.edu
Availability and/or Duration: JHU SOM students accepted year-round, ; Visiting Medical students may apply all year. JHU SOM students have preference in summer period 3
Hours Per Week (if specified):
Required Prerequisites: Core Clerkship in Ob/Gyn
Recommended Prerequisite:

Department: Gynecology and Obstetrics
Division: Gynecology and Obstetrics
Course Name: Subinternship in Gynecology
Course Code (if available):
Course Type: Subinternship, Approved Sub-I Experience
Course Description: This clinical experience consists of a subinternship in gynecology. The student will function as a house officer at the first-year level. In this capacity, the student will be responsible for the provision of inpatient and outpatient care to the patients who present to the respective services for care.

Course Director(s): Dr. Silka Patel, Dr Karen Wang

Faculty: Staff of the division of Gynecology

Contact Information (if none listed, please reach out to department/division): rslatte1@jhmi.edu

Availability and/or Duration: Summer session III; Could be offered during other times of the year as basic Women's Health Clerkship schedules will allow., 3- 4 weeks

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Women's Health and an interview

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Gynecology and Obstetrics

Division: Gynecology and Obstetrics

Course Name: Subinternship in Obstetrics and Gynecology at Bayview Medical Center

Course Code (if available):

Course Type: Subinternship, Approved Sub-I Experience

Course Description: This clinical experience consists of a subinternship in General Obstetrics and Gynecology. The student will function as an intern with responsibility for both inpatient and outpatient care. The emphasis will be on management of common OB/GYN problems.

Course Director(s): Dr. Silka Patel

Faculty: Departmental Staff

Contact Information (if none listed, please reach out to department/division): rslatte1@jhmi.edu

Availability and/or Duration: Summer session III; Could be offered during other times of the year as basic Women's Health Clerkship schedules will allow., 3-4 weeks

Hours Per Week (if specified):

Required Prerequisites: Passing Grade in basic core rotation in OB/GYN

Recommended Prerequisite:

Drop Period (if specified): 2 months

Enrollment Restrictions:

Department: Gynecology and Obstetrics

Division: Gynecology and Obstetrics

Course Name: Subinternship in Obstetrics/Maternal Fetal Medicine

Course Code (if available):

Course Type: Subinternship, Approved Sub-I Experience

Course Description: This clinical experience consists of a subinternship in obstetrics. The student will function as a house officer at the first-year level and will be responsible for the provision of both inpatient and outpatient care to the patients who present to the respective services for care. A portion of each week can be spent in prenatal genetics, obstetrical sonography, and fetal assessment.

Course Director(s): Dr. Silka Patel

Faculty: Staff of the division of Obstetrics

Contact Information (if none listed, please reach out to department/division): rslatte1@jhmi.edu

Availability and/or Duration: Summer session III; Could be offered during other times of the year as basic Women's Health Clerkship schedules will allow., 3- 4 weeks

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Ob/Gyn

Recommended Prerequisite:

Drop Period (if specified): 2 months

Enrollment Restrictions:**Department:** Gynecology and Obstetrics**Division:** Gynecology and Obstetrics/Femal Pelvic Medicine and Reconstructive Surgery**Course Name:** Virtual Patient Interactivity: Patient Case-Based Education in Urogynecology**Course Code (if available):****Course Type:** Other

Course Description: This course was developed to provide a virtually interactive introduction to the subspecialty of female pelvic medicine and reconstructive surgery/urogynecology. In this course, students will learn about the most common conditions seen in the urogynecology clinic. While this course will build on skills students learned during the Transitions to the Wards (TTW) course and other core clerkships including obstetrics and gynecology, previous rotation on any of the clinical clerkships, including obstetrics and gynecology, is not a prerequisite to taking this elective. The course combines the following elements: 1) Required readings mostly from the American College of Obstetrics and Gynecology (ACOG) practice bulletins. 2) Online interactive new patient case reviews with instructions on written notes for virtual debriefing with faculty 3) Electronic medical review of select past patients on EPIC and case presentation on these patients virtually to faculty. 3) Electronic medical review of select past patients on EPIC and case presentation on these patients virtually to faculty. 4) PowerPoint presentation on urogynecologic topic of interest. 5) Additional in-depth readings and reviewing of surgical videos with the opportunity to virtually discuss with faculty (optional). 6) Research in urogynecology topic of interest (optional)

Course Director(s): Dr. Chi Chiung Grace Chen, Dr. Danielle Patterson**Faculty:** Dr. Chi Chiung Grace Chen, Dr. Danielle Patterson, Urogynecology fellows**Contact Information** (if none listed, please reach out to department/division): cwilkin1@jhmi.edu**Availability and/or Duration:** , 3 weeks**Hours Per Week (if specified):****Required Prerequisites:** Transition to the wards**Recommended Prerequisite:****Department:** Health Sciences Informatics**Division:** Health Sciences Informatics**Course Name:** Health Sciences Informatics Elective**Course Code (if available):** ME:600.699**Course Type:** Other

Course Description: Attached to the Health Sciences Informatics Research Training Program, this elective provides students with basic informatics research skills and knowledge, focused on health sciences applications, data, information, and knowledge, decision support, evaluation, security. Students participate in program meetings, and seminars, conduct self-study, spend time at information technology settings (permission pending), and are responsible for a project report at the end of the elective. The report may range from a literature review to a system specification, to working code, depending on the interests and skills of the student.

Course Director(s): Dr. Harold Lehmann**Faculty:** Various Faculty Members**Contact Information** (if none listed, please reach out to department/division): kwinny@jhmi.edu**Availability and/or Duration:** September to June, 1 to 2 months**Hours Per Week (if specified):****Required Prerequisites:** Course Director's Permission

Recommended Prerequisite:
Drop Period (if specified): 1 month
Enrollment Restrictions:

Department: Health Sciences Informatics
Division: Health Sciences Informatics
Course Name: Unstructured Data Mining to Address Novel Infectious Diseases
Course Code (if available): ME:600.699
Course Type: Other

Course Description: This research elective is intended for medical students with an interest in the applications of natural language processing (NLP) techniques in addressing novel infectious disease outbreaks. During the era of big data in healthcare, there has been no greater catalyst for the importance of health informatics than the COVID-19 global pandemic. Students who are eager to derive insights from unstructured clinical data that can be used to better inform clinical decision making, contact tracing, containment and mitigation efforts will benefit from this opportunity. Faculty with expertise in pulmonology, infectious disease, radiological imaging, and clinical informatics will introduce students to the newly established COVID-19 Clinical Registry. Students will have an opportunity to perform chart abstraction and unstructured data annotation. They will work alongside clinical researchers, data analysts, and text mining experts to gain experience in the real-world application of creating supervised training sets for machine learning algorithms.

Course Director(s): Dr. Ashwini Davison, Dr. Stuart Ray, ,Dr. Paul Nagy
Faculty: Dr. Ashwini Davison, Dr. Stuart Ray, Dr. Paul Nagy
Contact Information (if none listed, please reach out to department/division): ashdavison@jhmi.edu
Availability and/or Duration: , 2-4 weeks
Hours Per Week (if specified):
Required Prerequisites: N/A
Recommended Prerequisite:
Drop Period (if specified): 1 month
Enrollment Restrictions: Enrollment limited to JHUSOM Students.

Department: History of Medicine
Division: History of Medicine
Course Name: Directed Readings
Course Code (if available):
Course Type: Other
Course Description: On any subject in the history of medicine by arrangement with faculty.
Course Director(s): Faculty
Faculty: Faculty
Contact Information (if none listed, please reach out to department/division): 410-955-3178
Availability and/or Duration:
Hours Per Week (if specified):
Required Prerequisites: None
Recommended Prerequisite:
Drop Period (if specified):
Enrollment Restrictions: Visiting medical students must follow JHUSOM quarter dates

Department: History of Medicine
Division: History of Medicine

Course Name: Medical Humanities and Social Medicine

Course Code (if available):

Course Type: Elective

Course Description: This elective course is designed for medical students in their clinical years seeking deeper engagement with the relationship between and its social contexts, and who want to develop or advance their own research projects on a topic of their interest in social medicine or medical humanities. "Social Medicine," for this course will be broadly defined and may include any number of themes-such as the production of health inequalities, racial justice in medicine, structural competency, and the application of social determinants of health-drawn from social science fields including anthropology, social, and history. "Medical Humanities" is similarly interdisciplinary and may include intersections with history, philosophy, literature, visual and musical arts, or religion. Participants in the course will pursue mentored research coupled with a series of core meetings with peers and faculty to discuss key concepts and current research in the medical humanities and social sciences, reflect on their applications to their developing clinical practice, and to workshop their own scholarly projects. By the end of the course, students can expect to have been introduced to various methods for examining the relationship between medicine and society, and to have made significant progress toward developing their own project as a publishable and/or actionable work.

Course Director(s): Dr. Joseph Carrese, Dr. Gail Geller, ,Dr. Jeremy Greene,, Dr. Graham Mooney

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): csufrin1@jhmi.edu

Availability and/or Duration:

Hours Per Week (if specified):

Required Prerequisites: None

Recommended Prerequisite:

Department: Medicine

Division: Internal Medicine

Course Name: Addiction Medicine - Johns Hopkins Bayview Medical Center

Course Code (if available): ME:250.699

Course Type: Advanced Clinical Clerkship

Course Description: This rotation exposes medical students to expert faculty/fellows and innovative treatment for patients with addiction on the Bayview campus. It provides a unique mix of inpatient and outpatient care of patients with substance use disorders from an internal medicine perspective. Students will spend time on our addiction medicine consult service and on the addiction medicine unit, a 16-bed inpatient unit which admits patients for treatment of withdrawal. The Comprehensive Care Practice is a primary care practice which focuses on providing care for patients with substance use disorders, hepatitis C and HIV infection. Over 650 patients receive buprenorphine treatment integrated with their medical care. The fourth-year medical student who takes this elective will also participate in case conference and journal club.

Course Director(s): Dr. Michael Fingerhood, Dr. Darius Rastegar

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): mifinger@jhmi.edu

Availability and/or Duration: All year, 2-4 weeks

Hours Per Week (if specified):

Required Prerequisites: Completion of third year of medical school preferred

Recommended Prerequisite:

Drop Period (if specified): 2 months

Enrollment Restrictions:**Department:** Medicine**Division:** Medicine/General Internal Medicine**Course Name:** Adult Genetics in Ambulatory Internal Medicine**Course Code (if available):** ME:250.699**Course Type:** Clinical Clerkship

Course Description: This elective is based primarily at Green Spring Station, in an outpatient internal medicine primary care practice. There is extensive experience with routine adult primary care. Additional clinical experiences include: acquiring, recording, and interpreting a family history; genetic risk assessment for multifactorial conditions; genetic factors in prevention, treatment, and differential diagnosis of common medical conditions; ordering and interpreting genetic tests; consultative diagnostic evaluation and longitudinal primary care management of adults with traditional single-gene disorders (especially Ehlers Danlos syndrome). There is also the opportunity to interact with other geneticists in the McKusick-Nathans Institute of Genetic Medicine, depending upon the student's particular interests.

Course Director(s): Dr. Howard Levy**Faculty:** Dr. Levy**Contact Information** (if none listed, please reach out to department/division):**Availability and/or Duration:****Hours Per Week (if specified):****Required Prerequisites:** Core Clerkship in Medicine**Recommended Prerequisite:****Drop Period (if specified):** 2 months**Enrollment Restrictions:****Department:** Medicine**Division:** Medicine/Infectious Disease/JHBMC**Course Name:** Adult Infectious Diseases - Johns Hopkins Bayview Medical Center**Course Code (if available):** ME:250.699**Course Type:** Consult Service

Course Description: Students will be assigned one consult per day and will follow their patients throughout their hospital course. Students will be responsible for deriving a care plan on each of these patients, in consultation with the fellow and attending. Students will be exposed to a broad variety of diagnoses. Students will be expected to review the scientific data guiding their clinical decisions and discuss these data with the team. The goal of this elective is to become familiar with diagnosing and managing common infectious diseases with a particular focus on making appropriate antibiotic choices.

Course Director(s): Dr. Khalil Ghanem**Faculty:** Faculty**Contact Information** (if none listed, please reach out to department/division): brucker2@jhmi.edu**Availability and/or Duration:** All year, 2-4 weeks**Hours Per Week (if specified):****Required Prerequisites:** Core Clerkship in Medicine and/or Surgery**Recommended Prerequisite:****Drop Period (if specified):** 2 months**Enrollment Restrictions:****Department:** Medicine**Division:** Internal Medicine/ Collaborative Inpatient Medical Service

Course Name: Advanced Clerkship in Hospital Medicine - Johns Hopkins Bayview Medical Center

Course Code (if available): ME:250.699

Course Type: Subinternship, Approved Sub-I Experience

Course Description: Over a 4-week period, approximately 20 shifts will be scheduled. This will provide a more robust experience for students to have continuity with attendings and patients and will prepare sub-Is even better to start their intern. This is a 2 or 4-week elective that exposes students to all key aspects of Hospital Medicine that are not included in a typical medicine clerkship. The elective assesses the students' knowledge of Hospital Medicine and the students' skills in various skills required for Hospitalist practice. The course experiences include:

- Direct patient care with attending physicians on the Hospitalist inpatient and medical consultation services
- Shadowing of Triage physicians to learn the systems based on practice aspects of hospital medicine
- Working with other multidisciplinary team members: case managers, physician assistants, nurse practitioners, physical and occupational therapists, and social workers.
- May include Didactic sessions on Hospital Medicine, billing and documentation guidelines, standardized practice guidelines on commonly encountered diseases in hospitalized patients, building communication skills, and contract negotiations.
- Opportunity to collaborate on a longitudinal scholarly activity experience that may extend beyond the rotation duration (this activity is not graded).

Course Director(s): Dr. Amteshwar Singh

Faculty: Hospitalist physicians of the division of Hospital Medicine

Contact Information (if none listed, please reach out to department/division): nshabaz2@jhmi.edu

Availability and/or Duration: , 3-4 weeks

Hours Per Week (if specified):

Required Prerequisites: Completion of year 1 and year 2 of Medical School; has completed medicine core clerkships

Recommended Prerequisite:

Department: Medicine

Division: Medicine/General Internal Medicine

Course Name: Advanced Clerkship in Medicine - Hospitalist Service

Course Code (if available): ME:250.699

Course Type: Subinternship, Approved Sub-I Experience

Course Description: This subinternship allows students to work one-on-one with faculty attendings (no interns or residents) on the general medicine inpatient service. Like the Osler firms the hospitalist service admits a mixture of both community patients with "bread and butter" diagnoses and tertiary referral transfers with more complicated and uncommon illnesses. As the primary trainee provider for your patients, you will have great hands-on experiences which lead to valuable "teaching moments" to have before starting any residency. The structure creates many opportunities for you to shine as you are evaluated personally by the hospitalist attendings you work with weekly. There is no overnight call, but you will be expected to take call three times per week from 7 a.m. to 8 p.m. Twice a week didactic conferences as well as formal and informal feedback are provided regularly.

For more information, please see the link to the hospitalist sub-intern webpage on:

http://www.hopkinsmedicine.org/gim/training/SubI_rotation.html

Course Director(s): Dr. Padmini Ranasinghe

Faculty: Hospitalists

Contact Information (if none listed, please reach out to department/division): lwilli45@jhmi.edu

Availability and/or Duration: All year;; 4 weeks

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Medicine

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Medicine

Division: Medicine/General Internal Medicine

Course Name: Advanced Clerkship in Medicine (Subinternship)

Course Code (if available): ME:250.699

Course Type: Subinternship, Approved Sub-I Experience

Course Description: Students can serve as subinterns on one of Osler Firm services or the Brancati Service. The Firms are general internal medicine inpatient ward teams that consist of interns, third year residents, and an Assistant Chief Resident or Firm Faculty as an attending. The Brancati Service is a general internal medicine inpatient ward team that consists of interns, second year residents, and Hospitalist Faculty as attending. Patients are assigned to each subintern, who fulfills the responsibilities of an intern by admitting and caring for patients on the medical services.

Course Director(s): Dr. Amit Pahwa

Faculty:

Contact Information (if none listed, please reach out to department/division): 410-955-9655

Availability and/or Duration: All year

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Medicine

Recommended Prerequisite:

Drop Period (if specified): 2 months; If a student wishes to drop with less than 2 months prior to the rotation, he or she must find a replacement

Enrollment Restrictions: Enrollment limited to JHUSOM Students

Department: Medicine

Division: Medicine/Cardiology

Course Name: Advanced Clinical Clerkship in Cardiology - Union Memorial Hospital

Course Code (if available): ME:250.699

Course Type: Clinical Clerkship

Course Description: The goal is to provide the student with a clinical experience in inpatient cardiology centered around the coronary care unit. Patients will be evaluated by the student as the primary physician functioning at an internship level. Patients will be followed into progressive care with the student participating in decisions relating to diagnosis and management as well as discharge planning. Emphasis will be placed upon daily teaching rounds, through which the student will be exposed to bedside teaching providing experience in auscultation and other means of diagnosis. An active laboratory, including cardiac catheterization, will provide adjunctive information on hospitalized patients. These are four-week rotations. Hours of participation are full time, along the same schedule as housestaff, with every fourth night call. The day begins at 8:00 a.m. with morning report. On-call rooms, food tickets, free parking passes, and a full-service library with Medline search and photocopying privileges are provided.

Course Director(s): Dr. R. Ferguson, Dr. J. Quartner

Faculty: Dr. Ferguson staff, Dr. Quartner, Staff

Contact Information (if none listed, please reach out to department/division): 410-554-2284

Availability and/or Duration: All year, Half quarter

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship

Recommended Prerequisite:

Drop Period (if specified): 2 months

Enrollment Restrictions: Lottery

Department: Medicine

Division: Medicine/Cardiology

Course Name: Advanced Clinical Clerkship in Coronary Intensive Care - Johns Hopkins Bayview Medical Center

Course Code (if available): ME:250.699

Course Type: Subinternship, Site for Advanced Clerkship in Critical Care/ICU

Course Description: The student functions as a member of the medical team at the level of an intern, with close supervision by the senior housestaff, cardiology fellow, and attending physician. Experience is gained in the evaluation and management of critically ill cardiac patients; dysrhythmia diagnosis and management; the interpretation of noninvasive studies; invasive procedures such as line placement and hemodynamic monitoring; and cardiovascular pharmacology. A sound understanding of cardiac physiology and hemodynamics is desirable

Course Director(s): Dr. Marlene Williams

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): mswillia@jhmi.edu

Availability and/or Duration: All year, Half or full quarter.

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Medicine and at least one clinical clerkship in Pulmonary, Cardiology, or advanced General Internal Medicine

Recommended Prerequisite:

Department: Medicine

Division: Internal Medicine

Course Name: Advanced Clinical Clerkship in Medicine - Johns Hopkins Bayview Medical Center

Course Code (if available): ME:250.699

Course Type: Subinternship, Approved Sub-I Experience

Course Description: The student will have the responsibilities of a medicine intern under the supervision of an assistant resident and an attending physician on one of the inpatient general medicine teaching teams. The responsibilities are similar to those of an intern on the service, but with fewer patients and with more direct resident supervision. The student will admit patients in rotation, evaluate these patients thoroughly, and formulate management plans, pend orders for co-signature by the resident, and will serve as first call (nurses' first point of contact for questions about patient care). The student will also hone skills in written and verbal handoff of patient care between shifts, with resident supervision. The student functions as part of a ward team which takes long call every fourth day and short call in-between. Typically, the subintern admits one patient on long call and one to 2 patients on short call (one of these usually admitted by the night team member), with a total service of about three or four patients. Students participate fully in the activities of the unit and attend conferences, including morning report, noon conference, and Grand Rounds.

The Bayview subinternship offers an outstanding patient population, the ability to function as an important part of the team, autonomy supported by supervision and teaching by residents and

attending physicians, a collegial environment, and opportunities for mentoring and career advice by faculty and other program leaders.

Course Director(s): Dr. Janet Record

Faculty: Dr. Record and staff

Contact Information (if none listed, please reach out to department/division): fhoward5@jhmi.edu

Availability and/or Duration: All year, Half quarter

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Medicine

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: Enrollment Limited to JHUSOM Students

Department: Medicine

Division: Internal Medicine

Course Name: Advanced Clinical Clerkship in Medicine (Subinternship) - Greater Baltimore Medical Center

Course Code (if available): ME:250.699

Course Type: Advanced Clinical Clerkship

Course Description: The clerkship focuses on the principles of diagnosis and management of medical patients in the inpatient setting. Students will work closely with the resident staff and faculty of the general medical service at GBMC. Night call is not required but encouraged. Students will carry a patient load of two to three patients.

Course Director(s): Dr. Paul Foster

Faculty: Dr. Foster and staff

Contact Information (if none listed, please reach out to department/division): bsizemore-kuczinski@gbmc.org

Availability and/or Duration: January - June; August - December, Half quarter

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Medicine

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: No students in July

Department: Medicine

Division: Interdisciplinary; Em Med Clinical Programs

Course Name: Advanced Clinical Elective in Inpatient COVID-19 Care

Course Code (if available): ME:250.699

Course Type: Clinical Clerkship

Course Description: The COVID-19 pandemic is the single greatest public health crisis of our time and is a major defining force in medicine and in public life. As of 12/7/2020, medical students in advanced clerkships have been granted permission to participate in the care of patients with confirmed or suspected COVID-19, and many have demonstrated great interest in this opportunity. As COVID-19 incidence surges in our community, there is a genuine need for clinical work to which senior medical students are extremely qualified to contribute, and engagement in this work would provide them with significant educational value.

This course focuses on the clinical care of hospitalized COVID-19 patients across various acuity levels and is a full-time clinical rotation. During their time on the COVID wards, students will be paired with clinicians responsible for admitting new patients and will actively participate in initial assessment and

development of diagnostic and management plans. Students will follow their admitted patients throughout their hospitalizations and will serve as a primary source of care continuity in a clinical setting that is reliant on short-term clinician labor provided by physicians who have been redeployed from other activities to aid in the COVID-19 response. Students will also be trained as “Epic Superusers” so that they can take responsibility for order entry, documentation, and medication reconciliation for admitted patients. This will allow them to take meaningful ownership over patient care, while also providing redeployed clinicians with vital assistance, as many are unaccustomed to the inpatient Epic environment. While faculty preceptors may be redeployed from other services, all will be qualified clinicians and full-time faculty members or fellows, and will receive specific training in how to work constructively with students and optimize their educational experience.

The clinical experience will be supplemented by online learning activities including case-based discussions and virtual simulation sessions. Peer education will be incorporated with the addition of a student-run journal club, in which students will present research data on novel therapies for COVID-19 in a faculty-moderated format. Assessment will be based primarily on clinical performance evaluations completed by faculty preceptors, with smaller contributions from journal club presentation scores and degree of engagement in learning activities.

Course Director(s): Dr. Julianna Jung

Faculty: COVID Service Faculty

Contact Information (if none listed, please reach out to department/division): 443-802-6037

Availability and/or Duration:

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Internal Medicine

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: Enrollment limited to M4 JHUSOM Students.

Department: Medicine

Division: Medicine/Medical Genetics

Course Name: Advanced Topics in Human Genetics

Course Code (if available): ME:250.699

Course Type: Tutorial

Course Description: This lecture/discussion course is a research-oriented introduction to principles of human genetics based on fundamental knowledge introduced in prior courses. Emphasis is placed on recent advances in knowledge, evolving techniques, and the design of research strategies, in the context of the current biomedical literature. Topics include: chromosome structure and function; chromosome aberrations; gene mapping; mutation; sex determination; inborn errors of metabolism; genetic heterogeneity; genotype environment interaction in health and disease; aneuploidy; carcinogenesis and ethical issues surrounding modern genetic medicine.

Course Director(s): Dr. Roger Reeves, Dr. Kirby Smith, ,Dr. Michael Parsons

Faculty: Dr. Reeves, Dr. Smith, Dr. Parsons

Contact Information (if none listed, please reach out to department/division):

Availability and/or Duration: Quarter 3

Hours Per Week (if specified): Monday, Wednesday, Friday

Required Prerequisites: Fundamentals of Genetics; Molecules and Cells and permission of instructor

Recommended Prerequisite:

Department: Medicine

Division: Medicine/Allergy and Clinical Immunology

Course Name: Clinical Clerkship in Allergy and Clinical Immunology - Bayview Medical Center/Asthma & Allergy Center

Course Code (if available): ME:250.699

Course Type: Clinical Clerkship

Course Description: Students will participate in three to five half day outpatient clinical sessions and two to three hours of inpatient consultations and consult rounds during each week. Attendance at teaching conferences each week is required. Divisional research conferences and Journal Clubs provide an opportunity to learn the research interests of the staff. Clinical experience in pediatric allergy and immuno-deficiency clinics can also be provided if desired. Because of the importance of longitudinal follow-up in outpatient medicine, this clerkship is taken as a six-to-eight-week block, but can be shared with other outpatient rotations, such as dermatology, if the student wishes to try more than one subspecialty during a quarter.

Course Director(s): Dr. Antoine Azar

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): kmcinty6@jhmi.edu

Availability and/or Duration: All year, minimum of one quarter

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Medicine

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: Visiting Medical Students must follow JHUSOM quarter dates

Department: Medicine

Division: Medicine/Cardiology

Course Name: Clinical Clerkship in Cardiology

Course Code (if available): ME:250.699

Course Type: Clinical Clerkship

Course Description: The student participates in the activities of the Cardiovascular Division, particularly the clinical service. Through inpatient consultations, the inpatient service, and the outpatient clinics, the student gains experience in the cardiac examination, the use and interpretation of noninvasive and imaging studies (electrocardiography; exercise testing; ultrasound, nuclear, CT and MRI based imaging methods), and invasive procedures (angiography, revascularization and interventional procedures electrophysiologic studies) with emphasis on integration of history, examination and diagnostic modalities in the formulation of treatment plans.

Course Director(s): Dr. Joshua Kiss

Faculty: Division Faculty

Contact Information (if none listed, please reach out to department/division): jkiss1@jhmi.edu

Availability and/or Duration: All Year, Half or full quarter.

Hours Per Week (if specified):

Required Prerequisites: Core Clerkships in Medicine and Surgery

Recommended Prerequisite:

Drop Period (if specified): 2 months

Enrollment Restrictions: Lottery

Department: Medicine

Division: Medicine/Cardiology

Course Name: Clinical Clerkship in Cardiology - Johns Hopkins Bayview Medical Center

Course Code (if available): ME:250.699

Course Type: Clinical Clerkship

Course Description: The student participates in the activities of the Cardiovascular Division, particularly the clinical service. Through inpatient consultations, the inpatient service, and the outpatient clinics, the student gains experience in the cardiac examination, the use and interpretation of both non-invasive and invasive studies.

Course Director(s): Dr. Marlene Williams

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): mswillia@jhmi.edu

Availability and/or Duration: All Year, Half or full quarter.

Hours Per Week (if specified):

Required Prerequisites: Core Clerkships in Medicine and Surgery

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: Lottery

Department: Medicine

Division: Medicine/Endocrinology

Course Name: Clinical Clerkship in Consultative Endocrinology

Course Code (if available): ME:250.699

Course Type: Clinical Clerkship

Course Description: This elective offers students an introduction to clinical endocrinology and diabetes. Endocrinology affects all organ systems and this rotation will benefit students regardless of their career choice. Students will get substantial experience interviewing, examining, and following patients with both straightforward and complex endocrine conditions. This is accomplished by seeing patients primarily on the in-patient endocrinology consultative service at JHH. We also offer opportunities to join faculty in their outpatient clinics to help round out your experience if needed. Examples of specialty clinics include Thyroid, Metabolic Bone, Diabetes, Pituitary/Adrenal. Further, there are numerous didactic sessions on the East Baltimore campus including: i) Endocrine clinical conference (weekly on Wednesdays at 1:30), ii) Endocrine Grand rounds (weekly on Wednesday afternoons during the fall-spring), iv) Bone conference (monthly), v) Pituitary pathology conference (monthly). Other important educational opportunities that can be availed of if there is interest and time include: i) lectures to Osler interns (different times depending on the season), ii) nutrition clinics in the Hopkins Diabetes Center, ii) the diabetes foot and wound clinic – a multi-disciplinary clinic including vascular surgery, podiatry, and endocrinology; iv) transition clinic for patients with type 1 diabetes at Mt. Washington Pediatric Hospital.

As you can see, we have a wonderful diversity of educational and work experiences from which students can get an excellent grounding in clinical endocrinology. We are always excited to have students on service with us and can tailor aspects of the rotation to your needs and interests so do not hesitate to reach out if you have questions.

Course Director(s): Dr. Daisy Duan

Faculty: Trainees spend time with many of the clinical Endocrine faculty

Contact Information (if none listed, please reach out to department/division): Christopher Harris
fharr23@jhmi.edu

Availability and/or Duration: All year, Half or full quarter.; Duration is flexible but we require at least 2 weeks for those who have done their medicine rotation and at least 3 to 4 weeks, for those who have done any non-medicine core rotation

Hours Per Week (if specified):

Required Prerequisites: None, however, it is preferable that a core rotation has been done beforehand
Recommended Prerequisite:

Department: Medicine

Division: Medicine/Cardiology

Course Name: Clinical Clerkship in Coronary Intensive Care

Course Code (if available): ME:250.699

Course Type: Clinical Clerkship, Site for Advanced Clerkship in Critical Care/ICU

Course Description: The student participates in the daily activities of the Coronary Care Unit and works closely with the medical housestaff, cardiology fellow and attending physician. The student gains experience in the evaluation and management of critically ill cardiac patients; ventricular and atrial arrhythmias, acute myocardial infarction, and acute decompensated heart failure. In addition, the student gains experience in the interpretation of electrocardiograms, echocardiograms, and other noninvasive studies; invasive procedures such as line placement, circulatory assist devices, angiography, angioplasty, and electrophysiological studies; and hemodynamic monitoring.

Course Director(s):

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): ssschulma@jhmi.edu

Availability and/or Duration: All year, Half quarter

Hours Per Week (if specified):

Required Prerequisites: Core clerkships in Medicine and Surgery

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Medicine

Division: Medicine/Gastroenterology and Hepatology

Course Name: Clinical Clerkship in Gastroenterology

Course Code (if available): ME:250.699

Course Type: Clinical Clerkship

Course Description: Students participate in evaluating inpatients and outpatients with a wide variety of gastroenterology complaints and problems. Interpretation of radiologic procedures, biopsies, and tests of physiologic function is an integral part of the course. Students participate in ward rounds, the Inflammatory Bowel Disease Center, the weekly GI clinical conference, the bi-weekly GI seminar, journal club, and research conference. Circumscribed clinical investigation and clinical-pathologic correlation are possible by arrangement.

Course Director(s): Dr. Tinsay Woreta

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): lwelch@jhmi.edu

Availability and/or Duration: All year, 4 weeks

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Medicine

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: Visiting Medical Students must follow JHUSOM quarter dates

Department: Medicine

Division: Medicine/Gastroenterology

Course Name: Clinical Clerkship in Gastroenterology - Sinai Hospital

Course Code (if available): ME:250.699

Course Type: Clinical Clerkship

Course Description: This well-rounded senior elective in Gastroenterology provides the student with opportunities to evaluate patients on the inpatient consultation service, participate on daily teaching rounds, and attend outpatient office hours with the attending staff. The student is encouraged to attend Joint GI-Surgery-Radiology conference as well as weekly GI Conference at Johns Hopkins Hospital

Course Director(s): John Rabine

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division):

Jcrabine@lifebridgehealth.org

Availability and/or Duration: All year, 4 weeks; Full time

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Medicine

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Medicine

Division: Dept. of Genetic Medicine

Course Name: Clinical Clerkship in Genetics

Course Code (if available): ME:250.699

Course Type: Clinical Clerkship

Course Description: The Dept. of Genetic Medicine provides genetic services to patients and families across the lifespan and can tailor your learning experience to your interests and learning needs. A team approach including geneticists – both MD and PhD laboratory and quantitative experts, genetic counselors, nurse practitioners, dieticians, coordinators, and other specialists provides both inpatient and outpatient exposure to a broad range of clinical concerns. A weekly case conference and multiple other conferences provide didactic learning and discussion and are integrated with multiple other learning resources, including on-line resources for lifelong learning. Students will learn the application of the fundamentals of medical genetics and human variation in the individual and family clinical, biochemical, cytogenetic, and molecular levels. Practical experience in clinical genetics, genetic counseling, and the application of laboratory methods to clinical problems are emphasized, with the possibility of tailoring and developing projects in line with individual interests. Patients are seen from preconception to palliative care to autopsy with an emphasis on prenatal diagnosis, newborn screening, congenital anomalies, neurodevelopmental disabilities, connective tissue conditions, neurosensory conditions, skeletal dysplasias, epigenetic conditions, and the integration of genetic understanding across all medicine. The opportunity to participate in case reports and clinical/educational research can be available with multiple publications being developed with students over the years. Clinical responsibilities, all under the direct supervision of a fellow, genetic counselor, and an attending physician, include: an active inpatient consultation service, daily clinical outpatient clinical activities, and an inpatient genetics service that focuses on inborn errors of metabolism.

Course Director(s): Dr. Joann Bodurtha

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division):

Availability and/or Duration: All year, 2-4 weeks

Hours Per Week (if specified):

Required Prerequisites:

Recommended Prerequisite: It is helpful to have at least one core clerkship prior to this elective

Department: Medicine

Division: Medicine/Geriatric Medicine and Gerontology

Course Name: Clinical Clerkship in Geriatric Medicine Bayview Medical Center/Geriatric Center

Course Code (if available): ME:250.699

Course Type: Elective

Course Description: This course is designed to provide an in-depth exposure to geriatric medicine and gerontology. The student will work closely with members of the faculty in the following programs:
Geriatric Rehabilitation Unit: The student will work directly in patient care gaining first-hand experience in managing patients with multiple health problems. The value of a multi-disciplinary approach to geriatric medicine will be emphasized and the student will have ample opportunity to learn to evaluate and treat many of the important problems in patients in a long-term care institution. There is no night call.

Physician House Call Program: The student will evaluate and follow a selected group of patients who are home-bound because of illness. This involvement will permit the student further exposure to a multidisciplinary team and sensitize the student to this important mode of geriatric health care deliver.

Ambulatory Care: The student may elect to spend a portion of time working with a member of the faculty in the Beacham Ambulatory Center on the Johns Hopkins Bayview Medical Center campus or a geriatrics specialty clinic such as those focused on memory, bone health and continence.

Inpatient Care: Experiences are also available on the hip-fracture co-management service.

Teaching Conference: The student will participate in the weekly clinical geriatrics rounds and seminars attended by faculty members, the clinical and research fellows, and the housestaff on geriatric medicine rotation.

Research Seminars: If interested, the student may participate in the divisional research seminars which often include presentations by visiting professors.

Each student may elect to emphasize one or more aspects of the program

Course Director(s): Dr. Danelle Cayea

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): crobin44@jhmi.edu

Availability and/or Duration: Available in quarters 1-4 only, 2-4 weeks

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Medicine

Recommended Prerequisite:

Drop Period (if specified): 2 weeks

Enrollment Restrictions:

Department: Medicine

Division: Medicine/Infectious Disease

Course Name: Clinical Clerkship in Infectious Diseases

Course Code (if available): ME:250.699

Course Type: Clinical Elective

Course Description: A rotation on the general ID inpatient consultation service provides the opportunity to participate in the evaluation and management of a wide range of ID problems. By working alongside our faculty, fellows, and clinical pharmacists, rotating residents and students experience a rich and

educational introduction to the world of clinical ID. Students answer consultation requests, review findings with fellows, and present cases to the attending on afternoon rounds held daily. The goals of the elective are to provide guidelines to an approach to patients with established or suspected infections. Methods to establish an etiologic diagnosis and rational use of antibiotics are emphasized.

Course Director(s): Dr. Michael Melia

Faculty: Division Faculty

Contact Information (if none listed, please reach out to department/division): IDFellowship@jhmi.edu

Availability and/or Duration: All year, 3 weeks or longer

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Medicine and Surgery Clerkship

Recommended Prerequisite:

Drop Period (if specified): 2 months

Enrollment Restrictions: Lottery; Limited to two students at a time

Department: Medicine

Division: Medicine/Infectious Disease

Course Name: Clinical Clerkship in Infectious Diseases Sinai Hospital

Course Code (if available): ME:250.699

Course Type: Consultation Service

Course Description: This elective offers medical students an opportunity to evaluate patients on the Infectious Diseases (I.D.) teaching and consultative service under the supervision of the division's attending staff Drs. Gradon and Mayrer. Students will also regularly evaluate outpatients with HIV, hepatitis C, and other infectious diagnoses in the Infectious Disease Ambulatory Center under the supervision of Drs. Cmar and Wiberg.

Medical students have the opportunity to assist in any Hospital based antibiotic utilization review studies, antibiotic trials, or other ongoing clinical projects.

Course Director(s): Dr. Kjell Wiberg

Faculty: Dr. A. Mayrer, Dr. J. Gradon, Dr. K. Wiberg

Contact Information (if none listed, please reach out to department/division):

Kwiberg@lifebridgehealth.org

Availability and/or Duration: All year

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Medicine

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Medicine

Division: Medicine/Infectious Disease

Course Name: Clinical Clerkship in Infectious Diseases Union Memorial Hospital

Course Code (if available): ME:250.699

Course Type: Clinical Clerkship

Course Description: This elective provides an opportunity for students to see patients with both medical and surgical infectious diseases. Students will participate as a member of the consult team seeing patients in inpatient and outpatient settings. Instruction is provided through working closely with the attending, attending clinical conferences, and through readings. Free parking and use of the Medline computer and photocopier; no weekend duties required.

Course Director(s): Dr. Wayne Campbell

Faculty: Dr. W. Campbell and staff

Contact Information (if none listed, please reach out to department/division):

wayne.campbell@medstar.net

Availability and/or Duration: All year, Half quarter

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Medicine

Recommended Prerequisite:

Department: Medicine

Division: Medicine/Pulmonary and Critical Care Medicine

Course Name: Clinical Clerkship in Medical Intensive Care

Course Code (if available): ME:250.699

Course Type: Subinternship, Site for Advanced Clerkship in Critical Care/ICU

Course Description: During this rotation medical students learn an approach to the critically ill patient, enhance their knowledge of respiratory and circulatory physiology and pathophysiology, and build on their abilities to evaluate and manage patients with complex and/or critical problems, as well as medical patients in general.

Students will see patients with other problems including endocrine emergencies, hyper and hypothermia, cardiac arrhythmias, CNS hemorrhage, etc. Most patients' problems are complex, involving several organ systems.

Each MICU team consists of an attending physician, the MICU nursing staff, five house officers, and a critical care fellow. Medical students take call with the housestaff, obtain histories, and perform physical examinations, gather, and integrate laboratory data and pertinent information from literature, participate in decision making, write admission and progress notes, etc. Students will observe various critical care procedures such as managing multiple intravenous lines, SwanGanz and central venous catheters, administration of medications such as antibiotics and pressors. Under the supervision of the resident or the attending, students may perform certain procedures.

Course Director(s): Dr. Roy Brower

Faculty: Dr. R. Brower and division faculty

Contact Information (if none listed, please reach out to department/division): cweaver1@jhmi.edu

Availability and/or Duration: January - June; September - December

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Medicine and at least one other rotation in medicine or surgery

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: Enrollment Limited to JHUSOM Students

Department: Medicine

Division: Medicine/Nephrology

Course Name: Clinical Clerkship in Nephrology

Course Code (if available): ME:250.699

Course Type: Clinical Clerkship

Course Description: This clinical elective is designed to provide the student with practical clinical work in nephrology including diagnostic evaluations on inpatients; participation in dialysis and the management of chronic kidney disease; management of electrolyte disorders, and management of acute renal failure.

The student works closely with the fellow on the renal service and the attending physician, rounds daily on inpatient consults (which average four per day), and follows patients.

Course Director(s): Dr. C. John Sperati

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): thennel1@jhmi.edu

Availability and/or Duration: All year;, Half or full quarter.; JHUSOM Students. Non-JHUSOM students: October-June only

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Medicine

Recommended Prerequisite:

Drop Period (if specified): 2 months

Enrollment Restrictions:

Department: Medicine

Division: Medicine/Pulmonary and Critical Care Medicine

Course Name: Clinical Clerkship in Pulmonary Diseases - Sinai Hospital

Course Code (if available): ME:250.699

Course Type: Consultation Service

Course Description: This elective involves the student in the full spectrum of inpatient pulmonary consultations. The student will see patients with the attending physician and have the opportunity to learn the technique of thoracentesis and observe bronchoscopies and other procedures. The student will also see patients with various sleep disorders. The student will learn the proper indications for pulmonary function studies and other pulmonary diagnostic studies. The student will receive instruction on the proper interpretation of pulmonary function studies.

Course Director(s): Dr. Steven Schonfeld

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division):

sschonfe@lifebridgehealth.org

Availability and/or Duration: All year, Half quarter

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Medicine

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Medicine

Division: Medicine/Pulmonary and Critical Care Medicine

Course Name: Clinical Clerkship in Pulmonary Diseases and Clinical Pulmonary Physiology

Course Code (if available): ME:250.699

Course Type: Clinical Clerkship

Course Description: Students participate in the consultation service of the Respiratory Division at the Johns Hopkins Hospital. Students will evaluate, under the supervision of a fellow and an attending physician, patients with a wide variety of lung diseases, recommend diagnostic and therapeutic options, and follow patients during the course of their pulmonary problems. Students attend radiology conferences and seminars of the division.

Course Director(s): Dr. Ramana Sidhaye

Faculty: Division Faculty

Contact Information (if none listed, please reach out to department/division): cweaver1@jhmi.edu

Availability and/or Duration: All year, Half quarter
Hours Per Week (if specified):
Required Prerequisites: Core Clerkship in Medicine
Recommended Prerequisite:

Department: Medicine

Division: Medicine/Rheumatology

Course Name: Clinical Clerkship in Rheumatology

Course Code (if available): ME:250.699

Course Type: Clinical Clerkship

Course Description: This elective teaches a general approach to the differential diagnosis of rheumatic diseases, the rheumatology physical exam, and the principles of treatment of common rheumatic disorders. Students will actively participate on the inpatient consultation service at Johns Hopkins Hospital or at Johns Hopkins Bayview Medical Center, by working with the fellows and attending rheumatology consultant. There will be significant opportunity for one-to-one teaching. Students will also attend the weekly Rheumatology Rounds Conference.

Course Director(s): Dr. Antony Rosen, Dr. Allan Gelber; Dr. Laura Cappelli

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): khueter1@jhmi.edu

Availability and/or Duration: , 1-4 weeks

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Medicine

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Medicine

Division: Medicine/Clinical Pharmacology

Course Name: Clinical Pharmacology/Internal Medicine

Course Code (if available): ME:250.699

Course Type: Clinical Clerkship

Course Description: This elective emphasizes the fundamentals of rational drug therapy in the context of a tertiary care hospital and primary care clinic. Students will participate in an outpatient primary care clinic at the Johns Hopkins Outpatient Center one half-day per week, as well as inpatient care of this clinic population when necessary. Students will join in review sessions of questions posed to the Drug Information Center and learn how to use various resources to answer these questions. Research conferences within the Clinical Pharmacology Division will be open to the student and attendance at twice monthly student journal clubs will be required. The student will be invited to attend the monthly Pharmacy and Therapeutics Committee meeting and join the Hospital Pharmacist and Drug Center staff in responding to questions and issues arising within the hospital.

Course Director(s): Dr. Brent G. Petty

Faculty:

Contact Information (if none listed, please reach out to department/division): bgp@jhmi.edu

Availability and/or Duration: All year, Half quarter

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Medicine

Recommended Prerequisite:

Drop Period (if specified): 2 month

Enrollment Restrictions:

Department: Medicine

Division: Medicine/Rheumatology

Course Name: Clinical Research in Rheumatology

Course Code (if available): ME:250.699

Course Type: Clinical Research

Course Description: Lupus erythematosus is a chronic autoimmune disease of young women that affects virtually every organ system. In the past students have been able to publish an abstract and paper on their work. Recent topics include coronary artery disease, thrombotic events, miscarriage, preterm birth, hyperlipidemia, satisfaction with care and measuring disease damage.

Course Director(s): Dr. Michelle Petri

Faculty:

Contact Information (if none listed, please reach out to department/division): khueter1@jhmi.edu

Availability and/or Duration: , 1 month

Hours Per Week (if specified):

Required Prerequisites:

Recommended Prerequisite:

Drop Period (if specified): 3 months

Enrollment Restrictions:

Department: Medicine

Division: Medicine; Endocrinology and Metabolism

Course Name: Elective in Ambulatory Care - Sinai Hospital

Course Code (if available): ME:250.699

Course Type: Clinical Clerkship

Course Description: The student is given an opportunity to evaluate and treat patients in an office setting designed as a model group practice. Students are supervised by full-time faculty clinicians, and gain familiarity in treating common ambulatory adult diseases as well as an appreciation for the process and nuances of the office visit. Approach is patient-centered, with a discussion of each patient with a faculty preceptor after the initial student evaluation. There is opportunity to follow a patient longitudinally over the course of the month.

The student has the opportunity to attend all Department of Medicine conferences including Noon Conference.

Course Director(s): Dr. Asha Thomas

Faculty: Division Faculty

Contact Information (if none listed, please reach out to department/division):

athomas@lifebridgehealth.org

Availability and/or Duration: All year, 4 weeks; Full time

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Medicine

Recommended Prerequisite:

Department: Medicine

Division: Medicine; Bay General Internal Medicine

Course Name: Elective in Clinical Excellence with the Miller-Coulson Academy

Course Code (if available): ME:250.699

Course Type: Other

Course Description: This 2-4 week elective will be a great learning experience for students interested in learning about clinical excellence first-hand across specialties and clinical settings. Faculty members inducted into the Miller-Coulson Academy of Clinical Excellence are highly clinically active faculty who are revered for their clinical excellence by their peers, patients, and trainees. Students will have the opportunity to spend a day and work with a selection of Academy members in their various clinical settings while reflecting on the processes and outcomes related to excellence in patient care. The Miller-Coulson Academy's definition of clinical excellence in academic medicine is "Achieving a level of mastery in the following six areas as they relate to patient care: 1) communication and interpersonal skills; 2) professionalism and humanism; 3) diagnostic acumen; 4) skillful negotiation of the healthcare system; 5) knowledge; 6) scholarly approach to clinical practice, and exhibiting a passion for patient care, and explicitly modeling this mastery to medical trainees."

Elective experiences will include:

- Direct patient care with multiple physician Academy members
- Review of literature related to excellence in patient care
- Narrative reflective writing about what the student observes in spending time with role model clinicians and how this influences their idea of the physician that they aspire to become.

Course Director(s): Dr. Scott Wright

Faculty: Members of the Miller-Coulson Academy of Clinical Excellence

Contact Information (if none listed, please reach out to department/division): ksimmers@jhmi.edu

Availability and/or Duration: All year, 2-4 weeks; The faculty member will provide the specific schedule

Hours Per Week (if specified):

Required Prerequisites: None

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: Enrollment Limited to JHUSOM Students

Department: Medicine

Division: Psychiatry and Behavioral Sciences and Medicine

Course Name: Exploring Professional Identity Through Art: An online Art Museum-Based Elective

Course Code (if available): ME:250.699

Course Type: Other

Course Description: This course will use the arts and humanities to facilitate reflection on professional identity. The most used and best studied of these arts-based methods, Visual Thinking Strategies, was developed by former Museum of Modern Art education director, Philip Yenawine, who has graciously agreed to be one of the small group facilitators for the course. The course builds on what you have learned in the College Advisory Program TIME Small Group Teaching Sessions about your sense of self and professional identity. What you learn here will prepare you to thrive personally and professionally during your training and throughout your career. You will engage in interactive online sessions and discussions centered on activities using online collections of art. Other activities will also include music, poetry, sketching, and reflective writing. Topic will include what it means to be human, to be a physician, and to lead a good life (for oneself and one's patients), and self-care. No art knowledge or experience of any kind is required.

Please note: Prior to enrolling voluntarily in this elective, students will be advised that course participation includes taking part in an IRB-approved research study (IRB00210522; Principal Investigator Margaret Chisolm MD). Each student will be expected to submit two 750-word+ written reflections over the duration of the course (one baseline and one summative reflection) and a pre- and post-course survey to assess whether course objectives were met and to answer the study's research questions.

Course Director(s): Dr. Margaret Chisolm

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): mchisol1@jhmi.edu

Availability and/or Duration:

Hours Per Week (if specified):

Required Prerequisites: N/A

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: Enrollment Limited to 2nd, 3rd, or 4th Year JHUSOM Students.

Department: Medicine

Division: Medicine/Division of Hospital Medicine

Course Name: General Internal Medicine Consultation Service

Course Code (if available): ME:250.699

Course Type: Consultation Service

Course Description: Students care for a diverse group of patients seen by the General Internal Medicine Consultation Service. The most common referring services are neurosurgery, orthopaedics, gynecology, plastic surgery, PM&R, and psychiatry. Particular emphasis is given to peri-operative medicine and an evidence-based approach to care.

The students evaluate the patients initially and then present the patient care problem(s) to the attending faculty and general internal medicine fellows. Students follow-up on the patients daily as they round with the fellow and make additional recommendations for evaluation and management. Near the end of the experience, the students present a case to the fellow and attending that they have seen on the service and discuss the essential features from an evidence-based medicine perspective.

Learning modules (<https://www.shmlearningportal.org/content/shm-consults-core-curriculum>) covering a wide range of consultation topics are provided. Students will receive teaching daily from the fellow on rounds and at least three times a week from the attending. Students will work directly with the attending.

The clerkship is particularly appropriate for students interested in entering a field of surgery, anesthesiology, psychiatry, or internal medicine.

You can find more information about the service on our website:

<https://www.hopkinsmedicine.org/hospitalists/consultation/index.html>

Course Director(s): Dr. Becca Engels

Faculty: Hospitalist Division faculty

Contact Information (if none listed, please reach out to department/division): rengels2@jhmi.edu

Availability and/or Duration: All year

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Medicine

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Medicine

Division: Medicine

Course Name: Hopkins Health Management Advisory Group

Course Code (if available): ME:250.699

Course Type: Other

Course Description: The Hopkins Health Management Advisory Group (HHMAG) was established to provide students with an education in the management and administration in academic health systems. Students gain experience in the core skills of communication, problem solving, and team and project management. These are skills required for success as a leader across any roles in healthcare. Students begin the course with a boot camp experience introducing the basic skills they are expected to learn, as well as an overview of the Johns Hopkins Medicine organization.

The students are divided into teams and assigned an important health system problem to help solve. Each team will have both a student advisor with prior HHMAG experience and a project sponsor, who is an institutional leader within Johns Hopkins Medicine. The team, in conjunction with the project sponsor and course director, will determine the goals and scope of the project. They will create a proposal detailing these goals and a timeline to show how they will achieve these goals. Teams will then use a variety of techniques to fulfill their goals and give a presentation to the relevant health system leaders.

Course Director(s): Dr. Sanjay Desai

Faculty: Dr. Sanjay Desai

Contact Information (if none listed, please reach out to department/division): sanjaydesai@jhmi.edu

Availability and/or Duration:

Hours Per Week (if specified): 4-5 hours per week

Required Prerequisites: None

Recommended Prerequisite:

Department: Medicine

Division: Internal Medicine/ Collaborative Inpatient Medical Service (HCG)

Course Name: Hospital Medicine Elective - Howard County General Hospital

Course Code (if available): ME:250.699

Course Type: Clinical Clerkship

Course Description: This rotation is a clinical elective in hospital medicine for 3rd and 4th year medical students. Students will work one-on-one with Johns Hopkins medical attendings. They will admit and follow a panel of patients, write notes, and get training and feedback on all aspects of internal medicine in the hospital. We have a diverse patient population, with some patients who have excellent access to care and high health literacy and some patients who have poor access to outpatient care and who are medically vulnerable. We are an amazing place for students to get one-on-one mentoring from attendings and to see a variety of common internal medicine cases. In addition, we focus on excellent communication with outpatient providers and safe transitions of care. Our physicians are in the hospital 24/7 so students can experience overnight shifts or weekend shifts if they wish.

Course Director(s): Dr. Rishi Kumar

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): jkaka1@jhmi.edu

Availability and/or Duration: , 2 weeks

Hours Per Week (if specified):

Required Prerequisites: Completion of year 1 and year 2 of Medical School; has started clerkships

Recommended Prerequisite:

Drop Period (if specified): 2 months

Enrollment Restrictions:

Department: Medicine

Division: Medicine; Bay Geriatric Medicine

Course Name: Introduction to Telehealth in Adult Ambulatory Medicine

Course Code (if available): ME:250.699

Course Type: Other

Course Description: This elective is designed to provide students with an introductory experience in telehealth in an ambulatory practice setting caring for adult patients. Students will take on an active role providing primary care to adult patients; work closely with a preceptor in Internal Medicine, Med-Peds, or Family practice. Students will also learn about technical, societal, and legal issues related to delivery of telehealth.

Course Director(s): Dr. Colleen Christmas

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): iknox1@jhmi.edu

Availability and/or Duration:

Hours Per Week (if specified):

Required Prerequisites: Successful completion of two Core Clerkships, including Medicine

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: Enrollment Limited to JHUSOM Students

Department: Medicine

Division: Medicine/Nephrology

Course Name: Nephrology Elective - Johns Hopkins Bayview Medical Center

Course Code (if available): ME:250.699

Course Type: Consultation Service

Course Description: Students will participate in the complete range of clinical nephrology activities at Johns Hopkins Bayview Medical Center with emphasis on inpatient and outpatient consultative nephrology; daily rounds (Mon-Fri) with the consult team, renal and transplant clinics, several teaching conferences, and journal clubs; introduction to end stage renal disease modalities (hemodialysis, CAPD, renal transplant); some required reading.

Course Director(s): Dr. Sumeska Thavarajah

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): sthavar1@jhmi.edu

Availability and/or Duration: All year

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Medicine

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Medicine

Division: Medicine/Palliative Medicine

Course Name: Palliative Care and Pain Clinical Elective

Course Code (if available): ME:250.699

Course Type: Clinical

Course Description: This elective will provide an introduction to Palliative Medicine and Hospice care. Over 90% of hospitals now have palliative care programs, based on evidence showing better quality of life, better quality of care, and even improved survival compared to usual care when palliative assists a patient.

Clinical experiences may include a mix of inpatient consultations at JHH (both within the Sidney Kimmel Comprehensive Cancer Center and the main hospital), outpatient consultations within various stand-

alone palliative care clinics in Viragh, Weinberg and JHOC, as well as hospice experiences at local hospice agencies. Opportunities to engage with social work and chaplaincy also exist. The learning curriculum will emphasize palliative care principles focusing on communication, goals of care discussions, family meetings, and a varying degree of basic and complex symptom management. This experience offers hands-on experience having difficult conversations, including sharing bad news and discussing prognosis, while also practicing opioid conversions, evaluating adjuvant therapies for complex symptoms, and developing care plans to transition a patient across multiple care settings. This elective will offer an individualized learning plan based on each unique learner's goals as well as provide necessary foundational knowledge to effectively communicate with patients and their families in times of stress and crisis, complicated by emotion. The skills gained throughout this experience can be carried forward and applied in any setting with any patient.

Course Director(s): Dr. Danielle Doberman, Dr. Corey Tapper

Faculty: Various members of the Palliative Medicine Team

Contact Information (if none listed, please reach out to department/division): ctapper1@jhmi.edu; ddoberm1@jhmi.edu

Availability and/or Duration: , 1, 2, or 4 weeks

Hours Per Week (if specified): Monday-Friday ; 8 AM-5 PM

Required Prerequisites:

Recommended Prerequisite:

Department: Medicine

Division: Psychiatry and Behavioral Sciences and Medicine

Course Name: Professional Identity (Trans)formation: An Art Museum-Based Elective

Course Code (if available): ME:250.699

Course Type: Other

Course Description: Description: This highly interactive 3-week arts and humanities course will take place primarily at the Baltimore Museum of Art and other local museums, although we will engage in a few arts-based experiences in clinical settings and online. This course is about professional identity (trans)formation, and builds on what you have learned in Years 1-4 of the College Advisory Program TIME Small Group Teaching Sessions about your sense of self and professional identity, and complements what you may have experienced in the 1-week elective, "Online Art Museum Exploring Professional Identity through Art." Priority enrollment will be given to Year 4 students as what you learn here is designed to prepare you to thrive personally and professionally during your residency training and throughout your career. The course uses the Baltimore Museum of Art and other regional museums, as well as a local innovators' space (Fast Forward U) and other non-clinical settings for a combination of small group problem-solving and creating activities. Class sessions will include activities such as open-ended discussions of visual art, music, and poetry; sketching; mask-making; storytelling; and reflective writing. Each week of the course will center on a core theme: 1) family/community, 2) work/education, and 3) self-care. No art knowledge or experience of any kind is required.

Please note: Prior to enrolling voluntarily in this elective, students will be advised that course participation includes taking part in an IRB-approved research study. Each student will be expected to submit four 750-word+ written reflections over the duration of the course (one baseline, two formative, and one summative reflection), both to assess whether course objectives were met and to answer the study's research questions.

Course Director(s): Dr. Margaret Chisolm

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): mchisol1@jhmi.edu

Availability and/or Duration: Course is offered second half of block VI
Hours Per Week (if specified):
Required Prerequisites: N/A
Recommended Prerequisite:
Drop Period (if specified): 1 month
Enrollment Restrictions: Enrollment is limited to 15 students. Enrollment Limited to 3rd or 4th Year JHUSOM Students

Department: Medicine
Division: Medicine/Pulmonary and Critical Care Medicine
Course Name: Pulmonary Diseases and Critical Care Medicine - Union Memorial Hospital
Course Code (if available): ME:250.699
Course Type: Clinical Clerkship
Course Description: The pulmonary elective involves exposure to pulmonary medicine and critical care medicine on a daily basis. The student is involved with pulmonary consultations on an inpatient and outpatient basis with faculty supervision. The student is also involved with pulmonary and critical care procedures to include interpretation of pulmonary function tests and arterial blood gases. The student will attend all conferences, an outpatient Chest Clinic, daily teaching rounds and radiology rounds. Free parking is available in the hospital lot; full-service library with Medline computer search available.
Course Director(s): Dr. Raja Ayash, Dr. Robert Ferguson
Faculty: Faculty
Contact Information (if none listed, please reach out to department/division):
marge.wolford.medstar.net

Availability and/or Duration: All year, 4-8 weeks; Full time
Hours Per Week (if specified):
Required Prerequisites: Core Clerkship in Medicine
Recommended Prerequisite:
Drop Period (if specified): 1 month
Enrollment Restrictions:

Department: Medicine
Division: Medicine/Allergy and Clinical Immunology
Course Name: Research in Allergy and Inflammation
Course Code (if available): ME:250.699
Course Type: Basic Research
Course Description: Students may participate in ongoing laboratory investigation projects under the supervision of one of the faculty. Each student will attend divisional educational activities including research conferences, journal review sessions, and clinical teaching sessions.
Course Director(s): Dr. Antione Azar, Dr. Don MacGlashan
Faculty: Dr. A. Azar and staff
Contact Information (if none listed, please reach out to department/division): Antoine.Azar@jhmi.edu
Availability and/or Duration: All year, Half or full quarter.
Hours Per Week (if specified):
Required Prerequisites:
Recommended Prerequisite:
Drop Period (if specified): 1 month
Enrollment Restrictions:

Department: Medicine
Division: Medicine/Gastroenterology
Course Name: Seminars in Intracellular Regulation
Course Code (if available): ME:250.699
Course Type: Tutorial
Course Description: A weekly journal club focusing on the regulation of epithelial absorption and secretion by intracellular intermediates - molecular and cell biology studies in signal transduction
Course Director(s): Dr. Mark Donowitz
Faculty: Dr. M. Donowitz and staff
Contact Information (if none listed, please reach out to department/division): mdonowit@jhmi.edu
Availability and/or Duration: All year
Hours Per Week (if specified): 1 hour
Required Prerequisites: Arrange with Dr. M. Donowitz
Recommended Prerequisite:

Department: Medicine
Division: Internal Medicine/Intensive Care
Course Name: Student Internship in Medical Intensive Care - Union Memorial Hospital
Course Code (if available): ME:250.699
Course Type: Advanced Clinical Clerkship
Course Description: An advanced experience for senior students in the management of patients in the intensive care unit. Students will be supervised by the residents and attending physicians. Students will have the responsibility for initial evaluation and management, writing orders, scheduling of diagnostic procedures, and arriving at decisions regarding day-to-day management, all closely supervised by the medical resident. The student works the same schedule as the resident staff, including call every fourth night. The day begins at 8:00 a.m. with morning report. On call rooms, library privileges, and free parking are provided.
Course Director(s): Dr. Robert Ferguson, Dr. Philip Buescher
Faculty: Dr. P. Buescher, Dr. R. Ferguson, Staff
Contact Information (if none listed, please reach out to department/division):
marge.wolford@medstar.net
Availability and/or Duration: All year, Half quarter
Hours Per Week (if specified):
Required Prerequisites: Core Clerkship in Medicine
Recommended Prerequisite:
Drop Period (if specified): 1 month
Enrollment Restrictions:

Department: Medicine
Division: Internal Medicine
Course Name: Student Internship in Medicine - Union Memorial Hospital
Course Code (if available): ME:250.699
Course Type: Subinternship
Course Description: This program is designed to give senior students clinical experience similar to that of interns. Supervision will be provided immediately by the senior resident with whom the student works quite closely as well as by full-time and part-time attending physicians. The student will be given primary responsibility for initial patient evaluation and management which will include writing of orders,

scheduling and performance of special diagnostic procedures and decisions relating to day-to-day management and eventually, discharge and follow-up plans. The student will be an active participant in the department's educational program. The student will follow the housestaff schedule. Free parking in the hospital garage is provided.

Course Director(s): Dr. Robert P. Ferguson, Dr. Stephanie A. Detterline

Faculty: Dr. R. Ferguson, Dr. S. Detterline, Attending staff

Contact Information (if none listed, please reach out to department/division):

marge.wolford@medstar.net

Availability and/or Duration: All year, 4 weeks

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Medicine

Recommended Prerequisite:

Drop Period (if specified): 2 months

Enrollment Restrictions:

Department: Medicine

Division: Internal Medicine

Course Name: Subinternship in Internal Medicine - Sinai Hospital

Course Code (if available): ME:250.699

Course Type: Subinternship

Course Description: The Sinai Hospital Program in Internal Medicine offers an outstanding Sub-Internship experience in an academically oriented community teaching hospital, with a broad-based patient population. Students function as integral members of the house staff team on a general medicine unit in the same capacity as interns except with limited patient load. Students are expected to participate in all aspects of patient care and are encouraged to be primarily responsible for clinical decisions and bedside procedures. Students take new admissions every other day and overnight call is not required because of night float coverage.

Sub-Interns will also participate in all the teaching activities of the department, including daily noon conferences and Department of Medicine Grand Rounds weekly. A wide range of ancillary services are available. Lunch is provided with noon conferences, an allotment for meals is given for admission days and parking are all provided. Students have 24/7 access to both the Physician's Lounge as well as the Eisenberg Medical Library and Simulation Center.

Course Director(s): Dr. John Cmar

Faculty: Dr. Cmar and division faculty

Contact Information (if none listed, please reach out to department/division):

jcmar@lifebridgehealth.org

Availability and/or Duration: All year, 4 weeks; Full time

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Medicine

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Medicine

Division: Medicine/General Internal Medicine

Course Name: Subinternship in Medicine - Johns Hopkins Howard County General Hospital

Course Code (if available): ME:250.699

Course Type: Subinternship, Approved Sub-I Experience

Course Description: Please contact Jumana Kaka for further information

Course Director(s): Dr. Brad Strunk

Faculty:

Contact Information (if none listed, please reach out to department/division): jkaka1@jhmi.edu

Availability and/or Duration: All year

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Medicine

Recommended Prerequisite:

Department: Medicine

Division: Interdepartmental; ped emergency med

Course Name: The Hospital

Course Code (if available): ME:250.699

Course Type: Other

Course Description: As a physician, and especially an intern, you will depend on a host of providers in order to efficiently care for your patients, from nurses and social workers to pharmacists and occupational therapists. An understanding of how these staff function in the hospital can help make you a more efficient (and happy) intern. An excellent complement to the Transition to Internship course (TRIPLE), The Hospital is a two-week immersion in the world of non-physician patient care. You will spend one day each “walking in the shoes of” various non-physician providers, under the individual guidance of expert preceptors from each field. The disciplines included are nursing, social work; case management; hospital administration; infection control; pharmacy, and rehabilitation (PT, OT, and speech pathology), home care, palliative care, respiratory therapy, nutrition, hospital administration, and infection control. A pioneering venture in interdisciplinary learning, The Hospital will help you become a better leader and collaborator as an intern, resident, and attending physician. Grading is pass/fail and will be determined by attendance and completion of a short essay.

Course Director(s): Dr. Amit Pahwa

Faculty: Dr. Amith Pahwa

Contact Information (if none listed, please reach out to department/division): pahwa@jhu.edu

Availability and/or Duration: All year, 2 weeks

Hours Per Week (if specified):

Required Prerequisites: None

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Medicine

Division: Interdepartmental; Psy Bay Bayview Physicians

Course Name: The Online Art Museum: Exploring Professional Identity Through Art

Course Code (if available): ME:250.699

Course Type: Other

Course Description: This course will use visual arts-based teaching methods to facilitate reflection on professional identity. The most used and best studied of these arts-based methods, Visual Thinking Strategies, was developed by former Museum of Modern Art education director, Philip Yenawine, who has graciously agreed to be one of the small group facilitators for the course. The course builds on what you have learned in the College Advisory Program TIME Small Group Teaching Sessions about your sense of self and professional identity. What you learn here will prepare you to thrive personally and

professionally during your training and throughout your career. You will engage in interactive online sessions and discussions centered on activities using online collections of art. Other activities will also include music, poetry, sketching, and reflective writing. Topic will include what it means to be human, to be a physician, and to lead a good life (for oneself and one's patients), and self-care. No art knowledge or experience of any kind is required.

Course Director(s): Dr. Margaret Chisolm

Faculty: Dr. Margaret Chisolm

Contact Information (if none listed, please reach out to department/division): mchisol1@jhmi.edu

Availability and/or Duration: , 1 week

Hours Per Week (if specified):

Required Prerequisites: N/A

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: Enrollment Limited to JHUSOM Students

Department: Molecular Biology and Genetics

Division: Cell Biology

Course Name: Fundamentals of Genetics

Course Code (if available): ME:260.708

Course Type: Other

Course Description: This lecture course will cover fundamental principles of genetics, focusing primarily on model systems. Problem sets will be an integral learning tool in this course.

Course Director(s): Dr. Erika Matunis

Faculty: Biochemistry, Cell, and Molecular Biology and Genetics faculty

Contact Information (if none listed, please reach out to department/division): 410-502-0009

Availability and/or Duration: Quarter 2

Hours Per Week (if specified): Tues & Thurs 9-10:30 a.m.

Required Prerequisites: Molecular Biology, special permission

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Molecular Biology and Genetics

Division: Molecular Biology and Genetics

Course Name: Great Experiments in Biology

Course Code (if available): ME:260.699

Course Type: Other

Course Description: In this course, we will read approximately 30 classic papers in the biological sciences. The course aims to expose students to some of the great experiments from 1700 to the present, and the creative thinking that inspired them. Authors include Benjamin Franklin, Robert Koch, Selig Hecht, Lubert Stryer, Christine Nusslein-Volhard, Alec Jeffries, and Avram Hershko.

Course Director(s): Dr. Jeremy Nathans

Faculty: Dr. Nathans

Contact Information (if none listed, please reach out to department/division): 410-955-4679

Availability and/or Duration: Quarter 4 ; 11 lectures and exam

Hours Per Week (if specified):

Required Prerequisites: Basic knowledge of molecular biology, genetics, cell biology, and biophysics

Recommended Prerequisite:

Department: Molecular Biology and Genetics
Division: Molecular Biology and Genetics
Course Name: Molecular Biology and Genomics
Course Code (if available): ME:260.709
Course Type: Other

Course Description: A lecture course dealing with the structure, physical properties, biosynthesis and degradation of nucleic acids and proteins. There will also be a focus on genetics and genetic regulatory mechanisms of bacteria and bacteriophages. The course is experimental approach-focused in an effort to train students to be analytical research scientists.

Course Director(s): Dr. Jeff Coller

Faculty: Biochemistry, Cell, and Molecular Biology and Genetics faculty

Contact Information (if none listed, please reach out to department/division): 410-614-0198

Availability and/or Duration: Quarter 2 ; 17 lectures and exam

Hours Per Week (if specified): Monday, Wednesday, Friday; 9 AM - 10:30 AM

Required Prerequisites: Courses in organic chemistry, physical chemistry, and Biochemistry B1 or its equivalent, or by special permission.

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Molecular Biology and Genetics

Division: Molecular Biology and Genetics

Course Name: Special Studies & Research

Course Code (if available): ME:260.699

Course Type: Basic Research

Course Description: Opportunities to carry out special studies and research in various branches of molecular genetics, immunology, and microbiology will be made available not only to candidates for advanced degrees but also to other qualified students. Arrangements for such work must be made with individual members of the staff.

Course Director(s): As arranged

Faculty: All faculty in the Department of Molecular Biology and Genetics

Contact Information (if none listed, please reach out to department/division):

Availability and/or Duration:

Hours Per Week (if specified):

Required Prerequisites:

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Neurology

Division: Neurology

Course Name: Advanced Neurology Clerkship

Course Code (if available): ME:200.699

Course Type: Subinternship

Course Description: Students may choose to focus on inpatient or outpatient adult neurology and may tailor their experience to their educational needs in consultation with the course director.

Course Director(s): Dr. Carlos Romo
Faculty: Dr. Christopher Oakley and Neurology faculty
Contact Information (if none listed, please reach out to department/division): mclark44@jhmi.edu
Availability and/or Duration: All year, 4 weeks; For visiting students
Hours Per Week (if specified):
Required Prerequisites: Core Clerkship in Neurology
Recommended Prerequisite:
Drop Period (if specified): 1 month
Enrollment Restrictions: subinternship rotations must follow the JHUSOM schedule for the Neurology Core Clerkship

Department: Neurology
Division: Neurology
Course Name: Clinical Elective in Pediatric Neurology
Course Code (if available): ME:200.699
Course Type: Clinical Elective
Course Description: Tailored primarily for the visiting medical student, the clinical elective in Pediatric Neurology is similar in structure to the Neurology Core Clerkship. Students have the flexibility to arrange a schedule that will focus the experience toward their interests in consultation with the course director.
Course Director(s): Dr. Jessica Nance
Faculty: Dr. Oakley and Pediatric Neurology staff
Contact Information (if none listed, please reach out to department/division): mclark44@jhmi.edu
Availability and/or Duration: Offered September through May for visiting students. (June-August contingent upon availability), 4 weeks
Hours Per Week (if specified):
Required Prerequisites: Core Clerkships in Neurology and Pediatrics
Recommended Prerequisite:

Department: Neurology
Division: Neurology
Course Name: Neuro Critical Care/NCCU
Course Code (if available): ME:200.699
Course Type: Clinical Elective, Site for Advanced Clerkship in Critical Care
Course Description:
Course Director(s): Dr. Marek Mirski
Faculty: Dr. Mirski
Contact Information (if none listed, please reach out to department/division): mmirski1@jhmi.edu
Availability and/or Duration: All year, 4.5 weeks
Hours Per Week (if specified):
Required Prerequisites: Core Clerkship in Neurology
Recommended Prerequisite:
Drop Period (if specified):
Enrollment Restrictions: Enrollment limited to JHUSOM students

Department: Neurology
Division: Neurology
Course Name: Neurology Elective

Course Code (if available): ME:200.699

Course Type: Clinical Elective

Course Description: A clinical elective is offered on the adult neurology inpatient services at the Johns Hopkins Hospital or at the Johns Hopkins Bayview Medical Center. Neurology elective students must devote a minimum of four weeks to inpatient neurology during the elective.

Course Director(s): Dr. Christopher Oakley

Faculty: Dr. Christopher Oakley and Neurology faculty

Contact Information (if none listed, please reach out to department/division): mclark44@jhmi.edu

Availability and/or Duration: All year ; For visiting students

Hours Per Week (if specified):

Required Prerequisites: Core Clerkships in Medicine and Neurology (if applicable)

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: Clinical elective rotations must follow the JHUSOM schedule for the Neurology Core Clerkship

Department: Neurology

Division: Neurology

Course Name: Neuropathology Conference

Course Code (if available): ME:200.699

Course Type: Tutorial

Course Description: Students will become familiar with the principles of neuropathology and clinical pathologic correlation. Students attend weekly Brain Cutting Conference, Neurology CPC, and Neurology and Neurosurgery Grand Rounds. Opportunities for research in experimental techniques in neurobiology as applied to CNS disease are available.

Course Director(s): Dr. Juan Troncoso

Faculty: Neurology faculty

Contact Information (if none listed, please reach out to department/division): 410-955-5632

Availability and/or Duration:

Hours Per Week (if specified):

Required Prerequisites: Neuropathology neurology course

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: Enrollment Limited to JHUSOM Students

Department: Neurology

Division: Neurology/Neuroimmunology

Course Name: Principles In Neuroimmunology

Course Code (if available): ME:200.699

Course Type: Other

Course Description: Neurodegenerative brain diseases, neurological trauma and brain circulatory diseases involve activation of immune mechanisms and inflammation, contribute to disease development, and can seriously affect quality of life and ability to work.

This course covers the specific cells of the central nervous system (CNS), immune functions of CNS cells, and trafficking of leukocytes into the CNS. Relevant anatomy (e.g., blood brain barrier) will be addressed. Discusses various immune cells (monocytes, T-, B- cells), inflammatory mediators (cytokines, chemokines, metalloproteinases, and prostaglandins) and explores how these mediators contribute to the development, plasticity, and pathology of the CNS.

Speakers that are active researchers in their field will provide introductions to their respective fields and present their research. Presentations address several neuroimmunological diseases, including multiple sclerosis, HIV dementia and Alzheimer's disease. The molecular basis of novel treatment approaches of these diseases and regulation of the inflammatory mediators in neurodegeneration will also be reviewed. Interactions and discussions between lecturers and students are encouraged.

This elective follows the schedule for the School of Public Health

Course Director(s): Dr. Peter Calabresi, Dr. Monique Stins

Faculty: Dr. Calabresi, Dr. Stins

Contact Information (if none listed, please reach out to department/division): 443-287-8027

Availability and/or Duration: March- May, 8 weeks

Hours Per Week (if specified): Tuesday & Thursday

Required Prerequisites: Basic knowledge of brain anatomy, physiology, and biology

Recommended Prerequisite:

Department: Neurology

Division: Pediatric Neurology, All Children's Hospital (ACH), St. Petersburg, FL

Course Name: Principles of Pediatric Neurology - All Children's Hospital

Course Code (if available): ME:200.699

Course Type: Other

Course Description: Principles of pediatric neurology will be taught in outpatient and inpatient encounters at ACH-JHM. As a free-standing children's hospital, patient cases will reflect both general pediatric neurology exposure as well as exposure to highly specialized patient cases reflecting ACH-JHM's status as a quaternary care center. Participation in clinical or basic research in pediatric neurology may also be coordinated pending project and faculty availability.

Students will attend daily neurology clinics at ACH. Emphasis will be placed on teaching the student to evaluate and manage common neurological problems of infancy, childhood, and adolescents including epilepsy, seizure disorders, sleep disorders, and other neurologic deficits.

Students will participate in work up and care of neurology patients. The goal is to enhance student understanding of the diagnosis and management of hospitalized patients with neurologic issues.

Students are expected to participate in weekly conferences including neurology specific conferences as well as resident noon conferences, JHUSOM Pediatric Neurology Grand Rounds and ACH-JHM Grand Rounds.

Course Director(s): Dr. Parrish Winesett

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): gharmon2@jhmi.edu

Availability and/or Duration: , Flexible and can be adjusted to fit student needs

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Pediatrics or Medicine

Recommended Prerequisite:

Drop Period (if specified): 2 months

Enrollment Restrictions: Enrollment Limited to JHUSOM Students

Department: Neurology

Division: Neurology

Course Name: Research in Medical Education Osler Apprenticeship - Neurology

Course Code (if available): ME:200.699

Course Type: Research

Course Description: The Osler Apprenticeship in Neurology is an opportunity for senior medical students with an interest in academic neurology to gain experience and exposure to the technical, administrative, and educational skills central to pursuing a clinician educator academic pathway.

Osler Apprenticeships (OAs) are, first and foremost, medical students interested in becoming academic scholars. This program affords these students the opportunity to work closely with faculty members and medical students in teaching, research, or administrative environments as an integral part of that education. By the end of the program OAs will be able to do the following:

-Enhance their educational research skills and develop pedagogical skills

-Acquire experience in leadership, interpersonal effectiveness, and performance evaluation

-Acquire academic administrative experience and enjoy collegial collaborations with advisors that may result in joint publications and other professional activities

Course Director(s): Dr. Rachel Salas, Dr. Doris Leung

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): mclark44@jhmi.edu

Availability and/or Duration: All year

Hours Per Week (if specified):

Required Prerequisites: Neurology Core Clerkship

Recommended Prerequisite:

Drop Period (if specified): 2 months

Enrollment Restrictions: Enrollment limited to JHUSOM students

Department: Neurology

Division: Neurology

Course Name: Subinternship in Pediatric Neurology

Course Code (if available): ME:200.699

Course Type: Clinical Subinternship

Course Description: A subinternship in Pediatric Neurology is offered on both inpatient and outpatient Pediatric Neurology Services.

Course Director(s): Dr. Jessica Nance

Faculty: Dr. Oakley and Pediatric Neurology staff

Contact Information (if none listed, please reach out to department/division): mclark44@jhmi.edu

Availability and/or Duration: All year, 4 weeks; For visiting students

Hours Per Week (if specified):

Required Prerequisites: Core Clerkships in Neurology and Pediatrics

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: Clinical elective rotations must follow the JHUSOM schedule for the Neurology Core Clerkship

Department: Neurology

Division: Neurology

Course Name: Virtual Patient Rounds in Neurology

Course Code (if available): ME:200.699

Course Type: Other

Course Description: This 2-week elective course explores key aspects in the care of patients with neurologic diseases through a case-based learning approach. Chart review and live presentation of real patients seen on the neurology inpatient service or outpatient clinics will be used to practice and

improve clinical thinking and learn relevant concepts on conducting a neurological history and physical exam. In addition, students will learn skills on localizing lesions in the nervous system, forming a list of differential diagnosis and recommend treatment plans for common neurologic conditions. Case selection will be curated by the neurology clerkship directors to ensure a diverse representation of neurologic disorders. The “virtual rounds” will be moderated by faculty members and a series of small group sessions will be facilitated Osler Apprentices in Neurology, who will serve as peer teachers. Attendance to Neurology Grand Rounds and participation in lectures will complement this learning experience. Students will also meet one-on-one with course directors in preparation for their presentations. When appropriate, faculty and trainees from the Department of Neurology will be invited to provide subspecialty expertise. The course will be conducted entirely via virtual meetings and does not require in-person student or faculty contact. This elective can be offered at multiple learner levels (including pre-clerkship, post-clerkship, or sub-intern). This course will prepare students for both inpatient and outpatient case management and provide experience in remote teaching for medical trainees.

Course Director(s): Dr. Rachel Salas, Dr. Doris Leung

Faculty: Dr. Rachel Salas, Dr. Doris Leung

Contact Information (if none listed, please reach out to department/division): mclark44@jhmi.edu

Availability and/or Duration: , 2 weeks

Hours Per Week (if specified):

Required Prerequisites: N/A

Recommended Prerequisite:

Department: Neuroscience

Division: Neuroscience

Course Name: Bioenergetics, Neuroplasticity and Brain Health

Course Code (if available): ME:440.699

Course Type: Tutorial

Course Description: Overindulgent sedentary lifestyles are increasingly common with adverse consequences for trajectories of brain health in current and future generations. This course will review findings from studies of humans and animals that are elucidating the cellular and molecular mechanisms by which energy intake and exercise affect structural and functional neuroplasticity. This topic will be considered from a bioenergetic perspective with emphases on brain evolution, developmental neurobiology, adult neuroplasticity and disorders of mood and cognition. The course will consist of a series of introductory lectures, and subsequent class meetings in which hot topics in the field are discussed.

Course Director(s): Dr. Mark Mattson

Faculty: Dr. Mark Mattson

Contact Information (if none listed, please reach out to department/division): 410-558-8463

Availability and/or Duration: Quarter 2

Hours Per Week (if specified):

Required Prerequisites: Neuroscience and Cognition I & II

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Neuroscience

Division: Neuroscience

Course Name: Brain Diseases: Neurodegenerative Diseases

Course Code (if available): ME:440.699

Course Type: Tutorial

Course Description: The course will provide an in-depth examination of the biology of the classic neurodegenerative disease such as Huntington's disease, Parkinson's disease, ALS and Alzheimer's disease, and other diseases may be considered depending on student and faculty interest. All involve toxicity or death of neurons. Rare genetic variants of many of the neurodegenerative diseases have greatly illuminated the more common, apparently sporadic, forms. Interactions among protein products of genes mutated in each disease are helping establish pathogenic pathways. Inflammation and metabolic stress are other common themes, environmental contributions, possibly involving toxins, are important for some diseases. Cell and mouse models are increasingly central for understanding pathogenesis and several diseases, though the exact mechanisms and relation to cell death are controversial. It is increasingly possible to conceive of a unit understanding ranging from molecular manifestations to systems neurobiology. Ultimately the goal is to devise rational disease-modifying treatments. Lectures by experts in each disease will be followed by student-led discussions critically reviewing current literature. Discussions will focus on strengths and limitations of current models, controversies about mechanisms, unresolved research questions, and potential paths to therapeutics. Student participation will include leading and participating in discussion of papers, and writing a research proposal, using an abbreviated NIH grant format, on any topic related to the course.

Course Director(s): Dr. Christopher Ross, Dr. Jeffrey Rothstein

Faculty:

Contact Information (if none listed, please reach out to department/division): 410-614-9494

Availability and/or Duration:

Hours Per Week (if specified):

Required Prerequisites: Neuroscience and Cognition I & II or consent of course director

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Neuroscience

Division: Neuroscience

Course Name: Brain Diseases: Neurodevelopmental Diseases

Course Code (if available): ME:440.699

Course Type: Tutorial

Course Description: This course will consider the emerging unity of approaches and concepts in understanding a range of brain diseases such as schizophrenia, bipolar disorder, autism, and related disorders. Genetic mutations or risk factors for many of these diseases are beginning to illuminate pathogenesis, and genetic relationships among the diseases are beginning to change our thinking about diagnostic categories. Interactions among protein or RNA products of genes mutated in each disease may help establish pathogenic pathways. Environmental influences also appear to be important, including possible roles of infection and immunity. Schizophrenia and related adult-onset disorders appear to be caused by mechanisms involving neurodevelopment, whose major consequences are most visible during adulthood. Cell and mouse models are increasingly central for understanding pathogenesis and developing novel therapeutics. For all the disorders, it is possible to conceive of a unified understanding ranging from molecular manifestations to systems neurobiology. Ultimately, the goal is to devise rationale disease-modifying treatments. Lectures by experts in each disease will be followed by student-led discussions critically reviewing current literature. Discussions will focus on strengths and limitations of current models, controversies about mechanisms, unresolved research

questions, and potential paths to therapeutics. Student participation will include leading and participating in discussions of papers and writing a research proposal using an abbreviated NIH grant format on any topic related to the course.

Course Director(s): Dr. Christopher Ross, Dr. Daniel Weinberger

Faculty:

Contact Information (if none listed, please reach out to department/division): 410-614-9494

Availability and/or Duration:

Hours Per Week (if specified):

Required Prerequisites: Neuroscience and Cognition I & II or consent of course director

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Neuroscience

Division: Neuroscience

Course Name: Cellular and Molecular Basis of Neural Development I: Neuronal Differentiation

Course Code (if available): ME:440.699

Course Type: Tutorial

Course Description: A seminar and reading course devoted to the discussion of the cellular and molecular processes underlying neuronal development. Topics include cell proliferation and migration, nervous system patterning, differentiation of neurons and glia, morphogen and growth factor signaling mechanisms, neuronal polarity, neural stem cell biology, and neurovascular biology. Examples from vertebrate and invertebrate model systems will be covered. This course is designed to complement The Cellular and Molecular Basis of Neural Development II: Axon Guidance and Synaptogenesis, offered alternate years. Students must have completed Introduction to Neuroscience and Cognition I or receive the consent of course directors prior to registering for this course.

Course Director(s): Dr. Alex Kolodkin, Dr. Christopher Potter, ,Dr. Uli Mueller

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): 410-614-9499; 443-287-4151; 443-287-4762

Availability and/or Duration:

Hours Per Week (if specified):

Required Prerequisites: Completion of Neuroscience Cognition I or consent of course directors

Recommended Prerequisite:

Department: Neuroscience

Division: Neuroscience

Course Name: Cellular and Molecular Basis of Neural Development II: Regulation of Neural Connectivity

Course Code (if available): ME:440.699

Course Type: Tutorial

Course Description: This is a seminar and reading course devoted to the discussion of the cellular and molecular processes underlying neuronal development. This is a seminar and reading course devoted to the discussion of the cellular and molecular processes underlying neuronal development. Topics and dates covered include Axon guidance; Growth cone motility and steering mechanisms; Target Matching; Guidance at the CNS Midline; Synaptic differentiation in the NMJ; Activity-dependent plasticity in the PNS and CNS; Regulation of process self-avoidance, tiling and mosaic spacing; Pruning; Developmental

diseases; Glial influences on connectivity; Sexual dimorphism in neural circuits; Viral tracing and single neuron RNAseq; Neural Regeneration.

This course is designed to complement The Cellular and Molecular Basis of Neural Development I: Neuronal Differentiation, which is offered in alternate years (next offering, Spring 2020). Students must have either completed Introduction to Neuroscience and Cognition I or have received the consent of the course directors prior to registering for this course.

Course Director(s): Dr. Christopher Potter, Dr. Alex Kolodkin, ,Dr. Shanthini Sockanathan,, Dr. Uli Mueller

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): 410-614-9494, 410-502-3084, 410-614-9499; 443-287-4762

Availability and/or Duration: Yearly; Quarter 4

Hours Per Week (if specified):

Required Prerequisites: Completion of Neuroscience Cognition I or consent of course director

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Neuroscience

Division: Neuroscience

Course Name: Circuits and Brain Disorders

Course Code (if available): ME:440.699

Course Type: Tutorial

Course Description: This course focuses on diseases of the nervous system and provides a balance of clinical presentation, basic neurobiology, genetics, and biomarkers, as well as a presentation of therapeutic approaches, where relevant. One of the goals is to highlight the distinct circuitry that is most impacted in each disorder. The curriculum includes 1 seminar per week and 1 journal club discussion related to the seminar per week.

Course Director(s): Dr. Paul Worley, Dr. Marilyn Albert, ,Dr. Barry Greenberg

Faculty:

Contact Information (if none listed, please reach out to department/division): 410-502-5489, 410-614-3040, 410-955-1696

Availability and/or Duration: Quarter 1 & Quarter 2 ; Course not eligible for elective credit

Hours Per Week (if specified):

Required Prerequisites: Undergraduate background in Neuroscience

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Neuroscience

Division: Neuroscience

Course Name: Computational Principles of Biological Vision

Course Code (if available): ME:440.699

Course Type: Tutorial

Course Description: Even though we rarely acknowledge it as such, vision is our superpower. It is so central to how we (or at least most of us) interact with the world, and it comes to us with such ease, that we underappreciate its complexity. To this date, there are no computer vision programs that can parallel the performance of the human visual system. Vision is also the topic that both of us actively

research, and are passionately interested in. Lastly, the neural underpinnings of vision are amongst the most thoroughly studied. As such, vision provides a very useful framework for learning about general principles of Neuroscience.

The goal of this class is to teach you the Neuroscience of vision, with topics ranging from a general overview of the visual system to highlighting ongoing research studies. We will also talk about state-of-the-art computer vision efforts as a comparison. The class is designed to not only provide you with the relevant background knowledge, but also to teach you how to critically evaluate current research papers. As such, the class will be split into 'classical' lectures, in which we provide an overview over a particular topic, and discussion classes. Discussion classes will serve to discuss one or two original research papers in depth. Our intention is for the discussion classes to feel like a real journal club or lab meeting, with a very active discussion amongst all of the participants.

To achieve the latter will require rigorous work by everybody. All of the reading for the discussion classes will be primary material, which might (at least initially) be challenging. However, if we all do our job right, you should be well able to easily read the primary literature by the end of the class.

Nonetheless, be prepared to work hard, and set aside time for the reading. This is a small and very advanced seminar, and participation in the discussions will be a central part of it (including your grade). Talking (or not talking) about things you haven't read will not go unnoticed (and make us annoyed) and will be reflected in your grade. Attendance at every session is required.

Course Director(s): Dr. Kristina Nielsen, Dr. Charles Connor

Faculty: Dr. Hendry

Contact Information (if none listed, please reach out to department/division): 410-516-5833, 410-516-8648

Availability and/or Duration: Quarter 1 & 2

Hours Per Week (if specified):

Required Prerequisites: Consent of course director

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Neuroscience

Division: Neuroscience

Course Name: Current Issues in Systems and Cognitive Neuroscience

Course Code (if available): ME:440.699

Course Type: Tutorial

Course Description: The brain is an information processing system without parallel. It excels at recognizing objects and substances, reconstructing space, analyzing sound environments, controlling complex behaviors, and storing a lifetime's worth of events and experiences. The neural mechanisms underlying these abilities are studied by a large community of systems and cognitive neuroscientists. This research has generated a rapidly evolving field of high-profile discoveries and lively debates between competing laboratories. This course aims to convey a clear sense of this field by focusing on current experimental and conceptual controversies regarding organization and function in the vertebrate nervous system. Each week will focus on a different topic represented by two or more recent papers (selected by an instructor) reflecting opposing points of view. Students will present the papers informally and direct a debate over the relative merits of the conflicting viewpoints. The quarter-long course will be divided into 2–3-week sections covering different sensory, motor, or cognitive systems, in addition to computational neuroscience. There will be one 2-hour debate each week, and participation in the 1-hour Systems Journal Club (Readings in Systems Neuroscience, ME440.810) will also be required.

Course Director(s): Dr. Jeremiah Cohen

Faculty:

Contact Information (if none listed, please reach out to department/division): 410-502-9193

Availability and/or Duration: Yearly; Quarter 3

Hours Per Week (if specified):

Required Prerequisites: Neuroscience A or Neuroscience & Cognition II (may be taken concurrently) or permission of course director.

Recommended Prerequisite:

Department: Neuroscience

Division: Neuroscience

Course Name: Current Topics in Neuroscience

Course Code (if available): ME:440.699

Course Type: Tutorial

Course Description: Weekly lecture on current research by active researchers. Topics are chosen so that an overall balance of subjects in neuroscience is covered in the course of a year.

Course Director(s): Dr. Jeremiah Cohen

Faculty:

Contact Information (if none listed, please reach out to department/division): 410-502-9193

Availability and/or Duration: All Year

Hours Per Week (if specified): Thursdays at 1 p.m.

Required Prerequisites:

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Neuroscience

Division: Neuroscience

Course Name: Mechanisms of Synaptic Transmission

Course Code (if available): ME:440.699

Course Type: Tutorial

Course Description: A seminar and reading course devoted to the molecular mechanisms underlying synaptic transmission and the regulation of synaptic plasticity. The structure and function of neurotransmitter receptors, ion channels and synaptic vesicle proteins will be discussed. In addition, the molecular mechanisms involved in the control of synaptic transmission such as the trans-synaptic regulation of the function and expression of synaptic proteins will be examined.

Course Director(s): Dr. Dwight Bergles, Dr. Elisabeth Glowatzki, Dr. Paul Worley

Faculty: Dr. Bergles, Dr. Glowatzki, Dr. Worley

Contact Information (if none listed, please reach out to department/division): 410-955-4050, 410-955-6939, 410-502-5489

Availability and/or Duration: Alternate years; Quarter 4

Hours Per Week (if specified):

Required Prerequisites: Consent of course director

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Neuroscience

Division: Neuroscience

Course Name: Neuropharmacology

Course Code (if available): ME:440.699

Course Type: Tutorial

Course Description: Focusing on several major classes of psychotropic drugs, the course will illustrate the use of diverse approaches (molecular, biochemical, electrophysiological, and behavioral) to decipher how psychotropic drugs influence the nervous system. The course will utilize a lecture format for the first two classes and then switch to a "journal club" format with students presenting and discussing classic and recent articles. Topics covered include opiates, benzodiazepines, antipsychotic drugs, antidepressant drugs, and cannabinoids.

Course Director(s): Dr. Jay Baraban

Faculty: Dr. Jay Baraban, Dr. Solomon Snyder

Contact Information (if none listed, please reach out to department/division): 410-955-2499

Availability and/or Duration: Alternate years. Quarter 1

Hours Per Week (if specified): 3 hours

Required Prerequisites: Neuroscience and Cognition I and II or consent of course director

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Neuroscience

Division: Neuroscience

Course Name: Neuroscience and Cognition I

Course Code (if available): ME:440.699

Course Type: Tutorial

Course Description: This is the first half of a 4-quarter course on the cellular and molecular basis of neural function and the neural basis of perception, cognition, and behavior. Topics covered in this half include (1) development and structure of the nervous system, (2) cellular neurophysiology, (3) neural signaling and coding, and (4) audition, vocalization, and language. Lectures will be presented by faculty in the Neuroscience, Neurology, Biomedical Engineering, Psychology, and Cognitive Science Departments. The course will also include discussion sections based on current literature and several neurotechniques sessions designed to familiarize students with current experimental approaches in cellular, systems, and molecular neuroscience. This course is required of all students in the Neuroscience Graduate Program. Students outside the program may take this course independent of Neuroscience and Cognition II.

Course Director(s): Dr. Xinzhong Dong

Faculty:

Contact Information (if none listed, please reach out to department/division): 410-502-2993

Availability and/or Duration: Yearly; Quarter 1 & Quarter 2

Hours Per Week (if specified):

Required Prerequisites: Basic cell and molecular biology or consent of course director

Recommended Prerequisite:

Department: Neuroscience

Division: Neuroscience

Course Name: Neuroscience and Cognition II

Course Code (if available): ME:440.699

Course Type: Tutorial

Course Description: This is the second half of a 4-quarter course on the cellular and molecular basis of neural function and the neural basis of perception, cognition, and behavior. Topics covered in this half include (1) perception of objects, space, and self, (2) movement and balance, (3) learning and memory, (4) neurological and psychiatric disorders, and (5) global function in the nervous system. Lectures will be presented by faculty in the Neuroscience, Neurology, Biomedical Engineering, Psychology, and Cognitive Science Departments. The course will also have a laboratory component. This course is required of all students in the Neuroscience Graduate Program

Course Director(s): Dr. Veit Stuphorn

Faculty:

Contact Information (if none listed, please reach out to department/division): 410-516-7963

Availability and/or Duration: Yearly; Quarter 3 & Quarter 4

Hours Per Week (if specified):

Required Prerequisites: Basic cell and molecular biology or consent of course director

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Neuroscience

Division: Neuroscience

Course Name: Neuroscience Career Skills

Course Code (if available): ME:440.699

Course Type: Tutorial

Course Description: This course is intended for Neuroscience Program graduate students who are in their fourth year or beyond. There will be ten sessions, and each session we will include one or more invited discussion leaders. This is a pass/fail course, and every participant is required to take it for credit. A grade of pass or fail will be decided based on attendance.

Course Director(s): Dr. Marshall Shuler

Faculty:

Contact Information (if none listed, please reach out to department/division): 410-502-1612

Availability and/or Duration: Quarter 3 & 4; Every other year

Hours Per Week (if specified):

Required Prerequisites: Consent of course director

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: Enrollment limited to JHUSOM students

Department: Neuroscience

Division: Neuroscience

Course Name: Physiology of Sensory Transduction

Course Code (if available): ME:440.699

Course Type: Tutorial

Course Description: A seminar and reading course that covers current research in sensory transduction from a physiological perspective. Visual, chemical, and auditory transductions will be covered.

Course Director(s): Dr. King-Wai Yau

Faculty:

Contact Information (if none listed, please reach out to department/division): 410-955-1260

Availability and/or Duration: Alternate years; Quarter 2

Hours Per Week (if specified):

Required Prerequisites: Consent of course director

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Neuroscience

Division: Neuroscience

Course Name: Readings in Neuroscience

Course Code (if available): ME:440.699

Course Type: Tutorial

Course Description: This is a discussion-based journal club course run by the neuroscience training program offered at the school of medicine.

Course Director(s): Dr. Gul Dolen, Dr. Andrew Gordus

Faculty:

Contact Information (if none listed, please reach out to department/division): 443-287-2091; 443-516-6509

Availability and/or Duration: All Year ; Course not eligible for elective credit

Hours Per Week (if specified):

Required Prerequisites: Consent of course director

Recommended Prerequisite:

Department: Neuroscience

Division: Neuroscience

Course Name: Readings in Systems Neuroscience

Course Code (if available): ME:440.699

Course Type: Tutorial

Course Description: This is a discussion-based journal club course run by the Neuroscience Training Program offered at the School of Medicine.

Course Director(s): Dr. Kristina Nielsen, Dr. Kishore Kuchibhotla

Faculty:

Contact Information (if none listed, please reach out to department/division): 410-516-5833; 202-631-6435

Availability and/or Duration: All Year

Hours Per Week (if specified):

Required Prerequisites: Consent of course director

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Neuroscience

Division: Neuroscience

Course Name: The Hypothalamus: The Brain's Master Homeostat

Course Code (if available): ME:440.699

Course Type: Tutorial

Course Description: The hypothalamus is the central regulator of a broad range of homeostatic behaviors essential to survival and plays a key role in controlling emotional and appetitive behaviors. This course offers an overview of both historical and recent work on this vital brain region. Topics covered will include the evolution and development of the hypothalamus, control of circadian rhythms and sleep, regulation of hunger and body temperature, as well as hypothalamic regulation of sexual, defensive, and affiliative behavior. Each class will include 10-15 minutes of introductory lecture, followed by in-class discussion of 2 relevant recent papers. The final grade will be based on class participation and one 6-page review article or mock grant proposal on any related topic. An optional lecture on good grant writing practices will also be offered. Students must have completed Neuroscience Cognition I and II or have permission of instructors. Maximum enrollment of 15 students.

Course Director(s): Dr. Seth Blackshaw

Faculty: Dr. Blackshaw

Contact Information (if none listed, please reach out to department/division): 443-287-5609

Availability and/or Duration: Quarter 3 ; Course not eligible for elective credit

Hours Per Week (if specified):

Required Prerequisites:

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Neuroscience

Division: Neuroscience

Course Name: Topics in Cortical Plasticity

Course Code (if available): ME:440.699

Course Type: Tutorial

Course Description: Experience-dependent changes in cortical synapses and circuits are critical for proper development of the nervous system and for memory storage. This course will focus on recent findings on fundamental mechanisms of plasticity from synapses to circuit level through discussions of recent research papers. Grades will be based on student presentations and participation.

Course Director(s): Dr. Alfredo Kirkwood, Dr. Hey-Kyoung Lee

Faculty: Dr. Kirkwood, Dr. Lee

Contact Information (if none listed, please reach out to department/division): 410-516-6410; 410-516-5712

Availability and/or Duration: Quarter 1

Hours Per Week (if specified):

Required Prerequisites: Consent of course director

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Neuroscience

Division: Neuroscience

Course Name: Trends in The Neurobiology of Aging

Course Code (if available): ME:440.699

Course Type: Tutorial

Course Description: As the average lifespan of humans increases, age-related dysfunction of the nervous system and neurodegenerative disorders such as Alzheimer's and Parkinson's diseases are becoming major concerns in our society. Recent advances in understanding the molecular and cellular

underpinnings of nervous system aging and neurodegenerative disorders will be the focus of this course. Emerging findings of genetic and environmental factors that either promote successful brain aging or predispose to age-related neurological disorders, and the elucidation of their underlying molecular and cellular mechanisms, will be emphasized. This course will consist of several introductory lectures and subsequent sessions in which hot topics in the field are discussed.

Course Director(s): Dr. Mark P. Mattson

Faculty: Dr. Mattson

Contact Information (if none listed, please reach out to department/division): 410-558-8463

Availability and/or Duration: Alternate years; Quarter 1

Hours Per Week (if specified):

Required Prerequisites: None

Recommended Prerequisite:

Department: Neuroscience

Division: Neuroscience

Course Name: Writing About The Brain

Course Code (if available): ME:440.699

Course Type: Tutorial

Course Description: The goal of this course is to train neuroscientists to effectively and clearly communicate ideas about nervous system function to a general audience. Students shall read and analyze writings about neuroscience and shall interact with established science writers. More importantly, they shall develop, research, and write both news and feature-length stories that shall be presented, critiqued, and revised each week in a workshop format. Enrollment is limited to 10 students.

Course Director(s): Dr. David Linden

Faculty: Dr. David Linden

Contact Information (if none listed, please reach out to department/division): 410-614-1529

Availability and/or Duration: Quarter 3 ; Every other Year

Hours Per Week (if specified):

Required Prerequisites: Neuroscience and Cognition I and consent of course director

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Oncology

Division: Pediatric Oncology

Course Name: Advanced Clerkship in Pediatric Oncology

Course Code (if available):

Course Type: Advanced Clinical Clerkship

Course Description: Students will have the opportunity to help care for children with cancer on the inpatient Pediatric Oncology and Bone Marrow Transplant Services. Patient population includes children with brain tumors, solid tumors, leukemia, lymphoma, and bone marrow transplant recipients, as well as those requiring admission related to complications of treatment. Students will be assigned patients and become an integral member of the medical team and have outpatient once per week. Lectures focused on the inpatient service occur at least twice a week. Students also attend a weekly conference including fellows' educational session and tumor board.

Course Director(s): Dr. Stacy Cooper

Faculty: Pediatric Oncology Division Faculty

Contact Information (if none listed, please reach out to department/division): 410-614-5055
Availability and/or Duration: All year, 4 weeks
Hours Per Week (if specified):
Required Prerequisites: Core Clerkship in Pediatrics
Recommended Prerequisite:
Drop Period (if specified): 1 month
Enrollment Restrictions: Enrollment limited to JHUSOM students. Visiting medical students must follow JHUSOM quarter dates

Department: Oncology
Division: Medical Oncology
Course Name: Advanced Clinical Clerkship in Oncology
Course Code (if available):
Course Type: Advanced Clinical Clerkship
Course Description: This elective will acquaint students with the principles and practice of oncology. Each student will serve as an advanced clinical clerk on one of three inpatient units. The student is expected to attend weekly outpatient clinic, daily rounds with the attending physician as well as two weekly conferences: Oncology Grand Rounds and the Multidisciplinary Clinical Conference. Other disease-oriented conferences should be attended as appropriate. Appropriate readings are recommended.

Course Director(s): Dr. Ross C. Donehower
Faculty: Dr. Donehower and Medical Oncology faculty
Contact Information (if none listed, please reach out to department/division): 410-955-8838
Availability and/or Duration: All year, Half quarter
Hours Per Week (if specified):
Required Prerequisites: Core Clerkship in Medicine
Recommended Prerequisite:
Drop Period (if specified): 1 month
Enrollment Restrictions: visiting medical students must follow JHUSOM quarter dates

Department: Oncology
Division: Oncology Center
Course Name: Advanced Laboratory Research
Course Code (if available):
Course Type: Basic Research
Course Description: Advanced research under the supervision of an Oncology faculty member. Research fellowships in basic and translational laboratory research on clinically relevant questions are available to students preparing themselves for careers in teaching and research.
Course Director(s): Dr. Stuart Grossman
Faculty: Oncology faculty as arranged
Contact Information (if none listed, please reach out to department/division): voelkga@jhmi.edu
Availability and/or Duration: All year, 1 year
Hours Per Week (if specified):
Required Prerequisites: Completion of years one and two
Recommended Prerequisite:

Department: Oncology
Division: Oncology/Hematologic Malignancies

Course Name: Clinical Clerkship in Bone Marrow Transplantation

Course Code (if available):

Course Type: Clinical Clerkship

Course Description: The principles and practice of bone marrow transplantation (BMT) will be stressed. Students will work on the inpatient BMT Unit of the Oncology Center and participate in the daily activities of the service including rounds, lectures, seminars, and informal discussions. Under supervision, the student will follow the clinical course of selected inpatients including follow up marrow graft recipients in the BMT Outpatient Clinic. The student will have the opportunity to become acquainted with the allied disciplines and procedures that relate to clinical BMT, including histocompatibility testing, marrow collection ("harvesting"), and ex vivo marrow processing. A syllabus of pertinent literature will be provided. The student will also be encouraged to conduct and present a BMT-related research/literature review project.

Course Director(s): Dr. Richard Jones

Faculty: Attending physicians of the Bone Marrow Transplantation Program

Contact Information (if none listed, please reach out to department/division): 410-955-2006

Availability and/or Duration: All year, Half quarter

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Medicine or Pediatrics

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: visiting medical students must follow JHUSOM quarter dates

Department: Oncology

Division: Oncology

Course Name: Clinical Clerkship in Medical Oncology at Johns Hopkins Bayview Medical Center

Course Code (if available):

Course Type: Clinical Clerkship

Course Description: This clinical experience in medical oncology exposes trainees to the multi-disciplinary practice of medical oncology, including inpatient consults and outpatient clinics in solid tumor and malignant hematology. A special feature of the clerkship is the weekly Thoracic Multidisciplinary Clinic with medical, radiation, and surgical oncologists.

Course Director(s): Dr. Kristen Marrone

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): 410-550-4525

Availability and/or Duration: All Year, 2-4 weeks

Hours Per Week (if specified):

Required Prerequisites: There are no absolute prerequisites, but completion of a Core Clerkship in Medicine will help the student fully participate in the elective.

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: visiting medical students must follow JHUSOM quarter dates

Department: Oncology

Division: Oncology

Course Name: Fundamentals of Cancer: Cause to Cure

Course Code (if available): ME:510.706

Course Type: Other

Course Description: The course is designed to be highly translational, covering fundamental molecular biology of cancer, the processes and pathophysiology of transformation and metastasis, and how targeted screening strategies and therapies for treatment and prevention emerge from new scientific knowledge. The course is divided into three modules: pathophysiology of cancer, therapy of cancer and disease overviews. Each of the eight disease overviews will summarize a common cancer diagnosis, highlighting two key elements from the pathophysiology and therapy modules. We have chosen a diverse faculty, each of whom will be lecturing in the area for which they are widely recognized as world experts.

Student evaluation is pass/fail. A passing grade will depend on >80% attendance and completion of lecture evaluations. Students are responsible for making sure their attendance is recorded at each meeting. Instructions will be provided at the start of the class.

Course Director(s): Dr. Stacy Cooper, Dr. Kristen Marrone

Faculty: Oncology Center faculty

Contact Information (if none listed, please reach out to department/division): voelkga@jhmi.edu

Availability and/or Duration: Every other year; Mid-August through February

Hours Per Week (if specified): Thursday; 1:30 PM-2:30 PM

Required Prerequisites: None

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: visiting medical students must follow JHUSOM quarter dates

Department: Oncology

Division: Oncology

Course Name: Introduction to Cancer Research

Course Code (if available):

Course Type: Basic or Clinical Research

Course Description: Interested and properly qualified students are encouraged to collaborate in clinical and laboratory research projects with members of the staff. Students will participate in research seminars and related teaching sessions. Interviews will be arranged with staff members to develop a mutually agreed-upon plan of study and research.

Course Director(s): Dr. Stuart Grossman

Faculty: Oncology Center faculty

Contact Information (if none listed, please reach out to department/division): voelkga@jhmi.edu

Availability and/or Duration: All year, 4 weeks minimum (JHU Students); 9 weeks (visiting students)

Hours Per Week (if specified):

Required Prerequisites: None; arrange with faculty member (visiting students must contact the Registrar's Office)

Recommended Prerequisite:

Department: Oncology

Division: Oncology

Course Name: Seminar Course: Biology of Cancer

Course Code (if available): ME:510.700

Course Type: Other

Course Description: Selected timely topics will be considered in some detail. Emphasis is placed on the fundamental biological processes underlying oncogenesis and factors affecting the course of various neoplastic diseases. A basic foundation will be developed that will permit the student to approach

various aspects of oncology including epidemiology, carcinogenesis, environmental issues, biologic behavior of the neoplastic cell and the rationale for the use of various treatment modalities with understanding.

Course Director(s): Dr. Hariharan Easwaran, Dr. Mathias Holdhoff, ,Dr. Sara Sukumar

Faculty: Dr. Sukumar

Contact Information (if none listed, please reach out to department/division): voelkga@jhmi.edu

Availability and/or Duration: Quarter 4

Hours Per Week (if specified): 2 hours per week. Monday, Tuesday 12:00 PM - Zoom

Required Prerequisites: None

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Oncology

Division: Oncology

Course Name: Seminar Course: New Approaches to Cancer Prevention and Therapy

Course Code (if available): ME:510.701

Course Type: Other

Course Description: Selected timely topics relevant to novel diagnostic and treatment techniques being developed for the management of patients with cancer are considered with a view toward illustrating the underlying principles. Emphasis is placed on illuminating the chemical and biologic basis of therapeutics and their translation impact on clinical practice.

Course Director(s): Dr. Hariharan Easwaran, Dr. Mathias Holdhoff, ,Dr. Sara Sukumar

Faculty: Dr. Sukumar, Dr. Holdhoff

Contact Information (if none listed, please reach out to department/division): voelkga@jhmi.edu

Availability and/or Duration: Quarter 4

Hours Per Week (if specified): 2 hours per week. Monday, Tuesday 12:00 PM - Zoom

Required Prerequisites: None

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: visiting medical students must follow JHUSOM quarter dates

Department: Oncology

Division: Oncology Center/Hematologic Malignancies

Course Name: Subinternship in Clinical Bone Marrow Transplantation

Course Code (if available):

Course Type: Subinternship

Course Description: This clinical elective will provide an in-depth experience in the management of patients undergoing allogeneic or autologous bone marrow transplantation (BMT) in the Johns Hopkins Oncology Center SKCCC. The student subintern will work with the BMT team, which consists of an attending physician, a clinical oncology fellow, a medical resident, and a physician assistant, plus staff members in nursing, nutrition, pharmacy, and social work.

The subintern will assume responsibilities for the direct care of selected BMT inpatients, under the guidance of the attending physician and clinical fellow, and will assume night call every fourth night. The subintern is expected to participate in daily work rounds, didactic BMT lectures given by the inpatient attending physician, informal discussions about allied topics and current research activities, graft-versus-host disease walk rounds, and Oncology Center departmental seminars. The student will

receive a syllabus of pertinent literature on both the clinical aspects and basic immunobiology of bone marrow transplantation.

During this elective, the subintern will also have the opportunity to become acquainted with the allied disciplines and procedures that relate to clinical BMT, including histocompatibility testing, marrow collection ("harvesting"), and ex vivo marrow processing (e.g., lymphocyte depletion, chemotherapeutic treatment, cryopreservation). As part of this subinternship, the student will also be introduced to the basic and clinical research activities of the BMT program.

Course Director(s): Dr. Richard Jones

Faculty: Attending physicians of the Bone Marrow Transplantation Program.

Contact Information (if none listed, please reach out to department/division): 410-955-2006

Availability and/or Duration: , Half quarter

Hours Per Week (if specified):

Required Prerequisites: Senior students only. Completion of Core Clerkship(s) in Medicine and/or Pediatrics is essential. Students interested in this subinternship should contact the course director (410-955-8464) to arrange an interview and to discuss availability of elective

Recommended Prerequisite:

Drop Period (if specified): 2 months

Enrollment Restrictions: visiting medical students must follow JHUSOM quarter dates

Department: Online

Division: Pediatrics

Course Name: Advanced Hospitalized Pediatrics Elective

Course Code (if available):

Course Type: Other

Course Description: Students will participate in the care of hospitalized pediatric patients at Johns Hopkins Children's Center. Students will assist the team with clinical reasoning through chart review, patient interview, and formulation of patient problems. Students will also assist with important transitions of care tasks such as medication reconciliation, discharge education, and communicating with outpatient providers. This course builds directly on core skills and learning objectives of the Pediatric Core Clerkship and will prepare students for the Subinternship in Hospitalized Pediatrics. Students will round with teams daily via Zoom and use remaining time for other patient related tasks as described. Didactics will be offered via Zoom.

Course Director(s): Dr. Christopher Golden, Dr. Amit Pahwa, ,Dr. Rebekah Reisig

Faculty: Dr. Christopher Golden, Dr. Amit Pahwa, Dr. Rebekah Reisig

Contact Information (if none listed, please reach out to department/division): cgolden@jhmi.edu

Availability and/or Duration: , 2 weeks

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Pediatrics

Recommended Prerequisite:

Department: Online

Division: Interdepartmental

Course Name: COVID-19 Translational Science Online Elective

Course Code (if available):

Course Type: Other

Course Description: Students will develop well-researched, concise, up-to-date presentations on the various drugs being considered for trial and treatment of COVID-19 patients. Presentations will be developed for informational purposes within and beyond the JHU community.

Course Director(s): Dr. Stephen Gould
Faculty: Dr. Stephen Gould
Contact Information (if none listed, please reach out to department/division): sgould@jhmi.edu
Availability and/or Duration: , 2 weeks
Hours Per Week (if specified):
Required Prerequisites: N/A
Recommended Prerequisite:
Drop Period (if specified): 1 month
Enrollment Restrictions: Enrollment limited to JHUSOM students

Department: Online

Division: Medicine

Course Name: Critical Appraisal Of The Medical Literature: Emerging COVID-19 Data

Course Code (if available):

Course Type: Other

Course Description: This course will expand on the critical appraisal and clinical epidemiology skills taught during the first year. It will consist of 90-minute small group seminars for learning and reviewing important skills, enabling students to become more savvy consumers of published medical literature. During the final week, students will present projects demonstrating mastery of the material presented in the class. I will attempt to focus on academic studies concerning COVID-19, as they are published.

Course Director(s): Dr. Robert Stern

Faculty: Dr. Robert Stern

Contact Information (if none listed, please reach out to department/division): rstern13@jhmi.edu

Availability and/or Duration: , 2 weeks

Hours Per Week (if specified): 20 hours

Required Prerequisites: N/A

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: Enrollment limited to JHUSOM students

Department: Online

Division: Psychiatry and Behavioral Sciences

Course Name: Eating Disorders: An Introduction to Care and Treatment

Course Code (if available):

Course Type: Other

Course Description: This course will introduce students to the epidemiology, clinical presentation, clinical work-up, diagnosis, and treatment approach to patients with various eating disorders including anorexia and bulimia nervosa and binge eating disorders. The course will integrate both psychiatric and medical knowledge and complement clinical and didactic experiences across both fields.

The course will include a combination of both didactic presentations, case-based assessment, and individual study time. There will be several readings to introduce you to the biological, psychological, social, epidemiological, and medical aspects of eating disorders. There will be a case-based assignment to work through which will be used as an assessment tool for grading (pass/fail) in the course. The case will be worked through together as a class (via teleconference) once it has been completed individually by each student. Participation in this part of the course will be a part of the grading process. There will also be a short quiz at the end of the course which will require at least a 70% to pass.

Course Director(s): Dr. Jennifer Goetz

Faculty: Dr. Jennifer Goetz

Contact Information (if none listed, please reach out to department/division): jgoetz@jhmi.edu

Availability and/or Duration: , 1 week

Hours Per Week (if specified):

Required Prerequisites: N/A

Recommended Prerequisite:

Department: Online

Division: Interdepartmental

Course Name: Effective Searching for High-Quality Literature for the Physician Scientist

Course Code (if available):

Course Type: Other

Course Description: This course introduces online sources for finding high-quality, full-text research articles and focuses on advanced techniques to efficiently search within these sources. It also discusses evaluating the quality of websites and research articles that are found along the way. Finally, students learn about managing references using online tools such as RefWorks. There is a lab component for this course in which students explore a research topic of their choosing and develop an advanced search strategy to find high-quality literature related to their topic. Peers in the course will provide feedback for improving the search strategy in order to make it more effective.

Note for those who have completed TTW: TTW introduced you to tools and strategies to quickly answer clinical questions through evidence-based summaries and high-quality literature. This course builds on these skills with a focus on developing more in-depth search strategies required for research such as literature reviews or systematic reviews.

Course Director(s): Julie Nanavati, MLS, MA, Anne Seymour, MS, ,Rachael Lebo, MLS, AHIP

Faculty:

Contact Information (if none listed, please reach out to department/division): rlebo1@jhmi.edu

Availability and/or Duration: , 1 week

Hours Per Week (if specified):

Required Prerequisites: N/A

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: Enrollment limited to JHUSOM students

Department: Online

Division: Medicine

Course Name: Electrocardiography Interpretation

Course Code (if available):

Course Type: Tutorial

Course Description: This course is about interpreting EKG's and builds on what students have learned in Years 2 and 3. What you learn here will prepare you for any clinical care that relies on EKGs in some way, including inpatient, outpatient, and consultant care. The course uses a combination of lecture, readings, small group sessions, literature review, and practice tracings.

Course Director(s): Dr. Brent G. Petty

Faculty: Dr. Brent G. Petty, Dr. Ronald Berger

Contact Information (if none listed, please reach out to department/division): bgp@jhmi.edu

Availability and/or Duration: , 1 week

Hours Per Week (if specified):

Required Prerequisites: N/A

Recommended Prerequisite:**Drop Period (if specified):** 1 month**Enrollment Restrictions:** Enrollment limited to JHUSOM students**Department:** Online**Division:** Berman Institute of Bioethics**Course Name:** Ethical and Policy Challenges in the Era of COVID-19: Implications For Clinical Practice, Research And Public Health**Course Code (if available):****Course Type:** Other

Course Description: This research elective is being offered by the Berman Institute of Bioethics (BI). It is designed for medical students who would otherwise be doing their clinical rotations (i.e., those in year 3 or the 2nd half of year 2). Much like the Scholarly Concentrations course or the Social Medicine elective, students will conduct independent research under the guidance and mentorship of individual BI faculty. Students will have the opportunity to select from among a list of projects/topics that faculty or fellows are already working on or interested in working. Examples include:

-Rationing, and/or preparation for the possibility of rationing due to (potential) shortages of life-saving medical resources

-Balancing the trade-offs between study quality vs. time pressures in academic publication: the case of the small publication on the use of hydroxychloroquine & azithromycin

-When should social distancing end? How should we look at the costs/risks/benefits through a public health ethics lens?

-Prison policy, prison health, & COVID-19

-Healthcare needs of vulnerable groups, e.g., undocumented patients

-School closures and structural injustice

-Ethical issues related to telemedicine. Is there an inherent structural injustice that will put patients from disadvantaged backgrounds (e.g., non-English speaking, undocumented, limited phone / Wi-Fi access) at risk?

-Researching the health, social, economic, and other vulnerabilities of workers in the healthcare and public health sector, and the emergency services sector, and researching potential responses to those vulnerabilities.

-Ethical issues related to the role of genomics in the management of Covid-19 including a review of the scientific literature and a content analysis of the news and social media reports

-Ethical issues in deploying retired healthcare workers

-Several topics related to women's health:

-Breastfeeding and infant care in setting of maternal PUI/+ status, and social distancing generally

-Defining essential/nonessential care, especially related to reproductive surgical procedures (cancer, sterilization, abortion, infertility treatments etc.)

-Home vs. hospital birth

-Impact of disruption of WIC and other social services on undeserved women/children

-Special issues in psychiatric care/substance use disorder/vulnerable populations related to social distancing etc.

Students will conduct literature and other background research, review core content with faculty, and collaborate to identify, create, and disseminate suitable research products. The products of this work can take various forms including scholarly papers, public outreach, and engagement materials: e.g., blog posts, including Q&A format; brief videos, ideally using zoom or other simple tools, brief audio pieces, planned twitter threads, etc.; and online course syllabi.

Course Director(s): Dr. Gail Geller

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): ggeller@jhmi.edu

Availability and/or Duration: , 3 weeks

Hours Per Week (if specified): 20 hours

Required Prerequisites: N/A

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: Enrollment limited to JHUSOM students

Department: Online

Division: Psychiatry and Behavioral Sciences and Medicine

Course Name: Exploring Professional Identity Through Art: An Online Art Museum-Based Elective

Course Code (if available):

Course Type: Other

Course Description: This course will use the arts and humanities to facilitate reflection on professional identity. The most used and best studied of these arts-based methods, Visual Thinking Strategies, was developed by former Museum of Modern Art education director, Philip Yenawine, who has graciously agreed to be one of the small group facilitators for the course. The course builds on what you have learned in the College Advisory Program TIME Small Group Teaching Sessions about your sense of self and professional identity. What you learn here will prepare you to thrive personally and professionally during your training and throughout your career. You will engage in interactive online sessions and discussions centered on activities using online collections of art. Other activities will also include music, poetry, sketching, and reflective writing. Topic will include what it means to be human, to be a physician, and to lead a good life (for oneself and one's patients), and self-care. No art knowledge or experience of any kind is required.

Please note: Prior to enrolling voluntarily in this elective, students will be advised that course participation includes taking part in an IRB-approved research study (IRB00210522; Principal Investigator Margaret Chisolm MD). Each student will be expected to submit two 750-word+ written reflections over the duration of the course (one baseline and one summative reflection) and a pre- and post-course survey to assess whether course objectives were met and to answer the study's research questions.

Course Director(s): Dr. Margaret Chisolm

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): mchisol1@jhmi.edu

Availability and/or Duration:

Hours Per Week (if specified):

Required Prerequisites: N/A

Recommended Prerequisite:

Department: Online

Division: Interdepartmental

Course Name: Foundations of Clinical Reasoning

Course Code (if available):

Course Type: Other

Course Description: Clinical reasoning involves establishing a diagnosis and developing a therapeutic plan that fits the unique circumstances and needs of the patient (McBee et al., 2018).

The goal of the curriculum is to formally introduce medical students at JHUSOM to current concepts in clinical reasoning, diagnostic error, and to provide an opportunity to practice clinical-problem solving in a safe, learner-centered environment. Medical students currently get exposed to the concept of

diagnostic reasoning during their clinical rotations, but this rotation will provide them with the ability to further explore and experiment with these concepts. Students will also discuss both appropriate ordering and interpretation of diagnostic testing. They will be provided with a framework for honing their own diagnostic reasoning skills which they will in turn be able to translate to patient care. This course will be a 1 week online elective available for medical students. We will use a combination of online material (video lectures, readings) and online zoom clinical problem-solving sessions with faculty facilitators.

Course Director(s): Dr. Susrutha Kotwal

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): skotwal1@jhmi.edu

Availability and/or Duration: , 1 week

Hours Per Week (if specified):

Required Prerequisites: N/A

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: Enrollment limited to JHUSOM students

Department: Online

Division: Interdepartmental

Course Name: High Value Care: A Deeper Dive

Course Code (if available):

Course Type: Other

Course Description: This two-week course will build on TIME High Value Healthcare from 1st year (although it is not a prerequisite) by delving into health systems and the clinical aspect of high value care. Students will participate in an integrative, comprehensive model of high-value care applicable to future clinical practice. Combining online modules, clinical cases, textbook instruction, and journal club with a team-based innovation project, this course spans the breadth of high-value care: a 30,000-foot view of value-based healthcare policy, the role of health systems science, and the bedside clinician's practice of high-value decision-making.

Students will be assigned to groups with students from University of Virginia School of Medicine to conduct Zoom journal clubs as well as a Shark Tank.

Course Director(s): Dr. Amit Pahwa

Faculty: Dr. Amit Pahwa, Dr. Andrew Parsons

Contact Information (if none listed, please reach out to department/division): pahwa@jhu.edu

Availability and/or Duration: , 2 weeks

Hours Per Week (if specified):

Required Prerequisites: Transition to the Wards

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: Enrollment limited to JHUSOM students

Department: Online

Division: Interdepartmental

Course Name: International Collaboration During a Global Pandemic

Course Code (if available):

Course Type: Other

Course Description: This course is an opportunity to learn about preparation, management, and patient care protocols in health facilities and health systems around the world as well as global knowledge

exchange management during a global pandemic outbreak, using the COVID-19 pandemic as a real time example. As part of this course, students will actively contribute to the global sharing of best practices and information in a rapidly changing environment. The course is primarily research based and will involve the development of knowledge transfer content and materials that can be shared with Johns Hopkins Medicine International partners around the globe.

Course Director(s): Dr. Charles Wiener, Dr. Jonathan Zenilman

Faculty: Dr. Charles Wiener, Dr. Jonathan Zenilman

Contact Information (if none listed, please reach out to department/division): cwiener@jhmi.edu

Availability and/or Duration: , 2 weeks

Hours Per Week (if specified):

Required Prerequisites: N/A

Recommended Prerequisite:

Department: Online

Division: Medicine

Course Name: Introduction to Telehealth in Adult Ambulatory Medicine

Course Code (if available):

Course Type: Other

Course Description: This elective is designed to provide students with an introductory experience in telehealth in an ambulatory practice setting caring for adult patients. Students will take on an active role providing primary care to adult patients; work closely with a preceptor in Internal Medicine, Med-Peds, or Family practice. Students will also learn about technical, societal, and legal issues related to delivery of telehealth.

Course Director(s): Dr. Colleen Christmas

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): cchristm@jhmi.edu

Availability and/or Duration: , 1.5 - 2 weeks

Hours Per Week (if specified):

Required Prerequisites: Successful completion of two Core Clerkships, including Medicine

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: Enrollment limited to JHUSOM students

Department: Online

Division: Interdepartmental

Course Name: Medical Humanities and Social Medicine in the Context of COVID-19

Course Code (if available):

Course Type: Other

Course Description: This two-week, part-time elective explores the ways that social structures influence the practice, research, and politics of healthcare through the lens of the COVID-19 pandemic. The course is designed for medical students seeking deeper study into the relationship between medicine and its social contexts. The course will provide a structural framework in the field of medical humanities and social medicine. Students will learn how they can use these frameworks to make various aspects of clinical settings and encounters visible in different ways than the standard therapeutic goals of the clinic. Students will engage with interdisciplinary scholarly work on past pandemics and apply these concepts to the present in order to critically discuss institutional and societal issues in medicine.

Participants in the course will meet daily with course coordinators and facilitators to discuss the social implications of COVID-19 in medicine and reflect on its lessons to their developing clinical practice. Discussions will be guided by pre-assigned readings and in-session activities. By the end of the course, students can expect to have been introduced to various methods for examining the relationship between medicine and society, and to have created one's own proposal of a potential project in the subject of medical humanities and social medicine.

Course Director(s): Dr. Carolyn Sufrin

Faculty: Dr. Joseph Carrese, Dr. Gail Geller, Dr. Jeremy Greene

Contact Information (if none listed, please reach out to department/division): csufrin1@jhmi.edu

Availability and/or Duration: Part Time, 1 week; Students will receive 1 week of elective credit

Hours Per Week (if specified):

Required Prerequisites: N/A

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: Enrollment limited to JHUSOM students

Department: Online

Division: Internal Medicine and Pediatrics

Course Name: Medical Spanish Elective

Course Code (if available):

Course Type: Other

Course Description: This two-week elective course is designed to help medical students with previous Spanish exposure improve upon comprehension, pronunciation, grammar, and medical vocabulary. The course will be taken remotely via an online medical Spanish training platform complemented with interactive Zoom sessions. Small group role-play will be incorporated to practice patient case scenarios as well as large group discussions to explore themes related to the course, such as the variation in cultural beliefs and practices among Spanish-speaking populations.

Course Director(s): Dr. Angela Orozco

Faculty: Dr. Angela Orozco, Dr. Colleen Christmas

Contact Information (if none listed, please reach out to department/division): aorozco1@jhmi.edu

Availability and/or Duration: , 2 weeks

Hours Per Week (if specified):

Required Prerequisites: Two previous Spanish courses or equivalent

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: Enrollment limited to JHUSOM students

Department: Online

Division: Dermatology

Course Name: Online Clinical Dermatology

Course Code (if available):

Course Type: Clinical Clerkship

Course Description: This is a two-week online dermatology rotation. The course will be structured as below.

-There is an online series of lectures for medical students curated by the American Academy of Dermatology (AAD) that students will watch at their own pace. Students must login and create a user ID. The rotation schedule below lists a recommended sequence.

-There will be medical student specific zoom lectures with Dermatology faculty/residents. They will be interactive clinical based teaching sessions and clinicopathologic correlation sessions. Use of either a smart phone or laptop with microphone capabilities is required to participate in Zoom sessions. The ability to use a camera (so we can see each other) is optional but recommended. -There will be opportunity for observation of departmental and interdepartmental/multidisciplinary clinical meetings and education sessions via zoom.

Course Director(s): Dr. Inbal Sander

Faculty: Dr. Inbal Sander and TBD

Contact Information (if none listed, please reach out to department/division): sbenne17@jhmi.edu

Availability and/or Duration: , 2 weeks

Hours Per Week (if specified):

Required Prerequisites: N/A

Recommended Prerequisite:

Department: Online

Division: Ophthalmology

Course Name: Online Elective in Ophthalmology

Course Code (if available):

Course Type: Other

Course Description: This one-week online course will include a combination of lectures by Wilmer Faculty, small group case discussions, online material from the American Academy of Ophthalmology, lectures from top educators from across the country, and visual attendance at weekly grand rounds and rounds with the department chair.

Course Director(s): Dr. Henry Jampel

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): hjampel@jhmi.edu

Availability and/or Duration: , 1 week

Hours Per Week (if specified):

Required Prerequisites: N/A

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: Enrollment limited to JHUSOM students

Department: Online

Division: Radiation Oncology

Course Name: Online Introduction To Radiation Oncology

Course Code (if available):

Course Type: Other

Course Description: Online Introduction to Radiation Oncology will introduce students to the fundamentals of Radiation Oncology. Radiation Oncology represents one of the three main disciplines within cancer care, along with Medical Oncology and Surgery Oncology. In this course, students will first learn the basic principles of how therapeutic radiation is produced and the mechanism through which radiation damages cancer cells. Students will subsequently learn about the complex workflow that is required to accurately deliver radiation to tumors. Thereafter, disease site-specific lectures will be provided in which students will be introduced to how radiation is used for cancers across the body, including central nervous system, head, and neck, thoracic, breast, abdominal, genitourinary, gynecologic, and pediatric malignancies. Furthermore, students will have the opportunity to observe

and participate in patient encounters through televisits through which students will gain insight into the complexities of oncologic decision-making and patient counseling. Additionally, students will be introduced to the process of contouring and treatment planning to understand how radiation treatment plans are designed. Students will also have the option to give a short presentation at the end of the rotation on the topic of their choice. As radiation therapy presents a critical treatment modality for the vast majority of cancers, this course is highly recommended for any student considering a career in any oncologic discipline, but it will also be applicable for students going into any field.

Course Director(s): Dr. Amol Narang, Dr. Brandi Page

Faculty: Multiple Faculty in Radiation Oncology

Contact Information (if none listed, please reach out to department/division): jschann1@jhmi.edu

Availability and/or Duration: , 1 week; Part Time

Hours Per Week (if specified):

Required Prerequisites: N/A

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: Enrollment limited to JHUSOM students

Department: Online

Division: Medicine

Course Name: Person and Pandemic: Exploring Medical Humanism Through The Arts

Course Code (if available):

Course Type: Other

Course Description: This course will build upon the professional identity formation activities taught through the Colleges Advising Program TIME sessions to deepen students' exploration of the meaning of health, self, and professional identity. The instructors will utilize materials drawn from the humanities (music, poetry, literature, podcasts, movies, and visual works of art) with a particular focus on how infection, contagion, social distancing, death, and hope and belonging relate to the work of a physician. While highly relevant to students' lived experience of the ongoing pandemic, the themes we will reflect upon together are also highly applicable to the day-to-day practice of medicine. We will utilize a range of artistic and creative works to not only help students make meaning of their experiences throughout their professional career but, in so doing, guide them in developing resiliency in their careers. Each day will consist of assigned artistic works to explore asynchronously combined with 2 hours of synchronous online reflections and discussion. The final day of the course will consist of students each presenting either a work of art they have selected or an original work with a discussion of the themes and values these works demonstrate. No prior artistic or creative experience is necessary.

Course Director(s): Dr. Colleen Christmas

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): cchristm@jhmi.edu

Availability and/or Duration: , 1 week

Hours Per Week (if specified):

Required Prerequisites: N/A

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: Enrollment limited to JHUSOM students

Department: Online

Division: Physical Medicine and Rehabilitation

Course Name: Physical Medicine and Rehabilitation Virtual Elective

Course Code (if available):

Course Type: Other

Course Description: This elective will offer a broad exposure to the scope of physical medicine and rehabilitation. In addition to learning about medical management of patients with disability, student will get exposure the Johns Hopkins residency program, faculty, and clinical and research opportunities in the department of PM&R. Students will have the opportunity to give presentation and share their passion for PM&R.

Course Director(s): Dr. Tracy Friedlander

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): tfried1@jhmi.edu

Availability and/or Duration: , 2 weeks

Hours Per Week (if specified):

Required Prerequisites: N/A

Recommended Prerequisite:

Department: Online

Division: Psychiatry and Behavioral Sciences and Medicine

Course Name: Professional Identity (TRANS)formation: An Art Museum-Based Elective

Course Code (if available):

Course Type: Other

Course Description: This highly interactive 3-week arts and humanities course will take place primarily at the Baltimore Museum of Art and other local museums, although we will engage in a few arts-based experiences in clinical settings and online. This course is about professional identity (trans)formation, and builds on what you have learned in Years 1-4 of the College Advisory Program TIME Small Group Teaching Sessions about your sense of self and professional identity, and complements what you may have experienced in the 1-week elective, "Online Art Museum Exploring Professional Identity through Art." Priority enrollment will be given to Year 4 students as what you learn here is designed to prepare you to thrive personally and professionally during your residency training and throughout your career. The course uses the Baltimore Museum of Art and other regional museums, as well as a local innovators' space (Fast Forward U) and other non-clinical settings for a combination of small group problem-solving and creating activities. Class sessions will include activities such as open-ended discussions of visual art, music, and poetry; sketching; mask-making; storytelling; and reflective writing. Each week of the course will center on a core theme: 1) family/community, 2) work/education, and 3) self-care. No art knowledge or experience of any kind is required.

Please note: Prior to enrolling voluntarily in this elective, students will be advised that course participation includes taking part in an IRB-approved research study. Each student will be expected to submit four 750-word+ written reflections over the duration of the course (one baseline, two formative, and one summative reflection), both to assess whether course objectives were met and to answer the study's research questions.

Course Director(s): Dr. Margaret Chisolm

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): mchisol1@jhmi.edu

Availability and/or Duration:

Hours Per Week (if specified):

Required Prerequisites: N/A

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: Enrollment is limited to 15 students, and the course will be offered if at least 5 students enroll and if in-person teaching is permitted by JHU and the Baltimore Museum of Art, as anticipated. Enrollment limited to 3rd and 4th Year JHUSOM students

Department: Online

Division: Interdepartmental

Course Name: Reading about Plagues: A Look-Back at Outbreaks, Epidemics, And Pandemics

Course Code (if available):

Course Type: Other

Course Description: This course will use classical and contemporary writings about outbreaks, epidemics, and pandemics during the past 2000 years to understand the experience of those living through these “plagues” of infectious disease, to understand the approaches of health professionals to these epidemics, and to put the current COVID-19 epidemic in perspective. Understanding how the attitudes and experiences of the lay public and professionals have been shaped by the social and scientific context of the time in which events have occurred will prepare students for facing current and future infectious disease outbreaks, epidemics, and pandemics.

Course Director(s): Dr. Peter Rabins

Faculty: Dr. Peter Rabins

Contact Information (if none listed, please reach out to department/division): pvrabins@jhmi.edu

Availability and/or Duration: , 2 weeks

Hours Per Week (if specified):

Required Prerequisites: N/A

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: Enrollment limited to JHUSOM students

Department: Online

Division: Medicine

Course Name: Structured Communication with Patient Families During The COVID-19 Pandemic

Course Code (if available):

Course Type: Other

Course Description: Due to the COVID-19 pandemic, Johns Hopkins Hospitals have instituted system-wide restrictions on all visitors, for all patients. While imperative to protecting public health, this policy is anticipated to heighten psychological distress among in-patients and their families.

The two-week course will build upon, and allow students to strengthen and practice communication skills, gain insight into the experiences of families of hospitalized patients, and directly contribute to the care of patients during a time of national emergency. This is an opportunity to exercise clinical judgement and analysis related to critical care medicine remotely.

Combining one-on-one coaching, simulation, readings, online lectures, and phone-based interactions with the families of current patients, this course will help prepare you to support patient families during both routine encounters and times of crisis.

Course Director(s): Dr. Alison E. Turnbull

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): turnbull@jhmi.edu

Availability and/or Duration: , 2 weeks

Hours Per Week (if specified):

Required Prerequisites: Transition to the Wards

Recommended Prerequisite:**Department:** Online**Division:** Interdepartmental**Course Name:** The Critical Care Elective Rotation During The COVID-19 Pandemic**Course Code (if available):****Course Type:** Other**Course Description:** This course is about learning the basics of critical care via telemedicine and video conferencing integrated ICU rounds. It builds on what you learned in the first two years of pathophysiology and in other clinical clerkships. This also provides an opportunity to learn about critical care specifically during the COVID-19 pandemic. What you learn here will prepare you for bedside critical care in the future and the recognition of critical illness in other patient populations outside of the ICU. The course is primarily driven by clinical experience.**Course Director(s):** Dr. Lee Goeddel**Faculty:** Faculty**Contact Information** (if none listed, please reach out to department/division):**Availability and/or Duration:** , 1 week; Part Time**Hours Per Week (if specified):****Required Prerequisites:** N/A**Recommended Prerequisite:****Drop Period (if specified):** 1 month**Enrollment Restrictions:** Enrollment limited to JHUSOM students**Department:** Online**Division:** Psychiatry**Course Name:** Trauma: Sequelae and Therapeutic Approaches**Course Code (if available):****Course Type:** Other**Course Description:** This course will explore the phenomenology, neurobiological substrates, and sequelae of trauma. Students will learn of the relation of childhood trauma to the leading causes of morbidity and mortality in adults; about assessment and intervention in domestic violence and community violence; and about the spectrum of trauma-related disorders. Students will also learn about trauma informed approaches to “first do no harm” and about trauma-specific therapeutic approaches.**Course Director(s):** Dr. Sylvia Atdjian**Faculty:** Dr. Sylvia Atdjian, Dr. Carol Vidal**Contact Information** (if none listed, please reach out to department/division): satdija1@jh.edu**Availability and/or Duration:** , 1 week**Hours Per Week (if specified):****Required Prerequisites:** N/A**Recommended Prerequisite:****Drop Period (if specified):** 1 month**Enrollment Restrictions:****Department:** Online**Division:** Health Sciences Informatics

Course Name: Unstructured Data Mining to Address Novel Infectious Diseases

Course Code (if available):

Course Type: Other

Course Description: This research elective is intended for medical students with an interest in the applications of natural language processing (NLP) techniques in addressing novel infectious disease outbreaks. During the era of big data in healthcare, there has been no greater catalyst for the importance of health informatics than the COVID-19 global pandemic. Students who are eager to derive insights from unstructured clinical data that can be used to better inform clinical decision making, contact tracing, containment and mitigation efforts will benefit from this opportunity. Faculty with expertise in pulmonology, infectious disease, radiological imaging, and clinical informatics will introduce students to the newly established COVID-19 Clinical Registry. Students will have an opportunity to perform chart abstraction and unstructured data annotation. They will work alongside clinical researchers, data analysts, and text mining experts to gain experience in the real-world application of creating supervised training sets for machine learning algorithms.

Course Director(s): Dr. Ashwini Davison, Dr Stuart Ray, ,Dr. Paul Nagy

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): ashdavison@jhmi.edu

Availability and/or Duration: , 2-4 weeks

Hours Per Week (if specified):

Required Prerequisites: N/A

Recommended Prerequisite:

Department: Online

Division: Medicine

Course Name: Virtual Advanced Adult Hospital Medicine Elective

Course Code (if available):

Course Type: Other

Course Description: Students will participate in the care of hospitalized adult patients at Johns Hopkins Hospital and Johns Hopkins Bayview Medical Center virtually. Students will assist the medical team with clinical reasoning through chart review, patient interview, and formulation of patient problems. Students will also assist with important transitions of care tasks such as medication reconciliation, discharge education, and communicating with outpatient providers. Students will address patients' social determinants of health through targeted education and motivational interviewing. This course builds directly on core skills and learning objectives of the Medicine Core Clerkship and will prepare students for an Advanced Clerkship in Internal Medicine (subinternship). Students will round with teams daily via Zoom and use remaining time for other patient related tasks as described. Didactics will be offered via Zoom. Independent reading will be assigned.

Course Director(s): Dr. Amit Pahwa, Dr. Danelle Cayea, ,Dr. Shannon Walker

Faculty: Dr. Amit Pahwa, Dr. Danelle Cayea, Dr. Shannon Walker

Contact Information (if none listed, please reach out to department/division): jsauer4@jhmi.edu

Availability and/or Duration: , 2 weeks

Hours Per Week (if specified):

Required Prerequisites: Medicine Core Clerkship

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: Enrollment limited to JHUSOM students

Department: Online

Division: Psychiatry, Division of Geriatric Psychiatry and Neuropsychiatry

Course Name: Virtual Geriatric Mental Healthcare in the Community

Course Code (if available):

Course Type: Other

Course Description: This course aims to familiarize students with mental health needs of elderly persons living in the community, two models of community-based geriatric mental healthcare, and the use of available communication technologies to support these patients' care during the COVID19 pandemic. It will give students an opportunity to observe interactions with patients served by geriatric mental healthcare outreach teams now using audio and realtime audiovisual communication to replace in-person visits. In addition, students will participate in weekly multi-site interdisciplinary telementoring sessions of teams providing community-based care and support to persons with dementia and their caregivers.

Course Director(s): Dr. Deirdre Johnston

Faculty: Dr. Deirdre Johnston, Dr. Jin Joo

Contact Information (if none listed, please reach out to department/division): djohnst4@jhmi.edu

Availability and/or Duration: , 2 weeks

Hours Per Week (if specified):

Required Prerequisites: Completion of Year 1

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: Enrollment limited to JHUSOM students

Department: Online

Division: Gynecology and Obstetrics/ Female Pelvic Medicine and Reconstructive Surgery

Course Name: Virtual Patient Interactivity: Patient Case-Based Education in Urogynecology

Course Code (if available):

Course Type: Other

Course Description: This course was developed to provide a virtually interactive introduction to the subspecialty of female pelvic medicine and reconstructive surgery/ urogynecology. In this course, students will learn about the most common conditions seen in the urogynecology clinic. While this course will build on skills students learned during the Transitions to the Wards (TTW) course and other core clerkships including obstetrics and gynecology, previous rotation on any of the clinical clerkships, including obstetrics and gynecology, is not a prerequisite to taking this elective. The course combines the following elements:

-Required readings mostly from the American College of Obstetrics and Gynecology (ACOG) practice bulletins

-Online interactive new patient case reviews with instructions on written notes for virtual debriefing with faculty

-Electronic medical review of select past patients on EPIC and case presentation on these patients virtually to faculty

-PowerPoint presentation on urogynecologic topic of interest

-Additional in-depth readings and reviewing of surgical videos with the opportunity to virtually discuss with faculty (optional)

-Research in urogynecology topic of interest (optional)

Course Director(s): Dr. Chi Chiung Grace Chen, Dr. Danielle Patterson

Faculty: Dr. Chi Chiung Grace Chen, Dr. Danielle Patterson, Urogynecology fellows

Contact Information (if none listed, please reach out to department/division): cwilkin1@jhmi.edu

Availability and/or Duration: , 3 weeks
Hours Per Week (if specified):
Required Prerequisites: Transition to the Wards
Recommended Prerequisite:
Drop Period (if specified): 1 month
Enrollment Restrictions: Enrollment limited to JHUSOM students

Department: Online
Division: Neurology
Course Name: Virtual Patient Rounds in Neurology
Course Code (if available):
Course Type: Other

Course Description: This 2-week elective course explores key aspects in the care of patients with neurologic diseases through a case-based learning approach. Chart review and live presentation of real patients seen on the neurology inpatient service or outpatient clinics will be used to practice and improve clinical thinking and learn relevant concepts on conducting a neurological history and physical exam. In addition, students will learn skills on localizing lesions in the nervous system, forming a list of differential diagnosis and recommend treatment plans for common neurologic conditions. Case selection will be curated by the neurology clerkship directors to ensure a diverse representation of neurologic disorders. The “virtual rounds” will be moderated by faculty members and a series of small group sessions will be facilitated Osler Apprentices in Neurology, who will serve as peer teachers. Attendance to Neurology Grand Rounds and participation in lectures will complement this learning experience. Students will also meet one-on-one with course directors in preparation for their presentations. When appropriate, faculty and trainees from the Department of Neurology will be invited to provide subspecialty expertise. The course will be conducted entirely via virtual meetings and does not require in-person student or faculty contact. This elective can be offered at multiple learner levels (including pre-clerkship, post-clerkship, or sub-intern). This course will prepare students for both inpatient and outpatient case management and provide experience in remote teaching for medical trainees.

Course Director(s): Dr. Rachel Salas, Dr. Doris Leung
Faculty: Dr. Rachel Salas, Dr. Doris Leung
Contact Information (if none listed, please reach out to department/division): mclark44@jhmi.edu
Availability and/or Duration: , 2 weeks
Hours Per Week (if specified):
Required Prerequisites: N/A
Recommended Prerequisite:

Department: Online
Division: Pediatrics
Course Name: Virtual Pediatrics
Course Code (if available):
Course Type: Other

Course Description: During this elective, students will learn about the care of pediatric patients through on-line coursework, didactics (in pediatric medicine and pediatric radiology), clinical reasoning exercises, virtual interviews, and oral presentations. Students will gain a better understanding of routine pediatric development, common medical problems across all ages, and strategies for evaluating children and working with families.

Course Director(s): Dr. Chris Golden, Dr. Amit Pahwa

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): cgolden@jhmi.edu

Availability and/or Duration: , 2 weeks

Hours Per Week (if specified):

Required Prerequisites: Transition to the Wards

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: Enrollment limited to JHUSOM students

Department: Online

Division: Pathology

Course Name: Virtual Surgical Pathology

Course Code (if available):

Course Type: Clinical Clerkship

Course Description: Online surgical pathology student rotation for medical students who have completed the pre-clinical curriculum. This case-based rotation is designed to simulate a surgical pathology resident experience and will include remote previewing and sign-out of scanned cases multiple times per week with surgical pathology faculty and/or senior residents. Assigned reading will guide independent or group case previewing. Rotators will also be expected to attend surgical pathology meetings hosted on Zoom including pathology grand rounds, daily QA conferences, live sign-outs, and resident lectures. Rotators will be evaluated at the end of the rotation in the form of a brief 10-minute presentation on a pathology topic and a short assessment. At the end of the course students will:

- Summarize the role of a general surgical pathologist as a member of the multidisciplinary care team
- List the defining histologic features of several common pathologic entities
- Demonstrate how to determine the pathologic stage for an oncologic resection
- Describe how to approach assessing biopsy specimens

Course Director(s): Dr. Marissa White

Faculty: Dr. Marissa White, Dr. Marc Halushka, Dr. Liz Thompson

Contact Information (if none listed, please reach out to department/division): mwhite44@jhmi.edu

Availability and/or Duration: All year, Half quarter

Hours Per Week (if specified):

Required Prerequisites: N/A

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: Visiting Medical Students accepted upon approval of course director

Department: Ophthalmology

Division: Ophthalmology

Course Name: Advanced Work and Research in Ophthalmology and Neurosurgery

Course Code (if available): ME:280.699

Course Type: Basic Research

Course Description: Research in angiogenesis immunology and controlled drug delivery.

Course Director(s): Dr. Henry Brem

Faculty: Dr. H. Brem

Contact Information (if none listed, please reach out to department/division): 410-614-0477

Availability and/or Duration:

Hours Per Week (if specified):

Required Prerequisites:

Recommended Prerequisite:

Drop Period (if specified): None

Enrollment Restrictions: Enrollment limited to JHUSOM students

Department: Ophthalmology

Division: Ophthalmology/SOM

Course Name: Argus II Retinal Implant, Intracortical Visual Prosthesis, and Ultra-Low Vision Assessment

Course Code (if available): ME:280.699

Course Type: Clinical Research

Course Description: The Argus II retinal prosthesis system was approved for clinical implantation in patients blind from end-stage retinitis pigmentosa in 2013 and is now being implanted clinically at the Johns Hopkins Wilmer Eye Institute and other centers in the US and Europe until April 2020. At Wilmer we have been working with Argus II recipients since the start of the FDA-supervised feasibility study in 2007 and continue testing a small group of dedicated Argus II users.

In a separate development, in collaboration with colleagues at the Illinois Institute of Technology, University of Chicago, and University of Texas in Dallas, we are preparing the initial implantation and evaluation of a modular intracortical visual prosthesis (ICVP) for patients in whom the functional connection from retina to visual cortex has been lost. Over the next 3 years we expect to implant and evaluate 5 patients in a first-in-human feasibility study of a wireless modular visual prosthesis.

In conjunction with these visual prosthesis studies, we are developing assessments for ultra-low vision, i.e., vision too limited to allow assessment with letter charts and other standard clinical tools. Such vision levels are often considered non-functional, but in fact are used for orientation and many other elementary daily activities. We are calibrating patient-reported outcome measures and virtual reality-based performance measures in this population, supported by several NIH grants.

This elective will offer medical students and graduate students in related fields (Optometry, Biomedical Engineering), with an interest in ophthalmology and or rehab medicine, an opportunity to participate in the evaluation, treatment, and rehabilitation of patients with end-stage eye disease as they prepare for and go through experimental vision restoration trials and the subsequent rehabilitation process.

The opportunity for a participating student will not be limited to a 6-to-8-week (summer) elective but can extend throughout the year and will include opportunities to participate in studying novel aspects of prosthetic and ultra-low vision.

Course Director(s): Gislin Dagnelie, Ph.D.

Faculty: Dr. James Handa, Dr. Judith Goldstein, Dr. Gislin Dagnelie

Contact Information (if none listed, please reach out to department/division): akartha2@jhmi.edu

Availability and/or Duration: All year

Hours Per Week (if specified):

Required Prerequisites: Undergraduate Neuroscience or equivalent

Recommended Prerequisite:

Department: Ophthalmology

Division: Ophthalmology

Course Name: Clinical Elective in Ophthalmology

Course Code (if available): ME:280.699

Course Type: Tutorial

Course Description: Supervised clinical experience in the diseases of the eye, including retinal disease, macular disease, cataracts, corneal disease, strabismus, glaucoma, ophthalmic plastic surgery,

emergency room, refractive surgery, and pediatric ophthalmology. The course includes daily tutorials, reading assignments, lectures, and seminars as well as observation of eye surgery, attendance at private offices of part-time Wilmer faculty as well as clinical experience with full time Wilmer faculty, library research and oral presentation on clinical topic. Major topics in ophthalmology will be reviewed as well as the diagnostic and therapeutic approaches to most of the common eye problems presenting to ophthalmic and nonophthalmic physicians.

Course Director(s): Dr. Henry Jampel

Faculty: Dr. Henry Jampel and departmental staff

Contact Information (if none listed, please reach out to department/division): aevere12@jhu.edu

Availability and/or Duration: All Year, 4 weeks; register at least one month before start of elective

Hours Per Week (if specified):

Required Prerequisites:

Recommended Prerequisite:

Drop Period (if specified): 2 weeks

Enrollment Restrictions:

Department: Ophthalmology

Division: Ophthalmology/Green Spring Station

Course Name: Clinical Elective in Ophthalmology-Green Spring Station

Course Code (if available): ME:280.699

Course Type: Clinical Clerkship

Course Description: Supervised clinical rotation with full time Wilmer faculty at Green Spring Station.

This course will focus on diagnosis and treatment of many common eye diseases, with particular attention to conditions of the anterior segment, including cataract, cornea, and refractive surgery.

Curriculum will include clinical experience, observation in the operating room and during laser refractive surgery, reading assignments, lectures and seminars, and one-on-one teaching.

Course Director(s): Dr. Kraig S. Bower

Faculty: Dr. K. Bower, Dr. A. Jun

Contact Information (if none listed, please reach out to department/division): 410-583-2843

Availability and/or Duration: By arrangement, 3 weeks - 4.5 weeks

Hours Per Week (if specified):

Required Prerequisites: Medical student in clinical years

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Ophthalmology

Division: Ophthalmology/Anterior Segment/Odenton/Columbia

Course Name: Clinical Elective in Ophthalmology-Odenton/Columbia

Course Code (if available): ME:280.699

Course Type: Clinical Clerkship

Course Description: Supervised clinical rotation with full time Wilmer faculty at Odenton and Columbia

sites. This course will focus on diagnosis and treatment of many common eye diseases, with particular attention to conditions of the anterior segment, including cataract and cornea. Curriculum will include clinical experience and the development of basic ophthalmic examination skills as well as observation in the operating room. Students will have the opportunity to develop research projects if interested in the medical education, cornea, or trauma. Should have transportation to get to satellite locations.

Course Director(s): Dr. Divya Srikumaran

Faculty: Divya Srikumaran, M.D.

Contact Information (if none listed, please reach out to department/division): dsrikum1@jhmi.edu

Availability and/or Duration: , 3 weeks

Hours Per Week (if specified):

Required Prerequisites: Medical student in clinical years

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Ophthalmology

Division: Ophthalmology

Course Name: Clinical Neuroophthalmology

Course Code (if available): ME:280.699

Course Type: Consultation Service

Course Description: Patients with presumed or proven neuro-ophthalmological disorders are evaluated and managed. Literature concerning specific syndromes encountered will be discussed, both during the clinic and at evening rounds. Journal club is held once a month. Students are expected to participate in all aspects of the clinics and rounds.

Course Director(s): Dr. Amanda Henderson

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): 410-955-8679

Availability and/or Duration: All Year, 4 weeks (minimum)

Hours Per Week (if specified):

Required Prerequisites: Preferably neurology (or neurosurgery) and ophthalmology general electives; special considerations will be made for some students who have only taken one of the above.

Recommended Prerequisite:

Department: Ophthalmology

Division: Ophthalmology/Oculoplastics

Course Name: Elective in Oculoplastic Surgery

Course Code (if available): ME:280.699

Course Type: Clinical Clerkship

Course Description: The one-month elective in Oculoplastic Surgery provides clinical and surgical experience for the medical student in this subspecialty. Three days a week will be spent in clinic and two days in the operating room. At all times, the student will be directly supervised by one of the faculty in the Division of Ophthalmic Plastic and Reconstructive Surgery. In the clinic there will be the opportunity to observe the evaluation and management of patients presenting with all aspects of Oculoplastic disease including trauma, neoplasia, aging, and congenital defects involving the ocular adnexae seen. There will be opportunity to do portions of the workups and then present to the preceptor(s). In the operating room, there will be observation of surgical techniques and opportunity to scrub in and assist on cases. There is also an opportunity to participate in research with the faculty.

Course Director(s): Dr. Ashley Campbell

Faculty: Dr. Ashley Campbell, Dr. Nicholas Mahoney, Dr. Fatemeh Rajaii

Contact Information (if none listed, please reach out to department/division): 410-955-1112

Availability and/or Duration: All Year, 4 weeks

Hours Per Week (if specified):

Required Prerequisites:

Recommended Prerequisite:
Drop Period (if specified): 1 month
Enrollment Restrictions:

Department: Ophthalmology
Division: Ophthalmology/Glaucoma
Course Name: Glaucoma Clinical Research Elective
Course Code (if available): ME:280.699
Course Type: Clinical Research

Course Description: A research elective is offered through the glaucoma division with an emphasis on clinical research. While longer periods of time are preferred (i.e., 6-12 months), many students have been productive during shorter periods of time (i.e., 2-3 months). Per the student's preference, the elective may involve chart review, interactions with research subjects (i.e., visual testing, questionnaire administration, ocular imaging), statistical analysis and manuscript writing. Opportunities for overseas work are also occasionally available. Several research topics are also available for study, depending on the student's interest, including: defining glaucoma, analyzing treatment/surgical outcomes, using deep learning and artificial intelligence to predict disease outcomes, imaging the optic nerve, analyzing adherence to glaucoma therapy, and understanding the functional consequences of glaucoma on the individual. Interested students should inquire with Dr. Ramulu, who would be happy to meet with any student, and circulate the application to interested mentors within the Division.

Course Director(s): Dr. Pradeep Ramulu

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): rhbmill@jhmi.edu

Availability and/or Duration: , 2 months

Hours Per Week (if specified):

Required Prerequisites: None

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Ophthalmology
Division: Ophthalmology/Anterior Segment
Course Name: Investigating the Genetic Basis of Inherited Ocular Dystrophies
Course Code (if available): ME:280.699
Course Type: Research

Course Description: Over the course of the rotation, the student will be introduced to a multifaceted approach to determine the genetic basis of different inherited ocular dystrophies including Fuch corneal dystrophy, congenital cataracts, primary congenital glaucoma, Retinitis pigmentosa, etc. The student will rotate under the supervision of Dr. Riazuddin and will be assisted by senior postdoctoral fellows Drs. Khan and Ali. The student will be exposed to various techniques commonly used in genetic analysis including but not limited to genome-wide linkage analysis using STR or SNP markers, next generation whole exome sequencing, etc.

The goal of the rotation is an understanding of the overall approach to decipher genetic determinants responsible for inherited dystrophies and the completion of a research project to generate a meeting abstract submission and/or paper.

Course Director(s): S. Amer Riazuddin, Ph.D.

Faculty: S. Amer Riazuddin, Ph.D.

Contact Information (if none listed, please reach out to department/division): sriazud1@jhmi.edu

Availability and/or Duration:
Hours Per Week (if specified):
Required Prerequisites: None
Recommended Prerequisite:
Drop Period (if specified): 1 month
Enrollment Restrictions:

Department: Ophthalmology
Division: Ophthalmology/Strabismus and Pediatric Ophthalmology
Course Name: Pediatric Ophthalmology and Strabismus
Course Code (if available): ME:280.699
Course Type: Clinical Research

Course Description: Over the course of the rotation, the medical student will be introduced to a multifaceted approach to pediatric ophthalmology across two different clinic settings and the operating room. The goal of the rotation will be to familiarize the student with academic pediatric ophthalmology practice. The two clinic settings will encompass an “attending” clinic as well as a “resident” clinic. In addition, weekly time in the operating room will be anticipated.

The goal of this rotation will be to gain an understanding of strabismus and strabismus surgery. Through work with Dr. Kraus, a research project on the impact of SES outcomes following strabismus surgery will be planned. There will be built in independent research days for the student to work on data acquisition, analysis, and writing.

The goal of the rotation is an understanding of pediatric ophthalmology and strabismus and the completion of a research project to generate a meeting abstract submission or paper.

Course Director(s): Dr. Courtney Kraus

Faculty: Dr. Courtney Kraus, Dr. Alex Cristoff

Contact Information (if none listed, please reach out to department/division): ckraus6@jhmi.edu

Availability and/or Duration:
Hours Per Week (if specified):
Required Prerequisites: None
Recommended Prerequisite:

Department: Ophthalmology
Division: Ophthalmology/Pediatric Ophthalmology and Adult Strabismus
Course Name: Signal Acquisition and Processing in Ophthalmic Optics
Course Code (if available): ME:280.699
Course Type: Basic Research

Course Description: This elective provides the student with an introduction to the physical principles, hardware design, and signal processing techniques used in ophthalmic optics and electronics. The course is designed for students who wish to pursue research in ophthalmic optics. Emphasis will be placed on low-power lasers, retinal scanning, optical sensors, amplifiers and filters, noise reduction, pattern recognition and data analysis in time, and frequency domains, as well as decision making rules based on statistical data. The project may include elements of computer programming, modeling, and optimization; possibly also implementing algorithms for diagnostics. Experimental data will be collected, analyzed, and statistically assessed. The end goal is to develop algorithms to be applied in functional and reliable diagnostic therapeutic devices in the field of ophthalmology or neuro-ophthalmology. Student will be expected to write a formal report and will be evaluated on their ability to plan and carry out their project independently.

Course Director(s): Dr. Boris Gramatikov

Faculty: Dr. Gramatikov

Contact Information (if none listed, please reach out to department/division): bgramat@jhmi.edu

Availability and/or Duration: , 4.5 weeks

Hours Per Week (if specified):

Required Prerequisites: Some background in ophthalmology, math, physics/optics, computer programming, and/or statistics would be desirable.

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: Enrollment limited to JHUSOM students

Department: Other

Division:

Course Name: Austere Medicine

Course Code (if available):

Course Type: Other

Course Description: 'Austere Medicine' is the practice of medicine in a resource-constrained environment- In developing countries, in the wilderness and after a disaster.

Medicine practiced in austere environments has become increasingly popular and useful but thus far has focused on only individual areas. This course is a multidisciplinary elective that seeks to train medical students for practice in any low-resource environment- on the wards before the team arrives, on the street, in the woods, in a developing country.

Using a universal emergency management approach (the "ABCs") students will learn leadership, teamwork, assessment, and resuscitation skills useful in international, disaster, and wilderness medicine. A combination of lectures, simulations and complex scenarios are used daily. The classroom teaching by diverse experienced faculty will be reinforced by field time in each of the disciplines through simulation and hands on learning in a multitude of environments.

Course Director(s): Dr. Susan Peterson, Dr. Michael Millin

Faculty: Dr. Susan Peterson, Dr. Michael Millin

Contact Information (if none listed, please reach out to department/division):

Availability and/or Duration: , 2 weeks

Hours Per Week (if specified):

Required Prerequisites: No experience is required; there will be a reasonable course fee associated that will not exceed \$100 that will cover the cost of the lodging, equipment, and site rental for the various locals.

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: Open to 2nd, 3rd, and 4th year students, 24-person maximum (plus 4 TA's) ; Enrollment limited to JHUSOM students

Department: Other

Division: JHU Schools of Medicine and Nursing and Notre Dame of Maryland University School of Pharmacy

Course Name: Elective in Interprofessional Practice

Course Code (if available):

Course Type: Clinical Clerkship

Course Description: This is a one-year longitudinal rotation designed to teach students the theory and practice of inter-professional practice competencies as applied to collaborative patient care for older

adults. By working in teams of students from the schools of medicine, nursing and pharmacy, students will gain an in-depth understanding of the importance of inter-professional teamwork in providing safe, high-quality patient care.

Course Director(s): Dr. Jennifer Hayashi

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): 410-955-7235

Availability and/or Duration: , 9 months

Hours Per Week (if specified):

Required Prerequisites: None

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: Enrollment limited to JHUSOM students

Department: Other

Division: Various (international locations)

Course Name: Global Health Leadership Program (GHLP) - International

Course Code (if available):

Course Type: Other

Course Description: The mission of the Johns Hopkins Global Health Leadership Program (GHLP) is to train future global healthcare leaders through an exchange of cultural, clinical, and educational knowledge and skills.

The program begins with pre-departure training including didactic global health topic content (mostly on-line with some in-person discussion), research preparation, ethics discussions, leadership training and clinical simulation sessions. Students will then travel abroad for a clinical elective in a supervised international site. Internships with a governmental or non-governmental organization may also be available on a case-by-case basis. Students will also complete a project while at the international site, working with public health, nursing, and other students. This project may focus on quality assurance, development of a clinical and/or educational program or a research project. Upon return to Hopkins, students will participate in a post-departure briefing. Additional information and applications can be found at:

https://www.hopkinsmedicine.org/som/curriculum/genes_to_society/curriculum/year_three/ghlp.html

Course Director(s): Dr. Grace Chen, Dr. Jill Edwardson

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): 410-550-2787

Availability and/or Duration: All year, 4-6 weeks

Hours Per Week (if specified):

Required Prerequisites: Completion of internal medicine clerkship AND either Core Clerkship in Surgery Women's Health (OB/GYN) or Emergency Medicine.

Recommended Prerequisite:

Department: Other

Division: Pediatrics, Medicine, Gynecology and Obstetrics; Center for Public Health and Human Rights

Course Name: Global Health Leadership Program (GHLP) - Migrant Health and Human Rights (Domestic)

Course Code (if available):

Course Type: Tutorial

Course Description: This course was developed to provide an introduction to the multidisciplinary field of migrant health and human rights. In this course, students will gain experience with medical-legal partnerships through training and participation in forensic evaluations of asylum-seekers. This

experience will be coupled with readings and a hybrid of online and faculty-facilitated content to deepen their understanding of health and human rights, the impact of trauma on the life cycle, reproductive justice, and treatment for survivors of gender-based violence, and community outreach efforts to the undocumented Latinx population in Baltimore.

The course combines the following elements:

- Training and practice in conducting forensic physical and psychological evaluations for asylum seekers and drafting expert affidavits in partnership with legal advocates
- Participation in outreach efforts to the undocumented Latinx community in Baltimore through partnership with Centro SOL, the center for Salud/Health and Opportunities for Latinos at JHBMC
- Completion of online Innovating Education in Reproductive Health modules (“Advancing Equity and Justice in Sexual and Reproductive Healthcare”) and review of gender-based violence case with subsequent faculty-facilitated discussion
- Completion of short OpenWHO course on migration and health and Childhood Education International course on trauma-informed care, coupled with independent readings on health and human rights
- =Interning with Tahirih Justice Center (TJC), a national organization dedicated to protecting immigrant women and girls fleeing violence (optional and will extend elective to 6 weeks, requires TJC approval)

Course Director(s): Dr. Chi Chiung Grace Chen, Dr. C. Nicholas Cuneo

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): 617-942-1328

Availability and/or Duration: All year

Hours Per Week (if specified):

Required Prerequisites: Transition to the Wards

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: Enrollment limited to JHUSOM students

Department: Other

Division:

Course Name: Health Systems Science: Fostering Future Leaders For Interprofessional Practice

Course Code (if available):

Course Type: Other

Course Description: This course is designed to develop future interprofessional leaders by teaching and providing opportunities to practice collaborative strategies for health care professional students (nursing, medical, and pharmacy). Virtual seminars are designed to focus on the IPEC competencies: values and ethics, roles and responsibilities, communication, and teams and teamwork. This program will also apply strengths-based leadership development strategies for our students to facilitate the following: 1) introduce the strength-based paradigm strategy for professional development 2) celebrate the diversity of strengths amongst health professions students 3) foster a sense of community that encourages professional identity and camaraderie with other health professions students. A Strengths-Based Health Professions Workshop will be tailored to students to explore this method in their journey as a leader and a healthcare team member. This interactive program will include customized exercises, materials, and group activities developed from the Strengths Certified Coaching Teams' armamentarium. A variety of learning modalities will be used for this course including role play, case studies, a mix of in person a virtual health mentor visits and didactic seminars by experts in the field. Nursing, medical, and pharmacy students will routinely be asked to reflect on these experiences as they consider application to their future practice with both patients and colleagues.

Course Director(s): Rachel Salas, MD, MEd

Faculty: Bryan Hansen, PhD, RN, APRN-CNS, Heather Folz, PharmD, BCACP, Nicole Culhane, PharmD, FCCP

Contact Information (if none listed, please reach out to department/division):

Availability and/or Duration:

Hours Per Week (if specified):

Required Prerequisites: None

Recommended Prerequisite:

Drop Period (if specified): One Month

Enrollment Restrictions: Enrollment limited to JHUSOM students

Department: Other

Division:

Course Name: Latino Health Pathway: Clinical Experience with Latino Health

Course Code (if available):

Course Type: Other

Course Description: Following completion of prerequisites, students will join residents and faculty at the Esperanza Center for an afternoon session under the guidance of Hopkins Med-Peds Urban Residents at the Esperanza Center with the following learning objectives in mind:

- To build skill in conducting a Spanish Language history and physical and communicating findings to a team of physicians

- To familiarize oneself with diagnosis and treatment of health issues common to Baltimore Latinos

- To understand the management of a community free clinic

-To appreciate the nuances of delivering culturally sensitive care to a heterogeneous population

Student will obtain a history, do a problem-oriented physical, and present the patient to the preceptor.

Therapeutic options will be discussed. The preceptor will then see the patient with the student to verify

the diagnosis and treatment. Student will present 1 patient case at monthly Latino Health Pathway

group meetings. Student will attend special activities such as guest speakers hosted by Center SOL. The

training will feature topics relevant to Latino patient care, including community engagement, alternative

medicine, translation issues and domestic violence, among others. Students will be evaluated on

participation and fulfillment of listed requirements, professionalism, cultural competence, interpersonal

skills, and knowledge.

Course Director(s): Dr. Rosalyn Stewart

Faculty: Dr. Kathleen Page

Contact Information (if none listed, please reach out to department/division): rstewart@jhmi.edu

Availability and/or Duration: , 1 Year

Hours Per Week (if specified): 2-3 afternoons per week, plus required training.

Required Prerequisites: Spanish language fluency; Esperanza Center/Cultural Competency Training Workshops. This training is usually done in the month before you begin volunteering in the clinic.

Recommended Prerequisite:

Drop Period (if specified): 1 or 2 months prior to beginning of the elective.

Enrollment Restrictions:

Department: Other

Division: Dept. of Epidemiology, Bloomberg School of Public Health, Center for Public Health and Human Rights

Course Name: Protection of Health in Conflict

Course Code (if available):

Course Type: Other

Course Description: This course involves supervised research and analysis regarding the problem of protection of health in armed conflict. Work includes qualitative research on attacks on health care in Syria, literature review on impacts of attacks on health care, and other related topics.

Course Director(s): Leonard Rubenstein

Faculty: Leonard Rubenstein

Contact Information (if none listed, please reach out to department/division): kshunt@jhu.edu

Availability and/or Duration:

Hours Per Week (if specified):

Required Prerequisites:

Recommended Prerequisite:

Department: Other

Division: Armstrong Institute for Safety and Quality

Course Name: Research in Patient Safety and Quality

Course Code (if available):

Course Type: Basic Research

Course Description: This course provides the medical student with a primer on research methodologies and measurement related to patient safety and quality. After an orientation to theory, the student will gain exposure to application by participating in projects at the Armstrong Institute for Safety and Quality. Students will be expected to assist in the preparation of one manuscript.

Course Director(s): Dr. Hanan Aboumatar

Faculty: Dr. Hanan Aboumatar, Armstrong Institute faculty and staff

Contact Information (if none listed, please reach out to department/division): bhansen3@jhu.edu

Availability and/or Duration: All year, 4-8 weeks

Hours Per Week (if specified):

Required Prerequisites: N/A

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Other

Division: Interdepartmental; Ped Emergency Medicine

Course Name: The Hospital

Course Code (if available):

Course Type: Other

Course Description: As a physician, and especially an intern, you will depend on a host of providers in order to efficiently care for your patients, from nurses and social workers to pharmacists and occupational therapists. An understanding of how these staff function in the hospital can help make you a more efficient (and happy) intern. An excellent complement to the Transition to Internship course (TRIPLE), The Hospital is a two-week immersion in the world of non-physician patient care. You will spend one day each "walking in the shoes of" various non-physician providers, under the individual guidance of expert preceptors from each field. The disciplines included are nursing, social work; case management; hospital administration; infection control; pharmacy, and rehabilitation (PT, OT, speech pathology), home care, palliative care, respiratory therapy, nutrition, hospital administration, and infection control. A pioneering venture in interdisciplinary learning, The Hospital will help you become a better leader and collaborator as an intern, resident, and attending physician. Grading is pass/fail and will be determined by attendance and completion of a short essay.

Course Director(s): Dr. Amit Pahwa

Faculty: Dr. Amit Pahwa

Contact Information (if none listed, please reach out to department/division): pahwa@jhu.edu

Availability and/or Duration: All year, 2 weeks

Hours Per Week (if specified):

Required Prerequisites: None

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: limited to one student

Department: Pathology

Division: Pathology

Course Name: Autopsy Pathology - JHH

Course Code (if available):

Course Type: Clinical Elective

Course Description: Students are trained to function as first year house officers on the autopsy service. They become responsible for work-up and sign-out of their cases and in other respects participate fully in the life of the department. There are informal case conferences at the autopsy table and at multi headed microscopes. Students have the opportunity to present cases at departmental and interdepartmental conferences or to write cases for publication. Brief supplementary exposures to other aspects of pathology (general surgery pathology, surgical pathology subspecialties, forensic pathology, and clinical pathology) are offered to students who enroll for a full quarter.

Course Director(s): Dr. David Nauen

Faculty: Dr. Nauen, others

Contact Information (if none listed, please reach out to department/division): 410-955-3765

Availability and/or Duration: January-June; August-December ; Full quarter rotation or one month rotation

Hours Per Week (if specified):

Required Prerequisites: Completion of Genes to Society

Recommended Prerequisite:

Drop Period (if specified): 2 months

Enrollment Restrictions: After this course completion must be followed by pathology elective

Department: Pathology

Division: Pathology/Transfusion Medicine

Course Name: Blood Bank/Transfusion Medicine

Course Code (if available):

Course Type: Tutorial or Clerkship

Course Description: This course provides an opportunity for medical students to gain experience in transfusion medicine {TM} in one of the largest and most academically productive TM services in the country. Students will learn about different types of blood products (i.e., indications, manipulation, and management of adverse effects) as well as approaches to patients with complex transfusion requirements (e.g., hyperhemolysis, severe alloimmunization) or who are unwilling to be transfused. Students will have an active role in clinical consultations in the TM and apheresis services. Those with an interest in research are encouraged – but not required – to pursue projects with the TM faculty and technical staff. Collectively, this elective will enhance the ability to manage patients in diverse clinical settings. It is particularly recommended for students who are interested in pathology, surgery, anesthesiology, hematology, oncology, and intensive care medicine.

Course Director(s): Dr. Evan Bloch
Faculty: Dr. Evan Bloch and technical staff
Contact Information (if none listed, please reach out to department/division): lblogg1@jhmi.ed
Availability and/or Duration: All Year, 1 month
Hours Per Week (if specified):
Required Prerequisites: Introduction to Pathology
Recommended Prerequisite:

Department: Pathology
Division: Surgical Pathology
Course Name: Clerkship in Surgical Pathology - JHH
Course Code (if available):
Course Type: Clinical Clerkship
Course Description: Students are trained in the techniques of general surgical pathology and then become responsible for the gross description, gross dissection, and microscopic examination of their assigned cases. Students are supervised by faculty members and senior residents, and they participate in all conference activities in the division. The elective exposes the student to a variety of modern techniques employed in the pathologic diagnosis of medical and surgical diseases and increases their awareness and understanding of the role played by surgical pathology in patient management. There are opportunities for exposure to other diagnostic pathology services (e.g., cytopathology and neuropathology)
Course Director(s): Dr. Marissa White
Faculty: Dr. White and staff
Contact Information (if none listed, please reach out to department/division): mwhite44@jhmi.edu
Availability and/or Duration: All Year, Half quarter
Hours Per Week (if specified):
Required Prerequisites: Completion of Introduction to Pathology or Genes to Society
Recommended Prerequisite:
Drop Period (if specified): 2 months
Enrollment Restrictions: Visiting Medical Students accepted upon approval of course director

Department: Pathology
Division: Pathology/Clinical Chemistry
Course Name: Clinical Chemistry
Course Code (if available):
Course Type: Tutorial
Course Description: This course will provide an introduction to the clinical and research activities of the Clinical Chemistry Division. Clinical aspects will focus on the analytical methods, quality assurance and the clinical interpretation of biochemical, immunological, and proteomics tests. Laboratories include: automated chemistry, critical care, emergency department, immunoassay for hormones and tumor markers, toxicology, and therapeutic drug monitoring. Research aspects will focus on clinical proteomics through interaction with the biomarker discovery laboratory. Students will meet with individual faculty members, attend laboratory meetings, rotate in the laboratories, and be involved in research projects.
Course Director(s): Dr. Daniel Chan
Faculty: Dr. Chan and staff
Contact Information (if none listed, please reach out to department/division): 410-955-2674

Availability and/or Duration: All Year

Hours Per Week (if specified):

Required Prerequisites: Third- or fourth-year medical student; completion of Introduction to Pathology

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: Enrollment limited to JHUSOM students

Department: Pathology

Division: Cytopathology

Course Name: Diagnostic Cytopathology

Course Code (if available):

Course Type: Clinical Clerkship

Course Description: An opportunity to learn about the clinical significance of morphologic changes in cells and other elements of the cytologic specimen in health and in disease. The materials utilized are specimens from the Johns Hopkins Hospital Diagnostic Cytopathology Service, including Pap tests and biopsies from the Fine Needle Aspiration (FNA) Service. There will be an active correlation of the clinico-radiologic, cytomorphologic and histopathologic findings and follow-up information.

Course Director(s): Dr. Syed Ali

Faculty: Dr. Ali and staff

Contact Information (if none listed, please reach out to department/division): 410-955-1180

Availability and/or Duration: , 1 quarter or less

Hours Per Week (if specified):

Required Prerequisites: Introduction to Pathology

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: Enrollment limited to JHUSOM students

Department: Pathology

Division: Pathology

Course Name: Forensic Pathology - Office of the Chief Medical Examiner

Course Code (if available):

Course Type: Other

Course Description: Students will acquire first-hand knowledge of legal medicine by participating in regular functions of the Office of the Chief Medical examiner. Included are investigations of sudden, unexpected, and violent deaths, autopsy procedures, and toxicological and histological studies. Students are encouraged (after adequate orientation) to assist at autopsies, to participate in on-the-scene investigations, and to observe staff members testifying in court. They participate in daily rounds, lectures, and seminars. There are also opportunities to participate in on-going research projects centered on forensic pathology.

Course Director(s): Dr. Nikki Mourtzinis

Faculty: Staff

Contact Information (if none listed, please reach out to department/division): 410-333--3353

Availability and/or Duration: All Year, 4 weeks or one quarter

Hours Per Week (if specified):

Required Prerequisites: Completion of Introduction to Pathology

Recommended Prerequisite:

Department: Pathology
Division: Gynecologic Pathology
Course Name: Gynecologic Pathology
Course Code (if available):
Course Type: Tutorial
Course Description: Students observe and participate in the gross and histological assessment of gynecologic pathology specimens under the supervision of residents, fellows, and attendings.
Course Director(s): Dr. Russell Vang
Faculty: Dr. Russell Vang and faculty
Contact Information (if none listed, please reach out to department/division):
Availability and/or Duration: , 4 weeks
Hours Per Week (if specified):
Required Prerequisites: Permission of instructor
Recommended Prerequisite:
Drop Period (if specified): 1 month
Enrollment Restrictions:

Department: Pathology
Division: Pathology/Microbiology
Course Name: Medical Microbiology
Course Code (if available):
Course Type: Other (Laboratory Rotation)
Course Description: Laboratory diagnosis of infectious diseases and detection of antimicrobial resistance.
Visiting Medical Students accepted upon approval of Course Director and must arrange times directly with the Education Coordinator, Paula Mister.
This course will emphasize all facets of diagnostic testing. The student will review specimen collection guidelines as they pertain to microbiology samples. Diagnostic methods and specific technologies for detection of a broad range of clinically significant pathogens will be learned. Susceptibility testing methods including tests designed to detect resistance mechanisms will be covered. A major objective is to provide correlation of laboratory information with disease presentations in patients through a dynamic interface with healthcare providers and other divisions within the Department of Pathology. Learning objectives are fulfilled through bench rotations in the laboratory, daily work rounds, didactics, and interdisciplinary conferences.
Course Director(s): Dr. Karen Carroll
Faculty: Dr. Karen Carroll and faculty within the Division of Medical Microbiology
Contact Information (if none listed, please reach out to department/division): 410-955-2674
Availability and/or Duration: All Year, 4 weeks
Hours Per Week (if specified):
Required Prerequisites: Basic knowledge of Microbiology
Recommended Prerequisite:
Drop Period (if specified): 1 month
Enrollment Restrictions: limited to two students per quarter

Department: Pathology
Division: Pathology/Neuropathology
Course Name: Neuropathology
Course Code (if available):

Course Type: Tutorial

Course Description: An opportunity to learn the fundamentals of diagnostic neuropathology. The student will examine brain and spinal cord specimens obtained at Hopkins and the Office of the Chief Medical Examiner and will also participate in the evaluation of surgical neuropathology specimens from the inpatient and outside consultation services. Self-study materials and individual tutoring sessions on special topics in neuropathology are available. Students are encouraged to identify small research projects in their areas of interest. This experience is recommended for students interested in pathology, neurology, and neurosurgery.

Course Director(s): Dr. Juan Troncoso

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): 410-955-5632

Availability and/or Duration: , 1 month

Hours Per Week (if specified):

Required Prerequisites: Introduction to Pathology. Approved neuroanatomy and histology.

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: visiting medical students must follow JHUSOM quarter dates

Department: Pathology

Division: Pathology

Course Name: Surgical Pathology - Bayview Medical Center

Course Code (if available):

Course Type: Clinical Clerkship

Course Description: This course offers an opportunity to see and experience at first hand a wide spectrum of activities in anatomic pathology. Students will rotate in Surgical Pathology, functioning at the level of a first-year resident in pathology. The student will perform gross dissections, dictate clinical summaries, review microscopic sections, and sign out the surgical pathologic material under senior staff supervision.

Course Director(s): Dr. Kevan Salimian

Faculty: Dr. Salimian and staff

Contact Information (if none listed, please reach out to department/division): 410-550-5587

Availability and/or Duration: All Year, Half quarter or full quarter

Hours Per Week (if specified):

Required Prerequisites: Introduction to Pathology or Genes to Society

Recommended Prerequisite:

Department: Pathology

Division: Pathology/Transfusion Medicine

Course Name: Virtual Blood Bank/Transfusion Medicine

Course Code (if available):

Course Type: Tutorial or Clerkship

Course Description: This course provides an opportunity for medical students to gain experience in transfusion medicine. Students will learn about different types of blood components (i.e., indications, manipulation, and management of adverse effects) as well as approaches to patients with complex transfusion requirements (e.g., hyperhemolysis, severe alloimmunization) or who are unwilling to be transfused. Independent assigned reading and viewing of recorded presentations will prepare the learner for the rotation. Rotators will be expected to attend transfusion medicine meetings, teaching

sessions, and case study reviews hosted on Zoom. Rotators will be evaluated at the end of the rotation in the form of a brief knowledge assessment examination and evaluation of participation in live learning activities. At the end of the course students will:

- Describe available blood components and their indications
- Summarize laboratory methods utilized in pre-transfusion testing
- Explain the clinical implications of antibodies to red blood cell antigens
- Differentiate types of adverse reactions to transfusion
- Recommend appropriate transfusion management strategies

Course Director(s): Dr. Evan Bloch

Faculty: Evan Bloch, Lorraine Blagg

Contact Information (if none listed, please reach out to department/division): lblagg1@jhmi.ed

Availability and/or Duration: All Year, 2-4 weeks

Hours Per Week (if specified):

Required Prerequisites: N/A

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Pathology

Division: Pathology

Course Name: Virtual Surgical Pathology

Course Code (if available):

Course Type: Clinical Clerkship

Course Description: Online surgical pathology student rotation for medical students who have completed the pre-clinical curriculum. This case-based rotation is designed to simulate a surgical pathology resident experience and will include remote previewing and sign-out of scanned cases multiple times per week with surgical pathology faculty and/or senior residents. Assigned reading will guide independent or group case previewing. Rotators will also be expected to attend surgical pathology meetings hosted on Zoom including pathology grand rounds, daily QA conferences, live sign-outs, and resident lectures. Rotators will be evaluated at the end of the rotation in the form of a brief 10-minute presentation on a pathology topic and a short assessment. At the end of the course students will:

- Summarize the role of a general surgical pathologist as a member of the multidisciplinary care team
- List the defining histologic features of several common pathologic entities
- Demonstrate how to determine the pathologic stage for an oncologic resection
- Describe how to approach assessing biopsy specimens

Course Director(s): Dr. Marissa White

Faculty: Dr. Marissa White, Dr. Marc Halushka, Dr. Liz Thompson

Contact Information (if none listed, please reach out to department/division): mwhite44@jhmi.edu

Availability and/or Duration: All Year, Half quarter

Hours Per Week (if specified):

Required Prerequisites: N/A

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: Visiting Medical Students accepted upon approval of course director

Department: Pediatrics

Division: Pediatrics/General Pediatrics and Adolescent Medicine

Course Name: Adolescent Medicine

Course Code (if available): ME:320.699

Course Type: Advanced Clerkship/Subinternship

Course Description: Students will gain increased experience working with adolescents (ages 10-21 years). Time is primarily spent in the Adolescent Clinic with additional clinical opportunities at the Baltimore City school-based clinics, and an adolescent substance abuse treatment program. Clinical interviewing skills are emphasized, and there is a weekly didactic seminar series. A case presentation or literature review is required during the month.

Course Director(s): Dr. Maria Trent

Faculty: Dr. H. Adger, Dr. A. Marcell, Dr. M. Trent

Contact Information (if none listed, please reach out to department/division): 410-614-3865

Availability and/or Duration: January - May; August - December, Half quarter

Hours Per Week (if specified):

Required Prerequisites: Core Clerkships in Pediatrics and Ob/Gyn

Recommended Prerequisite:

Drop Period (if specified): 2 months

Enrollment Restrictions: visiting medical students must follow JHUSOM quarter dates

Department: Pediatrics

Division: Oncology/Pediatric Oncology

Course Name: Advanced Clerkship in Pediatric Oncology

Course Code (if available): ME:320.699

Course Type: Clinical Clerkship

Course Description: Students will have the opportunity to become familiar with pediatric oncology patient care during this one-month inpatient-based rotation. The elective includes exposure and education to a wide range of oncologic conditions and complications. Students will have the opportunity to participate in the management of children with hematologic malignancies and solid tumors. In addition, students can participate in the management of pediatric bone marrow transplantation patients. Students primarily manage selected inpatients with resident, fellow, and attending supervision. Students may have the opportunity to see consults in concert with the inpatient team and to follow the progress of patients as they transition to the outpatient setting.

Course Director(s): Dr. Stacy Cooper

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): 410-614-5055

Availability and/or Duration: All year

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Pediatrics

Recommended Prerequisite:

Department: Pediatrics

Division: Pediatrics

Course Name: Advanced Hospitalized Pediatrics Elective

Course Code (if available): ME:320.699

Course Type: Other

Course Description: Students will participate in the care of hospitalized pediatric patients at Johns Hopkins Children's Center. Students will assist the team with clinical reasoning through chart review, patient interview, and formulation of patient problems. Students will also assist with important transitions of care tasks such as medication reconciliation, discharge education, and communicating

with outpatient providers. This course builds directly on core skills and learning objectives of the Pediatric Core Clerkship and will prepare students for the Subinternship in Hospitalized Pediatrics. Students will round with teams daily via Zoom and use remaining time for other patient related tasks as described. Didactics will be offered via Zoom.

Course Director(s): Dr. Christopher Golden, Dr. Amit Pahwa, ,Dr. Rebekah Reisig

Faculty: Dr. Christopher Golden, Dr. Amit Pahwa, Dr. Rebekah Reisig

Contact Information (if none listed, please reach out to department/division): cgolden@jhmi.edu

Availability and/or Duration: , 2 weeks

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Pediatrics

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: Enrollment Limited to JHUSOM Students

Department: Pediatrics

Division: Division of Child & Adolescent Psychiatry

Course Name: Child and Adolescent Psychiatry

Course Code (if available): ME:320.699

Course Type: Clinical Clerkship

Course Description: This course offers the opportunity to observe and participate in a variety of clinical-teaching settings, including inpatient child and adolescent units, day hospital, consultation liaison service, outpatient specialty clinics (affective disorders, anxiety disorders, developmental neuropsychiatric disorders, psychosomatic disorders) as well as community psychiatric programs including outpatient services, community liaison, and school-based programs. The student will learn about a variety of psychiatric presentations of children, adolescents, and their families and the range of psychotherapeutic interventions available. In addition, students have the opportunity to participate in a large number of ongoing research projects within the division. The elective is tailored to meet individual interests.

Course Director(s): Dr. Esther Lee

Faculty: Dr. Vasa and division faculty

Contact Information (if none listed, please reach out to department/division): jellio26@jhmi.edu

Availability and/or Duration:

Hours Per Week (if specified):

Required Prerequisites: None

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: visiting medical students must follow JHUSOM quarter dates

Department: Pediatrics

Division: Pediatrics/Neonatology

Course Name: Clinical Clerkship in Full-Term Nursery

Course Code (if available): ME:320.699

Course Type: Clinical Clerkship

Course Description: Clinical experience in the care of full-term and near-term newborns, including both normal and "at-risk" infants. Student will be expected to follow newborns and families throughout the nursery stay. On completion of the clerkship, the student should be able to: perform a newborn physical exam, including assessment of gestational age; recognize normal patterns of transition at birth; recognize risk factors for and signs of abnormal transition; identify many normal variants and abnormal

findings on the newborn physical examination; understand the diagnosis and management of common neonatal problems (such as jaundice, suspected sepsis, feeding problems, congenital infections, drug withdrawal, skin rashes); understand important issues in counseling parents regarding care of the newborn. Students will have the opportunity to rotate in the Neonatal Intensive Care Unit (NICU) and to attend deliveries with the pediatric house staff and participate in resuscitation. At the end of the clerkship, students will prepare a short presentation (PowerPoint recommended) on a newborn topic of his/her choice.

Course Director(s): Dr. Christopher Golden

Faculty: Dr. Golden and Nurse Practitioner staff

Contact Information (if none listed, please reach out to department/division): 410-955-4588 or 410-955-5259

Availability and/or Duration: All year, 4 weeks

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Pediatrics

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: visiting medical students must follow JHUSOM quarter dates

Department: Pediatrics

Division: Endocrinology

Course Name: Clinical Clerkship in Pediatric Endocrinology

Course Code (if available): ME:320.699

Course Type: Clinical Clerkship

Course Description: This elective offers the student an intensive outpatient exposure to a wide variety of endocrine problems in children and adolescents. The student will gain an understanding of normal growth and sexual maturation and how these patterns are affected by endocrine disorders at different ages. Also, the outpatient management of complex chronic disease on a long-term basis is emphasized. Students have the same clinical responsibilities as residents and fellows. A research conference and clinical conference are held weekly throughout the academic year. Disorders seen include pituitary, thyroid, bone/mineral, adrenal, growth, puberty, gonad and sexual differentiation abnormalities, and diabetes.

Course Director(s): Dr. David Cooke

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): dcooke@jhmi.edu

Availability and/or Duration: All year, 4 weeks minimum

Hours Per Week (if specified):

Required Prerequisites: None

Recommended Prerequisite:

Department: Pediatrics

Division: Pediatric Neurology

Course Name: Clinical Clerkship in Pediatric Epilepsy

Course Code (if available): ME:320.699

Course Type: Clinical Clerkship

Course Description: This elective will give the student experience in the "trenches" of managing pediatric epilepsy including participation in clinic or in a more structured and intensive experience, including ward duty. There also is experience reading EEGs in both outpatient and epilepsy monitoring

unit environments. The student may spend time with ketogenic diet patients and in epilepsy surgery cases, as available.

Course Director(s): Dr. Adam Hartman

Faculty: Dr. Hartman, Dr. Kossoff

Contact Information (if none listed, please reach out to department/division): 410-955-9100

Availability and/or Duration: All year, 2 weeks

Hours Per Week (if specified):

Required Prerequisites: Core Clerkships in Pediatrics and Neurology

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: visiting medical students must follow JHUSOM quarter dates

Department: Pediatrics

Division: Pediatrics/ Emergency Medicine

Course Name: Clinical Issues in Child Maltreatment and Advocacy

Course Code (if available): ME:320.699

Course Type: Clinical Clerkship

Course Description: The Clinical Issues in Child Maltreatment and Advocacy offers the student an intensive exposure to the many facets of caring for abused children and their families. The student will gain an understanding of the identification, evaluation, and treatment of the physically abused child in both the acute and inpatient settings. Likewise, the student will participate in the identification and evaluation of suspected sexual abuse. The student will observe the multidisciplinary approach to medical and psychological treatment of abused children and their families; the investigation, the prosecution and treatment of perpetrators and the roles of child advocacy groups in education and prevention.

Course Director(s): Dr. Mitchell Goldstein

Faculty: Dr. Mitchell Goldstein, Dr. Simone Thompson

Contact Information (if none listed, please reach out to department/division): 410-955-6143

Availability and/or Duration: January - June; August - November, 3 weeks

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Pediatrics

Recommended Prerequisite:

Drop Period (if specified): 2 months

Enrollment Restrictions: visiting medical students must follow JHUSOM quarter dates

Department: Pediatrics

Division: Pediatrics/ACCM

Course Name: Clinical Research Elective in Adoption Medicine

Course Code (if available): ME:320.699

Course Type: Clinical Research

Course Description: This is a clinical research elective in which the student evaluates children in orphanages abroad. The student will weigh and measure children living in orphanages and will develop a project of special interest such as nutrition, language development, vaccines, caretaking in orphanages, etc. The student will be expected to present findings at national meetings and make a publication attempt. Expenses are paid.

Course Director(s): Dr. Deborah Schwengel

Faculty: Dr. Deborah Schwengel

Contact Information (if none listed, please reach out to department/division): 410-955-7610

Availability and/or Duration: , 2-3 months

Hours Per Week (if specified):

Required Prerequisites: Only by specific arrangement and a short training period. Most important is the student's ability to function as an ambassador and be culturally sensitive. Previous experience in the third world or immersion in other cultures is ideal.

Recommended Prerequisite: Language fluency is helpful. Previous experience in the third world or immersion in other cultures is ideal.

Drop Period (if specified): 1 month

Enrollment Restrictions: Enrollment Limited to JHUSOM Students

Department: Pediatrics

Division: Pediatrics/Infectious Disease

Course Name: Clinical Research Elective in Pediatric Infectious Diseases

Course Code (if available): ME:320.699

Course Type: Clinical Research

Course Description: Clinical research opportunities are available on a range of topics related to the pathogenesis, epidemiology, diagnosis and management of infectious diseases, patient care (including HIV-infected children), outcome assessment, critical pathways, epidemiology, antibiotic utilization, and vaccine-related issues.

Course Director(s): Dr. Kwang Sik Kim

Faculty: Dr. Kim and division faculty

Contact Information (if none listed, please reach out to department/division): cpolk1@jhmi.edu

Availability and/or Duration: All year, 9 weeks

Hours Per Week (if specified):

Required Prerequisites: Enthusiasm

Recommended Prerequisite:

Department: Pediatrics

Division: Hematology

Course Name: Elective in Pediatric Hematology

Course Code (if available): ME:320.699

Course Type: Consultation Service

Course Description: Clinical and laboratory experience in pediatric hematology, including assignments in clinic, ward rounds, training in morphologic hematology, and attending research and clinical seminars and conferences. Each student is requested to organize a research seminar at the end of the elective.

Course Director(s): Dr. J. Casella

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): 410-955-6132

Availability and/or Duration: All year, 4.5 weeks

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Pediatrics or Medicine

Recommended Prerequisite:

Drop Period (if specified): 2 months

Enrollment Restrictions: One position offered at a time

Department: Pediatrics

Division: Pediatrics/General Pediatrics and Adolescent Medicine

Course Name: General Pediatrics & Adolescent Medicine Clinical Research

Course Code (if available): ME:320.699

Course Type: Clinical Research

Course Description: Opportunities are available for studies to participate in ongoing clinical research projects within the Center for Child and Community Health Research in the Division of General Pediatrics & Adolescent Medicine. Research opportunities exist at the East Baltimore and Bayview campuses. Division faculty provide clinical care to children, adolescents, and young adults in the Harriet Lane Clinic (including the Adolescent Medicine Clinics and Intensive Primary Care Clinic for youth with HIV infection) and the Bayview Children's Medical Practice. Students may be involved in developing critical literature reviews or pre-testing research instruments, in collecting data through interview or chart review, or in analyzing data, depending on the student's interest and previous experience and the stage of the project. Students who choose this elective will increase their depth of knowledge in at least one pediatric content area.

Course Director(s): Dr. Jacky Jennings

Faculty: Division of General Pediatrics faculty

Contact Information (if none listed, please reach out to department/division): 410-955-2910

Availability and/or Duration: All year, 9 weeks

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Pediatrics

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: visiting medical students must follow JHUSOM quarter dates

Department: Pediatrics

Division: Pediatrics/Infectious Disease

Course Name: Laboratory Elective in Pediatric Infectious Diseases

Course Code (if available): ME:320.699

Course Type: Laboratory Research

Course Description: Laboratory projects on the biology of the blood-brain barrier in central nervous system infections, inflammation, and on HIV. Laboratory skills include tissue culture, assays for microbial interaction with the blood-brain barrier, recombinant protein expression systems, microbial genetics, microarrays, proteomics, PAGE, 2D gels and Western blots, ELISA assays, signal transduction pathways and protein biochemistry.

Course Director(s): Dr. Kwang Sik Kim

Faculty: Dr. Kim and Infectious Diseases faculty

Contact Information (if none listed, please reach out to department/division): cpolk1@jhmi.edu

Availability and/or Duration: All year, Full quarter

Hours Per Week (if specified):

Required Prerequisites: Regular time commitment essential

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: visiting medical students must follow JHUSOM quarter dates

Department: Pediatrics

Division: Neonatology, All Children's Hospital (ACH), St. Petersburg, FL

Course Name: Neonatology at All Children's Hospital

Course Code (if available): ME:320.699

Course Type: Other

Course Description: Students will be taught to provide patient care that is compassionate, appropriate, and effective for the promotion of health, prevention of illness, treatment of disease and at the end of

life in the neonatal intensive care unit. Opportunities to participate in simulated resuscitative scenarios will also be available.

Students will attend the NICU follow-up clinic. Students will have the opportunity to follow nutritional, developmental, and other clinical issues on discharged neonatal patients. Students are expected to participate in daily rounds and didactic conferences and other structured learning opportunities.

Students will attend JHUSOM Pediatric Grand Rounds and ACH-JHM Grand Rounds.

Students will be able to observe a variety of procedures including but not limited to sterile gowning and aseptic preparation, venipuncture, intubation, lumbar puncture, suprapubic bladder aspiration, bladder catheterization and umbilical line placement.

Course Director(s): Dr. Patricia Quigley

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): dawn.jones@jhmi.edu

Availability and/or Duration: , 3-4 weeks

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Pediatrics or Medicine

Recommended Prerequisite:

Department: Pediatrics

Division: Pediatrics

Course Name: Neurodevelopmental Pediatrics - Kennedy Krieger Institute

Course Code (if available): ME:320.699

Course Type: Clinical Clerkship

Course Description: The goal of this elective is to provide the student with an overview to neurodevelopmental disabilities including cerebral palsy, autism, intellectual disability, attention deficit hyperactivity disorder and other disorders of communication and learning. Students will actively participate in the diagnostic and interdisciplinary evaluation and management of infants, children, and adolescents with neurodevelopmental disorders. Directed readings, lectures, and regular meetings with a faculty preceptor will be used to increase the student's knowledge of principles of development, specific diagnostic entities, brain-behavior relationships, and current issues in care. This elective is recommended for those students who are considering careers in pediatrics, neurology, genetics, or psychiatry.

Course Director(s): Dr. Miya Asato

Faculty: Dr. Asato and staff

Contact Information (if none listed, please reach out to department/division):

asato@kennedykrieger.org

Availability and/or Duration: Quarter 1 - 4, 1 month

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Pediatrics

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: visiting medical students must follow JHUSOM quarter dates

Department: Pediatrics

Division: Pediatrics/Cardiology

Course Name: Pediatric Cardiology

Course Code (if available): ME:320.699

Course Type: Consultation Service

Course Description: Students actively participate on the service working primarily with the cardiologist on call for the month. Students attend a weekly schedule of divisional conferences and teaching seminars; videotape, tape slide and computer interactive learning resources are available.

Emphasis is placed on the following areas: acquisition of basic skills of cardiovascular assessment in infants and children; understanding the hemodynamic principles of pressure, flow, and resistance, and relating them to the clinical picture and the findings at cardiac catheterization; overview of the natural history of common congenital and acquired heart disease in infancy, childhood, and adolescence; introduction to electrocardiography and two-dimensional color and Doppler echocardiography

Course Director(s): Dr. William Reid Thompson III

Faculty: Dr. Thompson and division faculty

Contact Information (if none listed, please reach out to department/division): clawren@jhmi.edu

Availability and/or Duration: , Half quarter or full quarter

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Pediatrics

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: visiting medical students must follow JHUSOM quarter dates

Department: Pediatrics

Division: Pediatric Endocrinology, All Children's Hospital (ACH), St. Petersburg, FL

Course Name: Pediatric Cardiology at All Children's Hospital

Course Code (if available): ME:320.699

Course Type: Other

Course Description: Principles of pediatric cardiology will be taught in outpatient and inpatient encounters at ACH-JHM. As a freestanding children's hospital, patient cases will reflect both general pediatric cardiology exposure as well as exposure to highly specialized patient cases reflecting ACH-JHM's status as a quaternary care center. Participation in clinical or basic research in pediatric cardiology may also be coordinated pending project and faculty availability.

Students will attend daily cardiology clinics at All Children's Hospital Johns Hopkins Medicine. Emphasis will be placed on understanding cardiac physiology and pathophysiology of pediatric patients, physical diagnosis, and outpatient management. Principles in cardiac electrophysiology and anatomy will be taught using electrocardiography and echocardiography.

Students will participate in work up and care of cardiac patients including those admitted for diagnostic cardiac catheterization and inpatient consultation. Students will be expected to round and follow patients assigned to the cardiology team throughout the clerkship rotation.

Students are expected to participate in weekly conferences including cardiology specific conferences as well as resident noon conferences, JHUSOM Pediatric Grand Rounds and ACH-JHM Grand Rounds.

Course Director(s): Dr. Patricia Quigley

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): 727-767-4106

Availability and/or Duration: , 3-4 weeks

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Pediatrics or Medicine

Recommended Prerequisite:

Drop Period (if specified): 2 months

Enrollment Restrictions: Enrollment Limited to JHUSOM Students

Department: Pediatrics

Division: Pediatrics/Dermatology

Course Name: Pediatric Dermatology

Course Code (if available): ME:320.699

Course Type: Clinical Clerkship/ Clinical Research

Course Description: This is an intensive clinical experience in Pediatric Dermatology. The student will participate in outpatient clinics, inpatient consults, dermatology rounds, and grand rounds. Students are also encouraged to design and complete clinical research projects and contribute to the online image resource dermatlas.org.

Course Director(s): Dr. Bernard Cohen

Faculty: Dr. Bernard Cohen, Dr. Katherine Puttgen

Contact Information (if none listed, please reach out to department/division): 410-955-2049

Availability and/or Duration: All year, 4.5 weeks

Hours Per Week (if specified):

Required Prerequisites: See course director

Recommended Prerequisite:

Department: Pediatrics

Division: Pediatric Endocrinology, All Children's Hospital (ACH), St. Petersburg, FL

Course Name: Pediatric Endocrinology at All Children's Hospital

Course Code (if available): ME:320.699

Course Type: Other

Course Description: This course offers the student in-depth exposure to a wide variety of endocrine related problems and diseases in children and adolescents.

Students will gain an understanding of the management of common and complex endocrine diseases in children of all ages. Medical management and understanding of growth physiology, sexual maturation and other hormonal processes/diseases will be emphasized. Students will additionally gain insight into the appropriate laboratory/diagnostic tests necessary to diagnose and evaluate common endocrine diseases in children.

Students will be expected to attend regularly scheduled research conferences and clinical conferences as well as JHUSOM Pediatric Grand Rounds and ACH-JHM Grand Rounds.

Students will have the opportunity to see and provide care for children with disorders including pituitary, thyroid, bone/mineral, adrenal, growth, puberty, gonad and sexual differentiation and diabetes.

Course Director(s): Dr. Patricia Quigley

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): 727-767-4106

Availability and/or Duration: , 3-4 weeks

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Pediatrics or Medicine

Recommended Prerequisite:

Drop Period (if specified): 2 months

Enrollment Restrictions: Enrollment Limited to JHUSOM Students

Department: Pediatrics

Division: Pediatric Hematology Oncology, All Children's Hospital (ACH), St. Petersburg, FL

Course Name: Pediatric Hematology Oncology at All Children's Hospital

Course Code (if available): ME:320.699

Course Type: Other

Course Description: The student will be involved in the diagnosis, evaluation, and management of patients with a spectrum of pediatric hematology and oncology disorders, both in the inpatient and outpatient settings at ACH.

In the outpatient setting, the student will actively participate in interviewing and examining newly referred and follow-up patients. Students will additionally gain exposure to the multi-disciplinary approach to the care of children with chronic oncologic and hematologic conditions.

The student will be an active participant in daily rounds and will be expected to interact with patients and team members. Students will develop a basic understanding of hematologic and oncologic pathophysiology as well as cancer chemotherapy. Written histories, physical examinations and plans for evaluation and treatment will be reviewed with the attending physician.

Students will attend the weekly multidisciplinary patient care and teaching rounds and monthly tumor board as well as resident noon conferences, JHUSOM Pediatric Grand Rounds and ACH-JHM Grand Rounds. Students will have the ability to participate in other settings related to the care of this population of children including the Child-life Center, infusion clinics and other related patient care settings at ACH.

Course Director(s): Dr. Patricia Quigley

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): dawn.jones@jhmi.edu

Availability and/or Duration: , 2-4 weeks

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Pediatrics or Medicine

Recommended Prerequisite:

Drop Period (if specified): 2 months

Enrollment Restrictions: Enrollment Limited to JHUSOM Students

Department: Pediatrics

Division: Pediatrics/Infectious Disease

Course Name: Pediatric Infectious Diseases

Course Code (if available): ME:320.699

Course Type: Consultation Service

Course Description: Consultation service seeing a variety of ward, intensive care, oncologic, transplantation, neonatal and HIV-infected patients. The service also serves as primary attending on select inpatients such as meningitis. Students have primary responsibility for selected patients and will accompany the faculty and fellow on daily consultation rounds as well as participating in daily "plate rounds" in the microbiologic laboratories. Students will select a topic to study and present to the division faculty in the division's weekly conferences.

Course Director(s): Dr. Kwang Sik Kim

Faculty: Dr. Kim and division faculty

Contact Information (if none listed, please reach out to department/division): cpolk1@jhmi.edu

Availability and/or Duration: All year, 4.5 and 9 weeks

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Pediatrics

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: one or two students

Department: Pediatrics

Division: Anesthesiology and Critical Care Medicine

Course Name: Pediatric Intensive Care

Course Code (if available): ME:320.699

Course Type: Clinical Clerkship, Site for Advanced Clerkship in Critical Care/ICU

Course Description: The course is designed for students planning a career in anesthesiology, pediatrics, or a pediatric surgery specialty and encourages students to become familiar with medical and surgical problems of critically ill infants and children. Basic pathophysiology and pharmacology will be stressed, along with principles of pediatric resuscitation. Students should be prepared to help contribute to the care of these patients on rounds and by following them throughout the day. Students are expected to attend daily didactic sessions and in-depth case discussions for residents and students held by the PICU faculty and fellows, as well as monthly in situ simulations in the PICU. If the student rotates for more than two weeks, there is the option of spending one to two days with the PICU transport team, during which the students may have the opportunity to attend ambulance transports of pediatric patients.

Course Director(s): Dr. Erik Su

Faculty: Dr. Erik Su and PICU on-service faculty

Contact Information (if none listed, please reach out to department/division): 410-614-6598

Availability and/or Duration: , 2-4 weeks (4 weeks preferred)

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Pediatrics required

Recommended Prerequisite: Clinical preceptorship in anesthesiology recommended, but not required

Department: Pediatrics

Division: Pediatrics

Course Name: Pediatric Osler Apprenticeship

Course Code (if available): ME:320.699

Course Type: Other

Course Description: The Osler Apprenticeship in Pediatrics is an opportunity for senior medical students with an interest in academic pediatrics. Apprenticeship allows students to gain experience and exposure to the technical, administrative, and educational skills central to pursuing a future career as an academic clinician educator.

Osler Apprentices (OAs) are medical students interested in becoming academic scholars. This Apprenticeship affords these learners the opportunity to work closely with pediatric faculty members (including the Clerkship Director, Associate Clerkship Director, and other pediatric faculty) and medical students on the Pediatrics Basic Clerkship. Responsibilities in teaching, research, or administration (as an integral part of pediatric medical education in the Department) form the foundation of the apprenticeship. OAs are expected to pursue academic scholarship through their activities, producing quantitative results (i.e., abstracts, published manuscripts) that will enhance their development as future academic pediatricians

By the end of the program, OAs will:

- Enhance their educational research skills and develop pedagogical skills.
- Acquire experience in leadership, interpersonal effectiveness, and performance evaluation.
- Obtain academic administrative experience, including supervision of Basic Clerkship students, and collaborate with pediatric medical educators (at Johns Hopkins and other institutions) on scholarly work that may result in joint scientific publications and/or attendance/presentations at national pediatric medical education meetings.

Course Director(s): Dr. Christopher Golden, Dr. Amit Pahwa

Faculty: Dr. Christopher Golden, Dr. Amit Pahwa

Contact Information (if none listed, please reach out to department/division): rreisig1@jhmi.edu

Availability and/or Duration: All year

Hours Per Week (if specified):

Required Prerequisites: Pediatric Core Clerkship

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: Enrollment Limited to JHUSOM Students

Department: Pediatrics

Division: Pediatrics/Gastroenterology

Course Name: Pediatrics Gastroenterology and Nutrition

Course Code (if available): ME:320.699

Course Type: Clinical Clerkship

Course Description: Students will receive exposure to children with a wide variety of pediatric gastrointestinal, hepatic and/or pancreatic disorders as well as disorders of under and over nutrition. Students will round daily with ward team beginning at 8 a.m. from CMSC 9, M-F.

Additionally, students will be expected to participate in various divisional outpatient clinics, including General GI/Inflammatory Bowel Disease Clinic Tuesday 9 a.m. -12 p.m. and/or 1-4 p.m. General GI Clinic on Thurs. 8 a.m.-12 p.m. and Liver clinic on Friday 9 a.m.-12 p.m. Clinic is in the David M. Rubenstein Children's Health Building, Lower Level. Students are also encouraged to participate in various divisional teaching sessions. Students will be asked to present an interesting case on the last Wednesday of their rotation.

Course Director(s): Dr. Carmen Cuffari

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): 410-955-8769

Availability and/or Duration: 3rd and 4th year students, Half quarter

Hours Per Week (if specified):

Required Prerequisites: Pediatrics Core Clerkship preferred

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: visiting medical students must follow JHUSOM quarter dates

Department: Pediatrics

Division: Pediatrics Gastroenterology, All Children's Hospital (ACH), ST. Petersburg, Florida

Course Name: Pediatrics Gastroenterology, Hepatology and Nutrition at all Children's Hospital

Course Code (if available): ME:320.699

Course Type: Other

Course Description: The Pediatric Gastroenterology/Nutrition Department is a very active clinical service. The student will participate in the evaluation and management of children with gastrointestinal disease disorders.

Students will attend daily gastroenterology clinics at ACH and interview and examine outpatients referred for gastrointestinal disorders. Students will assist in planning the diagnostic and therapeutic program for these patients.

Students will be expected to participate in clinical gastrointestinal rounds and Gastroenterology Journal Club.

Students will observe diagnostic modalities such as endoscopy, manometry, esophageal dilation, suction rectal biopsies and pH probes. The student will be evaluated on faculty evaluations, attendance, and overall performance.

Course Director(s): Dr. Mike Wilsey
Faculty: Dr. Daniel McClenathan, Dr. Michael Wilsey, Dr. Sara Kajoo
Contact Information (if none listed, please reach out to department/division): 727-767-4106
Availability and/or Duration: , 3-4 weeks
Hours Per Week (if specified):
Required Prerequisites: Core Clerkship in Pediatrics or Medicine
Recommended Prerequisite:
Drop Period (if specified): 2 months
Enrollment Restrictions: Enrollment Limited to JHUSOM Students

Department: Pediatrics
Division: Pediatrics/Immunology
Course Name: Research in Pediatric Allergy
Course Code (if available): ME:320.699
Course Type: Patient Care and/or Clinical Research
Course Description: The student may attend clinic for patients with allergic (primarily food allergy and asthma) or immunologic (primarily immunodeficiency) disorders and/or participate in a variety of ongoing research studies on children with allergic or immunologic disorders. Current projects include studies on the natural history of food allergy, treatment options for food allergy, the relationship of the environment to asthma, and novel treatment approaches for childhood asthma.
Course Director(s): Dr. Robert Wood
Faculty: Dr. Robert Wood
Contact Information (if none listed, please reach out to department/division): 410-955-5883
Availability and/or Duration: All year, 9 weeks
Hours Per Week (if specified):
Required Prerequisites: None
Recommended Prerequisite:

Department: Pediatrics
Division: Pediatrics/Inpatient, Emergency Medicine, Harriet Lane Clinic (split out into three)
Course Name: Subinternships in the Department of Pediatrics
Course Code (if available): ME:320.699
Course Type: Subinternship, Approved Sub-I Experience
Course Description: Inpatient Pediatrics: A subinternship experience on a ward service in the Children's Center, with primary responsibility for patients admitted to that service. Supervised by the SAR on that service, with some night shift and weekend responsibilities. This course will enhance the student's knowledge of pediatrics and provide responsibility appropriate to the level of subintern. Evaluation will be performed by ward attending and senior residents.
Emergency Medicine: Evaluation and treatment of children presenting to the Pediatric Emergency Department. Duties to approximate the workload of a pediatric intern- approximately 17 ten-hour shifts carrying on average three to four patients at a time.
Harriet Lane Clinic: The acute care Harriet Lane team sees pediatric patients aged birth to 21 years for acute complaints, newborn visits, and immunizations. Each day begins with an hour-long lecture on a topic relevant to primary care pediatrics. The subintern will perform histories and physical exams, present to the senior resident, fellow or faculty attending, participate in decisions regarding treatment plans, and communicate with the patient's primary care provider and subspecialist consultants, as necessary. The subintern will work closely with our social workers, nurses, child life specialists, legal

advocates, and mental health counselors in providing care to our patients. The student will also have the opportunity to join the lactation consultant during a breastfeeding clinic session. The subintern will also participate in the monthly case conference and journal club.

Course Director(s): Dr. Amit Pahwa, Dr. Lauren Kahl, Dr. Nakyla Showell

Faculty: Pediatrics Faculty

Contact Information (if none listed, please reach out to department/division): 410-955-5977

Availability and/or Duration: , 4 weeks

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Pediatrics

Recommended Prerequisite:

Drop Period (if specified): 2 months

Enrollment Restrictions: Enrollment Limited to JHUSOM Students, Lottery

Department: Pediatrics

Division: Pediatrics, Pediatric Hospital Medicine Division

Course Name: Trauma-Informed Care Elective

Course Code (if available): ME:320.699

Course Type: Tutorial

Course Description: Over the past several decades, a growing body of work has demonstrated that trauma and adverse childhood experiences are exceedingly common and are linked to a variety of negative health outcomes. At this time, there is no standardized curriculum to teach medical students the science of trauma and the appropriate delivery of trauma-informed care (TIC) to build resilience and mitigate the effects of trauma on physical and mental health.

This course intends to fulfill three objectives: (1) bring awareness to the impacts of trauma throughout the lifetime, (2) give students the confidence to compassionately discuss incidences of trauma with patients, (3) provide students with the tools to help build resilience and coping skills with patients. Composed of short lectures, role-playing activities, standardized patient experiences, self-reflection, discussion, and readings, this elective will be divided into seven sessions taken concurrently with a student's experience on the wards. This course will build on skills learned in Clinical Foundations of Medicine and clinical rotations to empower students to provide compassionate, evidence-based care for trauma-affected individuals during medical school and beyond.

Course Director(s): Dr. Rachel Cane

Faculty: Dr. Rachel Cane

Contact Information (if none listed, please reach out to department/division): rcane2@jhmi.edu

Availability and/or Duration:

Hours Per Week (if specified):

Required Prerequisites: At least one clinical rotation

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: Enrollment Limited to JHUSOM Students

Department: Pediatrics

Division: Pediatrics

Course Name: Virtual Pediatrics

Course Code (if available): ME:320.699

Course Type: Other

Course Description: During this elective, students will learn about the care of pediatric patients through on-line coursework, didactics (in pediatric medicine and pediatric radiology), clinical reasoning exercises,

virtual interviews, and oral presentations. Students will gain a better understanding of routine pediatric development, common medical problems across all ages, and strategies for evaluating children and working with families.

Course Director(s): Dr. Chris Golden, Dr. Amit Pahwa

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): cgolden@jhmi.edu

Availability and/or Duration: , 2 weeks

Hours Per Week (if specified):

Required Prerequisites: Transition to the Wards

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: Enrollment Limited to JHUSOM Students

Department: Pharmacy and Molecular Science

Division: Pharmacology and Molecular Sciences

Course Name: Analytical Methods of Clinical Pharmacology

Course Code (if available): ME:330.699

Course Type: Other

Course Description: This course covers fundamental principles of, and necessary quantitative skills required in the analysis of clinical pharmacokinetic and pharmacodynamic data with a focus on analysis of data generated in early clinical studies in humans. Topics include principles of pharmacokinetic and pharmacodynamic data analysis, curve stripping, non-compartmental analysis, compartmental modeling, pharmacodynamic model selection, pharmacokinetic study design using simulation, and introduction to clinical trial simulation. Teaching format is lecture, demonstration, and in-class exercises with Excel and WinNonlin software. Problem sets are used to sharpen the individual skills of the student.

Course Director(s): Dr. Craig Hendrix

Faculty: Dr. Hendrix

Contact Information (if none listed, please reach out to department/division): 410-955-9707

Availability and/or Duration: Summer, 3 weeks

Hours Per Week (if specified):

Required Prerequisites: Permission of instructor

Recommended Prerequisite:

Department: Pharmacy and Molecular Science

Division: Pharmacology and Molecular Sciences

Course Name: Graduate Pharmacology 1

Course Code (if available): ME:330.699

Course Type: Other

Course Description: This course is designed for second year graduate students. It covers basic pharmacology concepts and major drug classes related to disease therapies. The course covers basic principles of enzyme kinetics, receptors, pharmacokinetics, drug metabolism, and drug discovery.

Course Director(s): Dr. James Barrow

Faculty: Dr. Barrow and staff

Contact Information (if none listed, please reach out to department/division): 410-955-0894

Availability and/or Duration: August – November, 12 weeks

Hours Per Week (if specified):

Required Prerequisites:
Recommended Prerequisite:
Drop Period (if specified): 1 month
Enrollment Restrictions:

Department: Pharmacy and Molecular Science
Division: Pharmacology and Molecular Sciences
Course Name: Graduate Pharmacology 2
Course Code (if available): ME:330.699
Course Type: Other

Course Description: This course is designed for second year graduate students who have already taken Graduate Pharmacology 1. It covers basic pharmacology concepts and major drug classes related to disease therapies. The course includes lectures on therapeutic agents used in infectious diseases, cancer, cardiovascular diseases, endocrine disorders, inflammation, and nervous system diseases.

Course Director(s): Dr. James Barrow

Faculty: Dr. Barrow and staff

Contact Information (if none listed, please reach out to department/division): 410-955-0894

Availability and/or Duration: January- April, 14 weeks

Hours Per Week (if specified):

Required Prerequisites:

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Pharmacy and Molecular Science
Division: Pharmacology and Molecular Sciences
Course Name: Organic Mechanisms in Biology
Course Code (if available): ME:330.699
Course Type: Other

Course Description: This course deals with the chemical mechanisms of enzymes. It is intended to illustrate how catalysis in biological systems can be understood using principles derived from organic reaction mechanisms.

Course Director(s): Dr. James Stivers, Dr. Caren Meyers

Faculty: Dr. James Stivers, Dr. Caren Meyers, staff

Contact Information (if none listed, please reach out to department/division): 410-502-2758

Availability and/or Duration: November - January

Hours Per Week (if specified):

Required Prerequisites: Organic chemistry

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Physical Medicine and Rehabilitation
Division: Department of Physical Medicine and Rehabilitation
Course Name: Advanced Clerkship in Rehabilitation Research
Course Code (if available): ME:716.699
Course Type: Research

Course Description: This research elective involves establishing a relationship with a research mentor and working on one of their projects. Topics include:

Course Director(s): Physical Medicine & Rehabilitation Staff

Faculty: PM&R faculty

Contact Information (if none listed, please reach out to department/division): 410-502-2446

Availability and/or Duration: All year, Half quarter

Hours Per Week (if specified):

Required Prerequisites: None

Recommended Prerequisite:

Department: Physical Medicine and Rehabilitation

Division: Department of Physical Medicine and Rehabilitation

Course Name: Advanced Clinical Clerkship in Pediatric Rehabilitation

Course Code (if available): ME:716.699

Course Type: Clinical Clerkship

Course Description: Students will focus on care of children with disabilities at the Kennedy Krieger Institute

Course Director(s): Dr. Frank S. Pidcock

Faculty: Dr. Frank Pidcock and staff

Contact Information (if none listed, please reach out to department/division): daugust2@jhmi.edu

Availability and/or Duration: All year, Half quarter

Hours Per Week (if specified):

Required Prerequisites:

Recommended Prerequisite: Core Clerkship in Pediatrics recommended

Drop Period (if specified): 1 month

Enrollment Restrictions: one student

Department: Physical Medicine and Rehabilitation

Division: Department of Physical Medicine and Rehabilitation and Division of Geriatric Medicine

Course Name: Chronic Disease and Disability: Improving Quality of Life

Course Code (if available): ME:716.699

Course Type: Clinical Clerkship

Course Description: Over 100 million Americans suffer from one or more chronic diseases; over 35 million have severe disability as a result. These will be your patients in the future, irrespective of what specialty you ultimately choose. The goal of this rotation is that all students should possess the knowledge, skills, and attitudes to provide care for persons with chronic diseases and disabilities. The clerkship will focus on issues of chronic disease and disability in a variety of clinical settings, and will have concurrent didactic work, discussion groups, and simulation experiences on an inpatient rehabilitation unit, visits to a sub-acute or chronic care facility, outpatient clinics which emphasize care of disabled and chronically ill patients, and home visits. Inpatient acute care will be de-emphasized. Students will participate in interdisciplinary team meetings and patient/family conferences. Clinical sites will include Johns Hopkins Hospital (general adult rehabilitation), Johns Hopkins Bayview (geriatrics), and Kennedy Krieger (pediatric disabilities). There will be home visits, discussion groups, and simulation exercises. There are no overnight call duties.

Course Director(s): Dr. Samuel Mayer

Faculty: Dr. S. Mayer, Dr. T. Finucane, Staff

Contact Information (if none listed, please reach out to department/division): crobin44@jhmi.edu

Availability and/or Duration: All year, Half quarter

Hours Per Week (if specified):

Required Prerequisites: Medicine Core Clerkship for site placement at JHBMC. No clerkships required for JHH or KKI.

Recommended Prerequisite:

Drop Period (if specified): 1 month; contact Registrar's Office

Enrollment Restrictions:

Department: Physical Medicine and Rehabilitation

Division: Department of Physical Medicine and Rehabilitation

Course Name: Physical Medicine and Rehabilitation

Course Code (if available): ME:716.699

Course Type: Clinical Clerkship

Course Description: This elective is intended for students considering a career in physical medicine and rehabilitation. Students will care for inpatients on the Good Samaritan Hospital (stroke or spinal cord) or Johns Hopkins Hospital (complex medical) inpatient rehabilitation units. They will also care for outpatients in musculoskeletal medicine, electrodiagnosis, spasticity, prosthetics, and pain clinics. There is flexibility in selecting subspecialty interests. Objectives of the course are to increase knowledge and proficiency in the following areas: basic clinical skills, such as history taking, physical examination, and general knowledge pertaining to inpatient care; diagnosis, pathophysiology and treatment of certain conditions in which severe physical disability is a prominent feature; the contributions of non-physician health professions required for the comprehensive care of certain patients; the importance of patient and family education in reducing the cost of disability and preventing recurrent hospitalization for health crisis.

Course Director(s): Dr. Tracy Friedlander

Faculty: Dr. Friedlander and staff

Contact Information (if none listed, please reach out to department/division): 410-502-2446

Availability and/or Duration: All year, Half or full quarter.

Hours Per Week (if specified):

Required Prerequisites: At least a second-year student beginning the fourth quarter

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: 4 students maximum

Department: Physical Medicine and Rehabilitation

Division: Physical Medicine and Rehabilitation

Course Name: Physical Medicine and Rehabilitation Virtual Elective

Course Code (if available): ME:716.699

Course Type: Other

Course Description: This elective will offer a broad exposure to the scope of physical medicine and rehabilitation. In addition to learning about medical management of patients with disability, student will get exposure the Johns Hopkins residency program, faculty, and clinical and research opportunities in the department of PM&R. Students will have the opportunity to give presentation and share their passion for PM&R.

Course Director(s): Dr. Tracy Friedlander

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): tfried1@jhmi.edu

Availability and/or Duration: , 2 weeks

Hours Per Week (if specified):
Required Prerequisites: N/A
Recommended Prerequisite:

Department: Preventive Medicine
Division: Bloomberg School of Public Health
Course Name: Occupational and Environmental Medicine
Course Code (if available): ME:714.699
Course Type: Clinical Clerkship
Course Description: Learn about the specialty of occupational medicine and treat patients in an occupational setting. Work with an interdisciplinary team including safety and ergonomic professionals, physicians, and nurse case managers. Understand type of work injuries, prevention strategies and other types of visits common to occupational medicine, including pre-employment physicals, surveillance physicals and fit for duty physicals.
Course Director(s): Dr. Aisha Rivera, Dr. Brian Schwartz
Faculty: Dr. Aisha Rivera, Dr. Brian Schwartz
Contact Information (if none listed, please reach out to department/division): ariver28@jhu.edu
Availability and/or Duration:
Hours Per Week (if specified):
Required Prerequisites: Internal Medicine Rotation
Recommended Prerequisite:
Drop Period (if specified): 1 month
Enrollment Restrictions: Must be arranged and approved on a case-by-case basis

Department: Preventive Medicine
Division: Bloomberg School of Public Health
Course Name: Occupational and Environmental Research
Course Code (if available): ME:714.699
Course Type: Basic Research
Course Description: Learn about the specialty of occupational medicine. Engage in a research project related to occupational and environmental medicine.
Course Director(s): Dr. Brian Schwartz
Faculty: Dr. Brian Schwartz
Contact Information (if none listed, please reach out to department/division): bschwar1@jhu.edu
Availability and/or Duration:
Hours Per Week (if specified):
Required Prerequisites: Prior research experience preferred
Recommended Prerequisite:
Drop Period (if specified): 1 month
Enrollment Restrictions: Must be arranged and approved on a case-by-case basis

Department: Preventive Medicine
Division: General Preventive Medicine Residency, Bloomberg School of Public Health
Course Name: Preventive Medicine
Course Code (if available): ME:714.699
Course Type: Other
Course Description: This elective introduces students to the specialty of medicine devoted to health promotion and disease prevention as well as public health. Students will learn the theory and practice

of the principles required in population-based health. Didactic sessions and self-learning modules will be available on such topics as health promotion, injury control, healthcare delivery, public health surveillance, and outbreak investigation.

During the rotation, students will have the opportunity to interact with program residents and visit many sites in the Baltimore-Washington area where residents rotate during the second year of the program. These sites will include, local, state, federal public health agencies, as well as NGO's and "for profit" health care organizations.

Students will interact on a daily basis with the chief resident of the General Preventive Medicine Residency. They will also meet with Dr. Lam, the training program director. A project and presentation are required.

Course Director(s): Dr. Clarence Lam

Faculty: General Preventive Medicine Chief Resident

Contact Information (if none listed, please reach out to department/division): dbecraft@jhu.edu

Availability and/or Duration:

Hours Per Week (if specified):

Required Prerequisites: completion of junior medical student training

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Psychiatry and Behavioral Science

Division: Psychiatry and Behavioral Sciences

Course Name: Assessment and Treatment of Sexual Disorders

Course Code (if available): ME:370.699

Course Type: Clinical Clerkship

Course Description: Students will attend a weekly assessment clinic as well as a weekly teaching session and can follow the progress of patients in treatment. Many of the patients have sexual disorders such as pedophilia and exhibitionism and may receive weekly injections of antiandrogenic medication.

Course Director(s): Dr. Fred Berlin

Faculty: Dr. Berlin

Contact Information (if none listed, please reach out to department/division): 410-539-1661

Availability and/or Duration: , 3 weeks

Hours Per Week (if specified):

Required Prerequisites: An interest in clinical psychiatry

Recommended Prerequisite:

Department: Psychiatry and Behavioral Science

Division: Psychiatry and Behavioral Sciences/ Division of Child & Adolescent Psychiatry

Course Name: Child and Adolescent Psychiatry

Course Code (if available): ME:370.699

Course Type: Clinical Clerkship

Course Description: Students will work with child psychiatry fellows and division faculty across various clinical services at the Johns Hopkins Hospital, Kennedy Krieger Institute and Bayview Medical Center. These services include the inpatient unit, day hospital program and general and specialty outpatient clinics. Students will gain exposure to childhood psychiatric disorders, family and educational systems and community systems of care.

Course Director(s): Dr. Esther Lee

Faculty: Students will work with division faculty as they rotate through clinical service
Contact Information (if none listed, please reach out to department/division): elee121@jhmi.edu
Availability and/or Duration: , 2 - 4 weeks
Hours Per Week (if specified):
Required Prerequisites:
Recommended Prerequisite: Completion of pediatrics or adult psychiatry rotation is recommended but not necessary
Drop Period (if specified): 1 month
Enrollment Restrictions: Enrollment Limited to JHUSOM Students

Department: Psychiatry and Behavioral Science
Division: Psychiatry and Behavioral Sciences
Course Name: Clinical Research in Schizophrenia
Course Code (if available): ME:370.699
Course Type: Clinical Research
Course Description: Schizophrenia is a devastating disorder of the brain characterized by hallucinations, delusions, and disordered thought, affecting 0.5-1% of the world population. Recent developments in epidemiology, phenotypic analysis, neuroimaging, molecular genetics, and neuropathology have, for the first time, provided the tools for understanding the pathobiology of schizophrenia and developing rational therapeutics. Students will have the opportunity to gain experience with one or more of these approaches as applied to schizophrenia. Elective activities will focus on participation in the design and implementation of research projects and direct contact with patients and control populations. Students will also engage in a critical review of the relevant literature and attend schizophrenia teaching rounds and outpatient clinics focusing on recent onset schizophrenia.
Course Director(s): Dr. Russell Margolis
Faculty: Dr. Margolis
Contact Information (if none listed, please reach out to department/division): 410-614-4262
Availability and/or Duration: , 3 weeks - 4.5 weeks
Hours Per Week (if specified):
Required Prerequisites: None
Recommended Prerequisite:
Drop Period (if specified): 1 month
Enrollment Restrictions:

Department: Psychiatry and Behavioral Science
Division: Psychiatry and Behavioral Sciences
Course Name: Clinical Research on the Behavioral Pharmacology of Drug Abuse and Dependence
Course Code (if available): ME:370.699
Course Type: Clinical Research
Course Description: Research experience in human laboratory or treatment clinic concerning human drug abuse and the subjective and behavioral effects of abused drugs, including opioids, cocaine, sedatives, ethanol, tobacco, caffeine, marijuana, hallucinogens, and of medications that modify their effects or use.
Course Director(s): Dr. George Bigelow
Faculty: Dr. Bigelow, Dr. R. Griffiths, Dr. M. Stitzer
Contact Information (if none listed, please reach out to department/division): 410-550-0035
Availability and/or Duration: All year, 4.5 or 9 weeks
Hours Per Week (if specified):

Required Prerequisites:
Recommended Prerequisite:
Drop Period (if specified): 1 month
Enrollment Restrictions:

Department: Psychiatry and Behavioral Science
Division: Psychiatry and Behavioral Sciences
Course Name: Community Psychiatry
Course Code (if available): ME:370.699
Course Type: Other

Course Description: An opportunity to work with clinicians who are treating patients with chronic mental illness in a variety of out-patient settings. Students rotate through the general out-patient clinic (OMHC), the intensive out-patient program (IOP) and the assertive community treatment (ACT) program. Within the ACT program patients are seen both at the hospital and their homes.

Course Director(s): Dr. Bernadette Cullen

Faculty: Dr. Cullen

Contact Information (if none listed, please reach out to department/division): 410-955-5748

Availability and/or Duration: , 3-4 weeks

Hours Per Week (if specified):

Required Prerequisites: Must be comfortable traveling with staff in the East Baltimore area.

Recommended Prerequisite:

Department: Psychiatry and Behavioral Science
Division: Psychiatry and Behavioral Sciences
Course Name: Eating Disorders: An Introduction to Care and Treatment
Course Code (if available): ME:370.699
Course Type: Other

Course Description: This course will introduce students to the epidemiology, clinical presentation, clinical work-up, diagnosis, and treatment approach to patients with various eating disorders including anorexia and bulimia nervosa and binge eating disorders. The course will integrate both psychiatric and medical knowledge and complement clinical and didactic experiences across both fields.

The course will include a combination of both didactic presentations, case-based assessment, and individual study time. There will be several readings to introduce you to the biological, psychological, social, epidemiological, and medical aspects of eating disorders. There will be a case-based assignment to work through which will be used as an assessment tool for grading (pass/fail) in the course. The case will be worked through together as a class (via teleconference) once it has been completed individually by each student. Participation in this part of the course will be a part of the grading process. There will also be a short quiz at the end of the course which will require at least a 70% to pass.

Course Director(s): Dr. Jennifer Goetz

Faculty: Dr. Jennifer Goetz

Contact Information (if none listed, please reach out to department/division): jgoetz@jhmi.edu

Availability and/or Duration: , 1 week

Hours Per Week (if specified):

Required Prerequisites: N/A

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: Enrollment Limited to JHUSOM Students

Department: Psychiatry and Behavioral Science
Division: Psychiatry and Behavioral Sciences
Course Name: ECT & Novel Brain Stimulating Therapies
Course Code (if available): ME:370.699
Course Type: Research

Course Description: Electroconvulsive therapy (ECT) is the most effective available therapy for treating depression, however little is known about its mechanism of action. Mice genetically engineered to lack key genes which are inducible by electroconvulsive stimulation, and which regulate synaptic plasticity may yield clues to how it works. Although ECT is highly effective, it is not without side-effects and so there has been keen interest in developing alternate forms of therapeutic brain stimulation for depression, such as repetitive transcranial magnetic stimulation (TMS) and deep brain stimulation (DBS), that are more focal and do not involve anesthesia. We are now offering TMS as a clinical service to treat depression and also clinical trials using the technique.

Repetitive self-injurious behaviors are seen in developmental disorders, and in autism as many as a third to one-half display these behaviors such as head-banging, biting, and punching themselves. Many respond to pharmacological and behavioral treatments. In those who are unresponsive, ECT has been dramatically effective, reducing episodes by 90+ percent. Typically, these patients require maintenance ECT, as frequently as once every five days. This situation raises concern because ECT is associated with cognitive side-effects and the long-term consequences of such frequent ECT begun at a young age are unknown. As an alternative, we are exploring the potential of DBS to suppress self-injurious behaviors in autism that are not associated with cognitive and other side effects. We are presently using rodents for this research. The student will have the opportunity to focus on bench work that may yield clues to ECT's mechanism of action and/or to assist in the development of alternate brain stimulation treatment modalities for repetitive self-injurious behavior. Alternatively, the student may focus on clinical work related to ECT and novel brain stimulation techniques. If students opt to rotate through the lab, ideally, they should have some experience working with rodents.

Course Director(s): Dr. Irving Reti

Faculty: Dr. Reti

Contact Information (if none listed, please reach out to department/division): 410-955-1484

Availability and/or Duration: , 4.5 or 9 weeks

Hours Per Week (if specified):

Required Prerequisites: If interested in bench work, ideally, students should have some experience working with rodents.

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Psychiatry and Behavioral Science
Division: Psychiatry and Behavioral Sciences and Medicine
Course Name: Exploring Professional Identity Through Art: An Online Art Museum-Based Elective
Course Code (if available): ME:370.699
Course Type: Other

Course Description: This course will use the arts and humanities to facilitate reflection on professional identity. The most used and best studied of these arts-based methods, Visual Thinking Strategies, was developed by former Museum of Modern Art education director, Philip Yenawine, who has graciously agreed to be one of the small group facilitators for the course. The course builds on what you have learned in the College Advisory Program TIME Small Group Teaching Sessions about your sense of self

and professional identity. What you learn here will prepare you to thrive personally and professionally during your training and throughout your career. You will engage in interactive online sessions and discussions centered on activities using online collections of art. Other activities will also include music, poetry, sketching, and reflective writing. Topic will include what it means to be human, to be a physician, and to lead a good life (for oneself and one's patients), and self-care. No art knowledge or experience of any kind is required.

Please note: Prior to enrolling voluntarily in this elective, students will be advised that course participation includes taking part in an IRB-approved research study (IRB00210522; Principal Investigator Margaret Chisolm MD). Each student will be expected to submit two 750-word+ written reflections over the duration of the course (one baseline and one summative reflection) and a pre- and post-course survey to assess whether course objectives were met and to answer the study's research questions.

Course Director(s): Dr. Margaret Chisolm

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): mchisol1@jhmi.edu

Availability and/or Duration:

Hours Per Week (if specified):

Required Prerequisites: N/A

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: Enrollment is limited to 15 students. This course is available to any 2nd, 3rd, or 4th year JHUSOM student. The course will be offered if at least 5 students enroll; Enrollment Limited to JHUSOM Students

Department: Psychiatry and Behavioral Science

Division: Psychiatry and Behavioral Sciences

Course Name: Forensic Psychiatry

Course Code (if available): ME:370.699

Course Type: Other

Course Description: The course consists of experience at the Medical Service of the Circuit Court for Baltimore City. Experience in criminal forensic psychiatry will involve examination of offenders for competency, criminal responsibility and sentencing recommendations. Visits to courtrooms are included along with readings and discussions. Not available for visiting students. Johns Hopkins students who apply need to have completed psychiatry general clerkship.

Course Director(s): Dr. Jeffrey Janofsky

Faculty: Dr. Janofsky

Contact Information (if none listed, please reach out to department/division): 410-955-2236

Availability and/or Duration: January - June; September - December, Half quarter

Hours Per Week (if specified):

Required Prerequisites: Complete general psychiatry rotation

Recommended Prerequisite:

Department: Psychiatry and Behavioral Science

Division: Psychiatry and Behavioral Sciences

Course Name: Geriatric Psychiatry/Neuropsychiatry

Course Code (if available): ME:370.699

Course Type: Clinical Elective

Course Description: Students will have the opportunity to evaluate and follow patients on inpatient and outpatient services of the Division of Geriatric Psychiatry and Neuropsychiatry. They will be exposed to patients with a broad range of cognitive, affective, and behavioral disturbances in context with a variety of psychiatric conditions, including patients with psychiatric disorders related to stroke, Parkinson's disease, and dementia, as well as mood disorders and psychotic disorders. Weekly readings help students understand key issues in geriatric psychiatry and the heterogeneity of normal aging.

Course Director(s): Dr. Susan Lehmann

Faculty: Dr. Susan Lehmann

Contact Information (if none listed, please reach out to department/division): sthom175@jhmi.edu

Availability and/or Duration: Summer Sessions 1, 2, 3

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Psychiatry preferred but not required

Recommended Prerequisite:

Drop Period (if specified): 2 months

Enrollment Restrictions: Enrollment Limited to JHUSOM Students

Department: Psychiatry and Behavioral Science

Division: Psychiatry and Behavioral Sciences

Course Name: HIV Psychiatry Service

Course Code (if available): ME:370.699

Course Type: Subinternship/Research

Course Description: Outpatient clinic, inpatient consults, and evaluation clinic for HIV infected patients with psychiatric disorders. Clinical research with HIV-infected patients may also be arranged.

Course Director(s): Dr. Glenn Treisman

Faculty: Dr. G. Treisman

Contact Information (if none listed, please reach out to department/division): 410-955-6328

Availability and/or Duration: All year, Half quarter or full quarter

Hours Per Week (if specified):

Required Prerequisites: None

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Psychiatry and Behavioral Science

Division: Psychiatry and Behavioral Sciences

Course Name: Human Behavioral Pharmacology of Novel Sedatives and Hallucinogens

Course Code (if available): ME:370.699

Course Type: Research

Course Description: Opportunity to participate in ongoing human research characterizing behavioral, cognitive, subjective, and physiological effects of novel sedative compounds and hallucinogens. Compounds of interest include GHB, ketamine, dextromethorphan, psilocybin, and the classical benzodiazepines. Compounds of interest include psilocybin, ketamine, dextromethorphan, Salvia divinorum, DMT (N, N-dimethyltryptamine, and classic sedative hypnotics.)

Course Director(s): Dr. Roland Griffiths

Faculty: Dr. Griffiths

Contact Information (if none listed, please reach out to department/division): 410-550-0034

Availability and/or Duration:

Hours Per Week (if specified):

Required Prerequisites: None
Recommended Prerequisite:
Drop Period (if specified): 1 month
Enrollment Restrictions:

Department: Psychiatry and Behavioral Science
Division: Psychiatry and Behavioral Sciences
Course Name: Molecular Neurobiology and Neuropsychiatric Disorders
Course Code (if available): ME:370.699
Course Type: Basic Research

Course Description: A variety of efforts are underway in the Laboratory of Genetic Neurobiology to find and study genetic causes of neurological disorders, particularly those involving abnormal movements and neurodegeneration. A major theme of the lab is the role of unstable DNA in human disease. Current projects focus on the role of RNA in neurotoxicity, the impact of bidirectional transcription at disease loci, and a novel approach to discovery of small molecules with the potential of treating Huntington's disease. Students will have the opportunity to apply molecular and biochemical methods to cell and animal models and to participate in the drug discovery process.

Course Director(s): Dr. Russell Margolis

Faculty: Dr. Margolis, Dr. Li

Contact Information (if none listed, please reach out to department/division): 410-614-4262

Availability and/or Duration: All year, 9 weeks

Hours Per Week (if specified):

Required Prerequisites:

Recommended Prerequisite:

Department: Psychiatry and Behavioral Science
Division: Psychiatry and Behavioral Sciences
Course Name: Neuropsychiatry
Course Code (if available): ME:370.699
Course Type: Advanced Elective

Course Description: The advanced elective in neuropsychiatry rotates the senior or advanced medical student through the several inpatient, outpatient, and nursing home teaching components of the neuropsychiatry service. The focus is clinical, intended to develop expertise in evaluation, differential diagnosis, workup, and treatment. Patients with the most common neuropsychiatric disorders are seen, including dementia, Alzheimer's, Parkinson's, Huntington's, stroke, MS, PSP, traumatic brain injury, AIDS, and others.

Course Director(s): Dr. Greg Pontone

Faculty: Dr. Pontone and departmental faculty

Contact Information (if none listed, please reach out to department/division): 410-550-0477

Availability and/or Duration: All year, Half quarter

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Psychiatry, 4th year student

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Psychiatry and Behavioral Science

Division: Psychiatry and Behavioral Sciences

Course Name: Neuropsychiatry Research

Course Code (if available): ME:370.699

Course Type: Clinical Research (Parkinson's disease)

Course Description: Students are exposed to the various ongoing neuropsychiatry research projects of the department. These include studies in neuroimaging, epidemiology, nursing home research, clinical trials, and outcome studies. Students may choose and develop one project of their own to complete during the rotation.

Course Director(s): Dr. Greg Pontone

Faculty: Dr. Pontone and departmental faculty

Contact Information (if none listed, please reach out to department/division): 410-502-0477

Availability and/or Duration: , Half quarter

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Medicine and Psychiatry

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Psychiatry and Behavioral Science

Division: Psychiatry and Behavioral Sciences and Medicine

Course Name: Professional Identity (Trans)Formation: An Art Museum-Based Elective

Course Code (if available): ME:370.699

Course Type: Other

Course Description: This highly interactive 3-week arts and humanities course will take place primarily at the Baltimore Museum of Art and other local museums, although we will engage in a few arts-based experiences in clinical settings and online. This course is about professional identity (trans)formation, and builds on what you have learned in Years 1-4 of the College Advisory Program TIME Small Group Teaching Sessions about your sense of self and professional identity, and complements what you may have experienced in the 1-week elective, "Online Art Museum Exploring Professional Identity through Art." Priority enrollment will be given to Year 4 students as what you learn here is designed to prepare you to thrive personally and professionally during your residency training and throughout your career. The course uses the Baltimore Museum of Art and other regional museums, as well as a local innovators' space (Fast Forward U) and other non-clinical settings for a combination of small group problem-solving and creating activities. Class sessions will include activities such as open-ended discussions of visual art, music, and poetry; sketching; mask-making; storytelling; and reflective writing. Each week of the course will center on a core theme: 1) family/community, 2) work/education, and 3) self-care. No art knowledge or experience of any kind is required.

Please note: Prior to enrolling voluntarily in this elective, students will be advised that course participation includes taking part in an IRB-approved research study. Each student will be expected to submit four 750-word+ written reflections over the duration of the course (one baseline, two formative, and one summative reflection), both to assess whether course objectives were met and to answer the study's research questions.

Course Director(s): Dr. Margaret Chisolm

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): mchisol1@jhmi.edu

Availability and/or Duration:

Hours Per Week (if specified):

Required Prerequisites: N/A

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: Enrollment is limited to 15 students. This course is available to any 3rd or 4th year JHUSOM student. The course will be offered if at least 5 students enroll and if in-person teaching is permitted by JHU and the Baltimore Museum of Art, as anticipated;

Department: Psychiatry and Behavioral Science

Division: Psychiatry and Behavioral Sciences

Course Name: Research in Eating Disorders

Course Code (if available): ME:370.699

Course Type: Basic Research

Course Description: Opportunity for clinical research on eating disorders, primarily anorexia nervosa and bulimia nervosa. Experience may involve interviewing or outcome studies, chart reviews and work with patients.

Course Director(s): Dr. Angela Guarda

Faculty: Dr. Guarda, Dr. Redgrave

Contact Information (if none listed, please reach out to department/division): 410-955-3863

Availability and/or Duration: , 6 weeks; Minimum of 6 weeks or half day/week for a whole semester

Hours Per Week (if specified):

Required Prerequisites:

Recommended Prerequisite:

Department: Psychiatry and Behavioral Science

Division: Psychiatry and Behavioral Sciences

Course Name: Research in Molecular Neurobiology

Course Code (if available): ME:370.699

Course Type: Basic and Clinical Research

Course Description: The laboratory studies genes expressed in the brain as a means of better understanding normal brain function and neuropsychiatric disorders. We study the neurodegenerative diseases Huntington's disease and Parkinson's disease by focusing on the relevant gene products such as Huntington, Alpha-synuclein, and LRRK2, and their interactions. We use biochemical methods, cell culture approaches, and generation of transgenic mouse models in order to better understand the disease and to develop targets for experimental therapeutics. We are also studying the role of candidate genes in schizophrenia. We have developed mouse models and human IPS models of several diseases. We have a new mouse model of bipolar disorders. Clinical studies are done in collaboration with clinical investigators in the Department of Psychiatry. Students can learn the basics of molecular cloning techniques and cell culture and mouse model approaches while studying clinically relevant genes expressed in brain and can participate in the development of experimental therapeutics.

Course Director(s): Dr. Christopher Ross

Faculty: Dr. Ross

Contact Information (if none listed, please reach out to department/division): 410-614-0011

Availability and/or Duration: All year, 4.5 or 9 weeks

Hours Per Week (if specified):

Required Prerequisites: None

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Psychiatry and Behavioral Science

Division: Psychiatry and Behavioral Sciences

Course Name: Research in Neuropsychiatric Disorders

Course Code (if available): ME:370.699

Course Type: Basic and Clinical Research

Course Description: The Baltimore Huntington's Disease Center (BHDC) follows a large number of patients with HD on a longitudinal basis and conducts multidisciplinary research into the clinical features, genetic aspects, and neurobiology of HD. Students will have the opportunity to participate in clinical research projects, neuroimaging studies, neuropathological studies, or correlation of the causative mutation (the expanding triplet repeat) with clinical features. We pioneered the study of individuals ("pre-symptomatic") with the HD gene mutation who don't have clinical features of the disease in order to determine when and where brain changes begin in order to design preventive interventions. In parallel basic science investigations, we are studying cell and mouse models of HD and other brain diseases. In collaborative studies, we also are studying brain imaging and clinical features of schizophrenia. Other topics of interest can be arranged individually. The goal is to develop novel therapeutic interventions for brain diseases.

Course Director(s): Dr. Christopher Ross

Faculty: Dr. Ross

Contact Information (if none listed, please reach out to department/division): 410-614-0011

Availability and/or Duration: All year, 4.5 or 9 weeks

Hours Per Week (if specified):

Required Prerequisites: None

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Psychiatry and Behavioral Science

Division: Psychiatry and Behavioral Sciences

Course Name: Subinternship in Psychiatry

Course Code (if available): ME:370.699

Course Type: Subinternship

Course Description: Sub-internship on any of the Meyer Psychiatry Units: mood disorders, eating disorders, motivated behavior disorders, geriatric, chronic pain, and schizophrenia service. Students will have the opportunity to function in the capacity of a resident, taking primary responsibilities in the evaluation and treatment of patients on an inpatient service under the supervision of the attending psychiatrist. Sub-interns will work directly with patients, meet with family members, and coordinate care with consultants, other care providers and the team social worker. In addition, sub-interns will play an active role in teaching rounds, perform literature reviews of topics relevant to their patients, and work extensively with the non-physician members of the multi-disciplinary treatment team.

Course Director(s): Dr. Vinay Parekh, Dr. Avi Gerstenblith

Faculty: Psychiatry faculty members

Contact Information (if none listed, please reach out to department/division): sthom175@jhmi.edu

Availability and/or Duration: All year, 4 weeks

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Psychiatry

Recommended Prerequisite: Core Clerkship in Medicine recommended

Drop Period (if specified): 2 months

Enrollment Restrictions:

Department: Psychiatry and Behavioral Science

Division: Psychiatry

Course Name: Trauma: Sequelae and Therapeutic Approaches

Course Code (if available): ME:370.699

Course Type: Other

Course Description: This course will explore the phenomenology, neurobiological substrates, and sequelae of trauma. Students will learn of the relation of childhood trauma to the leading causes of morbidity and mortality in adults; about assessment and intervention in domestic violence and community violence; and about the spectrum of trauma-related disorders. Students will also learn about trauma informed approaches to “first do no harm” and about trauma-specific therapeutic approaches.

Course Director(s): Dr. Sylvia Atdjian

Faculty: Dr. Sylvia Atdjian, Dr. Carol Vidal

Contact Information (if none listed, please reach out to department/division): satdija1@jh.edu

Availability and/or Duration: , 1 week

Hours Per Week (if specified):

Required Prerequisites: N/A

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Psychiatry and Behavioral Science

Division: Psychiatry, Division of Geriatric Psychiatry and Neuropsychiatry

Course Name: Virtual Geriatric Mental Healthcare in the Community

Course Code (if available): ME:370.699

Course Type: Other

Course Description: This course aims to familiarize students with mental health needs of elderly persons living in the community, two models of community-based geriatric mental healthcare, and the use of available communication technologies to support these patients’ care during the COVID19 pandemic. It will give students an opportunity to observe interactions with patients served by geriatric mental healthcare outreach teams now using audio and realtime audiovisual communication to replace in-person visits. In addition, students will participate in weekly multi-site interdisciplinary telementoring sessions of teams providing community-based care and support to persons with dementia and their caregivers.

Course Director(s): Dr. Deirdre Johnston

Faculty: Dr. Deirdre Johnston, Dr. Jin Joo

Contact Information (if none listed, please reach out to department/division): djohnst4@jhmi.edu

Availability and/or Duration: , 2 weeks

Hours Per Week (if specified):

Required Prerequisites: N/A

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: Enrollment Limited to JHUSOM Students

Department: Radiation Oncology

Division: Radiation Oncology

Course Name: Basic Radiologic Physics

Course Code (if available): ME:717.699

Course Type: Tutorial

Course Description: Radiation physics concepts essential for individuals pursuing careers in radiology, radiotherapy, or medical physics. Lecture and laboratory topics include radioactive decay, x-ray production, interaction of ionizing radiation with matter and measurement of radiation.

Course Director(s): Dr. John Wong

Faculty: Dr. Wong and staff

Contact Information (if none listed, please reach out to department/division): 410-502-1458

Availability and/or Duration: Quarter 1 & Quarter 3

Hours Per Week (if specified): Monday & Wednesday; 5 PM-6:30 PM

Required Prerequisites: General physics and mathematics; consent of instructor

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Radiation Oncology

Division: Radiation Oncology

Course Name: Online Introduction to Radiation Oncology

Course Code (if available): ME:717.699

Course Type: Other

Course Description: Online Introduction to Radiation Oncology will introduce students to the fundamentals of Radiation Oncology. Radiation Oncology represents one of the three main disciplines within cancer care, along with Medical Oncology and Surgery Oncology. In this course, students will first learn the basic principles of how therapeutic radiation is produced and the mechanism through which radiation damages cancer cells. Students will subsequently learn about the complex workflow that is required to accurately deliver radiation to tumors. Thereafter, disease site-specific lectures will be provided in which students will be introduced to how radiation is used for cancers across the body, including central nervous system, head, and neck, thoracic, breast, abdominal, genitourinary, gynecologic, and pediatric malignancies. Furthermore, students will have the opportunity to observe and participate in patient encounters through televisits through which students will gain insight into the complexities of oncologic decision-making and patient counseling. Additionally, students will be introduced to the process of contouring and treatment planning to understand how radiation treatment plans are designed. Students will also have the option to give a short presentation at the end of the rotation on the topic of their choice. As radiation therapy presents a critical treatment modality for the vast majority of cancers, this course is highly recommended for any student considering a career in any oncologic discipline, but it will also be applicable for students going into any field.

Course Director(s): Dr. Amol Narang, Dr. Brandi Page

Faculty: Multiple faculty in Radiation Oncology

Contact Information (if none listed, please reach out to department/division): jschann1@jhmi.edu

Availability and/or Duration: , 1 week; Part Time

Hours Per Week (if specified):

Required Prerequisites: N/A

Recommended Prerequisite:

Department: Radiation Oncology

Division: Radiation Oncology

Course Name: Radiation Oncology: Consult Service

Course Code (if available): ME:717.699

Course Type: Consult Service

Course Description: This course introduces medical students to the field of radiation oncology. Radiation therapy is one of three primary treatment modalities used for patients with cancer (along with surgery and chemotherapy) and is administered for most patients with cancer at some point during their treatment course. It is an exciting field that combines new technologies with the intimacy of cancer care. During this rotation, students will have the opportunity to assist faculty with new patient consultations, follow-up evaluations, and on-treatment patient management, while also being introduced to the radiation treatment process, including simulations, contouring, treatment planning, and treatment delivery. Students will work with a variety of faculty members to assure a broad experience, including specialists in CNS, Head & Neck, Thoracic, Breast, Gastrointestinal, Genitourinary, Gynecologic, Hematologic, and Pediatric malignancies. This elective opportunity will be particularly valuable to students considering a career in an oncology-related field.

Course Director(s): Dr. Amol Narang

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): rlewisf@jhmi.edu

Availability and/or Duration: All year, 4 weeks

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Medicine or Surgery preferred, albeit not required

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Radiation Oncology

Division: Radiation Oncology

Course Name: Radiobiology

Course Code (if available): ME:717.699

Course Type: Tutorial

Course Description: DNA damage and radiobiology concepts essential for individuals pursuing careers in radiation oncology and oncology. Lecture topics include DNA damage response, signaling and repair, cell cycle checkpoints, environmental cues affecting damage response, radiation sensitizers and protectors.

Course Director(s): Dr. Marikki Laiho

Faculty: Dr. Laiho, Radiation Oncology Faculty

Contact Information (if none listed, please reach out to department/division): 410-502-9748

Availability and/or Duration: Quarter 2

Hours Per Week (if specified): Mondays; 7:30 AM - 9 AM

Required Prerequisites: General cell and molecular biology; consent of instructor

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Radiation Oncology

Division: Radiation Oncology

Course Name: Special Topics in Radiation Oncology Physics

Course Code (if available): ME:717.699

Course Type: Tutorial

Course Description: An advanced course dedicated to the discussion of developing technology and special techniques, including Radio-labeled Antibody Dosimetry, Stereotactic Radiosurgery, Total Body Irradiation, 3-Dimensional Treatment Planning, Hyperthermia and Digital Portal Imaging.

Course Director(s): Dr. John Wong

Faculty: Dr. Wong and staff

Contact Information (if none listed, please reach out to department/division): 410-502-1458

Availability and/or Duration: All year

Hours Per Week (if specified): every other Friday 3 PM-4 PM

Required Prerequisites: Consent of instructor

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Radiology and Radiological Sciences

Division: Radiology

Course Name: Diagnostic Radiology Tutorial

Course Code (if available): ME:420.699

Course Type: Tutorial

Course Description: Introduction to the fundamentals of diagnostic and interventional radiology. This course starts with the foundation of how the images are obtained, leading to formulating a differential based on imaging findings and ordering appropriateness. Workshops will be held throughout the course to give medical students hands-on experience in ultrasound, CT, breast imaging and interventional radiology. The course will provide an introduction and overview of the major radiologic subspecialties: body imaging, neuroradiology, and interventional radiology.

The program includes 3-5 hours per day of lectures and case review for students; use of the American College of Radiology appropriateness criteria; access to multiple online learning files; observation of patient procedures within the department and participation in department didactic and multidisciplinary conferences. Several short quizzes are staggered throughout the course. A ten-minute case presentation is made during the last week of the course. Final project includes group-based interpretation of a few select radiologic exams. The final exam is based on the ordering and interpretation of imaging studies in typical clinical settings. Free online textbook is available.

Course Director(s): Dr. Claire Brookmeyer

Faculty: Department Faculty

Contact Information (if none listed, please reach out to department/division): cbrookm2@jhmi.edu; swain1@jhmi.edu

Availability and/or Duration: Summer 3, Q1H2, Q3H2, S1 (starting 2023-2024 academic year), approximately 4 weeks

Hours Per Week (if specified):

Required Prerequisites:

Recommended Prerequisite: At least one core clinical clerkship is recommended but not required.

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Radiology and Radiological Sciences

Division: Radiology

Course Name: Interventional Radiology Subinternship and Research Clerkship

Course Code (if available): ME:420.699

Course Type: Subinternship/Clinical Research

Course Description: This course allows the student to become familiar with the basic services offered by Interventional Radiology, the risk/benefit ratio of these procedures and an understanding of the diagnostic and therapeutic role of these procedures. The student will learn to conceptualize and problem-solve as it relates to the clinical problems posed by the Interventional Radiology case load. The student should develop fundamental skills in interpreting radiographs, CT scans, ultrasound, and MRI. Physical exam skills will be employed and directed at developing a cardiovascular exam and use of Doppler. The student will be responsible for patient evaluations prior to and following procedures and will gain consent from the patient for basic vascular and nonvascular procedures. Attendance at Wednesday morning conferences, daily morning report and research meetings is expected.

Course Director(s): Dr. Brian Holly

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): khong1@jhmi.edu

Availability and/or Duration: The Clinical Clerkship is offered as a 3, 4½ or 6-week elective; the Subinternship/Research elective is offered for 4½, 5, or 6 weeks (time to be divided equally between Interventional Radiology and the research portion which must be arranged ahead of time) maximum of two students per rotation. Contact Dr. Kelvin Hong at 410-614-2237

Hours Per Week (if specified):

Required Prerequisites: It is preferred that the student have completed clinical rotations in surgery or medicine prior to this elective

Recommended Prerequisite:

Drop Period (if specified): 2 months

Enrollment Restrictions:

Department: Radiology and Radiological Sciences

Division: Radiology

Course Name: Advanced Diagnostic Radiology

Course Code (if available): ME:420.699

Course Type: Subinternship/Clinical Reserach

Course Description: This course is ideally situated for those students interested in specializing in Diagnostic Radiology. Course responsibilities include hands-on case interpretation in PACS with scheduled one-on-one case reviews with faculty, and observation and participation in the reading room. Didactic portion consists of attending daily resident or division case conferences and lectures.

To receive honors, the student must participate in some scholarship, to be further discussed in advance of the elective with the subspecialty course lead. Examples of scholarship include: ongoing research in the radiology department, educational exhibit or case report with faculty, or a presentation to the faculty, residents and fellows.

The subspecialty will be tailored to the individual student's interest and goals.

Course Director(s): Dr. Claire Brookmeyer

Faculty: Subspecialty course leads: Body: Claire Brookmeyer, Erin Gomez; Neuro: Doris Lin, Francis Deng
Nuclear Medicine/Molecular Imaging: Martin Pomper; Chest: David Feigin; Pediatric: Dani Bokhari (on hold for 2023-2024)

Contact Information (if none listed, please reach out to department/division): cbrookm2@jhmi.edu; swain1@jhmi.edu

Availability and/or Duration: All year; 4-8 weeks, this subinternship is offered as a 4, 6, or 8 week elective.

Hours Per Week (if specified):

Required Prerequisites: If registering without recommended Diagnostic Radiology tutorial prerequisite, please contact course director and administrator directly.

If focus on neuroradiology, then neurology clerkship is a required prerequisite.

Recommended Prerequisite: Diagnostic Radiology (highly recommended)

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Radiology and Radiological Sciences

Division: Radiology

Course Name: Subspecialty in Diagnostic Radiology

Course Code (if available): ME:420.699

Course Type: Clinical Clerkship

Course Description: This course is ideally situated for those students not intending to go into diagnostic radiology, but desire radiology subspecialty training pertaining to their future specialty. The course is primarily observation and student hands-on experience in the reading room and exam acquisition. The desired radiologic subspecialty will be tailored for the individual student goals.

Course Director(s): Dr. Claire Brookmeyer

Faculty: Subspecialty course leads: Body: Claire Brookmeyer, Erin Gomez; Neuro: Doris Lin, Francis Deng; Nuclear Medicine/Molecular Imaging: Martin Pomper; Chest: David Feigin; Pediatric: Dani Bokhari (on hold for 2023-2024)

Contact Information (if none listed, please reach out to department/division): cbrookm2@jhmi.edu; swain1@jhmi.edu

Availability and/or Duration: All year, 2-4 weeks

Hours Per Week (if specified):

Required Prerequisites: If registering without recommended Diagnostic Radiology tutorial prerequisite, please contact course director and administrator directly.

If focus on neuroradiology, then neurology clerkship is also required prerequisite.

Recommended Prerequisite: Diagnostic Radiology Tutorial (highly recommended)

Drop Period (if specified): 1 month

Department: Surgery and Surgical Sciences

Division: Orthopaedic Surgery

Course Name: Adult Trauma Orthopaedics

Course Code (if available): ME:380.699

Course Type: Clinical Clerkship

Course Description: This is a clinical course in adult trauma orthopaedics. The participant is exposed to different aspects of this discipline by attending the adult trauma clinic and by participating in operative procedures in emergent situations and on an elective basis. There is an extensive experience in management of long bone fractures, pelvic fractures, and periarticular fractures. Students are given responsibility according to their experience. There are three teaching conferences each day reviewing the previous trauma cases which came in the night before.

Course Director(s): Dr. Greg Osgood

Faculty: Dr. Gregory Osgood, Dr. Babar Shafiq

Contact Information (if none listed, please reach out to department/division): bkeefe2@jhmi.edu

Availability and/or Duration: All year, 4 weeks

Hours Per Week (if specified):

Required Prerequisites: Core Clerkships in Surgery

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: 1 to 2 students

Department: Surgery and Surgical Sciences

Division: Surgery and Surgical Sciences

Course Name: Advanced Clerkship in Alimentary Tract Surgery

Course Code (if available): ME:380.699

Course Type: Clinical Clerkship

Course Description: This elective provides comprehensive exposure to GI surgery patients. Students will participate in all aspects of care: pre-op evaluation, operative procedures, and post-op care.

Course Director(s): Dr. Alodia Gabre-Kidan

Faculty: Drs. Ravich and Surgical staff

Contact Information (if none listed, please reach out to department/division): misty@jhmi.edu

Availability and/or Duration: , 4.5 weeks

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Surgery

Recommended Prerequisite:

Drop Period (if specified): 2 months

Enrollment Restrictions: Visiting Medical Students from Non-LCME Accredited Schools cannot apply for the subinternship in quarter 4 or the summer quarter.

Department: Surgery and Surgical Sciences

Division: Orthopaedic Surgery

Course Name: Advanced Clerkship in Hand Surgery

Course Code (if available): ME:380.699

Course Type: Clinical Clerkship

Course Description: This course is about learning the evaluation, diagnosis, and management of patients with hand and upper extremity injury and pathology. It builds on what you learned in your musculoskeletal unit in Genes to Society as well as on your Surgery clerkship. The Hand Surgery Sub-I builds on earlier learning in anatomy, physiology, microbiology, general ethics, and interpersonal relations. It translates concepts into concrete action with immediate results. What you learn here will prepare you for evaluating patients who present with injuries or complaints regarding the hand, wrist, and elbow. This includes young children born with upper extremity abnormalities, all age groups with traumatic injuries, nerve injury or compression, arthritis, and other conditions. The course uses a combination of lecture, reading, conferences, and time in the hand clinic and in the operating room to teach important principles. The student learns from a team of residents PGY3+4, fellows, and four attending surgeons. These team members provide continuous teaching and feedback. Collegiality is a hallmark of the service.

Course Director(s): Dawn LaPorte, MD

Faculty: Dr. LaPorte, Dr. Strike, Dr. Nguyen

Contact Information (if none listed, please reach out to department/division): 410-955-8344

Availability and/or Duration: , 4 weeks

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Surgery
Recommended Prerequisite:
Drop Period (if specified): 2 months
Enrollment Restrictions: One position offered at a time

Department: Surgery and Surgical Sciences
Division: Surgery and Surgical Sciences
Course Name: Advanced Clerkship in Noncardiac Thoracic Surgery
Course Code (if available): ME:380.699
Course Type: Clinical Clerkship, Approved Sub-I Experience
Course Description: An advanced experience in thoracic surgery; involves patient care, operating room, and clinic experiences. Research projects are also possible. Conferences and teaching sessions included.
Course Director(s): Dr. Alodia Gabre-Kidan
Faculty: Thoracic Surgical staff
Contact Information (if none listed, please reach out to department/division): misty@jhmi.edu
Availability and/or Duration: , 4.5 weeks
Hours Per Week (if specified):
Required Prerequisites: Core Clerkship in Surgery
Recommended Prerequisite:

Department: Surgery and Surgical Sciences
Division: Surgery and Surgical Sciences
Course Name: Advanced Clerkship in Surgical Oncology
Course Code (if available): ME:380.699
Course Type: Clinical Clerkship
Course Description: This elective is designed to provide students with an academic multidisciplinary approach to solid tumors. Both clinical and research experiences are available. The clinical exposure is provided by rotating through the Surgical Oncology service, and the research interests are centered around immunologic manipulations of the host in solid tumor rejection.
Course Director(s): Dr. Alodia Gabre-Kidan
Faculty: Handelsman Surgery staff
Contact Information (if none listed, please reach out to department/division): misty@jhmi.edu
Availability and/or Duration: , 4.5 weeks
Hours Per Week (if specified):
Required Prerequisites: Core Clerkship in Surgery
Recommended Prerequisite:
Drop Period (if specified): 2 months
Enrollment Restrictions: Visiting Medical Students from Non-LCME Accredited Schools cannot apply for the subinternship in quarter 4 or the summer quarter.

Department: Surgery and Surgical Sciences
Division: Transplantation Surgery
Course Name: Advanced Clerkship in Transplantation Surgery
Course Code (if available): ME:380.699
Course Type: Clinical Clerkship

Course Description: Includes participation in management of patients undergoing renal dialysis, renal, pancreas and hepatic transplantation at the Johns Hopkins Hospital. Experience in immunology as it applies to transplantation will be included.

Course Director(s): Dr. Alodia Gabre-Kidan

Faculty: Transplant Surgery faculty

Contact Information (if none listed, please reach out to department/division): misty@jhmi.edu

Availability and/or Duration: All year, 4.5 weeks

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Surgery

Recommended Prerequisite:

Drop Period (if specified): 2 months

Enrollment Restrictions: Visiting Medical Students from Non-LCME Accredited Schools cannot apply for the subinternship in quarter 4 or the summer quarter.

Department: Surgery and Surgical Sciences

Division: Surgery and Surgical Sciences

Course Name: Advanced Clerkship in Vascular Surgery

Course Code (if available): ME:380.699

Course Type: Clinical Clerkship

Course Description: This elective provides exposure to vascular surgery patients. Students will participate in all aspects of patient care: pre-op evaluation, operative procedures, post-op care.

Course Director(s): Dr. Alodia Gabre-Kidan

Faculty: Vascular Surgery Staff

Contact Information (if none listed, please reach out to department/division): misty@jhmi.edu

Availability and/or Duration: , 4.5 weeks

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Surgery

Recommended Prerequisite:

Drop Period (if specified): 2 months

Enrollment Restrictions: Visiting Medical Students from Non-LCME Accredited Schools cannot apply for the subinternship in quarter 4 or the summer quarter.

Department: Surgery and Surgical Sciences

Division: Surgery and Surgical Sciences

Course Name: Advanced Clinical Clerkship in General Pediatric Surgery

Course Code (if available): ME:380.699

Course Type: Clinical Clerkship

Course Description: This elective is designed to provide clinical experience in the management of children with surgical problems, including trauma. Participation in ward and operating room as a surgical extern. This elective includes Pediatric Surgical Clinic and Pediatric Surgery Teaching Rounds, as well as exposure to a wide variety of pediatric surgical inpatient and outpatient cases.

Course Director(s): Dr. Alodia Gabre-Kidan

Faculty: Dr. David Hackam and Staff

Contact Information (if none listed, please reach out to department/division): misty@jhmi.edu

Availability and/or Duration: All year, 4.5 or 9 weeks

Hours Per Week (if specified):

Required Prerequisites: Core Clerkships in Surgery and Pediatrics

Recommended Prerequisite:

Department: Surgery and Surgical Sciences

Division: Orthopaedic Surgery-JHH and Bayview

Course Name: Advanced Clinical Clerkship in Orthopaedic Foot and Ankle Surgery

Course Code (if available): ME:380.699

Course Type: Clinical Clerkship

Course Description: This elective provides an overview of the evaluation and treatment of patients with foot and ankle pathology. It will include a focus on trauma to the foot and ankle, sports injuries, tendinopathy and reconstruction for deformities and arthritis. The student will participate in clinic and operative settings as well as following the inpatients after surgery. Students must have transportation between JHH, JH Bayview and JH White Marsh. Students must be flexible in their approach as faculty are located at multiple sites.

Course Director(s): Dr. Amiethab Aiyer

Faculty: Dr. Amiethab Aiyer, Dr. James Ficke

Contact Information (if none listed, please reach out to department/division): 410-955-8344

Availability and/or Duration: , 4 weeks

Hours Per Week (if specified):

Required Prerequisites: Preference is given to second semester third year students and to fourth year students.

Recommended Prerequisite:

Drop Period (if specified): 2 months

Enrollment Restrictions: One position offered at a time

Department: Surgery and Surgical Sciences

Division: Orthopaedic Oncology – JHH

Course Name: Advanced Clinical Clerkship in Orthopaedic Oncology

Course Code (if available): ME:380.699

Course Type: Clinical Clerkship

Course Description: This elective provides an overview of the evaluation and treatment of patients with benign and malignant bone and soft tissue tumors. In addition, metastatic disease to the skeleton is addressed. The student will participate in clinic and operative settings as well as following the inpatients after surgery.

Course Director(s): Dr. Adam Levin

Faculty: Dr. Carol Morris, Dr. Adam Levin

Contact Information (if none listed, please reach out to department/division): bkeefe2@jhmi.edu

Availability and/or Duration: , 4 weeks

Hours Per Week (if specified):

Required Prerequisites: Preference is given to second semester third year students and to fourth year students.

Recommended Prerequisite:

Drop Period (if specified): 2 months

Enrollment Restrictions: One position offered at a time

Department: Surgery and Surgical Sciences

Division: Orthopaedic Surgery

Course Name: Advanced Clinical Clerkship in Spine Surgery

Course Code (if available): ME:380.699

Course Type: Clinical Clerkship

Course Description: This elective provides in-depth clinical experience in orthopaedic spine surgery at the Johns Hopkins Hospital. The student is integrated into the orthopaedic residency program. Practical experience is supplemented by formal and informal teaching conferences and patient rounds. One or two positions offered at a time. Preference is given to second semester, third year students and to fourth year students. Duration four weeks.

Course Director(s): Dr. Lee Riley, III

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): bkeefe2@jhmi.edu

Availability and/or Duration: All year, 4 weeks

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Surgery; Core Clerkship in Medicine helpful

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: one or two students; preference given to second semester 3rd Year Students and 4th Year Students.

Department: Surgery and Surgical Sciences

Division: Otolaryngology: Head & Neck Surgery

Course Name: Advanced Clinical Elective in General Otolaryngology Head & Neck Surgery

Course Code (if available): ME:380.699

Course Type: Clinical Clerkship, Approved Sub-I experience

Course Description: Clerkships in general clinical otolaryngology are offered in addition to more specialized clerkships in otology, neuro-otology, clinical audiology and speech pathology, endoscopy, pediatrics, plastic surgery, and the management of head and neck tumors. These clerkships provide experience in the various diagnostic procedures related to the specialty as well as experience in the medical and surgical management of patients. Preference given to senior students who are at the beginning of the year in which they are applying to residency in Otolaryngology-Head & Neck Surgery.

Course Director(s): Dr. Marietta Tan

Faculty: Otolaryngology faculty

Contact Information (if none listed, please reach out to department/division): pthornto@jhmi.edu

Availability and/or Duration: All year, 4 weeks; JHH or Bayview only

Hours Per Week (if specified):

Required Prerequisites: General Surgery rotation

Recommended Prerequisite:

Department: Surgery and Surgical Sciences

Division: Cardiac Surgery

Course Name: Cardiac Surgery Research Rotation

Course Code (if available): ME:380.699

Course Type: Clinical Research/Basic Research

Course Description: Students can expect an excellent exposure to the preoperative, operative, and postoperative care of both large and small animals. Furthermore, students can expect to develop basic and intermediate to advanced surgical skills. Students will also have the opportunity to participate in our prospective and retrospective clinical studies evaluating important issues in both adult and pediatric cardiac surgery.

Course Director(s): Dr. William Baumgartner

Faculty: Dr. William Baumgartner and Staff

Contact Information (if none listed, please reach out to department/division): 410-955-2411

Availability and/or Duration: Summer Term, 2 months

Hours Per Week (if specified):

Required Prerequisites: Completion of first year of medical school

Recommended Prerequisite:

Drop Period (if specified): 2 months

Enrollment Restrictions:

Department: Surgery and Surgical Sciences

Division: Otolaryngology: Head & Neck Surgery

Course Name: Clinical Clerkship in General Otolaryngology Head & Neck Surgery

Course Code (if available): ME:380.699

Course Type: Clinical Clerkship

Course Description: This course introduces students to the field of otolaryngology-head and neck surgery. The student will learn the skills necessary to take an otolaryngologic history and perform a comprehensive head and neck examination. It provides a broad exposure to otolaryngologic pathology and will familiarize the student with outpatient and in-hospital otolaryngologic care.

Time is divided between the Head & Neck Service, Otology/Neurotology Service, The Facial Plastics Rhinology Service and Pediatric Otolaryngology Service. Students will participate in rounds with the resident team, inpatient care, in the operating room, and the outpatient clinic. Patients are discussed with the attending in order to arrive at an appropriate diagnosis and treatment plan. The student will assist in patient workups and follow them during the hospital stay.

Course Director(s): Dr. Marietta Tan

Faculty: Otolaryngology faculty

Contact Information (if none listed, please reach out to department/division): pthornta@jhmi.edu

Availability and/or Duration: All year, 2 weeks for summer and Quarter 1. All other half quarter

Hours Per Week (if specified):

Required Prerequisites: Transition to the Wards (TTW)

Recommended Prerequisite: THIS COURSE IS DIRECTED TO 2ND AND 3RD YEAR STUDENTS WHO ARE INTERESTED IN PURSUING A POTENTIAL CAREER IN OTOLARYNGOLOGY-HEAD AND NECK SURGERY. STUDENTS MAY HAVE OR MAY NOT HAVE COMPLETED THE GENERAL SURGERY ROTATION. WE PREFER 4TH YEAR STUDENTS REGIST

Drop Period (if specified): 1 month

Enrollment Restrictions: Visiting Medical students are not eligible to take this elective in summer or Qtr.1 and must conform to the JHUSOM academic calendar in Qtrs. 2, 3, and 4.

Department: Surgery and Surgical Sciences

Division: Neurosurgery

Course Name: Clinical Clerkship in Neurosurgery

Course Code (if available): ME:380.699

Course Type: Clinical Clerkship

Course Description: This clinical clerkship will provide an introduction to the care of adult and pediatric patients with brain tumors, cerebrovascular diseases, spinal and peripheral nerve disorders, and trauma in both the inpatient and outpatient settings. Students will participate in the operating room, clinics, inpatient wards, and departmental conferences. This clerkship may be performed at either the Johns Hopkins Hospital or the Johns Hopkins Bayview Medical Center campus, or a combination of both sites.

Course Director(s): Dr. Alan Cohen

Faculty: Neurosurgery Faculty

Contact Information (if none listed, please reach out to department/division): 410-502-5564

Availability and/or Duration: All year, 4.5 weeks

Hours Per Week (if specified):

Required Prerequisites: Open to 3rd and 4th year medical students

Recommended Prerequisite:

Drop Period (if specified): 2 months

Enrollment Restrictions:

Department: Surgery and Surgical Sciences

Division: Orthopaedic Surgery/ Shoulder Surgery

Course Name: Clinical Clerkship in Shoulder Surgery - Greenspring Station/East Baltimore

Course Code (if available): ME:380.699

Course Type: Clinical Clerkship

Course Description: This rotation is designed for the student who is considering orthopaedic residency program. The rotation involves observation and participation in the clinic and operating room. The student will be expected to see patients, to scrub in on cases and be part of the orthopaedic team. The student will also attend orthopaedic radiology rounds and hospital rounds once a week. There is opportunity to be involved in trauma call but it is not necessary. We see patients from young to old, including athletes and patients with simple or complex shoulder problems. We also evaluate injuries to other joints such as the knee, including sports injuries. If the rotation is six to eight weeks, we recommend contributing to a case report or other publishable research.

Course Director(s): Dr. Edward McFarland

Faculty: Dr. McFarland

Contact Information (if none listed, please reach out to department/division): bkeefe2@jhmi.edu

Availability and/or Duration: August 15 to May 30, 4-8 weeks

Hours Per Week (if specified):

Required Prerequisites: Finished 2nd year

Recommended Prerequisite:

Department: Surgery and Surgical Sciences

Division: Cross-listed under Anesthesiology

Course Name: Clinical Clerkship in the Surgery Intensive Care Unit

Course Code (if available): ME:380.699

Course Type: Site for Advanced Clerkship in Critical Care/ICU

Course Description:

Course Director(s):

Faculty:

Contact Information (if none listed, please reach out to department/division):

Availability and/or Duration:

Hours Per Week (if specified):

Required Prerequisites:

Recommended Prerequisite:

Drop Period (if specified):

Enrollment Restrictions:

Department: Surgery and Surgical Sciences

Division: Orthopaedic Surgery

Course Name: Exposure to Spinal Diseases

Course Code (if available): ME:380.699

Course Type: Clinical Clerkship

Course Description: This course is offered primarily for the student who thinks that he/she may be interested in orthopaedic surgery as a career. The student can expect to gain knowledge and experience in the preoperative evaluation, spinal surgical procedures, and postoperative care of patients with a wide variety of spinal diseases through hands-on participation in outpatient clinics, operating rooms, and didactic teaching.

Course Director(s): Dr. Brian J. Neuman

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): bkeefe2@jhmi.edu

Availability and/or Duration: All year, 1 month

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Surgery

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Surgery and Surgical Sciences

Division: Otolaryngology: Head & Neck Surgery

Course Name: General Otolaryngology Head & Neck Surgery Clerkship at Greater Baltimore Medical Center

Course Code (if available): ME:380.699

Course Type: Clinical Clerkship

Course Description: This course is designed for both the student who is interested in learning about otolaryngology in general or for those students who are planning on entering the field. GBMC has an extensive history with otolaryngology and close ties with the Johns Hopkins Department of Otolaryngology. Students will work with the Johns Hopkins residents, as well as members of the full-time and part-time faculty. All aspects of otolaryngology are practiced, including head and neck surgery, otology, rhinology/skull base, pediatric, laryngology, and facial plastics. Students will help manage the inpatients with the residents, cover cases, and spend time in the resident clinic. Numerous educational conferences at GBMC and Johns Hopkins will also be attended.

Course Director(s): Dr. Mark F. Williams

Faculty: Otolaryngology faculty

Contact Information (if none listed, please reach out to department/division): jstarling@gbmc.org

Availability and/or Duration: All year, 3-4 weeks

Hours Per Week (if specified):

Required Prerequisites: None

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Surgery and Surgical Sciences

Division: Neurosurgery

Course Name: Introduction to Neurosurgery

Course Code (if available): ME:380.699

Course Type: Clinical Clerkship

Course Description: This course gives the student an introduction to the field of neurosurgery. The student will learn the fundamentals of performing a neurological exam, as well as a neurosurgery history and physical. The course provides an exposure to the broad spectrum of neurosurgical pathology in the inpatient and outpatient settings. Time is divided between the neurosurgical oncology, spine, vascular, and pediatric services. Students will participate in rounds, inpatient care, in the operating rooms, and the outpatient clinic. Students will also attend departmental didactic teaching conferences, such as Spine Conference, Vascular Conference, Tumor Conference, Peds Conference and Neurosurgery Grand Rounds.

Course Director(s): Dr. Tim Witham

Faculty: Neurosurgery Faculty

Contact Information (if none listed, please reach out to department/division): 667-306-6327

Availability and/or Duration: All year, 4.5 weeks

Hours Per Week (if specified):

Required Prerequisites: None

Recommended Prerequisite:

Department: Surgery and Surgical Sciences

Division: Neurosurgery

Course Name: Neurophysiologic Studies of Human CNS in Pain and Movement

Course Code (if available): ME:380.699

Course Type: Clinical Research

Course Description: Single neuron analysis of the human CNS during stereotactic procedures for pain and movement disorders.

Course Director(s): Dr. Frederick Lenz

Faculty: Dr. Frederick Lenz

Contact Information (if none listed, please reach out to department/division): 410-955-2257

Availability and/or Duration:

Hours Per Week (if specified):

Required Prerequisites: Neuroanatomy

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Surgery and Surgical Sciences

Division: Orthopaedic Surgery

Course Name: Orthopaedic Surgery - Bayview Medical Center

Course Code (if available): ME:380.699

Course Type: Subinternship, Approved Sub-I Experience;

Course Description: This elective is offered to students seeking more extensive knowledge of general orthopaedics than is usually obtained in the required curriculum. Musculoskeletal trauma, total joint arthroplasty and foot and ankle pathology are emphasized. During this elective, students are actively involved with the resident staff in all aspects of patient care. They are expected to participate in the same educational conferences as the resident staff. They are expected to broaden their knowledge of the physiological basis of orthopaedic practice and to acquire a better understanding of appropriate diagnostic and therapeutic techniques. Students also have the opportunity to learn about the training and development of orthopaedic surgeons, to acquire useful information in making a career choice and to develop reference contacts.

Course Director(s): Dr. Paul Khanuja

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): bkeefe2@jhmi.edu

Availability and/or Duration: All year, Half or full quarter.

Hours Per Week (if specified):

Required Prerequisites: 4th year student with prior Orthopaedic rotation experience; Core Clerkship in Surgery

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: one student

Department: Surgery and Surgical Sciences

Division: Otolaryngology Head & Neck Surgery

Course Name: Otolaryngology Head & Neck Surgery Clinical Rotation-National Capital Region

Course Code (if available): ME:380.699

Course Type: Clinical Clerkship

Course Description: This rotation is a unique tour of all aspects of Otolaryngology/Head and Neck Surgery including Facial Plastic and Reconstructive Surgery, Head and Neck Cancer, Sinus and Skull Base Surgery, Neurotology/Ear Surgery as well as Laryngeal/Voice Surgery. Students will have the opportunity to have exposure to all sub-specialties of Otolaryngology and have the flexibility to focus on certain aspects depending on level of interest. Benefits include near one-on-one mentoring opportunities with attending full-time Otolaryngology faculty. Students will have hands-on experience both in the clinic and in the operating room setting. This rotation would take place in the Bethesda/Washington, D.C. site.

Course Director(s): Dr. Shaun Desai

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): sdesai27@jhmi.edu

Availability and/or Duration: All year, 2-4 weeks

Hours Per Week (if specified):

Required Prerequisites: Third- and fourth-year medical students

Recommended Prerequisite:

Drop Period (if specified): 1 month prior

Enrollment Restrictions:

Department: Surgery and Surgical Sciences

Division: Orthopaedic Surgery

Course Name: Pediatric Orthopaedic Surgery

Course Code (if available): ME:380.699

Course Type: Subinternship, Approved Sub-I Experience

Course Description: To spend time with a surgeon doing pediatric orthopaedic surgery both in a clinic situation and in the operating room. Each rotation can be tailored to each individual. Some ability to do clinical research can also be entertained.

Course Director(s): Dr. Paul Sponseller

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): bkeefe2@jhmi.edu

Availability and/or Duration: All Year, 3 weeks - 4.5 weeks

Hours Per Week (if specified):

Required Prerequisites: Core Clerkships in Surgery and Pediatrics

Recommended Prerequisite:

Department: Surgery and Surgical Sciences

Division: Orthopaedic Surgery

Course Name: Pediatric Orthopaedics

Course Code (if available): ME:380.699

Course Type: Clinical Clerkship

Course Description: This is a clinical course in pediatric orthopaedics. The participant is exposed to different aspects of this discipline by attending the General Pediatric Orthopaedic, Birth Defect, Cerebral Palsy, Comprehensive Child Care and Scoliosis Clinics and by participating in operative procedures on children. There is extensive experience in pediatric sports medicine. Students are given responsibility according to their experience. There are three teaching conferences per week. "Team spirit" pervades. General and case specific reading is guided by the attendings and residents.

Course Director(s): Dr. Paul Sponseller

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): bkeefe2@jhmi.edu

Availability and/or Duration: , 4 weeks

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Surgery

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions: One position offered at a time

Department: Surgery and Surgical Sciences

Division: Pediatric Surgery, All Children's Hospital (ACH), St. Petersburg, FL

Course Name: Pediatric Surgery at All Children's Hospital

Course Code (if available): ME:380.699

Course Type: Other

Course Description: Principles of pediatric surgery will be taught in outpatient and inpatient encounters at ACH-JHM. As a free-standing children's hospital, patient cases will reflect both general pediatric surgical exposure as well as exposure to highly specialized patient cases reflecting ACH-JHM's status as a quaternary care center. Participation in clinical or basic research in pediatric surgery may also be coordinated pending project and faculty availability.

Students will attend daily surgical clinics at ACH and scrub into operative procedures. Emphasis will be placed on the understanding of the pathogenesis, diagnosis, and management of common conditions requiring surgery in the pediatric patient.

Students will gain an appreciation of the effect of anesthetics, surgical procedures, and critical illnesses on the pediatric patient. They will become familiar with parenteral fluid management and the philosophy of oral and parenteral nutritional needs for the pediatric surgical patient. Students are expected to participate in weekly conferences including surgical specific conferences as well as resident noon conferences, JHUSOM Pediatric Grand Rounds and ACH-JHM Grand Rounds.

Students will become familiar with the pathogenesis, diagnosis and management of common conditions requiring surgery in pediatric patient, such as inguinal-scrotal conditions, appendicitis, and other gastrointestinal inflammatory and obstructive states, airway problems, and congenital abnormalities amenable to surgical correction. The student will be evaluated on faculty evaluations, attendance, and overall performance.

Course Director(s): Dr. Elizabeth Walford

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): gharmon2@jhmi.edu

Availability and/or Duration:

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Pediatrics or Medicine

Recommended Prerequisite:

Drop Period (if specified): 2 months

Enrollment Restrictions: Enrollment Limited to JHUSOM Students

Department: Surgery and Surgical Sciences

Division: Plastic, Reconstructive and Maxillofacial Surgery

Course Name: Plastic, Reconstructive & Maxillofacial Surgery

Course Code (if available): ME:380.699

Course Type: Clinical Clerkship

Course Description: Rotations at Hopkins or Bayview units provide in-depth experience with surgery and clinical care of the plastic surgery patient.

Course Director(s): Dr. Robin Yang

Faculty: Dr. Robin Yang

Contact Information (if none listed, please reach out to department/division): ryang14@jhmi.edu

Availability and/or Duration: , 1 week

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Surgery required

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Surgery and Surgical Sciences

Division: Orthopaedic Surgery

Course Name: Poggi Pediatric Orthopaedic Program

Course Code (if available): ME:380.699

Course Type: Research Clerkship

Course Description: A yearlong medical student clinical and research preceptorship. Responsibilities included designing and completing medical research, data analysis, writing research manuscripts, seeing patients in the outpatient and inpatient clinical setting as well as in the operating room, submitting manuscripts for publication and presenting research at national meetings.

Course Director(s): Dr. Paul Sponseller

Faculty: Faculty

Contact Information (if none listed, please reach out to department/division): 410-955-3137

Availability and/or Duration: , 1 year

Hours Per Week (if specified):

Required Prerequisites: 2–3-year medical school completed in good standing, completion of USMLE Step1

Approval by the course directors is required to enroll in this course.

Recommended Prerequisite:

Department: Surgery and Surgical Sciences

Division: Neurosurgery

Course Name: Research in Neurosurgery

Course Code (if available): ME:380.699

Course Type: Basic Research

Course Description: Students may work in any of the departmental laboratories by arranging with the individual faculty members and laboratory directors.

Course Director(s):

Faculty:

Contact Information (if none listed, please reach out to department/division):

Availability and/or Duration: , Full quarter

Hours Per Week (if specified):

Required Prerequisites: None

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Surgery and Surgical Sciences

Division: Otolaryngology Head & Neck Surgery

Course Name: Research in Otolaryngology: Head & Neck Surgery

Course Code (if available): ME:380.699

Course Type: Research

Course Description: An advanced research elective in Otolaryngology -Head and Neck Surgery is available to students interested in hearing, balance, olfaction, head and neck cancer, and laryngeal function. Research opportunities exist in pathogenesis of sinus disease, epidemiology, physiology and development of the inner ear, instrumentation and assessment of cochlear and vestibular implants, laryngeal pathology and reconstruction, oncology and reconstructive surgery of the head and neck.

Course Director(s): Dr. Jean Kim, Dr. Paul Fuchs

Faculty: Dr. Paul Fuchs, Otolaryngology staff

Contact Information (if none listed, please reach out to department/division): pfuchs1@jhmi.edu

Availability and/or Duration: All year

Hours Per Week (if specified):

Required Prerequisites: Clinical elective in Otolaryngology

Recommended Prerequisite:

Drop Period (if specified): 1 month

Enrollment Restrictions:

Department: Surgery and Surgical Sciences

Division: Surgery and Surgical Sciences

Course Name: Senior Surgical Anatomy

Course Code (if available):

Course Type: Other

Course Description: Senior Surgical Anatomy will provide an environment, with didactic, practical, and hands on components, in which senior medical students can learn surgical anatomy and its relevance to the treatment of disease processes commonly seen in general surgery.

Participating students will meet for one week every morning and every afternoon with an attending surgeon from the Department of Surgery at the Armstrong Medical Education Building (AMEB). Students will undergo 9 case-based discussions with their associated cadaveric dissections with the attending surgeon from the Department of Surgery at Johns Hopkins. Faculty surgeons will begin with a clinically oriented case-based discussion on a specific area of the body, i.e. foregut. These discussions will include surgical anatomy with its relevance to the surgical treatment of specific diseases, i.e. stomach anatomy

and the treatment of peptic ulcer disease, esophageal anatomy and the treatment of achalasia, etc. Each discussion will include pertinent surgical procedures and how they relate to the anatomic area discussed. On a provided cadaver, the students will then have guided dissections using surgical principles. For example, dissecting the inguinal anatomy much like a surgeon would do in performing an open inguinal hernia repair.

In preparation for the final exam students will have practice, not for credit, oral board style quizzes at the cadaver bedside at the end of each discussion/dissection. The final exam will be held the afternoon of the final day of the course and will have a written component and an ABS format oral portion at the cadaver bedside where the student is expected to demonstrate their knowledge of surgical anatomy.

Course Director(s): Dr. Clint Cappiello

Faculty: Dr. Clint Cappiello

Contact Information (if none listed, please reach out to department/division): bmalas1@jhmi.edu

Availability and/or Duration:

Hours Per Week (if specified):

Required Prerequisites: Students will have completed a General Surgery Sub-internship

Recommended Prerequisite:

Drop Period (if specified): 1 Month

Enrollment Restrictions: Visiting Medical Students from Non-LCME Accredited Schools cannot apply for the subinternship in quarter 4 or the summer quarter.

Department: Surgery and Surgical Sciences

Division: Surgery and Surgical Sciences

Course Name: Subinternship in General Surgery - Bayview Medical Center

Course Code (if available): ME:380.699

Course Type: Subinternship, Approved Sub-I Experience

Course Description: This course is designed to provide extensive, in-depth experience in the management of the surgical patient. The student will be an integral part of the surgical team and will be assigned specific patients. The activities of the student will be supervised by the attending and house staff. Services available: vascular, bariatric, GI, and surgical oncology. The subintern will have responsibility for pre and postoperative care of patients and will participate in the operative procedures. Daily rounds with attendings and residents, as well as several special conferences and teaching sessions each week are part of this course.

Course Director(s): Dr. Alodia Gabre-Kidan

Faculty: Bayview surgical staff

Contact Information (if none listed, please reach out to department/division): misty@jhmi.edu

Availability and/or Duration: Quarter 1 - 4, 4.5 weeks

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Surgery

Recommended Prerequisite:

Drop Period (if specified): 2 months

Enrollment Restrictions: Visiting Medical Students from Non-LCME Accredited Schools cannot apply for the subinternship in quarter 4 or the summer quarter.

Department: Surgery and Surgical Sciences

Division: Neurosurgery

Course Name: Subinternship in Neurosurgery

Course Code (if available): ME:380.699

Course Type: Subinternship, Approved Sub-I Experience

Course Description: Students are given significant responsibilities in patient care and a broad exposure in neurosurgical operating room techniques. Time is divided between the neurosurgical oncology, spine, cerebrovascular, and pediatric services. Students will participate in daily rounds, inpatient care, departmental conferences, operating rooms, and outpatient clinic. Subinterns will participate in overnight call with a supervising resident. Rotations will be at the Johns Hopkins Hospital and Johns Hopkins Bayview Medical Center campuses.

Course Director(s): Dr. Timothy Witham

Faculty: Neurosurgery Faculty

Contact Information (if none listed, please reach out to department/division): 667-306-6327

Availability and/or Duration: All year, 4 weeks

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Surgery

Recommended Prerequisite:

Department: Surgery and Surgical Sciences

Division: Orthopaedic Surgery

Course Name: Subinternship in Orthopaedic Surgery

Course Code (if available): ME:380.699

Course Type: Subinternship, Approved Sub-I Experience

Course Description: This is a clinical course in adult trauma orthopaedics. The participant is exposed to different aspects of this discipline by attending the adult trauma clinic and by participating in operative procedures in emergent situations and on an elective basis. There is an extensive experience in management of long bone fractures, pelvic fractures, and periarticular fractures. Students are given responsibility according to their experience. There are three teaching conferences each day reviewing the previous trauma cases which came in the night before.

Course Director(s): Dr. Greg Osgood

Faculty: Dr. Greg Osgood, Dr. Babar Shafiq

Contact Information (if none listed, please reach out to department/division): bkeefe2@jhmi.edu

Availability and/or Duration: All year

Hours Per Week (if specified):

Required Prerequisites: Core Clerkship in Surgery

Recommended Prerequisite:

Drop Period (if specified): 2 months

Enrollment Restrictions: 2 students per half quarter

Department: Surgery and Surgical Sciences

Division: Plastic, Reconstructive and Maxillofacial Surgery

Course Name: Subinternship in Plastic Surgery

Course Code (if available): ME:380.699

Course Type: Subinternship, Approved Sub-I Experience

Course Description: This elective provides broad experience in all aspects of plastic surgery, stressing basic techniques and wound care. The student participates in the formal educational activities of the Department of Plastic Surgery. The elective will provide 2-3 weeks of training at JHH and 1- 2 weeks at Johns Hopkins Bayview.

Course Director(s): Dr. Robin Yang

Faculty: Richard Redett, MD, Scott Lifchez, MD, Robin Yang, MD, DDS

Contact Information (if none listed, please reach out to department/division): ryang14@jhmi.edu

Availability and/or Duration: , 4 weeks
Hours Per Week (if specified):
Required Prerequisites: Core Clerkship in Surgery
Recommended Prerequisite:
Drop Period (if specified): 2 months
Enrollment Restrictions:

Department: Surgery and Surgical Sciences
Division: Surgery and Surgical Sciences
Course Name: Subinternship in Surgery
Course Code (if available): ME:380.699
Course Type: Subinternship, Approved Sub-I experience
Course Description: This course is designed to provide extensive, in-depth experience in the management of the surgical patient. The student will be an integral part of the surgical team and will be assigned specific patients. The activities of the student will be supervised by the attending and house staff. Services available: GI surgery, vascular surgery, Halstead-trauma, and surgical oncology to include breast, endocrine, and melanoma. The subintern will have responsibility for pre and postoperative care of patients and will participate in the operative procedures. Daily rounds with attendings and residents, as well as several special conferences and teaching sessions each week are part of this course.

Course Director(s): Dr. Alodia Gabre-Kidan
Faculty: Dr. Alodia Gabre-Kidan and surgical staff
Contact Information (if none listed, please reach out to department/division): misty@jhmi.edu
Availability and/or Duration: All year, 4.5 weeks

Hours Per Week (if specified):
Required Prerequisites: Core Clerkship in Surgery; registration must be at least 8 weeks before this elective as credentialing is required by the Medical Board
Recommended Prerequisite:
Drop Period (if specified): 2 months
Enrollment Restrictions: Visiting Medical Students from Non-LCME Accredited Schools cannot apply for the subinternship in quarter 4 or the summer quarter.

Department: Surgery and Surgical Sciences
Division: Urology
Course Name: Subinternship in Urology
Course Code (if available): ME:380.699
Course Type: Subinternship, Approved Sub-I Experience
Course Description: This course provides an intense experience in Clinical Urology and Genitourinary Surgery. Working with the team, the student participates in the diagnosis, medical or surgical management and post-operative care. The large number of patients seen on the pediatric and adult urology service will provide exposure to medical problems, including renal physiology, electrolyte balance, urinary infections, urologic oncology, men's health, BPH, lower urinary tract symptoms, infertility, erectile dysfunction, urinary incontinence, and urethral stricture disease.
Course Director(s): Dr. Amin Herati
Faculty: Dr. Alan Partin and staff
Contact Information (if none listed, please reach out to department/division): 410-955-4494
Availability and/or Duration: All year, Half quarter
Hours Per Week (if specified):
Required Prerequisites: Core Clerkship in Surgery

Recommended Prerequisite:**Department:** Surgery and Surgical Sciences**Division:** Surgery**Course Name:** Surgical Oncology - National Cancer Institute, National Institutes of Health, Bethesda, MD**Course Code (if available):** ME:380.699**Course Type:** Clinical Clerkship

Course Description: Students will see new outpatients and follow their progress through the initial workup in the clinic and hospital. Students will assist in the surgical procedures and postoperative care. Attendance at all departmental conferences and meetings, as well as weekly departmental seminars, is expected. Students have intensive exposure to this combination of medical endeavors due to the close interrelationship of clinical and research activities in the Surgery Branch of the National Cancer Institute. Clinical work centers around formal research protocol patients. Currently the branch is concentrating its attention on protocols concerned with investigation of melanoma, osteosarcoma, and a variety of soft tissue sarcomas, rectal cancer, and breast cancer. The surgery branch also serves as a general surgical consultant for all patients at the National Institutes of Health. In this capacity, a broad range of general surgical problems are also seen.

Course Director(s): Dr. David Danforth**Faculty:** Dr. Danforth, Dr. Steven Rosenberg**Contact Information** (if none listed, please reach out to department/division): 410-955-5765**Availability and/or Duration:** All year, 2 full quarters**Hours Per Week (if specified):****Required Prerequisites:** Core Clerkship in Surgery**Recommended Prerequisite:****Drop Period (if specified):** 1 month**Enrollment Restrictions:** Enrollment Limited to JHUSOM Students**Department:** Surgery and Surgical Sciences**Division:** Surgery and Surgical Sciences**Course Name:** Vascular and Endovascular Surgery Elective Rotation Bayview Medical Center**Course Code (if available):** ME:380.699**Course Type:** Clinical Clerkship

Course Description: Students can join the Johns Hopkins Bayview Vascular and Endovascular Surgery Elective rotation for 4-to-8-week periods. They are expected to participate in patient care, round on patients in the ward with the interns and surgical residents and to participate in a variety of open and endovascular cases in the operative room. They are also expected to attend the vascular clinic at least one day a week and to contribute to a research project at the vascular and endovascular research center at Johns Hopkins Bayview Medical Center.

Course Director(s): Dr. Mahmoud B. Malas**Faculty:** Dr. Mahmoud B. Malas**Contact Information** (if none listed, please reach out to department/division): bmalas1@jhmi.edu**Availability and/or Duration:** All year, 4-8 weeks**Hours Per Week (if specified):****Required Prerequisites:** Medical Student-HIPAA Certification prior to the start of the elective**Recommended Prerequisite:****Drop Period (if specified):** 2 months

Enrollment Restrictions: Visiting Medical Students from Non-LCME Accredited Schools cannot apply for the subinternship in quarter 4 or the summer quarter.

RESEARCH OPPORTUNITIES BY DEPARTMENT/DIVISION AND FACULTY

Department/Division: Biological Chemistry

Faculty Name: Michael Caterina

Research Topic(s): Molecular and physiological mechanisms responsible for pain sensation

Department/Division: Biological Chemistry

Faculty Name: Robert Cole

Research Topic(s): Understanding the role of proteins, their modifications, adductomes and interactomes in human health and disease through innovative proteomics.

Department/Division: Biological Chemistry

Faculty Name: Ryuya Fukunaga

Research Topic(s): Biology and mechanism of post-transcriptional gene regulation by small silencing RNAs and RNA-binding proteins.

Department/Division: Biological Chemistry

Faculty Name: Erin Goley

Research Topic(s): Bacterial cell biology: growth and adaptation mechanisms of bacteria in different environments.

Department/Division: Biological Chemistry

Faculty Name: Steve Gould

Research Topic(s): HIV/AIDS; Retrovirology; Exosome biogenesis; Alloimmunity

Department/Division: Biological Chemistry

Faculty Name: Dr. Seth Margolis

Research Topic(s): The regulation of protein homeostasis in nervous system development and disease.

Department/Division: Biological Chemistry

Faculty Name: Mollie Meffert

Research Topic(s): The regulation of neuronal gene expression in health and disease; impact of noncoding RNAs and RNA-binding proteins.

Department/Division: Biological Chemistry

Faculty Name: Tamara O'Connor

Research Topic(s): Molecular mechanisms of bacterial pathogenesis.

Department/Division: Biological Chemistry

Faculty Name: Joel Pomerantz

Research Topic(s): Functional specificity and design of signal transduction pathways.

Department/Division: Biological Chemistry

Faculty Name: Daniel Raben

Research Topic(s): Biochemistry and chemistry of lipids and lipid metabolizing enzymes involved in signaling cascades.

Department/Division: Biological Chemistry

Faculty Name: Karen Reddy

Research Topic(s): Understanding how the nuclear periphery and other subcompartments contribute to general nuclear architecture and to specific gene regulation.

Department/Division: Biological Chemistry

Faculty Name: George Sack

Research Topic(s): Structure of human amyloid A proteins and their role in inflammation.

Department/Division: Biological Chemistry

Faculty Name: David Shortle

Research Topic(s): Computational approaches to refining protein models and de novo structure prediction.

Department/Division: Biological Chemistry

Faculty Name: Michael Wolfgang

Research Topic(s): CNS control of metabolism; neuronal metabolism; neurochemistry.

Department/Division: Biological Chemistry

Faculty Name: Natasha Zachara

Research Topic(s): The role of intracellular glycosylation, O-GlcNAc, in survival signaling models of oxidative stress.

Department/Division: Biophysics and Biophysical Chemistry

Faculty Name: Dr. L. Mario Amzel

Research Topic(s): Structure enzymology of redox and phosphoryl transfer enzymes: MICAL, peptidyl amidating monooxygenase, PI3K, FPPS and Nudix hydrolases; channels and transporters; selected areas of structural thermodynamics

Department/Division: Biophysics and Biophysical Chemistry

Faculty Name: Dr. Berger

Research Topic(s): Structural and mechanistic studies of protein/nucleic acid machines and assemblies that control DNA replication and chromosome organization.

Department/Division: Biophysics and Biophysical Chemistry

Faculty Name: Dr. Frueh

Research Topic(s): Structural and dynamic studies of active enzymatic systems by Nuclear Magnetic Resonance (NMR). Mechanisms of domain communication in non-ribosomal Peptide Synthetases. Development of NMR methods to study large and dynamic proteins.

Department/Division: Biophysics and Biophysical Chemistry

Faculty Name: Dr. Ha

Research Topic(s): Single-molecule detection and super-resolution imaging methods to study complex biological systems, including DNA/RNA/protein interactions, chromatin, and cellular mechanics.

Department/Division: Biophysics and Biophysical Chemistry

Faculty Name: Dr. Lau

Research Topic(s): Structural thermodynamics of biomolecular association and conformational transitions, computational and experimental approaches.

Department/Division: Biophysics and Biophysical Chemistry

Faculty Name: Dr. Sohn

Research Topic(s): Mechanistic studies of foreign-DNA sensing pathways in innate immunity

Department/Division: Biophysics and Biophysical Chemistry

Faculty Name: Dr. Cynthia Wolberger

Research Topic(s): Structure-based mechanism of transcription regulation and ubiquitin signaling.

Department/Division: Biophysics and Biophysical Chemistry

Faculty Name: Dr. Wu

Research Topic(s): Single-molecule microscopy/spectroscopy methods to study the molecular dynamics in live cells.

Department/Division: Biophysics and Biophysical Chemistry

Faculty Name: Dr. Xiao

Research Topic(s): Dynamics of gene regulation and cell using single-molecule fluorescence microscopy and live-cell analysis.

Department/Division: Cell Biology

Faculty Name: Deborah Andrew

Research Topic(s): Developmental genetics of organ formation; Drosophila

Department/Division: Cell Biology

Faculty Name: Peter Devreotes

Research Topic(s): Chemoattractant directed cell migration; Signal transduction

Department/Division: Cell Biology

Faculty Name: Peter Espenshade

Research Topic(s): Cellular Regulation of cholesterol Homeostasis and adaptation to hypoxia

Department/Division: Cell Biology

Faculty Name: Andrew Ewald

Research Topic(s): Cellular Mechanisms and Molecular Regulation of epithelial morphogenesis in development and cancer.

Department/Division: Cell Biology
Faculty Name: Dr. Luis Adres Garza
Research Topic(s): The study of skin stem cells and prostaglandins in regeneration and wound healing.

Department/Division: Cell Biology
Faculty Name: Dr. David Hackam
Research Topic(s): Immune regulation of injury and repair at epithelial surfaces

Department/Division: Cell Biology
Faculty Name: Dr. Pablo Iglesias
Research Topic(s): Computational biology; use of control and information theory to study signal transduction pathways.

Department/Division: Cell Biology
Faculty Name: Dr. Miho Ijima
Research Topic(s): Lipid signaling in chemotaxis

Department/Division: Cell Biology
Faculty Name: Dr. Takanari Inoue
Research Topic(s): Directed cell migration; Tumor Metastasis; primary cilia; Synthetic chemical biology; Technology Development

Department/Division: Cell Biology
Faculty Name: Dr. Carlo Iomini
Research Topic(s): The role of primary cilia in corneal development and polycystic kidney disease.

Department/Division: Cell Biology
Faculty Name: Dr. Phil Jordan
Research Topic(s): Gametogenesis (spermatogenesis and oogenesis); Pluripotent stem cell genome maintenance; Neurodevelopment

Department/Division: Cell Biology
Faculty Name: Dr. Scot Kuo
Research Topic(s): Mechanical functions of cells; Actin-Based protrusion and cell motility; Nanoscale biophysics; laser-based imaging and bioinstrumentation

Department/Division: Cell Biology
Faculty Name: Dr. Rong Li
Research Topic(s): Cellular dynamics in space, time, and adaptation

Department/Division: Cell Biology
Faculty Name: Dr. Jian Liu
Research Topic(s): Theoretical modeling, mechanobiology, cell migration, membrane trafficking, cell

Department/Division: Cell Biology
Faculty Name: Dr. Erika Matunis
Research Topic(s): Molecular genetics of germ line stem cell function

Department/Division: Cell Biology
Faculty Name: Dr. Michael Matunis
Research Topic(s): Molecular mechanisms of SUMOylation and functions of mitosis; DNA repair, stress response pathways and *P. falciparum* development

Department/Division: Cell Biology
Faculty Name: Dr. Susan Michaelis
Research Topic(s): Yeast and mammalian cell biology; progeria and lamin A processing; ER quality control and cystic fibrosis; ABC transporters

Department/Division: Cell Biology
Faculty Name: Dr. Douglas Robinson
Research Topic(s): Probing the molecular, biochemical, and mechanical basis for cytokinesis and cellular morphogenesis.

Department/Division: Cell Biology
Faculty Name: Dr. Lewis H. Romer
Research Topic(s): Cardiovascular, pulmonary diseases

Department/Division: Cell Biology
Faculty Name: Dr. Anthony Rosen
Research Topic(s): Autoimmune rheumatic diseases including Lupus, RA, Scleroderma, Myositis and Sjogren's Syndrome.

Department/Division: Cell Biology
Faculty Name: Dr. Hiromi Sesaki
Research Topic(s): Mitochondrial dynamics; Membrane fusion and fission

Department/Division: Cell Biology
Faculty Name: Dr. Nilabh Shastri
Research Topic(s): Immune surveillance, exploring the molecular mechanisms behind T-cell activation.

Department/Division: Cell Biology
Faculty Name: Dr. Shigeki Watanbe
Research Topic(s): High-resolution, ultrafast kinetics of synaptic membrane trafficking events

Department/Division: Cell Biology
Faculty Name: Dr. Katherine Wilson
Research Topic(s): The cell nucleus, nuclear membranes, lamins and nucleoskeleton; membranes of Emery-Dreifuss muscular dystrophy and other "laminopathies"

Department/Division: Dermatology
Faculty Name: Dr. Crystal Aguh
Research Topic(s): Ethnic skin and program and fellowship

Department/Division: Dermatology
Faculty Name: Dr. Anna Chen
Research Topic(s): Translational research in general dermatology; Mechanism of skin aging; photobiology

Department/Division: Dermatology
Faculty Name: Dr. Luis Adres Garza
Research Topic(s): Skin infection; skin inflammation, innate immunity, skin microbiome

Department/Division: Dermatology
Faculty Name: Dr. Jun Kang
Research Topic(s): Clinical and translational research in rheumatologic dermatology and in-patient consultative dermatology.; AI and full body photography in dermatology

Department/Division: Dermatology
Faculty Name: Dr. Sewon Kang
Research Topic(s): Translational research in dermatology

Department/Division: Dermatology
Faculty Name: Dr. Shawn Kwatra
Research Topic(s): Translational research in itch; pruritus; atopic dermatitis; prurigo nodularis.; Also, epidemiology/health service research using national data sets and retrospective cohort studies. Opportunities for literature reviews are also available.

Department/Division: Dermatology
Faculty Name: Dr. Sima Rozati
Research Topic(s): Translational research in cutaneous lymphoma, oncodermatology

Department/Division: Dermatology
Faculty Name: Dr. Inbal Sander
Research Topic(s): Rheumatologic dermatology diseases, dermapathology

Department/Division: Dermatology
Faculty Name: Dr. Jeffrey Scott
Research Topic(s): Dermatoepidemiology; Dermatologic Surgery; Skin Cancer

Department/Division: Dermatology
Faculty Name: Dr. Daren Simkin
Research Topic(s): History of Dermatology

Department/Division: Dermatology

Faculty Name: Dr. Janis Taube

Research Topic(s): Melanoma; Dermatopathology, image analysis

Department/Division: Dermatology

Faculty Name: Dr. Joy Wan

Research Topic(s): Epidemiologic and clinical research investigations focused on pediatric dermatology; Atopic Dermatitis; Psychosocial and life impact of chronic skin disease

Department/Division: Emergency Medicine

Faculty Name: Christina Catlett, M.D.

Research Topic(s): Health system emergency preparedness and response; disaster education and training; expedition medicine

Department/Division: Emergency Medicine

Faculty Name: Arjun Chanmugam, M.D.

Research Topic(s): Psychiatric Emergencies

Department/Division: Emergency Medicine

Faculty Name: Bhakti Hansoti, M.D.

Research Topic(s): International Emergency Medicine Research

Department/Division: Emergency Medicine

Faculty Name: Yu-Hsiang Hsieh, M.Sc., Ph.D.

Research Topic(s): Infectious diseases epidemiology in ED settings

Department/Division: Emergency Medicine

Faculty Name: Edbert Hsu, M.D., M.P.H.

Research Topic(s): Disaster preparedness and disaster training; pharmaceutical preparedness

Department/Division: Emergency Medicine

Faculty Name: Julianna Jung, M.D., M.Ed.

Research Topic(s): Simulation in medical education

Department/Division: Emergency Medicine

Faculty Name: Gabor Kelen, M.D.

Research Topic(s): Research methodology and design; HIV and infectious disease prevalence; health services; acute care outcomes; disaster medicine

Department/Division: Emergency Medicine

Faculty Name: Scott Levin, Ph.D.

Research Topic(s): Systems engineering in healthcare; research design and methods; patient safety; health services

Department/Division: Emergency Medicine
Faculty Name: Matthew Levy, D.O. M.Sc.
Research Topic(s): Emergency Medical Services Research

Department/Division: Emergency Medicine
Faculty Name: Michael Millin, M.D., M.P.H.
Research Topic(s): EMS systems development; out-of-hospital cardiovascular resuscitation; wilderness medicine; emergency preparedness

Department/Division: Emergency Medicine
Faculty Name: Junaid Razzak, M.D.
Research Topic(s): International Emergency Medicine Research

Department/Division: Emergency Medicine
Faculty Name: Richard Rothman, M.D., Ph.D.
Research Topic(s): Complications of drug abuse; health services research; infectious diseases and rapid diagnostics

Department/Division: Emergency Medicine
Faculty Name: Nelson Tang, M.D.
Research Topic(s): Emergency Medical Services; operational emergency medicine; tactical medicine; law enforcement medical support; special event medical preparedness

Department/Division: Genetic Medicine
Faculty Name: Dr. Hind Alsharhan
Research Topic(s): metabolic disease

Department/Division: Genetic Medicine
Faculty Name: Dr. H Dietz
Research Topic(s): Elucidation of the pathogenesis and treatment strategies for vascular aneurysm; connective tissue disorders; fibrosis

Department/Division: Genetic Medicine
Faculty Name: Dr. J Fahrner
Research Topic(s): Abnormal growth caused by aberrations in the epigenetic machinery

Department/Division: Genetic Medicine
Faculty Name: Dr. A Hamosh
Research Topic(s): Integration of genetic and genomic information into the electronic health record; OMIM; Understanding the molecular basis of Mendelian disorders

Department/Division: Genetic Medicine
Faculty Name: Dr. Xiao Peng

Research Topic(s): immunogenetics

Department/Division: Genetic Medicine

Faculty Name: Dr. Sonya Rasmussen

Research Topic(s): geongenital abnormalities

Department/Division: Genetic Medicine

Faculty Name: Dr. G Raymond

Research Topic(s): Neurogenetics, Lysosomal and peroxisomal diseases

Department/Division: Genetic Medicine

Faculty Name: Dr. N Sobreira

Research Topic(s): Mendelian disease discovery; Clinical sequencing informatics; PhenodB

Department/Division: Genetic Medicine

Faculty Name: Dr. D.L. Valle

Research Topic(s): Inborn errors of amino acid metabolism; molecular genetics

Department/Division: Genetic Medicine

Faculty Name: Dr. H Vernon

Research Topic(s): Biochemical genetics

Department/Division: Genetic Medicine

Faculty Name: Dr. T Wang

Research Topic(s): X-linked intellectual disability; Brain development and disorders in cognitive function and behaviors

Department/Division: Gynecology and Obstetrics

Faculty Name: Dr. Abimbola Aina

Research Topic(s): Maternal and Fetal Medicine

Department/Division: Gynecology and Obstetrics

Faculty Name: Dr. Jean Anderson

Research Topic(s): Obstetrics/Gynecology Infectious Diseases; HIV

Department/Division: Gynecology and Obstetrics

Faculty Name: Dr. Cynthia Argani

Research Topic(s): Maternal and Fetal Medicine

Department/Division: Gynecology and Obstetrics

Faculty Name: Dr. Jessica Bienstock

Research Topic(s): Maternal-Fetal Medicine; Research in educational techniques

Department/Division: Gynecology and Obstetrics

Faculty Name: Dr. Karin Blakemore

Research Topic(s): Maternal and Fetal Medicine; Prenatal Genetics

Department/Division: Gynecology and Obstetrics

Faculty Name: Dr. Mostafa Borahay

Research Topic(s): Uterine Fibroid; Minimally Invasive Gynecologic Surgery

Department/Division: Gynecology and Obstetrics

Faculty Name: Dr. Irina Burd

Research Topic(s): Maternal and Fetal Medicine

Department/Division: Gynecology and Obstetrics

Faculty Name: Dr. Anne Burke

Research Topic(s): Contraception; Family Planning

Department/Division: Gynecology and Obstetrics

Faculty Name: Dr. Grace Chen

Research Topic(s): Obstetric Fistula; Surgical Education; Surgical Skills assessment

Department/Division: Gynecology and Obstetrics

Faculty Name: Dr. Betty Chou

Research Topic(s): Cervical Dysplasia; HPV Vaccine; Medical Education

Department/Division: Gynecology and Obstetrics

Faculty Name: Dr. Jenell S. Coleman

Research Topic(s): Gynecology

Department/Division: Gynecology and Obstetrics

Faculty Name: Dr. Amanda Fader

Research Topic(s): Gyn Oncology

Department/Division: Gynecology and Obstetrics

Faculty Name: Dr. Jairo Garcia

Research Topic(s): Reproductive Endocrinology; In vitro fertilization

Department/Division: Gynecology and Obstetrics

Faculty Name: Dr. Ernest Graham

Research Topic(s): Maternal and Fetal Medicine

Department/Division: Gynecology and Obstetrics

Faculty Name: Dr. Victoria Handa

Research Topic(s): Urogynecology

Department/Division: Gynecology and Obstetrics

Faculty Name: Dr. Janice Henderson
Research Topic(s): Maternal and Fetal Medicine

Department/Division: Gynecology and Obstetrics
Faculty Name: Dr. Nancy Hueppchen
Research Topic(s): Maternal and Fetal Medicine; Medical Education

Department/Division: Gynecology and Obstetrics
Faculty Name: Dr. Shari Lawson
Research Topic(s): Ambulatory Practice; Medical Student/Resident Education

Department/Division: Gynecology and Obstetrics
Faculty Name: Dr. Lorraine Milio
Research Topic(s): Maternal and Fetal Medicine

Department/Division: Gynecology and Obstetrics
Faculty Name: Dr. Donna Neale
Research Topic(s): Maternal and Fetal Medicine

Department/Division: Gynecology and Obstetrics
Faculty Name: Dr. Silka Patel
Research Topic(s): General Obstetrics and gynecology; Medical Education

Department/Division: Gynecology and Obstetrics
Faculty Name: Dr. Andrew Satin
Research Topic(s): Medical Simulation

Department/Division: Gynecology and Obstetrics
Faculty Name: Dr. Wen Shen
Research Topic(s): General Gynecology; Menopause; Cervical Dysplasia; Abnormal Uterine Bleeding

Department/Division: Gynecology and Obstetrics
Faculty Name: Dr. Cornelia Trimble
Research Topic(s): Gynecologic Pathology; Special clinical-pathologic projects; Therapeutic HPV Vaccines; Cervical Dysplasia

Department/Division: Gynecology and Obstetrics
Faculty Name: Dr. Frank Witter
Research Topic(s): Maternal and Fetal Medicine

Department/Division: Gynecology and Obstetrics
Faculty Name: Dr. Howard Zacur
Research Topic(s): Reproductive Endocrinology

Department/Division: History of Medicine

Faculty Name: Dr. Nathaniel Comfort

Research Topic(s): History of biology, especially genetics; Molecular biology and biomedicine; History of recent science; Oral history; Genomics

Department/Division: History of Medicine

Faculty Name: Dr. Mary Fissell

Research Topic(s): Anglo-American health care and popular medicine, 17th and 18th centuries; Early modern gender, sex, and the body

Department/Division: History of Medicine

Faculty Name: Dr. Jeremy A Greene

Research Topic(s): History of disease; History of therapeutics; Medical technology; Biomedical communications; Medical anthropology

Department/Division: History of Medicine

Faculty Name: Dr. Graham Mooney

Research Topic(s): History of public health; Infectious diseases; Historical geographies of health and medicine; Epidemiology and demography

Department/Division: History of Medicine

Faculty Name: Dr. Elizabeth O'Brien

Research Topic(s): Colonial and post-colonial Mexico and Latin America; history of obstetric surgery; fertility control and sterilization; race and indigeneity in medicine

Department/Division: History of Medicine

Faculty Name: Dr. Ahmed Ragab

Research Topic(s): Medieval and early modern medicine, Islamic medicine, history of race and medicine, colonial and postcolonial medicine and global health, medicine and religion, history of gender, sexuality, and medicine

Department/Division: History of Medicine

Faculty Name: Dr. Alexandre White

Research Topic(s): History of Global Health; Infectious disease control; Epidemic responses; Colonial medicine and postcolonial historical approaches

Department/Division: Medicine - Cardiology

Faculty Name: Dr. S. Achuff

Research Topic(s): Clinical cardiology

Department/Division: Medicine - Cardiology

Faculty Name: Dr. A Arbab-Zadeh

Research Topic(s): Coronary circulation and disease; coronary/cardiac imaging; coronary risk prediction

Department/Division: Medicine - Cardiology

Faculty Name: Dr. H. Ashikaga

Research Topic(s): Cardiac arrhythmias; cardiology; electrophysiology

Department/Division: Medicine - Cardiology

Faculty Name: Dr. T. Aversano

Research Topic(s): Arrhythmia; cardiology; cardiomyopathy; cardiovascular disease; clinical cardiology; coronary artery disease; general cardiology; heart disease; heart failure; hypertension

Department/Division: Medicine - Cardiology

Faculty Name: Dr. S. Bansal

Research Topic(s): Cardiac arrhythmias; cardiology; electrophysiology

Department/Division: Medicine - Cardiology

Faculty Name: Dr. R. Berger

Research Topic(s): Cardiac electrophysiology; hemodynamics of cardiac pacing; autonomic influences on cardiovascular system

Department/Division: Medicine - Cardiology

Faculty Name: Dr. S. Berkowitz

Research Topic(s): Cardiology

Department/Division: Medicine - Cardiology

Faculty Name: Dr. R. Bhatia

Research Topic(s): Cardiology

Department/Division: Medicine - Cardiology

Faculty Name: Dr. M. Blaha

Research Topic(s): Cardiology; preventative cardiology

Department/Division: Medicine - Cardiology

Faculty Name: Dr. R. Blumenthal

Research Topic(s): Atherosclerosis progression and regression; medical and interventional management of coronary artery disease

Department/Division: Medicine - Cardiology

Faculty Name: Dr. M. Brennan

Research Topic(s): Cardiology; cardiovascular disease; clinical cardiology; echocardiography; heart failure; hypertension; valvular disease

Department/Division: Medicine - Cardiology

Faculty Name: Dr. J.A. Brinker

Research Topic(s): Angiography; angioplasty; myocardial function

Department/Division: Medicine - Cardiology
Faculty Name: Dr. H. Calkins
Research Topic(s): Clinical and cellular electrophysiology

Department/Division: Medicine - Cardiology
Faculty Name: Dr. A. Cammarato
Research Topic(s): Basic investigation in molecular contractile physiology

Department/Division: Medicine - Cardiology
Faculty Name: Dr. M. Chacko
Research Topic(s): Coronary artery disease, peripheral arterial disease; carotid artery disease valvular heart disease; structural heart disease; acute coronary syndromes; stents; cardiac critical care

Department/Division: Medicine - Cardiology
Faculty Name: Dr. N. Chandra-Strobos
Research Topic(s): Cardiopulmonary resuscitation

Department/Division: Medicine - Cardiology
Faculty Name: Dr. O. Cingolani
Research Topic(s): Heart failure; hypertension; cardiac remodeling and hypertrophy

Department/Division: Medicine - Cardiology
Faculty Name: Dr. M. Corretti
Research Topic(s): Ultrasound assessment of endothelial function/vascular physiology; echocardiography; valve disease

Department/Division: Medicine - Cardiology
Faculty Name: Dr. S. Desai
Research Topic(s): Cardiology; cardiovascular disease; heart disease

Department/Division: Medicine - Cardiology
Faculty Name: Dr. R. George
Research Topic(s): Cardiovascular CT; nuclear cardiology; myocardial perfusion imaging; non-invasive imaging of coronary atherosclerosis; subclinical atherosclerosis

Department/Division: Medicine - Cardiology
Faculty Name: Dr. G Gerstenblith
Research Topic(s): Age changes in cardiac function

Department/Division: Medicine - Cardiology
Faculty Name: Dr. S.H. Gottlieb
Research Topic(s): Ischemic heart disease; diabetes and heart disease

Department/Division: Medicine - Cardiology

Faculty Name: Dr. L Griffith
Research Topic(s): Clinical cardiology

Department/Division: Medicine - Cardiology
Faculty Name: Dr. T. Hailu
Research Topic(s): Cardiology; echocardiography and nuclear cardiology; heart disease; nuclear stress tests; transesophageal echocardiography

Department/Division: Medicine - Cardiology
Faculty Name: Dr. H. R. Halperin
Research Topic(s): Biomedical engineering and biomechanics; electrophysiology

Department/Division: Medicine - Cardiology
Faculty Name: Dr. A. Hays
Research Topic(s): Cardiac MR; proton spectroscopy; coronary endothelial function; diabetic cardiomyopathy; echocardiography

Department/Division: Medicine - Cardiology
Faculty Name: Dr. C. Hwang
Research Topic(s): Acute coronary care; percutaneous coronary intervention; percutaneous treatment of valvular stenosis; pericardiocentesis; peripheral angiography; trans-radial intervention

Department/Division: Medicine - Cardiology
Faculty Name: Dr. P. Johnston
Research Topic(s): Stem cell therapy; interventional cardiology; coronary disease

Department/Division: Medicine - Cardiology
Faculty Name: Dr. S. Jones
Research Topic(s): Lipids and cardiovascular risk stratification

Department/Division: Medicine - Cardiology
Faculty Name: Dr. D. Judge
Research Topic(s): Pathogenesis of Marfan Syndrome; identification of genes responsible for familial cardiomyopathies

Department/Division: Medicine - Cardiology
Faculty Name: Dr. E. Kasper
Research Topic(s): Cardiomyopathy; Heart Transplantation; Clinical Cardiology

Department/Division: Medicine - Cardiology
Faculty Name: Dr. D.A. Kass
Research Topic(s): Hemodynamics; left ventricular function

Department/Division: Medicine - Cardiology

Faculty Name: Dr. M. Kelemen

Research Topic(s): Exercise

Department/Division: Medicine - Cardiology

Faculty Name: Dr. A. Kolandaivelu

Research Topic(s): MR imaging of intermingled arrhythmic and non-arrhythmic heartbeats

Department/Division: Medicine - Cardiology

Faculty Name: Dr. B Kral

Research Topic(s): Genetic and biological mechanisms of premature coronary artery disease; noninvasive imaging of coronary atherosclerosis; stress myocardial perfusion imaging; cardiovascular and genetic epidemiology; association of mental stress and cardiovascular disease

Department/Division: Medicine - Cardiology

Faculty Name: Dr. C. Kwon

Research Topic(s): Basic Investigation in Cardiovascular Development

Department/Division: Medicine - Cardiology

Faculty Name: Dr. E.G. Lakatta

Research Topic(s): Age and the cardiovascular system

Department/Division: Medicine - Cardiology

Faculty Name: Dr. J. Lima

Research Topic(s): Left ventricular remodeling; mitral valve disease; transesophageal echocardiography; MRI; CT

Department/Division: Medicine - Cardiology

Faculty Name: Dr. J. Marine

Research Topic(s): Electrophysiology

Department/Division: Medicine - Cardiology

Faculty Name: Dr. S. Mayer

Research Topic(s): Echocardiography

Department/Division: Medicine - Cardiology

Faculty Name: Dr. E. Michos

Research Topic(s): Preventive cardiology; heart disease in women; subclinical atherosclerosis imaging; vitamin D deficiency and cardiovascular risk

Department/Division: Medicine - Cardiology

Faculty Name: Dr. J. Miller

Research Topic(s): Acute coronary syndromes; antiplatelet and antithrombotic therapy; microvascular obstruction; multidetector computed tomography angiography; novel therapies for myocardial

infarction; angiogenesis; peripheral vascular disease; novel therapies for peripheral vascular disease; claudication; angiogenesis

Department/Division: Medicine - Cardiology

Faculty Name: Dr. M. Mukherjee

Research Topic(s): Acute coronary care; coronary artery disease; general cardiology; cardiovascular diseases; echocardiography; heart disease prevention and treatment in women, hypertension, non-invasive imaging; pulmonary hypertension

Department/Division: Medicine - Cardiology

Faculty Name: Dr. S. Nazarian

Research Topic(s): Clinical electrophysiology

Department/Division: Medicine - Cardiology

Faculty Name: Dr. C. Ndumele

Research Topic(s): Acute coronary care; coronary artery disease; coronary care unit; dyslipidemia; high cholesterol; ischemic heart disease; preventive cardiology; risk factor modification

Department/Division: Medicine - Cardiology

Faculty Name: Dr. B. O'Rourke

Research Topic(s): Cellular physiology; mitochondrial metabolism

Department/Division: Medicine - Cardiology

Faculty Name: Dr. P. Ouyang

Research Topic(s): Cardiovascular pharmacology

Department/Division: Medicine - Cardiology

Faculty Name: Dr. J. Porterfield

Research Topic(s): General cardiology; echocardiography

Department/Division: Medicine - Cardiology

Faculty Name: Dr. W. Post

Research Topic(s): Echocardiography and hypertension

Department/Division: Medicine - Cardiology

Faculty Name: Dr. E Ratchford

Research Topic(s): Claudication/peripheral arterial disease; carotid stenosis

Department/Division: Medicine - Cardiology

Faculty Name: Dr. J. Resar

Research Topic(s): Interventional cardiology

Department/Division: Medicine - Cardiology

Faculty Name: Dr. J. Rickard

Research Topic(s): Electrophysiology

Department/Division: Medicine - Cardiology

Faculty Name: Dr. R. Rouf

Research Topic(s): Heart failure

Department/Division: Medicine - Cardiology

Faculty Name: Dr. S. Russell

Research Topic(s): Heart failure; cardiac transplantation

Department/Division: Medicine - Cardiology

Faculty Name: Dr. M. Salameh

Research Topic(s): Vascular disease and diagnostics

Department/Division: Medicine - Cardiology

Faculty Name: Dr. S. Schulman

Research Topic(s): Clinical trials; hypertension

Department/Division: Medicine - Cardiology

Faculty Name: Dr. E. P. Shapiro

Research Topic(s): Echocardiography

Department/Division: Medicine - Cardiology

Faculty Name: Dr. H. Silber

Research Topic(s): Acute coronary care; MRI

Department/Division: Medicine - Cardiology

Faculty Name: Dr. S. Sinha

Research Topic(s): Clinical Electrophysiology

Department/Division: Medicine - Cardiology

Faculty Name: Dr. D. Spragg

Research Topic(s): Clinical electrophysiology

Department/Division: Medicine - Cardiology

Faculty Name: Dr. K. Stewart

Research Topic(s): Exercise training for cardiovascular disease and heart failure; exercise training for diabetes and hypertension; weight loss effects through diet and exercise on body composition and CV health; exercise for cancer patients; increasing physical activity in the community

Department/Division: Medicine - Cardiology

Faculty Name: Dr. N. Strahan

Research Topic(s): Echocardiography

Department/Division: Medicine - Cardiology
Faculty Name: Dr. H. Tandri
Research Topic(s): Clinical electrophysiology

Department/Division: Medicine - Cardiology
Faculty Name: Dr. J. Tanio
Research Topic(s): Clinical cardiology

Department/Division: Medicine - Cardiology
Faculty Name: Dr. R. Tedford
Research Topic(s): Cardiac transplant; cardiology; cardiomyopathy; congestive heart failure; endomyocardial biopsy; heart failure; right heart catheterization; mechanical circulatory support

Department/Division: Medicine - Cardiology
Faculty Name: Dr. D. Thiemann
Research Topic(s): Information systems; angioplasty

Department/Division: Medicine - Cardiology
Faculty Name: Dr. G. Tomaselli
Research Topic(s): Cellular electrophysiology

Department/Division: Medicine - Cardiology
Faculty Name: Dr. T. A. Traill
Research Topic(s): Regional cardiac function; congenital heart disease

Department/Division: Medicine - Cardiology
Faculty Name: Dr. C. Valdiviezo-Schlomp
Research Topic(s): Cardiology; cardiovascular disease; cardiovascular disease in women; heart disease; heart disease prevention and treatment in women; non-invasive imaging; preventive cardiology

Department/Division: Medicine - Cardiology
Faculty Name: Dr. G. Walford
Research Topic(s): Cardiology; cardiovascular disease; heart disease

Department/Division: Medicine - Cardiology
Faculty Name: Dr. J. Weiss
Research Topic(s): Ultrasound imaging; ventricular function

Department/Division: Medicine - Cardiology
Faculty Name: Dr. R. Weiss
Research Topic(s): Cardiac metabolism; NMR

Department/Division: Medicine - Cardiology
Faculty Name: Dr. M. Williams

Research Topic(s): Platelets and acute coronary syndromes

Department/Division: Medicine - Cardiology

Faculty Name: Dr. S. Williams

Research Topic(s): Cardiology; cardiovascular disease; heart disease

Department/Division: Medicine - Cardiology

Faculty Name: Dr. I. Wittstein

Research Topic(s): Heart failure; clinical trials

Department/Division: Medicine - Cardiology

Faculty Name: Dr. K. Wu

Research Topic(s): Echocardiography; MRI

Department/Division: Medicine - Cardiology

Faculty Name: Dr. S. Zakaria

Research Topic(s): Cardiac disease; cardiology; cardiovascular disease; cardiovascular medicine; critical care medicine; heart disease

Department/Division: Medicine - Cardiology

Faculty Name: Dr. R. Ziegelstein

Research Topic(s): Clinical cardiology; depression and its effects on cardiac diseases

Department/Division: Medicine - Clinical Pharmacology

Faculty Name: Dr. K. Dooley

Research Topic(s): Anti-tuberculosis drugs; co-treatment of HIV and tuberculosis

Department/Division: Medicine - Clinical Pharmacology

Faculty Name: Dr. C. Flexner

Research Topic(s): Anti-HIV drugs; drug metabolism and transport; mechanisms of drug action and toxicity

Department/Division: Medicine - Clinical Pharmacology

Faculty Name: Dr. Craig Hendrix

Research Topic(s): Microbicide prophylaxis

Department/Division: Medicine - Clinical Pharmacology

Faculty Name: Dr. B. Petty

Research Topic(s): Clinical pharmacology; Phase I, II studies

Department/Division: Medicine - Clinical Pharmacology

Faculty Name: Dr. T. Shapiro

Research Topic(s): Antiparasitic chemotherapy

Department/Division: Medicine - Endocrinology

Faculty Name: Dr. D. Ball

Research Topic(s): Medullary thyroid carcinoma; multiple endocrine neoplasia; regulation of calcitonin gene expression

Department/Division: Medicine - Endocrinology

Faculty Name: Dr. T. Brown

Research Topic(s): Endocrine problems in HIV; diabetes mellitus; osteoporosis; hypogonadism

Department/Division: Medicine - Endocrinology

Faculty Name: Dr. S. Jan De Beur

Research Topic(s): Metabolic bone disorders

Department/Division: Medicine - Endocrinology

Faculty Name: Dr. A. Dobs

Research Topic(s): Hyperlipidemia and diabetes mellitus; gonadal disorders

Department/Division: Medicine - Endocrinology

Faculty Name: Dr. T. Donner

Research Topic(s): Diabetes mellitus

Department/Division: Medicine - Endocrinology

Faculty Name: Dr. S. Golden

Research Topic(s): Cardiology and diabetes

Department/Division: Medicine - Endocrinology

Faculty Name: Dr. R. Kalyani

Research Topic(s): Diabetes mellitus

Department/Division: Medicine - Endocrinology

Faculty Name: Dr. P. W. Ladenson

Research Topic(s): Thyroid disorders; thyroid hormone therapy; endocrine health economic analysis

Department/Division: Medicine - Endocrinology

Faculty Name: Dr. J. Mammen

Research Topic(s): Thyroid disorders

Department/Division: Medicine - Endocrinology

Faculty Name: Dr. N. Mathioudakis

Research Topic(s): Diabetes mellitus

Department/Division: Medicine - Endocrinology

Faculty Name: Dr. K. Moseley

Research Topic(s): Metabolic bone disorders

Department/Division: Medicine - Endocrinology
Faculty Name: Dr. R. Salvatori
Research Topic(s): Neuroendocrine and pituitary disorders

Department/Division: Medicine - Endocrinology
Faculty Name: Dr. D. Sellmeyer
Research Topic(s): Metabolic bone disorders

Department/Division: Medicine - Endocrinology
Faculty Name: Dr. G.S. Wand
Research Topic(s): Neuroendocrine and pituitary disease; cellular mechanisms of addiction

Department/Division: Medicine - Endocrinology
Faculty Name: Dr. M. Xing
Research Topic(s): Thyroid cancer; pituitary disorders

Department/Division: Medicine - Gastroenterology
Faculty Name: Dr. M. Canto
Research Topic(s): Therapeutic endoscopy; endoscopic ultrasonography, Barrett's esophagus; outcomes research in endoscopy

Department/Division: Medicine - Gastroenterology
Faculty Name: Dr. M. Donowitz
Research Topic(s): Diarrheal diseases; inflammatory bowel disease

Department/Division: Medicine - Gastroenterology
Faculty Name: Dr. Michael Goggins
Research Topic(s): Molecular biology of pancreatic cancer

Department/Division: Medicine - Gastroenterology
Faculty Name: Dr. J. Hamilton
Research Topic(s): Acute and chronic viral, alcoholic, nonalcoholic, autoimmune, cholestatic, and drug-induced liver disease

Department/Division: Medicine - Gastroenterology
Faculty Name: Dr. M. Khashab
Research Topic(s): Pancreatitis; pancreatic cyst; endoscopic ultrasound; ERCP

Department/Division: Medicine - Gastroenterology
Faculty Name: Dr. A. Lennon
Research Topic(s): Pancreatitis; pancreatic cyst; endoscopic ultrasound; ERCP

Department/Division: Medicine - Gastroenterology

Faculty Name: Dr. S. Meltzer

Research Topic(s): Gastrointestinal cancer and precancer biomarker discovery; development and validation; genomics, epigenomics, and bioinformatics; early detection of cancer; outcomes research in cancer and precancer

Department/Division: Medicine - Gastroenterology

Faculty Name: Dr. G. Mullin

Research Topic(s): The role of early intervention of nutritional support in the hospitalized setting to improve outcomes

Department/Division: Medicine - Gastroenterology

Faculty Name: Dr. R. Sarker

Research Topic(s): Signaling pathway of human intestinal Na⁺/H⁺ exchanger 2 (NHE3) regulation; transactivation of NHE3; knock-down NHE3 regulatory proteins by shRNA

Department/Division: Medicine - Gastroenterology

Faculty Name: Dr. V. Singh

Research Topic(s): Acute and chronic pancreatitis; therapeutic endoscopy; resource utilization and cost effectiveness in pancreaticobiliary disease

Department/Division: Medicine - Gastroenterology

Faculty Name: Dr. C.M. Tse

Research Topic(s): Function and regulation of sodium/hydrogen exchange-2 isoform; molecular biology of nucleoside transporters; roles in nutrient and drug absorption

Department/Division: Medicine - General Internal Medicine

Faculty Name: Dr. A. Alvanzo

Research Topic(s): Substance use disorders and posttraumatic stress with emphasis on relationship between physical, sexual, and/or emotional abuse and substance abuse in women; race/ethnicity and sex differences in substance use disorders; screening and brief interventions for substance misuse

Department/Division: Medicine - General Internal Medicine

Faculty Name: Dr. L Appel

Research Topic(s): Prevention of blood pressure-related cardiovascular and kidney diseases through pharmacologic and non-pharmacologic approaches, often nutrition-based

Department/Division: Medicine - General Internal Medicine

Faculty Name: Dr. B Ashar

Research Topic(s): Dietary supplements; disease prevention; complementary and alternative medicine; physician conflicts of interest; anemia; medical education

Department/Division: Medicine - General Internal Medicine

Faculty Name: Dr. E. Bass

Research Topic(s): Evidence-based medicine; medical and surgical outcomes research; cost-effectiveness; community health partnerships; medical education and curriculum development

Department/Division: Medicine - General Internal Medicine

Faculty Name: Dr. M. Beach

Research Topic(s): Physician-patient relationships and communication, respect, bioethics, health care quality for vulnerable populations; HIV; sickle-cell disease.

Department/Division: Medicine - General Internal Medicine

Faculty Name: Dr. D. M. Becker

Research Topic(s): Genetics/epidemiology of premature cardiovascular disease (CVD); molecular and physiologic aspects of CVD risk; community-based CVD prevention; social/behavioral science; health disparities

Department/Division: Medicine - General Internal Medicine

Faculty Name: Dr. W. Bennett

Research Topic(s): Women's health; diabetes and obesity

Department/Division: Medicine - General Internal Medicine

Faculty Name: Dr. Z. Berger

Research Topic(s): Patient-provider communication; bioethics; clinical epidemiology; the primary care physician's role in cancer control

Department/Division: Medicine - General Internal Medicine

Faculty Name: Dr. G. Berkenblit

Research Topic(s): Improving resident training in HIV outpatient care; design and evaluation of an internet-based curriculum

Department/Division: Medicine - General Internal Medicine

Faculty Name: Dr. R. Boonyasai

Research Topic(s): Care coordination at hospital discharge; teamwork; quality improvement for chronic disease; hypertension

Department/Division: Medicine - General Internal Medicine

Faculty Name: Dr. L. Boulware

Research Topic(s): Quality and access to care in chronic kidney disease; organ donation; racial and ethnic disparities

Department/Division: Medicine - General Internal Medicine

Faculty Name: Dr. D. Brotman

Research Topic(s): Hospital medicine; perioperative medicine; hemostasis and thrombosis; the physiological stress response

Department/Division: Medicine - General Internal Medicine

Faculty Name: Dr. R. Brown

Research Topic(s): Obesity

Department/Division: Medicine - General Internal Medicine

Faculty Name: Dr. G. Chander

Research Topic(s): Clinical epidemiology of HIV/AIDS and hepatitis C

Department/Division: Medicine - General Internal Medicine

Faculty Name: Dr. J. Clark

Research Topic(s): Obesity, diabetes, and related conditions including nonalcoholic fatty liver disease (NAFLD)

Department/Division: Medicine - General Internal Medicine

Faculty Name: Dr. S. Clever

Research Topic(s): Patient-physician communication; medical education

Department/Division: Medicine - General Internal Medicine

Faculty Name: Dr. J. Cofrancesco

Research Topic(s): Medical education; HIV care and antiretroviral management; HIV lipodystrophy and metabolic complications

Department/Division: Medicine - General Internal Medicine

Faculty Name: Dr. L. Cooper

Research Topic(s): Patient-physician relationship and communication; patient-centered care; race/ethnic disparities

Department/Division: Medicine - General Internal Medicine

Faculty Name: Ms. A. Dalcin

Research Topic(s): Obesity; prevention and treatment of cardiovascular disease; health disparities

Department/Division: Medicine - General Internal Medicine

Faculty Name: Dr. G. Daumit

Research Topic(s): Medical comorbidity; access to and quality of primary medical care for individuals with severe and persistent medical illness; health disparities

Department/Division: Medicine - General Internal Medicine

Faculty Name: Dr. L. Feldman

Research Topic(s): Resident education; evidence-based medicine; consult medicine

Department/Division: Medicine - General Internal Medicine

Faculty Name: Dr. A. Fitzgerald

Research Topic(s): Medical education; leadership skills training; primary care; Johns Hopkins Medicine International patient care; health care disparities education

Department/Division: Medicine - General Internal Medicine

Faculty Name: Dr. L. Florea

Research Topic(s): Algorithms and tools for cDNA and genomic sequence alignment; comparative and evolutionary genomics; gene annotation; alternative splicing and its regulation; miRNA genomics; peptide-based vaccine design

Department/Division: Medicine - General Internal Medicine

Faculty Name: Dr. J Flynn

Research Topic(s): Arthritis; ambulatory education and the delivery of primary care in an academic setting

Department/Division: Medicine - General Internal Medicine

Faculty Name: Dr. D. Ford

Research Topic(s): Primary care research; epidemiology and treatment of depression; internet health applications; physician health

Department/Division: Medicine - General Internal Medicine

Faculty Name: Dr. G. Geller

Research Topic(s): Communication and decision-making; ethics and professionalism; genetics; women's health; medical education; complementary and alternative medicine

Department/Division: Medicine - General Internal Medicine

Faculty Name: Dr. M. Goyal

Research Topic(s): Effects of meditation on chronic pain and symptoms; stress and overall health; low-cost means to improve health in rural India; ethics

Department/Division: Medicine - General Internal Medicine

Faculty Name: Dr. R. Greer

Research Topic(s): Chronic kidney disease; primary care; ethnic/race disparities

Department/Division: Medicine - General Internal Medicine

Faculty Name: Dr. K. Gudzone

Research Topic(s): Obesity; patient-physician communication; social networks

Department/Division: Medicine - General Internal Medicine

Faculty Name: Dr. C. Herzke

Research Topic(s): Resident and student education; infectious diseases-notably infection control; quality improvement

Department/Division: Medicine - General Internal Medicine

Faculty Name: Dr. F. Hill-Briggs

Research Topic(s): Chronic disease self-management; disability; behavioral intervention trials; health disparities; functional impairment and disability

Department/Division: Medicine - General Internal Medicine

Faculty Name: Dr. M. Hughes

Research Topic(s): Clinical bioethics; research ethics; palliative care; philosophy of medicine; ambulatory care

Department/Division: Medicine - General Internal Medicine

Faculty Name: Dr. M. Lazo

Research Topic(s): Nonalcoholic fatty liver disease; diabetes; epidemiologic studies

Department/Division: Medicine - General Internal Medicine

Faculty Name: Dr. D. Levine

Research Topic(s): Community-based prevention of cardiovascular disease; behavioral aspects of prevention

Department/Division: Medicine - General Internal Medicine

Faculty Name: Dr. H. Levy

Research Topic(s): General internal medicine; genetics

Department/Division: Medicine - General Internal Medicine

Faculty Name: Mr. D. Lichtman

Research Topic(s): Medical procedures; hospitalist medicine

Department/Division: Medicine - General Internal Medicine

Faculty Name: Dr. S. Marinopoulos

Research Topic(s): Evidence-based medicine; health care administration

Department/Division: Medicine - General Internal Medicine

Faculty Name: Dr. M. Markowski

Research Topic(s): Anti-inflammatory agents and cancer incidence; prostate cancer; men's health; hospitalist medicine

Department/Division: Medicine - General Internal Medicine

Faculty Name: Dr. N. Maruthur

Research Topic(s): Primary care; individualized medicine for the prevention and treatment of type 2 diabetes and obesity; pharmacogenomics of type 2 diabetes; comparative effectiveness

Department/Division: Medicine - General Internal Medicine

Faculty Name: Dr. H. Michtalk

Research Topic(s): Quality improvement and systems management; patient safety issues especially as related to patient census; transitions of care from acute to primary care

Department/Division: Medicine - General Internal Medicine

Faculty Name: Dr. E. Miller

Research Topic(s): Hypertension; clinical trials; non-pharmacologic therapies; antioxidants

Department/Division: Medicine - General Internal Medicine

Faculty Name: Dr. R. Miller

Research Topic(s): Women's health; physician practice issues; medical education

Department/Division: Medicine - General Internal Medicine

Faculty Name: Dr. A. Monroe

Research Topic(s): Cardiovascular disease risk reduction in HIV-infected patients; optimizing care of HIV-infected patients with medical comorbidities

Department/Division: Medicine - General Internal Medicine

Faculty Name: Dr. R.D. Moore

Research Topic(s): Pharmacoepidemiology; outcomes research in HIV treatment; epidemiology of substance abuse and alcoholism

Department/Division: Medicine - General Internal Medicine

Faculty Name: Dr. T. Niessen

Research Topic(s): Medical education; patient safety; quality improvement

Department/Division: Medicine - General Internal Medicine

Faculty Name: Dr. A. Pahwa

Research Topic(s): Hospitalist medicine

Department/Division: Medicine - General Internal Medicine

Faculty Name: Dr. K. Peairs

Research Topic(s): Cancer survivorship and screening; medical education

Department/Division: Medicine - General Internal Medicine

Faculty Name: Dr. M. Perlea

Research Topic(s): Computational gene finding; splice site prediction; sequence motif finding

Department/Division: Medicine - General Internal Medicine

Faculty Name: Dr. G. Prokopowicz

Research Topic(s): General internal medicine; medical informatics; hypertension

Department/Division: Medicine - General Internal Medicine

Faculty Name: Dr. R. Qayyum

Research Topic(s): Platelet biology; hemostasis and thrombosis; pharmacogenomics of anti-platelet agents; genetic epidemiology; systematic reviews; meta-analysis

Department/Division: Medicine - General Internal Medicine

Faculty Name: Dr. P. Ranasinghe

Research Topic(s): Internal and preventive medicine; international health; health and wellness

Department/Division: Medicine - General Internal Medicine
Faculty Name: Dr. K. Robinson
Research Topic(s): Evidence-based health care; health informatics

Department/Division: Medicine - General Internal Medicine
Faculty Name: Dr. S. Salzberg
Research Topic(s): Genomics; bioinformatics; gene finding; genome assembly; genome technology

Department/Division: Medicine - General Internal Medicine
Faculty Name: Dr. J. Segal
Research Topic(s): Pharmacoepidemiology; comparative effectiveness research including evidence-based review; advanced methods for using observational data; evaluation of diagnostic tests; diabetes; venous thrombosis and blood disorders

Department/Division: Medicine - General Internal Medicine
Faculty Name: Dr. Z. Siddiqui
Research Topic(s): Clinical reasoning; preoperative medicine; international medicine

Department/Division: Medicine - General Internal Medicine
Faculty Name: Dr. S. Singh
Research Topic(s): Pharmacoepidemiology; drug safety; comparative effectiveness; health equality

Department/Division: Medicine - General Internal Medicine
Faculty Name: Dr. S. Sisson
Research Topic(s): Ambulatory medicine; medical education; community outreach

Department/Division: Medicine - General Internal Medicine
Faculty Name: Dr. C. Snyder
Research Topic(s): Quality of life for cancer patients undergoing treatment; coordination of care for cancer survivors; patient-reported outcomes assessment; quality of medical care; cancer outcomes and health services research

Department/Division: Medicine - General Internal Medicine
Faculty Name: Dr. R. Stewart
Research Topic(s): Medical education; preventive medicine; health outcomes; community outreach

Department/Division: Medicine - General Internal Medicine
Faculty Name: Dr. J. Sugarman
Research Topic(s): Philosophical and empirical research in biomedical ethics

Department/Division: Medicine - General Internal Medicine
Faculty Name: Ms. L. Swartz
Research Topic(s): Project management; multi-center randomized controlled trials

Department/Division: Medicine - General Internal Medicine

Faculty Name: Dr. D. Vaidya

Research Topic(s): Mechanisms of vascular dysfunction; assessment of cardiovascular risk factors

Department/Division: Medicine - General Internal Medicine

Faculty Name: Dr. N. Wang

Research Topic(s): Longitudinal data analysis; statistical and epidemiologic methods; randomized controlled trials; multicenter studies

Department/Division: Medicine - General Internal Medicine

Faculty Name: Dr. L.D. Wooster

Research Topic(s): Healthcare management; quality clinical outcomes; preventive care in pulmonary diseases; medical economics; medical education integrated into clinical practice

Department/Division: Medicine - General Internal Medicine

Faculty Name: Ms. L. Yanek

Research Topic(s): Cardiovascular disease in families and risk factor modification

Department/Division: Medicine - General Internal Medicine

Faculty Name: Dr. H. Yeh

Research Topic(s): Epidemiology; diabetes; obesity; cancer; lung functions

Department/Division: Medicine - General Internal Medicine

Faculty Name: Dr. J. Young

Research Topic(s): Genetic epidemiology; novel risk factors for CVD; hypertension; insulin resistance

Department/Division: Medicine - Genetic Medicine

Faculty Name: Dr. J Bodurtha

Research Topic(s): Genetic risk communication; Family history; Dysmorphology; Public health genetics, community engagement

Department/Division: Medicine - Genetic Medicine

Faculty Name: Dr. Garry R. Cutting

Research Topic(s): Cystic Fibrosis; Modifier genes; DNA diagnostics

Department/Division: Medicine - Genetic Medicine

Faculty Name: Dr. M Gunay-Aygun

Research Topic(s): Inborn errors of metabolism; Clinical genetics

Department/Division: Medicine - Genetic Medicine

Faculty Name: Dr. J Hoover-Fong

Research Topic(s): Skeletal dysplasias and chromosomal abnormalities

Department/Division: Medicine - Geriatric Medicine

Faculty Name: Dr. P. Abadir

Research Topic(s): Basic research mitochondria/frailty

Department/Division: Medicine - Geriatric Medicine

Faculty Name: Dr. A. Arbaje

Research Topic(s): Health services research on care transition

Department/Division: Medicine - Geriatric Medicine

Faculty Name: Dr. J. Barron

Research Topic(s): Primary care of older adults

Department/Division: Medicine - Geriatric Medicine

Faculty Name: Dr. M. Bellantoni

Research Topic(s): Osteoporosis; post-acute care

Department/Division: Medicine - Geriatric Medicine

Faculty Name: Dr. C. Boyd

Research Topic(s): Primary care; research on multimorbidity

Department/Division: Medicine - Geriatric Medicine

Faculty Name: Dr. J.R. Burton

Research Topic(s): Primary care; continence evaluations; geriatrics education

Department/Division: Medicine - Geriatric Medicine

Faculty Name: Dr. D. Cayea

Research Topic(s): Primary care; educational outcomes research

Department/Division: Medicine - Geriatric Medicine

Faculty Name: Dr. C. Christmas

Research Topic(s): Primary care; educational outcomes research

Department/Division: Medicine - Geriatric Medicine

Faculty Name: Dr. J. Colburn

Research Topic(s): Outpatient geriatric primary care

Department/Division: Medicine - Geriatric Medicine

Faculty Name: Dr. P. Colvin

Research Topic(s): Hip fracture geriatrics co-management service

Department/Division: Medicine - Geriatric Medicine

Faculty Name: Dr. S. Durso

Research Topic(s): Community-based geriatrics; consultation for complex medical illness

Department/Division: Medicine - Geriatric Medicine

Faculty Name: Dr. N. Fedarko

Research Topic(s): Bone metabolism; tumor progression

Department/Division: Medicine - Geriatric Medicine

Faculty Name: Dr. J. Finkelstein

Research Topic(s): Chronic disease informatics program

Department/Division: Medicine - Geriatric Medicine

Faculty Name: Dr. T. Finucane

Research Topic(s): Primary care; post-acute care; ethical issues regarding health care decisions

Department/Division: Medicine - Geriatric Medicine

Faculty Name: Dr. J. Hayashi

Research Topic(s): House calls

Department/Division: Medicine - Geriatric Medicine

Faculty Name: Dr. B. Leff

Research Topic(s): Primary care; new approaches to treating elderly patients at home

Department/Division: Medicine - Geriatric Medicine

Faculty Name: Dr. S. Leng

Research Topic(s): Post-acute care; molecular biology of aging and frailty

Department/Division: Medicine - Geriatric Medicine

Faculty Name: Dr. M. McNabney

Research Topic(s): Health care delivery in a capitated model; community-based long-term care

Department/Division: Medicine - Geriatric Medicine

Faculty Name: Dr. E. Oh

Research Topic(s): Clinical dementia care; biomarkers for Alzheimer's disease research

Department/Division: Medicine - Geriatric Medicine

Faculty Name: Dr. R. Varadhan

Research Topic(s): Mathematical modeling of multisystem dysregulation in frailty

Department/Division: Medicine - Geriatric Medicine

Faculty Name: Dr. J. Walston

Research Topic(s): Post-acute care; genetics and clinical research applications to diabetes in the elderly

Department/Division: Medicine - Geriatric Medicine

Faculty Name: Dr. Q. Xue

Research Topic(s): Biostatistical models of frailty

Department/Division: Medicine - Geriatric Medicine

Faculty Name: Dr. S. Yasar
Research Topic(s): Dementia; clinical care and research

Department/Division: Medicine - Hematology
Faculty Name: Dr. R. Brodsky
Research Topic(s): Bone marrow failure disorder

Department/Division: Medicine - Hematology
Faculty Name: Dr. J. Gerber
Research Topic(s): Leukemic stem cell biology

Department/Division: Medicine - Hematology
Faculty Name: Dr. T. S. Kickler
Research Topic(s): Immunohematology

Department/Division: Medicine - Hematology
Faculty Name: Dr. S. Lanzkron
Research Topic(s): Anemias and other bleeding disorders, with emphasis on sickle cell disorders

Department/Division: Medicine - Hematology
Faculty Name: Dr. M. McDevitt
Research Topic(s): Myeloproliferative and myelodysplastic disorders

Department/Division: Medicine - Hematology
Faculty Name: Dr. A. Merchant
Research Topic(s): Cancer stem cells

Department/Division: Medicine - Hematology
Faculty Name: Dr. A. Moliterno
Research Topic(s): Polycythemia Vera

Department/Division: Medicine - Hematology
Faculty Name: Dr. P. Ness
Research Topic(s): Transfusion practices

Department/Division: Medicine - Hematology
Faculty Name: Dr. S. Shanbhag
Research Topic(s): General hematology and lymphoproliferative disorders

Department/Division: Medicine - Hematology
Faculty Name: Dr. M. Streiff
Research Topic(s): Hemorrhagic and thrombotic disorders

Department/Division: Medicine - Infectious Diseases

Faculty Name: Dr. A. Andrade
Research Topic(s): HIV clinical trials

Department/Division: Medicine - Infectious Diseases
Faculty Name: Dr. P. Auwaerter
Research Topic(s): Lyme disease; general ID clinical care

Department/Division: Medicine - Infectious Diseases
Faculty Name: Dr. R. Avery
Research Topic(s): Transplant and oncology infectious diseases

Department/Division: Medicine - Infectious Diseases
Faculty Name: Dr. A. Balagopal
Research Topic(s): HIV/HCV pathogenesis

Department/Division: Medicine - Infectious Diseases
Faculty Name: Dr. S. Berry
Research Topic(s): HIV health outcomes

Department/Division: Medicine - Infectious Diseases
Faculty Name: Dr. W. Bishai
Research Topic(s): Tuberculosis

Department/Division: Medicine - Infectious Diseases
Faculty Name: Dr. J. Blankson
Research Topic(s): HIV pathogenesis

Department/Division: Medicine - Infectious Diseases
Faculty Name: Dr. R. Bollinger
Research Topic(s): Host defense in HIV; tropical infections

Department/Division: Medicine - Infectious Diseases
Faculty Name: Dr. R. Chaisson
Research Topic(s): Mycobacterial infections; HIV/AIDS

Department/Division: Medicine - Infectious Diseases
Faculty Name: Dr. L. Chang
Research Topic(s): International HIV

Department/Division: Medicine - Infectious Diseases
Faculty Name: Dr. S. Cosgrove
Research Topic(s): Infection control and antibiotic control

Department/Division: Medicine - Infectious Diseases

Faculty Name: Dr. A. Cox

Research Topic(s): Pathogenesis of Hepatitis C

Department/Division: Medicine - Infectious Diseases

Faculty Name: Dr. C. Flexner

Research Topic(s): AIDS; clinical pharmacology

Department/Division: Medicine - Infectious Diseases

Faculty Name: Dr. C. Gaydos

Research Topic(s): Chlamydia pneumonia and STDs

Department/Division: Medicine - Infectious Diseases

Faculty Name: Dr. K. Gebo

Research Topic(s): HCV and HIV databases

Department/Division: Medicine - Infectious Diseases

Faculty Name: Dr. K. Ghanem

Research Topic(s): Sexually transmitted infections

Department/Division: Medicine - Infectious Diseases

Faculty Name: Dr. D. Griffin

Research Topic(s): Pathogenesis of viral infections of the central nervous system

Department/Division: Medicine - Infectious Diseases

Faculty Name: Dr. A. Gupta

Research Topic(s): HIV and co-morbidities management research in resource-limited settings

Department/Division: Medicine - Infectious Diseases

Faculty Name: Dr. C. Hoffman

Research Topic(s): International HIV

Department/Division: Medicine - Infectious Diseases

Faculty Name: Dr. N. Hynes

Research Topic(s): STD's; tropical medicine

Department/Division: Medicine - Infectious Diseases

Faculty Name: Dr. P. Karakousis

Research Topic(s): Tuberculosis

Department/Division: Medicine - Infectious Diseases

Faculty Name: Dr. J. Keruly

Research Topic(s): Epidemiology and service utilization in HIV management

Department/Division: Medicine - Infectious Diseases

Faculty Name: Dr. G. Kirk
Research Topic(s): HCV Epidemiology

Department/Division: Medicine - Infectious Diseases
Faculty Name: Dr. G. Lucas
Research Topic(s): HIV and substance abuse

Department/Division: Medicine - Infectious Diseases
Faculty Name: Dr. L. Maragakis
Research Topic(s): Infection control

Department/Division: Medicine - Infectious Diseases
Faculty Name: Dr. R. McKenzie
Research Topic(s): Travel medicine; HIV

Department/Division: Medicine - Infectious Diseases
Faculty Name: Dr. M. Melia
Research Topic(s): ID and HIV clinical care

Department/Division: Medicine - Infectious Diseases
Faculty Name: Dr. E. Nuermberger
Research Topic(s): TB and pneumonia

Department/Division: Medicine - Infectious Diseases
Faculty Name: Dr. W. Osburn
Research Topic(s): Neutralizing antibody responses in HCV infection; role of CCR5 in clearance of HBV

Department/Division: Medicine - Infectious Diseases
Faculty Name: Dr. T. Perl
Research Topic(s): Hospital infection control

Department/Division: Medicine - Infectious Diseases
Faculty Name: Dr. T.C. Quinn
Research Topic(s): Sexually transmitted diseases; chlamydia; AIDS

Department/Division: Medicine - Infectious Diseases
Faculty Name: Dr. S. Ray
Research Topic(s): Hepatitis C virology

Department/Division: Medicine - Infectious Diseases
Faculty Name: Dr. A. Rompalo
Research Topic(s): Sexually transmitted diseases

Department/Division: Medicine - Infectious Diseases

Faculty Name: Dr. C. Sears
Research Topic(s): Mechanisms of diarrhea

Department/Division: Medicine - Infectious Diseases
Faculty Name: Dr. M. Shah
Research Topic(s): TB diagnostics

Department/Division: Medicine - Infectious Diseases
Faculty Name: Dr. S. Shoham
Research Topic(s): Transplant and oncology infectious diseases

Department/Division: Medicine - Infectious Diseases
Faculty Name: Dr. J. Siliciano
Research Topic(s): Pharmacodynamics of HIV-1 drugs; mechanisms of viral persistence

Department/Division: Medicine - Infectious Diseases
Faculty Name: Dr. R. Siliciano
Research Topic(s): Pharmacodynamics of HIV-1 drugs; mechanisms of viral persistence

Department/Division: Medicine - Infectious Diseases
Faculty Name: Dr. M. Sulkowski
Research Topic(s): Hepatitis

Department/Division: Medicine - Infectious Diseases
Faculty Name: Dr. C. Thio
Research Topic(s): Viral Hepatitis

Department/Division: Medicine - Infectious Diseases
Faculty Name: Dr. D. Thomas
Research Topic(s): Hepatitis

Department/Division: Medicine - Infectious Diseases
Faculty Name: Dr. J. Zenilman
Research Topic(s): Sexually transmitted diseases; H. simplex; HIV

Department/Division: Medicine - Nephrology
Faculty Name: Dr. M. Atta
Research Topic(s): HIV kidney disease; acute kidney disease; metabolic bone disease; hypertension

Department/Division: Medicine - Nephrology
Faculty Name: Dr. M. Choi
Research Topic(s): Electrolyte disorders; nephrolithiasis; glomerular disease

Department/Division: Medicine - Nephrology

Faculty Name: Dr. M. Estrella

Research Topic(s): HIV; Diabetic nephropathy

Department/Division: Medicine - Nephrology

Faculty Name: Dr. D. Fine

Research Topic(s): SLE; HIV; glomerular kidney disease; toxin related kidney disease

Department/Division: Medicine - Nephrology

Faculty Name: Dr. P. Scheel

Research Topic(s): Dialysis vascular access; dialysis; retroperitoneal fibrosis; acute kidney injury

Department/Division: Medicine - Nephrology

Faculty Name: Dr. C. Sperati

Research Topic(s): Hypertension; glomerular disease; electrolyte disorders

Department/Division: Medicine - Nephrology

Faculty Name: Dr. S. Turban

Research Topic(s): Chronic kidney disease; hypertension

Department/Division: Medicine - Nephrology

Faculty Name: Dr. T. Watnick

Research Topic(s): Genetic diseases of the kidney

Department/Division: Medicine - Occupational & Environmental Medicine

Faculty Name: Dr. Edward J. Bernacki

Research Topic(s): Occupational epidemiology; cumulative trauma disorders

Department/Division: Medicine - Occupational & Environmental Medicine

Faculty Name: Dr. Brian S. Schwartz

Research Topic(s): Lyme disease; occupational epidemiology

Department/Division: Medicine - Occupational & Environmental Medicine

Faculty Name: Dr. Paul T. Strickland

Research Topic(s): Biomarkers of genotoxicity; biomarkers of PAH exposure and susceptibility

Department/Division: Medicine - Occupational & Environmental Medicine

Faculty Name: Dr. Xuguang Tao

Research Topic(s): Occupational epidemiology

Department/Division: Medicine - Pulmonary & Critical Care Medicine

Faculty Name: Dr. N. Aggarwal

Research Topic(s): Acute lung injury; gene expression

Department/Division: Medicine - Pulmonary & Critical Care Medicine

Faculty Name: Dr. R. Aurora

Research Topic(s): Sleep medicine

Department/Division: Medicine - Pulmonary & Critical Care Medicine

Faculty Name: Dr. S. Bose

Research Topic(s): Chronic obstructive pulmonary disease; asthma; vitamin D deficiency

Department/Division: Medicine - Pulmonary & Critical Care Medicine

Faculty Name: Dr. M. Boyle

Research Topic(s): Adult cystic fibrosis; clinical cystic fibrosis research

Department/Division: Medicine - Pulmonary & Critical Care Medicine

Faculty Name: Dr. R. Brower

Research Topic(s): Critical care medicine; adult respiratory distress syndrome

Department/Division: Medicine - Pulmonary & Critical Care Medicine

Faculty Name: Dr. W. Checkley

Research Topic(s): Critical care medicine; acute lung injury; international clinical trials

Department/Division: Medicine - Pulmonary & Critical Care Medicine

Faculty Name: Dr. F. D'Alessio

Research Topic(s): Acute lung injury resolution

Department/Division: Medicine - Pulmonary & Critical Care Medicine

Faculty Name: Dr. M. Damarla

Research Topic(s): Endothelial barrier dysfunction; MAP Kinase signaling in apoptosis-induced ventilator-associated lung injury

Department/Division: Medicine - Pulmonary & Critical Care Medicine

Faculty Name: Dr. R. Damico

Research Topic(s): Endothelial cell apoptosis; LPS-induced acute lung injury

Department/Division: Medicine - Pulmonary & Critical Care Medicine

Faculty Name: Dr. S. Danoff

Research Topic(s): Transcription genes, neuronal development, BAP135 protein; interstitial lung disease

Department/Division: Medicine - Pulmonary & Critical Care Medicine

Faculty Name: Dr. E. Daugherty

Research Topic(s): Infection prevention in the ICU; critical care during epidemics

Department/Division: Medicine - Pulmonary & Critical Care Medicine

Faculty Name: Dr. G. Diette

Research Topic(s): Asthma outcomes; quality of care, quality improvement

Department/Division: Medicine - Pulmonary & Critical Care Medicine
Faculty Name: Dr. D. Feller-Kopman
Research Topic(s): Interventional pulmonology

Department/Division: Medicine - Pulmonary & Critical Care Medicine
Faculty Name: Dr. H. Fessler
Research Topic(s): Cardiopulmonary interactions; intensive care

Department/Division: Medicine - Pulmonary & Critical Care Medicine
Faculty Name: Dr. B. Garibaldi
Research Topic(s): Idiopathic pulmonary fibrosis; interstitial lung disease

Department/Division: Medicine - Pulmonary & Critical Care Medicine
Faculty Name: Dr. D. Hager
Research Topic(s): Critical care medicine; catastrophic event preparedness and response

Department/Division: Medicine - Pulmonary & Critical Care Medicine
Faculty Name: Dr. P. Hassoun
Research Topic(s): Pulmonary hypertension; xanthine oxidoreductase in acute lung injury

Department/Division: Medicine - Pulmonary & Critical Care Medicine
Faculty Name: Dr. M. Horton
Research Topic(s): Interstitial lung disease; idiopathic pulmonary fibrosis; extra cellular matrix; chemokines

Department/Division: Medicine - Pulmonary & Critical Care Medicine
Faculty Name: Dr. J. Jun
Research Topic(s): Sleep medicine; obstructive sleep apnea

Department/Division: Medicine - Pulmonary & Critical Care Medicine
Faculty Name: Dr. B. Kim
Research Topic(s): Pulmonary hypertension; xanthine oxidoreductase in acute lung injury

Department/Division: Medicine - Pulmonary & Critical Care Medicine
Faculty Name: Dr. L. King
Research Topic(s): Acute lung injury; critical care; epithelial cell biology

Department/Division: Medicine - Pulmonary & Critical Care Medicine
Faculty Name: Dr. J. Kirkness
Research Topic(s): Sleep disordered breathing

Department/Division: Medicine - Pulmonary & Critical Care Medicine
Faculty Name: Dr. T. Kolb
Research Topic(s): Pulmonary arterial hypertension; vascular remodeling; acute lung injury

Department/Division: Medicine - Pulmonary & Critical Care Medicine

Faculty Name: Dr. N. Lechtzin

Research Topic(s): Neuromuscular disease; cystic fibrosis

Department/Division: Medicine - Pulmonary & Critical Care Medicine

Faculty Name: Dr. M. Liu

Research Topic(s): Studies of asthma and pathogenesis and therapy

Department/Division: Medicine - Pulmonary & Critical Care Medicine

Faculty Name: Dr. S. Mathai

Research Topic(s): Pulmonary hypertension; scleroderma in pulmonary hypertension

Department/Division: Medicine - Pulmonary & Critical Care Medicine

Faculty Name: Dr. M. McCormack

Research Topic(s): Asthma; COPD; environmental impacts on airway disease

Department/Division: Medicine - Pulmonary & Critical Care Medicine

Faculty Name: Dr. C. Merlo

Research Topic(s): Cystic Fibrosis epidemiology; lung transplant

Department/Division: Medicine - Pulmonary & Critical Care Medicine

Faculty Name: Dr. D. Moller

Research Topic(s): Sarcoidosis; Molecular and cellular immunology of lung diseases; mechanisms of T-cell activation

Department/Division: Medicine - Pulmonary & Critical Care Medicine

Faculty Name: Dr. D. Needham

Research Topic(s): Critical care medicine; ventilator-induced lung injury outcomes

Department/Division: Medicine - Pulmonary & Critical Care Medicine

Faculty Name: Dr. E. Neptune

Research Topic(s): Receptor signaling; neutrophils

Department/Division: Medicine - Pulmonary & Critical Care Medicine

Faculty Name: Dr. J. Orens

Research Topic(s): Lung transplantation; emphysema; lung volume reduction surgery; exercise physiology

Department/Division: Medicine - Pulmonary & Critical Care Medicine

Faculty Name: Dr. S. Patil

Research Topic(s): Neuromodulation of upper airway obstruction during sleep; testing of sleep apnea treatment devices

Department/Division: Medicine - Pulmonary & Critical Care Medicine
Faculty Name: Dr. D. Pearse
Research Topic(s): Ischemia reperfusion lung injury; airway smooth muscle hyper-responsiveness

Department/Division: Medicine - Pulmonary & Critical Care Medicine
Faculty Name: Dr. V. Polotsky
Research Topic(s): Cardiorespiratory abnormalities in obesity and sleep disorders

Department/Division: Medicine - Pulmonary & Critical Care Medicine
Faculty Name: Dr. N. Punjabi
Research Topic(s): Clinical epidemiology; pulmonary and sleep medicine

Department/Division: Medicine - Pulmonary & Critical Care Medicine
Faculty Name: Dr. C. Rand
Research Topic(s): Behavioral pulmonology; patient compliance in asthma treatment; smoking cessation

Department/Division: Medicine - Pulmonary & Critical Care Medicine
Faculty Name: Dr. K. Reikert
Research Topic(s): Asthma Disparities; Cystic Fibrosis

Department/Division: Medicine - Pulmonary & Critical Care Medicine
Faculty Name: Dr. H. Schneider
Research Topic(s): Sleep disordered breathing

Department/Division: Medicine - Pulmonary & Critical Care Medicine
Faculty Name: Dr. A.R. Schwartz
Research Topic(s): Respiratory and upper airway physiology; sleep apnea

Department/Division: Medicine - Pulmonary & Critical Care Medicine
Faculty Name: Dr. J. Sham
Research Topic(s): Electrophysiology and calcium homeostasis in pulmonary and cardiac myocytes and smooth muscle transport

Department/Division: Medicine - Pulmonary & Critical Care Medicine
Faculty Name: Dr. L. Shimoda
Research Topic(s): Pulmonary vascular biology; oxidative stress; endothelial cell signaling

Department/Division: Medicine - Pulmonary & Critical Care Medicine
Faculty Name: Dr. R. Sidhaye
Research Topic(s): Aquaporins in the lung; epithelial cell biology; acute lung injury

Department/Division: Medicine - Pulmonary & Critical Care Medicine
Faculty Name: Dr. L. Silhan
Research Topic(s): Lung transplantation; interstitial lung disease

Department/Division: Medicine - Pulmonary & Critical Care Medicine

Faculty Name: Dr. P.L. Smith

Research Topic(s): Sleep Disordered Breathing

Department/Division: Medicine - Pulmonary & Critical Care Medicine

Faculty Name: Dr. P. Sosnay

Research Topic(s): Adult cystic fibrosis; genomics

Department/Division: Medicine - Pulmonary & Critical Care Medicine

Faculty Name: Dr. J.T. Sylvester

Research Topic(s): Pulmonary vascular biology; medical intensive care

Department/Division: Medicine - Pulmonary & Critical Care Medicine

Faculty Name: Dr. P.B. Terry

Research Topic(s): Pulmonary Physiology; medical ethics

Department/Division: Medicine - Pulmonary & Critical Care Medicine

Faculty Name: Dr. E. Wagner

Research Topic(s): Angiogenesis in the lung; bronchial vascular proliferation and function

Department/Division: Medicine - Pulmonary & Critical Care Medicine

Faculty Name: Dr. J. Wang

Research Topic(s): Calcium pathways in hypoxic pulmonary hypertension

Department/Division: Medicine - Pulmonary & Critical Care Medicine

Faculty Name: Dr. R.A. Wise

Research Topic(s): Cardiopulmonary physiology; autoimmune pulmonary disease; chronic obstructive pulmonary disease

Department/Division: Medicine - Pulmonary & Critical Care Medicine

Faculty Name: Dr. L. Yarmus

Research Topic(s): Interventional pulmonology

Department/Division: Medicine - Pulmonary & Critical Care Medicine

Faculty Name: Dr. R.C. Yung

Research Topic(s): Diagnosis of and therapy for early and advanced cancer; aerosolized cytokines

Department/Division: Medicine - Rheumatology

Faculty Name: Dr. F Andrade

Research Topic(s): Mechanisms of autoimmunity

Department/Division: Medicine - Rheumatology

Faculty Name: Dr. A. Baer

Research Topic(s): Evaluation and management of Sjogren's Syndrome, metabolic myopathies, and gout

Department/Division: Medicine - Rheumatology

Faculty Name: Dr. C. Bingham

Research Topic(s): Clinical therapeutics of rheumatoid arthritis and osteoarthritis; oral health in rheumatic diseases; RA & OA clinical trial design

Department/Division: Medicine - Rheumatology

Faculty Name: Dr. J. Birnbaum

Research Topic(s): Neurological manifestations of systemic rheumatic disease

Department/Division: Medicine - Rheumatology

Faculty Name: Dr. L. Casciola-Rosen

Research Topic(s): Mechanisms of autoimmunity, especially myositis and scleroderma

Department/Division: Medicine - Rheumatology

Faculty Name: Dr. L. Christopher-Stine

Research Topic(s): Epidemiology and therapy of inflammatory myositis

Department/Division: Medicine - Rheumatology

Faculty Name: Dr. E. Darrah

Research Topic(s): Mechanisms of autoimmunity

Department/Division: Medicine - Rheumatology

Faculty Name: Dr. A. Gelber

Research Topic(s): Epidemiology of arthritis and rheumatic disorders

Department/Division: Medicine - Rheumatology

Faculty Name: Dr. T. Grader-Beck

Research Topic(s): Translational research in systemic autoimmunity

Department/Division: Medicine - Rheumatology

Faculty Name: Dr. U. Haque

Research Topic(s): Evaluation and management of inflammatory arthritis

Department/Division: Medicine - Rheumatology

Faculty Name: Dr. L. Hummers

Research Topic(s): Epidemiology and treatment of scleroderma

Department/Division: Medicine - Rheumatology

Faculty Name: Dr. R. Manno

Research Topic(s): Epidemiology of aging and arthritis

Department/Division: Medicine - Rheumatology

Faculty Name: Dr. Z. McMahan

Research Topic(s): Evaluation and management of arthritis and fibromyalgia

Department/Division: Medicine - Rheumatology

Faculty Name: Dr. A. Rosen

Research Topic(s): Mechanisms of rheumatic diseases

Department/Division: Medicine - Rheumatology

Faculty Name: Dr. P. Seo

Research Topic(s): Disease activity and novel therapeutics of systemic vasculitis

Department/Division: Medicine - Rheumatology

Faculty Name: Dr. A. Shah

Research Topic(s): Epidemiology and management of scleroderma

Department/Division: Medicine - Rheumatology

Faculty Name: Dr. M. Soloski

Research Topic(s): T-cell immunity in infection

Department/Division: Medicine - Rheumatology

Faculty Name: Dr. S. Sule

Research Topic(s): Evaluation and management of pediatric rheumatology

Department/Division: Medicine - Rheumatology

Faculty Name: Dr. F. Wigley

Research Topic(s): Raynaud's phenomenon, scleroderma, and related disorders

Department/Division: Molecular Biology and Genetics

Faculty Name: Dr. Luisa Cochella

Research Topic(s): Transcriptional and post-transcriptional gene regulation in development

Department/Division: Molecular Biology and Genetics

Faculty Name: Dr. Jeff Coller

Research Topic(s): Mechanism of mRNA regulation through stability and translation

Department/Division: Molecular Biology and Genetics

Faculty Name: Dr. Brendan Cormack

Research Topic(s): Microbial pathogenesis; chromatin silencing

Department/Division: Molecular Biology and Genetics

Faculty Name: Dr. Rachel Green

Research Topic(s): Molecular mechanisms of translation; mRNA surveillance in bacteria and eukaryotes

Department/Division: Molecular Biology and Genetics

Faculty Name: Dr. Josh Modell

Research Topic(s): The Modell lab studies the basic mechanisms by which CRISPR-Cas9 systems protect their bacterial hosts from viruses and other foreign genetic elements.

Department/Division: Molecular Biology and Genetics

Faculty Name: Dr. Jeremy Nathans

Research Topic(s): Molecular biology of vision; developmental neurobiology

Department/Division: Molecular Biology and Genetics

Faculty Name: Dr. Sergi Regot

Research Topic(s): Single cell signaling dynamics; live cell biosensors

Department/Division: Molecular Biology and Genetics

Faculty Name: Dr. Geraldine Seydoux

Research Topic(s): Establishment of embryonic polarity and germ cell fate

Department/Division: Neurological Surgery

Faculty Name: Dr. Stan Anderson

Research Topic(s): Computational modeling and microelectrode recordings for studying seizure dynamics and new techniques in neuromodulation

Department/Division: Neurological Surgery

Faculty Name: Dr. Alan Belzberg

Research Topic(s): Mechanisms of neuropathic pain; peripheral nerve outcome studies; animal model of neuroma

Department/Division: Neurological Surgery

Faculty Name: Dr. Chetan Bettegowda

Research Topic(s): Microbiology of brain tumors

Department/Division: Neurological Surgery

Faculty Name: Dr. Henry Brem

Research Topic(s): Brain tumor angiogenesis and drug delivery systems: novel therapies for brain tumors and immunological approaches to brain tumors; microchip delivery systems to the brain

Department/Division: Neurological Surgery

Faculty Name: Dr. Ali Bydon

Research Topic(s): Spinal biomechanics

Department/Division: Neurological Surgery

Faculty Name: Dr. Michael Caterina

Research Topic(s): Molecular and physiological mechanisms of pain in health and disease

Department/Division: Neurological Surgery

Faculty Name: Dr. Alan Cohen
Research Topic(s): Minimally Invasive Neurosurgery Lab

Department/Division: Neurological Surgery
Faculty Name: Dr. Gary Gallia
Research Topic(s): Molecular biology of brain tumors

Department/Division: Neurological Surgery
Faculty Name: Dr. Judy Huang
Research Topic(s): Cerebrovascular diseases; intracerebral hemorrhage

Department/Division: Neurological Surgery
Faculty Name: Dr. Eric Jackson
Research Topic(s): Pediatric neurosurgery; treatment of infant brain tumors

Department/Division: Neurological Surgery
Faculty Name: Dr. Gregory Riggins
Research Topic(s): Brain cancer genomics; molecular biology and drug development

Department/Division: Neurological Surgery
Faculty Name: Dr. Matthias Ringkamp
Research Topic(s): Pain research

Department/Division: Neurological Surgery
Faculty Name: Dr. Dody Robinson
Research Topic(s): Perinatal brain injury

Department/Division: Neurological Surgery
Faculty Name: Dr. Rafael Tamargo
Research Topic(s): Post-hemorrhagic vasospasm; immune responses in the brain, stroke; history of neurosurgery

Department/Division: Neurological Surgery
Faculty Name: Dr. Nicholas Theodore
Research Topic(s): Spinal cord pathophysiology; genetics of spinal disorders; personalized medicine in spinal surgery; robotics and advanced technologies in spinal surgery.

Department/Division: Neurological Surgery
Faculty Name: Ms. Betty Tyler
Research Topic(s): Brain tumor laboratory research

Department/Division: Neurological Surgery
Faculty Name: Dr. Jon Weingart
Research Topic(s): Brain tumor research: clinical and laboratory

Department/Division: Neurological Surgery
Faculty Name: Dr. Timothy Witham
Research Topic(s): Spinal disorders; outcomes research

Department/Division: Neurology
Faculty Name: Dr. Marilyn Albert
Research Topic(s): Alzheimer's disease

Department/Division: Neurology
Faculty Name: Dr. Peter Calabresi
Research Topic(s): Neuroimmunology and neuroimaging

Department/Division: Neurology
Faculty Name: Dr. David Cornblath
Research Topic(s): Neurology peripheral nerve disease and electromyography

Department/Division: Neurology
Faculty Name: Dr. Ted Dawson
Research Topic(s): Molecular mechanisms of neurodegenerative disease; neuronal cell death and survival

Department/Division: Neurology
Faculty Name: Dr. Valina Dawson
Research Topic(s): Molecular mechanisms of neurodegenerative disease

Department/Division: Neurology
Faculty Name: Dr. Daniel Drachman
Research Topic(s): Neuromuscular diseases; neuroimmunology; gene transfer strategies for therapy of Myasthenia and ALS

Department/Division: Neurology
Faculty Name: Dr. Christopher Earley
Research Topic(s): Sleep related disorders; sleep-wake dysfunctions; restless leg syndrome; circadian rhythm disorders

Department/Division: Neurology
Faculty Name: Dr. Jeffrey Ellenbogen
Research Topic(s): Sleep physiology and brain sciences; sound perception during sleep

Department/Division: Neurology
Faculty Name: Dr. Ryan Felling
Research Topic(s): Neurogenesis after perinatal brain injury

Department/Division: Neurology

Faculty Name: Dr. Romergrsko Geocadin

Research Topic(s): Brain resuscitation; acute disorders of consciousness (coma, vegetative states); targeted temperature management of therapeutic hypothermia

Department/Division: Neurology

Faculty Name: Dr. Gary Goldstein

Research Topic(s): Cerebral endothelial cells

Department/Division: Neurology

Faculty Name: Dr. Barry Gordon

Research Topic(s): Neuropsychology

Department/Division: Neurology

Faculty Name: Dr. Daniel Hanley

Research Topic(s): Brain injury outcomes

Department/Division: Neurology

Faculty Name: Dr. Argye Hillis

Research Topic(s): Neural basis of cognitive impairment and recovery after stroke

Department/Division: Neurology

Faculty Name: Dr. Ahmet Hoke

Research Topic(s): Peripheral neuropathies; nerve regeneration and drug development for neuroprotection

Department/Division: Neurology

Faculty Name: Dr. Michael Johnston

Research Topic(s): Excitatory amines in cerebral anoxia

Department/Division: Neurology

Faculty Name: Dr. Peter Kaplan

Research Topic(s): Epilepsy and sleep disorders

Department/Division: Neurology

Faculty Name: Dr. Amir Kheramand

Research Topic(s): Neurophysiology of spatial orientation and perception of upright

Department/Division: Neurology

Faculty Name: Dr. Eric Kossoff

Research Topic(s): Ketogenic diet; hemispherectomy; infantile spasms; migraines; intractable epilepsy; neurocysticercosis

Department/Division: Neurology

Faculty Name: Dr. John J. Laterra
Research Topic(s): Studies of brain tumors; neuro-oncology

Department/Division: Neurology
Faculty Name: Dr. Ronald Lesser
Research Topic(s): Epilepsy and electroencephalography

Department/Division: Neurology
Faculty Name: Dr. Michael Levy
Research Topic(s): Animal modeling of autoimmune neurological diseases

Department/Division: Neurology
Faculty Name: Dr. Zoltan Mari
Research Topic(s): Parkinson's disease and movement disorders

Department/Division: Neurology
Faculty Name: Dr. Elisabeth Marsh
Research Topic(s): Outcomes in stroke recovery

Department/Division: Neurology
Faculty Name: Dr. Justin McArthur
Research Topic(s): Therapies for HIV-associated dementia and sensory neuropathies; cutaneous innervations in diverse neuropathic states; multiple sclerosis; neurological infections

Department/Division: Neurology
Faculty Name: Dr. Abhay Moghekar
Research Topic(s): Alzheimer's disease; cerebrospinal fluid disorders

Department/Division: Neurology
Faculty Name: Dr. Brett Morrison
Research Topic(s): The role of myelinating cells and lactate in peripheral nerve regeneration and ALS

Department/Division: Neurology
Faculty Name: Dr. David Newman-Toker
Research Topic(s): Diagnostic errors; diagnostic cost-effectiveness; diagnostic decision support; Eye movement-based stroke diagnosis in dizziness/vertigo

Department/Division: Neurology
Faculty Name: Dr. Alexander Pantelyat
Research Topic(s): Atypical parkinsonian disorders; music and rhythm-based interventions for neurological disorders

Department/Division: Neurology
Faculty Name: Dr. Liana Rosenthal

Research Topic(s): Clinical research in movement disorders

Department/Division: Neurology

Faculty Name: Dr. Nicoline Schiess

Research Topic(s): Multiple Sclerosis

Department/Division: Neurology

Faculty Name: Dr. Anja Soldan

Research Topic(s): Cognitive aging, Alzheimer's disease; cognitive reserve

Department/Division: Neurology

Faculty Name: Dr. Hongjun Song

Research Topic(s): Regulation and application of adult neural stem cells

Department/Division: Neurology

Faculty Name: Dr. Charlotte Sumner

Research Topic(s): Genetic and cellular mechanisms of inherited motor neuron and peripheral nerve disease

Department/Division: Neurology

Faculty Name: Dr. Mark Wu

Research Topic(s): Genetic analysis of sleep disorders

Department/Division: Neuroscience

Faculty Name: Dr. Marilyn Albert

Research Topic(s): Cognitive processes in aging and neurodegenerative disorders

Department/Division: Neuroscience

Faculty Name: Dr. Yexica Aponte

Research Topic(s): Neuronal circuits underlying goal-directed behaviors

Department/Division: Neuroscience

Faculty Name: Dr. Jay M. Baraban

Research Topic(s): Molecular mechanisms of neural plasticity

Department/Division: Neuroscience

Faculty Name: Dr. Amy Bastian

Research Topic(s): Mechanism of human movement disorders

Department/Division: Neuroscience

Faculty Name: Dr. Dwight Bergles

Research Topic(s): Synaptic physiology: glutamate transporters and glial involvement in neuronal signaling

Department/Division: Neuroscience

Faculty Name: Dr. Seth Blackshaw

Research Topic(s): Molecular basis of cell specification in vertebrate retina and hypothalamus

Department/Division: Neuroscience

Faculty Name: Dr. Mary Blue

Research Topic(s): Neurotransmitter mechanisms in the development and activity-dependent plasticity

Department/Division: Neuroscience

Faculty Name: Dr. Antonello Bonci

Research Topic(s): Synaptic plasticity; dopamine and substance abuse disorders

Department/Division: Neuroscience

Faculty Name: Dr. Frank Bosmans

Research Topic(s): Molecular organization and pharmacologic properties of the voltage-gated sodium channel signaling complex

Department/Division: Neuroscience

Faculty Name: Dr. Solange Brown

Research Topic(s): Functional organization of local circuits of the neocortex

Department/Division: Neuroscience

Faculty Name: Dr. Peter Campochiaro

Research Topic(s): Molecular aspects of retinal repair and regeneration

Department/Division: Neuroscience

Faculty Name: Dr. Michael Caterina

Research Topic(s): Molecular mechanisms of thermosensation and nociception

Department/Division: Neuroscience

Faculty Name: Dr. Pablo Celnik

Research Topic(s): Neurophysiological mechanisms underlying human motor learning

Department/Division: Neuroscience

Faculty Name: Dr. Jeremiah Cohen

Research Topic(s): Neural circuits for reward, mood, and decision making

Department/Division: Neuroscience

Faculty Name: Dr. Carlo Colantuoni

Research Topic(s): Functional genomics of human brain development

Department/Division: Neuroscience

Faculty Name: Dr. Charles Connor JR.

Research Topic(s): Object synthesis in higher level visual cortex

Department/Division: Neuroscience
Faculty Name: Dr. Susan Courtney-Faruquee
Research Topic(s): Functional organization of the neural system for human working memory

Department/Division: Neuroscience
Faculty Name: Dr. Kathleen Cullen
Research Topic(s): Neural mechanisms underlying the computation of Self-Motion: understanding and advancing the treatment of vestibular and other motor disorders

Department/Division: Neuroscience
Faculty Name: Dr. Ted Dawson
Research Topic(s): Molecular and cellular signals controlling neurodegeneration; neuronal survival and cell death

Department/Division: Neuroscience
Faculty Name: Dr. Valina Dawson
Research Topic(s): Molecular mechanisms of neuronal death and survival

Department/Division: Neuroscience
Faculty Name: Dr. John Desmond
Research Topic(s): Cognitive neuroscience; cerebro-cerebellar circuits in learning and memory

Department/Division: Neuroscience
Faculty Name: Dr. Angelika Doetzlhofer
Research Topic(s): Cell fate specification and differentiation in the mammalian auditory system

Department/Division: Neuroscience
Faculty Name: Dr. Gul Dolen
Research Topic(s): Synaptic and circuit mechanisms of social behavior

Department/Division: Neuroscience
Faculty Name: Dr. Xinzhong Dong
Research Topic(s): Molecular and genetic studies of pain-sensing neurons

Department/Division: Neuroscience
Faculty Name: Dr. Sascha Du Lac
Research Topic(s): Eye movements, the cerebellum, and the vestibular system

Department/Division: Neuroscience
Faculty Name: Dr. Wenzhen Duan
Research Topic(s): Translational neurobiology research

Department/Division: Neuroscience

Faculty Name: Dr. Daniel Ebert

Research Topic(s): Molecular mechanisms of autism and schizophrenia

Department/Division: Neuroscience

Faculty Name: Dr. Howard Egeth

Research Topic(s): Perception and cognition; attention and attentional selectivity; eyewitness testimony

Department/Division: Neuroscience

Faculty Name: Dr. Mohamed Farah

Research Topic(s): Axonal regeneration in the peripheral nervous system

Department/Division: Neuroscience

Faculty Name: Dr. Paul Fuchs

Research Topic(s): Excitability and synaptic function in cochlear hair cells

Department/Division: Neuroscience

Faculty Name: Dr. Michela Gallagher

Research Topic(s): Neural mechanisms of memory and attention

Department/Division: Neuroscience

Faculty Name: Dr. Elisabeth Glowatzki

Research Topic(s): Synaptic transmission at hair cell synapses in the inner ear

Department/Division: Neuroscience

Faculty Name: Dr. Loyal Goff

Research Topic(s): Long non-coding RNAs in neuronal and glial cell fate specification

Department/Division: Neuroscience

Faculty Name: Dr. Marnie Halpern

Research Topic(s): Zebra fish neural development

Department/Division: Neuroscience

Faculty Name: Dr. Samer Hattar

Research Topic(s): Physiological effects of light on mammals: role of the novel melanopsin-containing retinal ganglion photoreceptors

Department/Division: Neuroscience

Faculty Name: Dr. Ahmet Hoke

Research Topic(s): Neurobiology of peripheral neuropathies; development and regeneration of the peripheral nervous system

Department/Division: Neuroscience

Faculty Name: Dr. Richard L. Huganir

Research Topic(s): Molecular mechanisms in the regulation of synaptic plasticity

Department/Division: Neuroscience
Faculty Name: Dr. Paricia Janak
Research Topic(s): Behavioral neuroscience of addiction

Department/Division: Neuroscience
Faculty Name: Dr. Alfredo Kirkwood
Research Topic(s): Mechanisms of cortical modification

Department/Division: Neuroscience
Faculty Name: Dr. James Knierim
Research Topic(s): Behavioral neurophysiology of the hippocampal formation

Department/Division: Neuroscience
Faculty Name: Dr. Alex L. Kolodkin
Research Topic(s): Molecular mechanisms of growth cone guidance

Department/Division: Neuroscience
Faculty Name: Dr. John Krakauer
Research Topic(s): Mechanisms of human sensorimotor learning and motor recovery after brain injury

Department/Division: Neuroscience
Faculty Name: Dr. Rejji Kuruvilla
Research Topic(s): Signaling and trafficking of growth factors in neuronal development

Department/Division: Neuroscience
Faculty Name: Dr. John J. Laterra
Research Topic(s): CNS tumor biology and blood-brain barrier

Department/Division: Neuroscience
Faculty Name: Dr. Gabsang Lee
Research Topic(s): Disease modeling of muscular dystrophies and peripheral neuropathies with human pluripotent stem cells

Department/Division: Neuroscience
Faculty Name: Dr. Hey-Kyoung Lee
Research Topic(s): Cellular/molecular mechanisms of synaptic plasticity underlying memory formation and cross-modal plasticity

Department/Division: Neuroscience
Faculty Name: Dr. Frederick Lenz
Research Topic(s): Neurophysiology and psychophysics for sensory and motor processing in the human forebrain

Department/Division: Neuroscience
Faculty Name: Dr. David Linden
Research Topic(s): Cellular substrates of memory

Department/Division: Neuroscience
Faculty Name: Dr. Tom Lloyd
Research Topic(s): Neuronal intracellular transport in development and disease

Department/Division: Neuroscience
Faculty Name: Dr. Brady Maher
Research Topic(s): Functional analysis of genes associated with psychiatric disorders

Department/Division: Neuroscience
Faculty Name: Dr. Seth Margolis
Research Topic(s): Molecular mechanisms of synapse formation in development and disease

Department/Division: Neuroscience
Faculty Name: Dr. Keri Martinowich
Research Topic(s): Molecular and cellular regulation of neural plasticity

Department/Division: Neuroscience
Faculty Name: Dr. Mollie Meffert
Research Topic(s): Transcriptional regulation of neuronal function in health and disease

Department/Division: Neuroscience
Faculty Name: Dr. Cynthia Moss
Research Topic(s): Spatial perception, attention, and memory

Department/Division: Neuroscience
Faculty Name: Dr. Ulrich Mueller
Research Topic(s): Auditory perception and development of neocortical circuits

Department/Division: Neuroscience
Faculty Name: Dr. Jeff Mumm
Research Topic(s): Neural circuit formation, function, and regeneration

Department/Division: Neuroscience
Faculty Name: Dr. Shreesh Mysore
Research Topic(s): Neural circuits and computations for behavior

Department/Division: Neuroscience
Faculty Name: Dr. Jeremy Nathans
Research Topic(s): Molecular biology of the visual system

Department/Division: Neuroscience
Faculty Name: Dr. Ernst Niebur
Research Topic(s): Computational neuroscience

Department/Division: Neuroscience
Faculty Name: Dr. Kristina Nielsen
Research Topic(s): Neural circuits underlying object recognition

Department/Division: Neuroscience
Faculty Name: Dr. Daniel O'Connor
Research Topic(s): Neural circuits for touch perception

Department/Division: Neuroscience
Faculty Name: Dr. Pankaj Jay Pasricha
Research Topic(s): Enteric neuroscience, visceral pain, and neural control of metabolic syndromes

Department/Division: Neuroscience
Faculty Name: Dr. Jonathan Pevsner
Research Topic(s): Molecular basis of neurological disorders

Department/Division: Neuroscience
Faculty Name: Dr. Mikhail Pletnikov
Research Topic(s): Gene-environment interactions in neurodevelopmental disorders

Department/Division: Neuroscience
Faculty Name: Dr. Christopher Potter
Research Topic(s): Neural circuits required for insect olfaction

Department/Division: Neuroscience
Faculty Name: Dr. Zhaozhu Qiu
Research Topic(s): Mechanisms of Osmotic Regulation in Physiology and Disease

Department/Division: Neuroscience
Faculty Name: Dr. Randall R. Reed
Research Topic(s): Molecular mechanisms of signal transduction; neurogenesis in the olfactory system

Department/Division: Neuroscience
Faculty Name: Dr. Irving Reti
Research Topic(s): Behavioral neuroscience and its clinical applications

Department/Division: Neuroscience
Faculty Name: Dr. Christopher A. Ross
Research Topic(s): Biology of neuropsychiatric disorders

Department/Division: Neuroscience
Faculty Name: Dr. Jeffrey Rothstein
Research Topic(s): Molecular mechanisms of neurodegeneration and transporters

Department/Division: Neuroscience
Faculty Name: Dr. Akira Sawa
Research Topic(s): Neurobiology of psychiatric illness

Department/Division: Neuroscience
Faculty Name: Dr. Ronald L. Schnaar
Research Topic(s): Cell surface molecules in neural cell-cell recognition; myelin maintenance; axon regeneration

Department/Division: Neuroscience
Faculty Name: Dr. Lawrence P. Schramm
Research Topic(s): Regulation of sympathetic neurons

Department/Division: Neuroscience
Faculty Name: Dr. Reza Shadmehr
Research Topic(s): Computational motor control and learning

Department/Division: Neuroscience
Faculty Name: Dr. Marshall Shuler
Research Topic(s): Neural mechanisms of reward dependent learning

Department/Division: Neuroscience
Faculty Name: Dr. Barbara Slusher
Research Topic(s): Drug-Discovery

Department/Division: Neuroscience
Faculty Name: Dr. Solomon Snyder
Research Topic(s): Neurotransmitters, second messengers, and drug action in the nervous system

Department/Division: Neuroscience
Faculty Name: Dr. Shanthini Sockanathan
Research Topic(s): Cell fate specification in the central nervous system

Department/Division: Neuroscience
Faculty Name: Dr. Veit Stuphorn
Research Topic(s): Neurophysiological mechanisms of decision making and self-control

Department/Division: Neuroscience
Faculty Name: Dr. Charloté Sumner
Research Topic(s): Genetic and cellular mechanisms of motor neuron disease

Department/Division: Neuroscience
Faculty Name: Dr. Joshua Vogelstein
Research Topic(s): Open connectome project

Department/Division: Neuroscience
Faculty Name: Dr. Kathryn Wagner
Research Topic(s): Muscle growth and regeneration

Department/Division: Neuroscience
Faculty Name: Dr. Jiou Wang
Research Topic(s): Mechanisms of neurodegeneration and protein quality control

Department/Division: Neuroscience
Faculty Name: Dr. Xiaoqin Wang
Research Topic(s): Neural basis of auditory perception and learning

Department/Division: Neuroscience
Faculty Name: Dr. Shigeki Watanabe
Research Topic(s): Cellular and molecular characterizations of rapid synaptic membrane trafficking

Department/Division: Neuroscience
Faculty Name: Dr. Daniel Weinberger
Research Topic(s): Neurobiological mechanisms of genetic risk for developmental brain disorders

Department/Division: Neuroscience
Faculty Name: Dr. Mary Ann Wilson
Research Topic(s): Mechanisms of development, plasticity, and injury in the immature brain

Department/Division: Neuroscience
Faculty Name: Dr. Dean Wong
Research Topic(s): In vivo PET/SPECT neuroimaging of neuroreceptor systems

Department/Division: Neuroscience
Faculty Name: Dr. Philip Wong
Research Topic(s): Molecular mechanism and experimental therapeutic of neurodegenerative diseases

Department/Division: Neuroscience
Faculty Name: Dr. Paul F. Worley
Research Topic(s): Molecular mechanisms of neuronal plasticity

Department/Division: Neuroscience
Faculty Name: Dr. Mark Wu
Research Topic(s): Genetic mechanisms and neuronal circuitry underlying sleep in drosophila

Department/Division: Neuroscience
Faculty Name: Dr. King-Wai Yau
Research Topic(s): Visual and olfactory sensory transduction

Department/Division: Neuroscience
Faculty Name: Dr. Donald J. Zack
Research Topic(s): Molecular approaches to the study of retinal development

Department/Division: Neuroscience
Faculty Name: Dr. David Zee
Research Topic(s): Regulation of eye movements; vestibular perception and eye-movement based stroke diagnosis

Department/Division: Neuroscience
Faculty Name: Dr. Kechen Zhang
Research Topic(s): Theoretical neuroscience

Department/Division: Neuroscience
Faculty Name: Dr. Fengquan Zhou
Research Topic(s): Molecular mechanisms of axon growth and guidance during development; CNS regeneration

Department/Division: Oncology
Faculty Name: Dr. Syed Abbas Ali
Research Topic(s): Multiple myeloma

Department/Division: Oncology
Faculty Name: Dr. Rich Ambinder
Research Topic(s): Molecular virology; lymphoma

Department/Division: Oncology
Faculty Name: Dr. Mary Armanios
Research Topic(s): Biology of aging; telomere syndromes; pulmonary fibrosis; solid tumors

Department/Division: Oncology
Faculty Name: Dr. Deb Armstrong
Research Topic(s): Gynecology and breast cancer

Department/Division: Oncology
Faculty Name: Dr. Nilo Azad
Research Topic(s): Phase I studies and drug development; GI cancers (liver and colon)

Department/Division: Oncology

Faculty Name: Dr. Stephen Baylin

Research Topic(s): Epigenetic abnormalities in cancer

Department/Division: Oncology

Faculty Name: Dr. Julie Brahmer

Research Topic(s): Lung cancer; novel therapeutics; mesothelioma; lung cancer prevention

Department/Division: Oncology

Faculty Name: Dr. William Brennen

Research Topic(s): Prostate cancer, tumor microenvironment, mesenchymal stem cells, novel cell-based, prodrug and immunotherapies; drug development ,prodrugs,epigenetics

Department/Division: Oncology

Faculty Name: Dr. Ilene Browner

Research Topic(s): Geriatric and general oncology

Department/Division: Oncology

Faculty Name: Dr. Robert Casero

Research Topic(s): Amine oxidases as antineoplastic targets; chromatin remodeling; inflammation/infection induced cancer; molecular pharmacology

Department/Division: Oncology

Faculty Name: Dr. Allen Chen

Research Topic(s): Bone marrow transplantation; immunotherapy

Department/Division: Oncology

Faculty Name: Dr. Young Choi

Research Topic(s): Molecular mechanisms of mitochondrial quality control by human oncogenic virus

Department/Division: Oncology

Faculty Name: Dr. Kenneth Cooke

Research Topic(s): Immune mechanisms of graft vs. host disease; pulmonary dysfunction after blood stem cell transplantation

Department/Division: Oncology

Faculty Name: Dr. Stacy Cooper

Research Topic(s): clinical research in leukemia and lymphoma, medical education research

Department/Division: Oncology

Faculty Name: Dr. Leslie Cope

Research Topic(s): Methods for the analysis of gene expression data

Department/Division: Oncology

Faculty Name: Dr. William Dalton

Research Topic(s): Functional genetics of myeloid malignancies

Department/Division: Oncology

Faculty Name: Dr. Ana De Jesus-Acosta

Research Topic(s): Drug development

Department/Division: Oncology

Faculty Name: Dr. Angelo De Marzo

Research Topic(s): Molecular pathogenesis of prostate cancer

Department/Division: Oncology

Faculty Name: Dr. Samuel Denmeade

Research Topic(s): Novel therapies for prostate cancer; urologic oncology

Department/Division: Oncology

Faculty Name: Dr. Prashant Desai

Research Topic(s): Molecular genetics of herpes simplex virus assembly and morphogenesis

Department/Division: Oncology

Faculty Name: Dr. Patrick Forde

Research Topic(s): Lung cancer; immunotherapy

Department/Division: Oncology

Faculty Name: Dr. Alan Friedman

Research Topic(s): Hematopoiesis; leukemogenesis; inflammation and cancer

Department/Division: Oncology

Faculty Name: Dr. Ephraim Fuchs

Research Topic(s): Tumor immunology; t-cell activation and tolerance; immunotherapy

Department/Division: Oncology

Faculty Name: Dr. Gabriel Ghiaur

Research Topic(s): Cancer genomics and molecular biology approaches to understand the mechanism of human leukemia

Department/Division: Oncology

Faculty Name: Dr. Lukasz Gondek

Research Topic(s): Clonal hematopoiesis and myeloid malignancies

Department/Division: Oncology

Faculty Name: Dr. Christine Hann

Research Topic(s): Small cell and non-small cell lung cancer; New drug development for lung cancer

Department/Division: Oncology

Faculty Name: Dr. Mathias Holdoff

Research Topic(s): Neuro-Oncology

Department/Division: Oncology

Faculty Name: Dr. Franck Housseau

Research Topic(s): Dendritic cell and innate immunity

Department/Division: Oncology

Faculty Name: Dr. Elizabeth Jaffe

Research Topic(s): Developing vaccine approaches that bypass mechanisms of immune tolerance in mice and patients

Department/Division: Oncology

Faculty Name: Dr. Tania Jain

Research Topic(s): CAR T cells and Myeloproliferative Neoplasms

Department/Division: Oncology

Faculty Name: Dr. Yoon Young Jang

Research Topic(s): Stem cells and microenvironment; pluripotent stem cells; hepatic differentiation; liver regeneration

Department/Division: Oncology

Faculty Name: Dr. Rick Jones

Research Topic(s): Bone marrow transplantation; hematopoiesis

Department/Division: Oncology

Faculty Name: Dr. Sushant Kachhap

Research Topic(s): DNA repair; metastasis; prostate cancer

Department/Division: Oncology

Faculty Name: Dr. Theodoros Karantanos

Research Topic(s): Biology of chronic myeloid neoplasms

Department/Division: Oncology

Faculty Name: Dr. Scott Kern

Research Topic(s): Genetics of pancreatic cancer

Department/Division: Oncology

Faculty Name: Dr. Kenneth Kinzler

Research Topic(s): Molecular genetics of human cancer

Department/Division: Oncology

Faculty Name: Dr. Alison Klein

Research Topic(s): Genetic epidemiology; pancreatic cancer; cancer epidemiology; statistical genetics

Department/Division: Oncology
Faculty Name: Dr. Daniel Laheru
Research Topic(s): GI, drug development

Department/Division: Oncology
Faculty Name: Dr. Dung Le
Research Topic(s): GI cancers; immunotherapy

Department/Division: Oncology
Faculty Name: Dr. Mark Levis
Research Topic(s): Molecular biology of leukemia; molecularly targeted cancer therapy

Department/Division: Oncology
Faculty Name: Dr. Evan Lipson
Research Topic(s): Melanoma

Department/Division: Oncology
Faculty Name: Dr. Leo Luznik
Research Topic(s): Adoptive immunotherapy of cancer; allogenic bone marrow transplantation

Department/Division: Oncology
Faculty Name: Dr. Christian Meyer
Research Topic(s): Adult sarcoma

Department/Division: Oncology
Faculty Name: Dr. William Nelson
Research Topic(s): Molecular mechanisms of drugs for urological cancer prevention and treatment

Department/Division: Oncology
Faculty Name: Dr. John Nicholas
Research Topic(s): Signal transducing cytokines and receptors of humanherpesvirus-8

Department/Division: Oncology
Faculty Name: Dr. Channing Paller
Research Topic(s): Novel and natural therapeutics; combination therapies; urologic cancer

Department/Division: Oncology
Faculty Name: Dr. Nickolas Papadopoulos
Research Topic(s): Molecular genetics of human neoplasia

Department/Division: Oncology
Faculty Name: Dr. Drew Pardoll
Research Topic(s): Dendritic cell biology; T-cell regulation

Department/Division: Oncology
Faculty Name: Dr. Christine Pratilas
Research Topic(s): Molecularly targeted therapy for pediatric solid tumors

Department/Division: Oncology
Faculty Name: Dr. Eric Raabe
Research Topic(s): Neural stem cell biology; pediatric brain tumors; medulloblastoma; glioblastoma; diffuse intrinsic pontine glioma; targeting stem cell factors in brain tumors

Department/Division: Oncology
Faculty Name: Dr. Kathy Ruble
Research Topic(s): Cancer survivorship

Department/Division: Oncology
Faculty Name: Dr. Michelle Rudek
Research Topic(s): Drug development; clinical pharmacology

Department/Division: Oncology
Faculty Name: Dr. William Sharfman
Research Topic(s): Malignant melanoma

Department/Division: Oncology
Faculty Name: Dr. Dipali Sharma
Research Topic(s): Breast cancer prevention; obesity-cancer axis; bioactive compounds; endocrine resistance

Department/Division: Oncology
Faculty Name: Dr. Eugene Shenderov
Research Topic(s): GU Cancers; Immunotherapy; Spatial Biology; Computational AI

Department/Division: Oncology
Faculty Name: Dr. Donald Small
Research Topic(s): Molecular biology and molecular targeting of leukemia; leukemia stem cells

Department/Division: Oncology
Faculty Name: Dr. B. Douglas Smith
Research Topic(s): Myeloid malignancies (AML, CML, MDS); cancer stem cell biology

Department/Division: Oncology
Faculty Name: Dr. Vered Stearns
Research Topic(s): Breast cancer

Department/Division: Oncology

Faculty Name: Dr. Sara Sukumar

Research Topic(s): Molecular genetics of breast cancer

Department/Division: Oncology

Faculty Name: Dr. Lode Swinnen

Research Topic(s): Lymphoma; viral oncology; neoplasia and immunodeficiency; Epstein Barr virus

Department/Division: Oncology

Faculty Name: Dr. Heather Symons

Research Topic(s): immunobiology of bone marrow transplantation; alternative donor bone marrow transplantation for malignant and nonmalignant diseases

Department/Division: Oncology

Faculty Name: Dr. Victor Velculescu

Research Topic(s): Genomic analyses of human cancer

Department/Division: Oncology

Faculty Name: Dr. Kala Visvanathan

Research Topic(s): Genetic oncology; breast cancer

Department/Division: Oncology

Faculty Name: Dr. Bert Vogelstein

Research Topic(s): Exploring and exploiting the genetic alterations in human cancers

Department/Division: Oncology

Faculty Name: Dr. Nina Wagner-Johnston

Research Topic(s): Lymphoma

Department/Division: Oncology

Faculty Name: Dr. Antonio Wolff

Research Topic(s): Breast cancer; novel therapies; biomarkers; survivorship; guidelines

Department/Division: Oncology

Faculty Name: Dr. Srinivasan Yegnasubramanian

Research Topic(s): Molecular genetics and epigenetics of cancer; DNA methylation

Department/Division: Oncology

Faculty Name: Dr. Cynthia Zahnow

Research Topic(s): Mouse models and epigenetic therapeutic approaches for epithelial cancers

Department/Division: Oncology

Faculty Name: Dr. Elias Zambidis

Research Topic(s): Developmental biology of human hematopoietic and vascular stem cells; embryonic stem cell biology; regenerative medicine; stem cell transplantation; cancer stem cells

Department/Division: Oncology

Faculty Name: Dr. Lei Zheng

Research Topic(s): GI cancers (pancreatic, colon, and liver); vaccines and immunotherapy; molecularly targeted therapies

Department/Division: Oncology

Faculty Name: Dr. Shibin Zhou

Research Topic(s): Experimental cancer therapeutics

Department/Division: Oncology

Faculty Name: Dr. Challice Bonifant

Research Topic(s): Immunobiology of myeloid malignancies, targeted immunotherapy with cell engineering.

Department/Division: Oncology

Faculty Name: Dr. Clayton Yates

Research Topic(s): Molecular pathology; Genetics/Epigenetics of Cancer

Department/Division: Ophthalmology

Faculty Name: Dr. Esen Akpek

Research Topic(s): Cornea/Cataract

Department/Division: Ophthalmology

Faculty Name: Dr. Meghan Berkenstock

Research Topic(s): Uveitis; Scleritis, Autoimmune Diseases of the Eye

Department/Division: Ophthalmology

Faculty Name: Dr. Henry Brem

Research Topic(s): Angiogenesis Research and Controlled Drug Delivery

Department/Division: Ophthalmology

Faculty Name: Dr. Cindy Cai

Research Topic(s): Retina; Health equity / social determinants of health; Big data / informatics

Department/Division: Ophthalmology

Faculty Name: Dr. Peter Campochiaro

Research Topic(s): Surgical Retina

Department/Division: Ophthalmology

Faculty Name: Dr. Andrew Carey

Research Topic(s): Clinical neuro-ophthalmology

Department/Division: Ophthalmology

Faculty Name: Dr. Megan Collins

Research Topic(s): Pediatric ophthalmology and adult strabismus; Pediatric ophthalmology and Public Health and/or Health care policy; Medical ethics and professionalism; Health care equity / social determinants of health

Department/Division: Ophthalmology

Faculty Name: Dr. Allen Egharri

Research Topic(s): Cornea/Cataract

Department/Division: Ophthalmology

Faculty Name: Dr. James Handa

Research Topic(s): Ocular Tumors; Methods of Diagnosis and Treatment; Surgical Retina

Department/Division: Ophthalmology

Faculty Name: Dr. Amanda Henderson

Research Topic(s): Neuro-Ophthalmology

Department/Division: Ophthalmology

Faculty Name: Dr. Mona Kaleem

Research Topic(s): Clinical Research Elective in Ophthalmology - Bethesda campus

Department/Division: Ophthalmology

Faculty Name: Dr. Irene Kuo

Research Topic(s): Cornea/Cataract

Department/Division: Ophthalmology

Faculty Name: Dr. Emily Li

Research Topic(s): Oculoplastics

Department/Division: Ophthalmology

Faculty Name: Dr. Nicholas Mahoney

Research Topic(s): Oculoplastics

Department/Division: Ophthalmology

Faculty Name: Dr. Neil Miller

Research Topic(s): Clinical neuro-ophthalmology

Department/Division: Ophthalmology

Faculty Name: Dr. Fatemeh Rajaii

Research Topic(s): Oculoplastics

Department/Division: Ophthalmology

Faculty Name: Dr. Pradeep Ramulu

Research Topic(s): Ocular Epidemiology

Department/Division: Ophthalmology
Faculty Name: Dr. Oliver Schein
Research Topic(s): Cornea/Cataract; Ocular Epidemiology

Department/Division: Ophthalmology
Faculty Name: Dr. Shameema Sikder
Research Topic(s): Surgical Education; Cornea/Cataract; Surgical Education

Department/Division: Ophthalmology
Faculty Name: Dr. Uri Soiberman
Research Topic(s): Cornea/Cataract

Department/Division: Ophthalmology
Faculty Name: Dr. Sharon Solomon
Research Topic(s): Medical Retina

Department/Division: Ophthalmology
Faculty Name: Dr. Jennifer Thorne
Research Topic(s): Uveitis; Scleritis, Autoimmune Diseases of the Eye

Department/Division: Ophthalmology
Faculty Name: Dr. Robert Weinberg
Research Topic(s): Cornea/Cataract

Department/Division: Ophthalmology
Faculty Name: Dr. Don Zack
Research Topic(s): Retinal Molecular Biology

Department/Division: Ophthalmology
Faculty Name: Dr. David Zee
Research Topic(s): Pathophysiology of Eye Movement Disorders and Nystagmus

Department/Division: Orthopaedic Surgery
Faculty Name: Dr. Michael Ain
Research Topic(s): Skeletal dysplasia

Department/Division: Orthopaedic Surgery
Faculty Name: Dr. Ronald Byank
Research Topic(s): General Orthopaedic Surgery

Department/Division: Orthopaedic Surgery
Faculty Name: Dr. David Cohen
Research Topic(s): Clinical outcomes in spinal surgery; spinal deformities and disorders in adults

Department/Division: Orthopaedic Surgery
Faculty Name: Dr. Raj Deu
Research Topic(s): Sports Medicine

Department/Division: Orthopaedic Surgery
Faculty Name: Dr. James Ficke
Research Topic(s): Foot and ankle

Department/Division: Orthopaedic Surgery
Faculty Name: Dr. Erik Hasenboehler
Research Topic(s): Trauma

Department/Division: Orthopaedic Surgery
Faculty Name: Dr. Casey Humbyrd
Research Topic(s): Foot and Ankle

Department/Division: Orthopaedic Surgery
Faculty Name: Dr. Jack Ingari
Research Topic(s): Hand Surgery

Department/Division: Orthopaedic Surgery
Faculty Name: Dr. Khaled Kebaish
Research Topic(s): Spine deformities

Department/Division: Orthopaedic Surgery
Faculty Name: Dr. Harpal Khanuja
Research Topic(s): Total Joints

Department/Division: Orthopaedic Surgery
Faculty Name: Dr. Dawn Laporte
Research Topic(s): Hand Surgery

Department/Division: Orthopaedic Surgery
Faculty Name: Dr. Jay Lee
Research Topic(s): Pediatrics

Department/Division: Orthopaedic Surgery
Faculty Name: Dr. Adam Levin
Research Topic(s): Oncology; primary bone tumors

Department/Division: Orthopaedic Surgery
Faculty Name: Dr. Edward McFarland
Research Topic(s): Sports medicine; shoulder and elbow conditions

Department/Division: Orthopaedic Surgery
Faculty Name: Dr. Carol Morris
Research Topic(s): Oncology, primary bone tumors

Department/Division: Orthopaedic Surgery
Faculty Name: Dr. Brian Neuman
Research Topic(s): Spine

Department/Division: Orthopaedic Surgery
Faculty Name: Dr. Julius Oni
Research Topic(s): Total Joints

Department/Division: Orthopaedic Surgery
Faculty Name: Dr. Greg Osgood
Research Topic(s): Trauma

Department/Division: Orthopaedic Surgery
Faculty Name: Dr. Lee Riley III
Research Topic(s): Clinical outcomes in spinal surgery; spinal deformities and disorders in adults

Department/Division: Orthopaedic Surgery
Faculty Name: Dr. Babar Shafiq
Research Topic(s): Trauma

Department/Division: Orthopaedic Surgery
Faculty Name: Dr. Paul Sponseller
Research Topic(s): Spinal deformities; pediatric trauma; myelodysplasia; skeletal aspects of bladder exstrophy

Department/Division: Orthopaedic Surgery
Faculty Name: Dr. Robert Sterling
Research Topic(s): Total Joints

Department/Division: Orthopaedic Surgery
Faculty Name: Dr. Miho Tanaka
Research Topic(s): Sports medicine

Department/Division: Orthopaedic Surgery
Faculty Name: Dr. John Tis
Research Topic(s): Pediatrics

Department/Division: Orthopaedic Surgery
Faculty Name: Dr. Ranjit Varghese

Research Topic(s): Pediatrics

Department/Division: Otolaryngology - Head & Neck Surgery

Faculty Name: Dr. Yuri Agrawal

Research Topic(s): Vestibular function and aging; implications for gait and falls; vestibular compensation; vestibular rehabilitation

Department/Division: Otolaryngology - Head & Neck Surgery

Faculty Name: Dr. Lee Akst

Research Topic(s): Voice and swallowing disorders; dysphonia evaluation in various populations

Department/Division: Otolaryngology - Head & Neck Surgery

Faculty Name: Dr. Simon Best

Research Topic(s): Immunobiology of Recurrent Respiratory Papillomatosis (RRP); Development of novel therapeutic treatments for RRP

Department/Division: Otolaryngology - Head & Neck Surgery

Faculty Name: Dr. Nasir Bhatti

Research Topic(s): Difficult airways; complementary and alternative medicine

Department/Division: Otolaryngology - Head & Neck Surgery

Faculty Name: Dr. Kofi Boahene

Research Topic(s): Outcomes in facial paralysis restoration; Tissue engineering and wound healing; Minimally invasive approaches to brain and skull base lesions; Outcomes in ethnic facial cosmetic surgery; Facial paralysis; Cleft lip repair; Tissue engineering; Wound healing; Keloids

Department/Division: Otolaryngology - Head & Neck Surgery

Faculty Name: Dr. Emily Boss

Research Topic(s): Patient and family experience of care, provider-family communication, healthcare disparities, and surgical healthcare quality and utilization

Department/Division: Otolaryngology - Head & Neck Surgery

Faculty Name: Dr. Mariana Brait

Research Topic(s): Cancer Biomarkers; Early Detection of Cancer; Circulating DNA; Head and Neck Cancer; Translational Cancer Research; Epigenetics; Genetics; Salivary Gland Tumors

Department/Division: Otolaryngology - Head & Neck Surgery

Faculty Name: Dr. Patrick Byrne

Research Topic(s): Facial nerve rehabilitation; telemedicine and international cleft palate care; outcomes in reconstructive surgery

Department/Division: Otolaryngology - Head & Neck Surgery

Faculty Name: Dr. Wade Chen

Research Topic(s): Atraumatic methodologies for cochlear implant insertion; Hearing protection/regeneration; Middle ear mechanics; Temporal bone histopathology; Musical perception in cochlear implant users

Department/Division: Otolaryngology - Head & Neck Surgery

Faculty Name: Dr. Chenkai Dai

Research Topic(s): Optimize electrical stimulation in vestibular prosthesis; adaptation and interaction of vestibular nerve system to electrical stimulation; develop new rehabilitation paradigm to improve vestibular compensation for patients with vestibular disorder; set up ECAP/VOR measurements for electrode implantation

Department/Division: Otolaryngology - Head & Neck Surgery

Faculty Name: Dr. David Eisele

Research Topic(s): Surgery for malignant and benign tumors of the head and neck

Department/Division: Otolaryngology - Head & Neck Surgery

Faculty Name: Dr. Carole Fakhry

Research Topic(s): HPV-associated head and neck squamous cell cancer

Department/Division: Otolaryngology - Head & Neck Surgery

Faculty Name: Dr. Gene Fridman

Research Topic(s): Applied research toward developing novel methods and devices for neural interfacing and toward developing electronic prostheses for the treatment of central and peripheral neural disorders

Department/Division: Otolaryngology - Head & Neck Surgery

Faculty Name: Dr. Daria Gaykalova

Research Topic(s): The whole-genome analysis of chromatin structure re-organization in primary head and neck cancer tissues with and without HPV infection and viral genome integration. The role of chromatin in the regulation of gene expression. Adaptation of epigenetic ther

Department/Division: Otolaryngology - Head & Neck Surgery

Faculty Name: Dr. Christine Gourin

Research Topic(s): Quality of life; Quality of care, safety, and decision making in head and neck cancer; Functional outcomes; Survival following treatment for head and neck cancer

Department/Division: Otolaryngology - Head & Neck Surgery

Faculty Name: Dr. Alexander Hillel

Research Topic(s): Laryngeal tissue engineering; management of the difficult airway; pathogenesis of laryngotracheal fibrosis

Department/Division: Otolaryngology - Head & Neck Surgery

Faculty Name: Dr. Eugene Huang

Research Topic(s): Adhesion Dentistry; Biological considerations of the periodontium in regard to implant and restorative dentistry; Sjogren's Syndrome (currently involved with Sjogren's International Collaborative Clinical Alliance)

Department/Division: Otolaryngology - Head & Neck Surgery

Faculty Name: Dr. Lisa Ishii

Research Topic(s): Evaluation of aesthetic outcomes in facial plastic and reconstructive surgery

Department/Division: Otolaryngology - Head & Neck Surgery

Faculty Name: Dr. Masaru Ishii

Research Topic(s): Objective assessment of surgical data sciences

Department/Division: Otolaryngology - Head & Neck Surgery

Faculty Name: Dr. Matthew Kashima

Research Topic(s): Sleep apnea outcomes research; resident education

Department/Division: Otolaryngology - Head & Neck Surgery

Faculty Name: Dr. Jean Kim

Research Topic(s): Clinical, translational, and basic science research in chronic rhinosinusitis and nasal polyposis; immune dysfunction and upper airway epithelial cell biology; clinical, translational, and basic science research in autoimmune sinusitis and salivary gland disease.

Department/Division: Otolaryngology - Head & Neck Surgery

Faculty Name: Dr. Wayne Koch

Research Topic(s): Translational research using molecular biology to study the head and neck neoplasms; markers for early detection, prognostication

Department/Division: Otolaryngology - Head & Neck Surgery

Faculty Name: Dr. Andrew Lane

Research Topic(s): Chronic rhinosinusitis with and without nasal polyposis, olfactory loss and transnasal endoscopic surgery. Basic science research lab utilizes molecular biologic and immunologic techniques to study human tissue and mouse models, with a focus on epithelial

Department/Division: Otolaryngology - Head & Neck Surgery

Faculty Name: Dr. Frank Lin

Research Topic(s): How hearing loss impacts the health and functioning of older adults and the role of different treatment modalities (hearing aids, cochlear implantation) in mitigating these effects; Examining the potential causal associations between hearing loss and dementia, cognition, functional decline, social isolation, and health economic costs

Department/Division: Otolaryngology - Head & Neck Surgery

Faculty Name: Dr. Sandra Lin

Research Topic(s): Outcomes in pediatric and adult sinusitis; outcomes in the treatment of allergies

Department/Division: Otolaryngology - Head & Neck Surgery

Faculty Name: Dr. Raksha Mirchandani

Research Topic(s): Endodontic and oral infections and their link to systemic diseases

Department/Division: Otolaryngology - Head & Neck Surgery

Faculty Name: Dr. Wojciech Mydlarz

Research Topic(s): Surgical and non-surgical treatment outcomes in head and neck cancer patients; Molecular biology of head and neck cancer, Clinical applications of novel targeted cancer therapies, Robotic and laser surgery and their clinical applications, Minimally invasive surgical approaches for head and neck cancer

Department/Division: Otolaryngology - Head & Neck Surgery

Faculty Name: Dr. Alexander Pazoki

Research Topic(s): Oral and dental medicine

Department/Division: Otolaryngology - Head & Neck Surgery

Faculty Name: Dr. Murugappan Ramanathan

Research Topic(s): Molecular and immunologic (innate and adaptive) mechanisms underlying the pathogenesis of chronic rhinosinusitis with nasal polyps; Role of allergy and environmental pollutants

Department/Division: Otolaryngology - Head & Neck Surgery

Faculty Name: Dr. Nicole Schmitt

Research Topic(s): Biology of head and neck tumors, mechanisms, and toxicity profiles of platinum-based chemotherapy drugs

Department/Division: Otolaryngology - Head & Neck Surgery

Faculty Name: Dr. Michael Schubert

Research Topic(s): Research is focused on examining the oculomotor mechanisms responsible for both behavioral outcomes and physiologic changes associated with vestibular rehabilitation. Developing novel tools to change vestibular motor behavior.

Department/Division: Otolaryngology - Head & Neck Surgery

Faculty Name: Dr. David Sidransky

Research Topic(s): Molecular genetics of head and neck cancer; novel diagnostic approaches to detect tumors and better choose targeted therapies for cancer

Department/Division: Otolaryngology - Head & Neck Surgery

Faculty Name: Dr. Margaret Skinner

Research Topic(s): Disorders of the pediatric airway and upper aerodigestive tract; Congenital anomalies of the larynx, trachea, and esophagus

Department/Division: Otolaryngology - Head & Neck Surgery

Faculty Name: Dr. Matthew Stewart

Research Topic(s): Auditory Processing in Bone Anchored Hearing Aids; Healthcare quality implementation in microsystems

Department/Division: Otolaryngology - Head & Neck Surgery

Faculty Name: Dr. Barry Trink

Research Topic(s): Molecular biology of head and neck cancer

Department/Division: Otolaryngology - Head & Neck Surgery

Faculty Name: Dr. Ralph Tufano

Research Topic(s): Clinical and translational research of thyroid and parathyroid disease process

Department/Division: Otolaryngology - Head & Neck Surgery

Faculty Name: Dr. David Tunkel

Research Topic(s): Pediatric airway problems; ear and airway disease in skeletal dysplasia; development and application of clinical practice guidelines in pediatric otolaryngology

Department/Division: Pathology

Faculty Name: Dr. Syed Z. Ali

Research Topic(s): Cytopathology; digital photoimaging; web-based teaching tools

Department/Division: Pathology

Faculty Name: Dr. Syed Z. Ali

Research Topic(s): Cytopathology; digital photoimaging; web-based teaching tools

Department/Division: Pathology

Faculty Name: Dr. Robert Anders

Research Topic(s): Tumor immunology, tumor immune microenvironment, liver, and gastrointestinal pathology

Department/Division: Pathology

Faculty Name: Dr. Robert Anders

Research Topic(s): Tumor immunology, tumor immune microenvironment, liver, and gastrointestinal pathology

Department/Division: Pathology

Faculty Name: Dr. Lois Arend

Research Topic(s): Pathology of native and transplanted kidney

Department/Division: Pathology

Faculty Name: Dr. Lois Arend

Research Topic(s): Pathology of native and transplanted kidney

Department/Division: Pathology

Faculty Name: Dr. Pedram Argani

Research Topic(s): Breast cancer, gall bladder, and bile duct carcinomas; pediatric renal tumors

Department/Division: Pathology

Faculty Name: Dr. Pedram Argani

Research Topic(s): Breast cancer, gall bladder, and bile duct carcinomas; pediatric renal tumors

Department/Division: Pathology

Faculty Name: Dr. Serena Bagnasco

Research Topic(s): Pathology of native and transplanted kidney

Department/Division: Pathology

Faculty Name: Dr. Serena Bagnasco

Research Topic(s): Pathology of native and transplanted kidney

Department/Division: Pathology

Faculty Name: Dr. Alexander Baras

Research Topic(s): Machine learning/artificial intelligence applied to biological sequences and biomedical imaging; urological and gynecological pathology

Department/Division: Pathology

Faculty Name: Dr. Alexander Baras

Research Topic(s): Machine learning/artificial intelligence applied to biological sequences and biomedical imaging; urological and gynecological pathology

Department/Division: Pathology

Faculty Name: Dr. Evan Bloch

Research Topic(s): Transfusion transmitted infections; Babesiosis; global blood transfusion safety; international health

Department/Division: Pathology

Faculty Name: Dr. Evan Bloch

Research Topic(s): Transfusion transmitted infections; Babesiosis; global blood transfusion safety; international health

Department/Division: Pathology

Faculty Name: Dr. Michael Borowitz

Research Topic(s): Leukemia and lymphoma, especially pediatric leukemia; flow cytometry

Department/Division: Pathology

Faculty Name: Dr. Michael Borowitz

Research Topic(s): Leukemia and lymphoma, especially pediatric leukemia; flow cytometry

Department/Division: Pathology

Faculty Name: Dr. Karen Carroll

Research Topic(s): Diagnostic test development and evaluation for bacteria with emphasis on healthcare associated infections.

Department/Division: Pathology

Faculty Name: Dr. Karen Carroll

Research Topic(s): Diagnostic test development and evaluation for bacteria with emphasis on healthcare associated infections.

Department/Division: Pathology

Faculty Name: Dr. Patrizio Caturegli

Research Topic(s): Autoimmune diseases; thyroiditis; hypophysitis; mouse models

Department/Division: Pathology

Faculty Name: Dr. Patrizio Caturegli

Research Topic(s): Autoimmune diseases; thyroiditis; hypophysitis; mouse models

Department/Division: Pathology

Faculty Name: Dr. Daniel Chan

Research Topic(s): Tumor markers; proteomics; immunoassay

Department/Division: Pathology

Faculty Name: Dr. Daniel Chan

Research Topic(s): Tumor markers; proteomics; immunoassay

Department/Division: Pathology

Faculty Name: Dr. Daniel Cihakova

Research Topic(s): Immunology, cardiac inflammation, myocarditis, dilated cardiomyopathy, myocardial infarction, T cells, Macrophages, Innate lymphoid cells, cytokines

Department/Division: Pathology

Faculty Name: Dr. Daniel Cihakova

Research Topic(s): Immunology, cardiac inflammation, myocarditis, dilated cardiomyopathy, myocardial infarction, T cells, Macrophages, Innate lymphoid cells, cytokines

Department/Division: Pathology

Faculty Name: Dr. Ashley Cimino-Mathews

Research Topic(s): Breast cancer, tumor immune microenvironment

Department/Division: Pathology

Faculty Name: Dr. Ashley Cimino-Mathews

Research Topic(s): Breast cancer, tumor immune microenvironment

Department/Division: Pathology

Faculty Name: Dr. William Clarke

Research Topic(s): Therapeutic drug monitoring; clinical toxicology; drug assay development, point-of-care testing

Department/Division: Pathology

Faculty Name: Dr. William Clarke

Research Topic(s): Therapeutic drug monitoring; clinical toxicology; drug assay development, point-of-care testing

Department/Division: Pathology

Faculty Name: Dr. Angelo De Marzo

Research Topic(s): Molecular pathogenesis of prostate cancer

Department/Division: Pathology

Faculty Name: Dr. Angelo De Marzo

Research Topic(s): Molecular pathogenesis of prostate cancer

Department/Division: Pathology

Faculty Name: Dr. Charles Eberhart

Research Topic(s): Pathogenesis of brain and eye tumors

Department/Division: Pathology

Faculty Name: Dr. Charles Eberhart

Research Topic(s): Pathogenesis of brain and eye tumors

Department/Division: Pathology

Faculty Name: Dr. Jonathan Epstein

Research Topic(s): Genitourinary pathology

Department/Division: Pathology

Faculty Name: Dr. Jonathan Epstein

Research Topic(s): Genitourinary pathology

Department/Division: Pathology

Faculty Name: Dr. James Eshleman

Research Topic(s): Early detection of pancreatic cancer; genes causing familial pancreatic cancer; liquid biopsy for patients with solid tumors; targeting cancer based on its genotype; novel molecular tools for cancer

Department/Division: Pathology

Faculty Name: Dr. James Eshleman

Research Topic(s): Early detection of pancreatic cancer; genes causing familial pancreatic cancer; liquid biopsy for patients with solid tumors; targeting cancer based on its genotype; novel molecular tools for cancer

Department/Division: Pathology
Faculty Name: Dr. Susan Eshleman
Research Topic(s): HIV genetic diversity, transmission, and drug resistance; novel methods for HIV analysis

Department/Division: Pathology
Faculty Name: Dr. Susan Eshleman
Research Topic(s): HIV genetic diversity, transmission, and drug resistance; novel methods for HIV analysis

Department/Division: Pathology
Faculty Name: Dr. Edward Gabrielson
Research Topic(s): Molecular pathology of breast and lung cancer

Department/Division: Pathology
Faculty Name: Dr. Edward Gabrielson
Research Topic(s): Molecular pathology of breast and lung cancer

Department/Division: Pathology
Faculty Name: Dr. Mary Glenn Fowler
Research Topic(s): Prevention of mother and child transmission of HIV; treatment of pediatric HIV infection; and prevention among high-risk adolescents and women in international settings

Department/Division: Pathology
Faculty Name: Dr. Mary Glenn Fowler
Research Topic(s): Prevention of mother and child transmission of HIV; treatment of pediatric HIV infection; and prevention among high-risk adolescents and women in international settings

Department/Division: Pathology
Faculty Name: Dr. Christopher Gocke
Research Topic(s): Molecular diagnostics and hematopathology

Department/Division: Pathology
Faculty Name: Dr. Christopher Gocke
Research Topic(s): Molecular diagnostics and hematopathology

Department/Division: Pathology
Faculty Name: Dr. Michael Goggins
Research Topic(s): Pancreatic cancer, particularly early detection; cancer genetics; cancer epigenetics

Department/Division: Pathology
Faculty Name: Dr. Michael Goggins
Research Topic(s): Pancreatic cancer, particularly early detection; cancer genetics; cancer epigenetics

Department/Division: Pathology

Faculty Name: Dr. Mary Kate Grabowski

Research Topic(s): Human immunodeficiency virus, epidemiology, pathogen phylogenetics, international health

Department/Division: Pathology

Faculty Name: Dr. Mary Kate Grabowski

Research Topic(s): Human immunodeficiency virus, epidemiology, pathogen phylogenetics, international health

Department/Division: Pathology

Faculty Name: Dr. Marc Halushka

Research Topic(s): Cellular expression and cardiovascular disease

Department/Division: Pathology

Faculty Name: Dr. Marc Halushka

Research Topic(s): Cellular expression and cardiovascular disease

Department/Division: Pathology

Faculty Name: Dr. Abdu Hamad

Research Topic(s): Type I diabetes, underlying mechanisms and innovative therapeutic strategies, role of B cells and Natural killer T cells

Department/Division: Pathology

Faculty Name: Dr. Abdu Hamad

Research Topic(s): Type I diabetes, underlying mechanisms and innovative therapeutic strategies, role of B cells and Natural killer T cells

Department/Division: Pathology

Faculty Name: Dr. Ralph H. Hruban

Research Topic(s): Cancer of the pancreas

Department/Division: Pathology

Faculty Name: Dr. Ralph H. Hruban

Research Topic(s): Cancer of the pancreas

Department/Division: Pathology

Faculty Name: Dr. Chien-Fu Hung

Research Topic(s): Cancer vaccine; immunotherapy; DNA vaccine

Department/Division: Pathology

Faculty Name: Dr. Chien-Fu Hung

Research Topic(s): Cancer vaccine; immunotherapy; DNA vaccine

Department/Division: Pathology
Faculty Name: Dr. Peter Illei
Research Topic(s): Pulmonary pathology and cytopathology

Department/Division: Pathology
Faculty Name: Dr. Peter Illei
Research Topic(s): Pulmonary pathology and cytopathology

Department/Division: Pathology
Faculty Name: Dr. Aaron James
Research Topic(s): Bone biology, bone repair, mesenchymal stem cells, bone tumors

Department/Division: Pathology
Faculty Name: Dr. Aaron James
Research Topic(s): Bone biology, bone repair, mesenchymal stem cells, bone tumors

Department/Division: Pathology
Faculty Name: Dr. Claire Knezevic
Research Topic(s): Critical care testing, TDM/toxicology, Mass Spectrometry

Department/Division: Pathology
Faculty Name: Dr. Claire Knezevic
Research Topic(s): Critical care testing, TDM/toxicology, Mass Spectrometry

Department/Division: Pathology
Faculty Name: Dr. Vassilis Koliatsos
Research Topic(s): Traumatic brain injury, traumatic axonopathy; stem cell therapies for neural injury

Department/Division: Pathology
Faculty Name: Dr. Vassilis Koliatsos
Research Topic(s): Traumatic brain injury, traumatic axonopathy; stem cell therapies for neural injury

Department/Division: Pathology
Faculty Name: Dr. Scott Krummey
Research Topic(s): Transplant immunology, high-dimensional flow cytometry for immune profiling of transplant patient populations, histocompatibility, HLA antibody testing

Department/Division: Pathology
Faculty Name: Dr. Scott Krummey
Research Topic(s): Transplant immunology, high-dimensional flow cytometry for immune profiling of transplant patient populations, histocompatibility, HLA antibody testing

Department/Division: Pathology
Faculty Name: Dr. H. Benjamin Larman

Research Topic(s): High throughput molecular assay development, human immunology, autoimmunity

Department/Division: Pathology

Faculty Name: Dr. H. Benjamin Larman

Research Topic(s): High throughput molecular assay development, human immunology, autoimmunity

Department/Division: Pathology

Faculty Name: Dr. Tatianna Larman

Research Topic(s): Intestinal epithelial biology, intestinal stem cell niche homeostasis, early colorectal cancer pathogenesis, GI/liver/soft tissue pathology

Department/Division: Pathology

Faculty Name: Dr. Tatianna Larman

Research Topic(s): Intestinal epithelial biology, intestinal stem cell niche homeostasis, early colorectal cancer pathogenesis, GI/liver/soft tissue pathology

Department/Division: Pathology

Faculty Name: Dr. Anne Le

Research Topic(s): Metabolism of disease and metabolomics technologies

Department/Division: Pathology

Faculty Name: Dr. Anne Le

Research Topic(s): Metabolism of disease and metabolomics technologies

Department/Division: Pathology

Faculty Name: Dr. Qing Kay Li

Research Topic(s): Biomarkers in lung cancer and prostate cancer

Department/Division: Pathology

Faculty Name: Dr. Tong Li

Research Topic(s): Molecular biology of neurobiological diseases

Department/Division: Pathology

Faculty Name: Dr. Ming-Tseh Lin

Research Topic(s): Molecular diagnosis of solid tumor

Department/Division: Pathology

Faculty Name: Dr. Tamara Lotan

Research Topic(s): Prognostic and predictive molecular biomarkers for prostate cancer; PTEN/Pi3k/mTOR signaling in development and tumorigenesis; genitourinary pathology

Department/Division: Pathology

Faculty Name: Dr. Zahra Maleki

Research Topic(s): Cytopathology; Lung Neoplasms, Salivary Gland and Head and Neck Cytopathology

Department/Division: Pathology
Faculty Name: Dr. Joseph L. Mankowski
Research Topic(s): Comparative pathology and viral pathogenesis; neuroimmunology

Department/Division: Pathology
Faculty Name: Dr. Lee J. Martin
Research Topic(s): Amyotrophic lateral sclerosis; Parkinson's disease; mitochondria; stroke; neonatal brain ischemia; cell death; apoptosis-necrosis continuum; motor neuron disease; transgenic mice

Department/Division: Pathology
Faculty Name: Dr. Mark Marzinke
Research Topic(s): Analytical pharmacology, laboratory automation, precision medicine and pharmacogenetics

Department/Division: Pathology
Faculty Name: Dr. Andres Matoso
Research Topic(s): Urologic pathology including rare tumors and bladder cancer

Department/Division: Pathology
Faculty Name: Dr. Alan Meeker
Research Topic(s): Molecular pathology and telomere biology of prostate and other cancers

Department/Division: Pathology
Faculty Name: Dr. Heba Mostafa
Research Topic(s): Diagnostic Molecular Virology, Viral Surveillance and Evolution

Department/Division: Pathology
Faculty Name: Dr. Jaclyn Murry
Research Topic(s): Prenatal and Postnatal Clinical Cytogenetics; Chromosome Microarray; delineation of genetic syndromes

Department/Division: Pathology
Faculty Name: Dr. David Nauen
Research Topic(s): Structure and function of human hippocampus

Department/Division: Pathology
Faculty Name: Dr. Kiyoko Oshima
Research Topic(s): Liver and biliary pathology, liver transplant pathology

Department/Division: Pathology
Faculty Name: Dr. Nicole Parrish
Research Topic(s): Antibiotic development; use of natural compounds as antimicrobials and the basis for synthetic scaffolds; diagnostic development for rapid detection of antimicrobial resistance;

understanding antibiotic consumption and the relationship to development of antimicrobial resistance in both pathogens and commensal organisms

Department/Division: Pathology

Faculty Name: Dr. Nicolas Roberts

Research Topic(s): Pancreatic cancer, inherited cancer, in vitro and in vivo cancer models

Department/Division: Pathology

Faculty Name: Dr. Richard Roden

Research Topic(s): Cervical cancer; ovarian cancer; papillomavirus; vaccine development; virology

Department/Division: Pathology

Faculty Name: Dr. Brigitte Ronnett

Research Topic(s): Gynecologic pathology

Department/Division: Pathology

Faculty Name: Dr. Max Rosario

Research Topic(s): Corona Virus T cell vaccines and NK cell immunology

Department/Division: Pathology

Faculty Name: Dr. Scheherazade Sadegh-Nasseri

Research Topic(s): Molecular mechanisms of Antigen Processing in relation to autoimmune diseases, HIV, memory T cell longevity, and vaccine designs

Department/Division: Pathology

Faculty Name: Dr. Alena Savonenko

Research Topic(s): Cognitive deficits in animal models of Alzheimer's, Parkinson's, and schizophrenia; testing experimental treatments for these diseases; their mechanisms, safety, and side effects

Department/Division: Pathology

Faculty Name: Dr. Jonathan Schneck

Research Topic(s): Basic mechanisms controlling T-cell mediated immune responses; cellular engineering; adoptive immunotherapy; cellular microarray-based high-throughput analysis of immune responses

Department/Division: Pathology

Faculty Name: Dr. Karen Sfanos

Research Topic(s): Cancer biology; prostate cancer

Department/Division: Pathology

Faculty Name: Dr. IE Ming Shih

Research Topic(s): Molecular events that drive precursor lesion to invasive cancer; Molecular targets for new therapy by exploring cancer genomics; Integrated proteogenomic analysis of human cancer

Department/Division: Pathology

Faculty Name: Dr. Trish Simner

Research Topic(s): Clinical microbiology, antimicrobial resistance, and novel diagnostic tools for infectious diseases

Department/Division: Pathology

Faculty Name: Dr. Lori Sokoll

Research Topic(s): Clinical chemistry; tumor markers; immunoassays

Department/Division: Pathology

Faculty Name: Dr. Charles Steenbergen

Research Topic(s): Cardiac pathology; myocardial ischemia/reperfusion injury and cardio protection

Department/Division: Pathology

Faculty Name: Dr. Shuying Sun

Research Topic(s): Neurodegenerative diseases and RNA metabolism

Department/Division: Pathology

Faculty Name: Dr. Elizabeth Thompson

Research Topic(s): Pancreatic tumors, tumor immune microenvironment, immune response to different stages of neoplasia

Department/Division: Pathology

Faculty Name: Dr. Aaron Tobian

Research Topic(s): Transfusion medicine and HIV

Department/Division: Pathology

Faculty Name: Dr. Juan Troncoso

Research Topic(s): Neuropathology of normal aging, Alzheimer's, Parkinson's, and Huntington's disease with emphasis on morphological and biochemical studies of human postmortem tissues. My laboratory has access to >2500 autopsy brains, with fixed and frozen tissues, of neu

Department/Division: Pathology

Faculty Name: Dr. Chris Vadenbussche

Research Topic(s): Genitourinary pathology; ancillary testing in small biopsy specimens; cytomorphologic digital analysis

Department/Division: Pathology

Faculty Name: Dr. Russell Vang

Research Topic(s): Gynecologic pathology

Department/Division: Pathology

Faculty Name: Dr. Tian-Li Wang

Research Topic(s): DNA damage repair in cancer development; Chromatin remodeling in ovarian cancer; Cancer stem cell study; Innovative cancer detection using body fluid

Department/Division: Pathology

Faculty Name: Dr. Philip Wong

Research Topic(s): Molecular mechanisms and mouse models of neurodegenerative and psychiatric diseases; experimental therapeutics

Department/Division: Pathology

Faculty Name: Dr. Laura Wood

Research Topic(s): Cancer genomics; pancreatic and liver cancers; gastrointestinal and liver pathology

Department/Division: Pathology

Faculty Name: Dr. T.C. Wu

Research Topic(s): Cancer, immunotherapy for HPV associated malignancies and other gynecological cancers; molecular pathology and DNA vaccines

Department/Division: Pathology

Faculty Name: Dr. Rena Xian

Research Topic(s): B-cell lymphoma genomics, next-generation sequencing, non-invasive diagnostics, viral-associated lymphomas

Department/Division: Pathology

Faculty Name: Dr. Deyin Xing

Research Topic(s): Diagnosis and molecular pathogenesis of gynecologic neoplastic and non-neoplastic lesions

Department/Division: Pathology

Faculty Name: Dr. Mark Zarella

Research Topic(s): Digital pathology, Human interpretable machine learning using histology images.

Department/Division: Pathology

Faculty Name: Dr. Hui Zhang

Research Topic(s): Developing and applying high-throughput mass spectrometric technologies and data analysis pipeline for multi-omics characterization of proteins and protein phosphorylation/glycosylation

Department/Division: Pathology

Faculty Name: Dr. Sean Zhang

Research Topic(s): Medical mycology; molecular diagnosis of fungal infections

Department/Division: Pathology

Faculty Name: Dr. Zhen Zhang

Research Topic(s): Bioinformatics; biomarker discovery; computational methods for expression data analysis; biomarkers for ovarian cancer

Department/Division: Pathology

Faculty Name: Dr. Ying Zou

Research Topic(s): Characterization of chromosomal structural abnormalities in leukemia and lymphoma using cytogenomics methods; Fluorescence in situ hybridization

Department/Division: Pharmacy and Molecular Science

Faculty Name: Dr. Kelly E. Dooley

Research Topic(s): Clinical pharmacology of anti-infective agents; evaluation of new drug regimens for the treatment of tuberculosis and co-treatment of TB and HIV

Department/Division: Pharmacy and Molecular Science

Faculty Name: Dr. Laura Ensign

Research Topic(s): Nanomedicine for drug delivery

Department/Division: Pharmacy and Molecular Science

Faculty Name: Dr. Caren Freel Meyers

Research Topic(s): Organic and medicinal chemistry; chemical biology; drug delivery mechanisms in bacteria; development of antibiotic prodrug strategies; study of bacterial isoprenoid biosynthesis; combinatorial biosynthesis; development of potential therapeutic agents

Department/Division: Pharmacy and Molecular Science

Faculty Name: Dr. Marc Greenberg

Research Topic(s): Chemical and biochemical approaches to the study of DNA damage and repair, and their applications

Department/Division: Pharmacy and Molecular Science

Faculty Name: Dr. Justin Haines

Research Topic(s): Nanotechnology for drug and nucleic acid delivery

Department/Division: Pharmacy and Molecular Science

Faculty Name: Dr. J. Marie Hardwick

Research Topic(s): Molecular mechanisms of programmed cell death

Department/Division: Pharmacy and Molecular Science

Faculty Name: Dr. Ling He

Research Topic(s): Regulations of glucose and lipid metabolism by co-activators and metformin

Department/Division: Pharmacy and Molecular Science

Faculty Name: Dr. Craig Hendrix

Research Topic(s): Anti-infective drugs; chemoprevention of infectious disease

Department/Division: Pharmacy and Molecular Science

Faculty Name: Dr. Richard L. Haganir

Research Topic(s): Molecular mechanisms in regulation of synaptic plasticity

Department/Division: Pharmacy and Molecular Science

Faculty Name: Dr. Takanari Inoue

Research Topic(s): Synthetic Cell Biology: Total synthesis of cellular functions such as neutrophil chemotaxis and ciliary mechanosensation

Department/Division: Pharmacy and Molecular Science

Faculty Name: Dr. Matthew Ippolito

Research Topic(s): Chemotherapeutics for malaria control and elimination

Department/Division: Pharmacy and Molecular Science

Faculty Name: Dr. John T. Isaacs

Research Topic(s): Anti-cancer drug development; Normal and malignant stem cell biology

Department/Division: Pharmacy and Molecular Science

Faculty Name: Dr. William B. Isaacs

Research Topic(s): Understanding the molecular genetic events responsible for the initiation and progression of prostate cancer; inherited susceptibility of prostate cancer

Department/Division: Pharmacy and Molecular Science

Faculty Name: Dr. David Kass

Research Topic(s): Molecular physiology of myocardial disease

Department/Division: Pharmacy and Molecular Science

Faculty Name: Dr. Kenneth Kinzler

Research Topic(s): Molecular genetics of cancer; translational cancer research

Department/Division: Pharmacy and Molecular Science

Faculty Name: Dr. Mark Levis

Research Topic(s): Targeting the FLT3 signaling pathway as a treatment for acute leukemia

Department/Division: Pharmacy and Molecular Science

Faculty Name: Dr. Jun Liu

Research Topic(s): Chemical biology and molecular biology; use of small molecules as probes to elucidate mechanisms of signal transduction; angiogenesis and cell proliferation

Department/Division: Pharmacy and Molecular Science

Faculty Name: Dr. William Nelson

Research Topic(s): Molecular mechanisms of prostatic carcinogenesis; epigenetic alterations in cancer; new approaches to prostate cancer prevention and treatment

Department/Division: Pharmacy and Molecular Science

Faculty Name: Dr. Sridhar Nimmagadda

Research Topic(s): Chemokine receptor biology and molecular imaging applications in drug development

Department/Division: Pharmacy and Molecular Science

Faculty Name: Dr. Kenneth Pienta

Research Topic(s): The ecology of cancer, tumor microenvironment, metastasis, biomarker development, novel therapeutic development

Department/Division: Pharmacy and Molecular Science

Faculty Name: Dr. Martin Pomper

Research Topic(s): In vivo molecular and cellular imaging; radiopharmaceutical development; targeted cancer imaging and therapy; functional brain imaging

Department/Division: Pharmacy and Molecular Science

Faculty Name: Dr. Jonathan Powell

Research Topic(s): Mechanisms of T-cell activation and tolerance

Department/Division: Pharmacy and Molecular Science

Faculty Name: Dr. Stuart Ray

Research Topic(s): Computational immunovirology of chronic viral hepatitis

Department/Division: Pharmacy and Molecular Science

Faculty Name: Dr. Douglas Robinson

Research Topic(s): Understanding cytokinesis and cell shape control

Department/Division: Pharmacy and Molecular Science

Faculty Name: Dr. Christopher Ross

Research Topic(s): Molecular mechanisms of apoptosis; roles of apoptosis in carcinogenesis and therapeutic resistance; novel therapeutic development in animal models of cancer

Department/Division: Pharmacy and Molecular Science

Faculty Name: Dr. Ronald Schnaar

Research Topic(s): Cell interactions in the nervous system

Department/Division: Pharmacy and Molecular Science

Faculty Name: Dr. Theresa Shapiro

Research Topic(s): Clinical pharmacology; molecular mechanisms of antiparasitic drug action; effects of topoisomerase inhibitors on DNA of trypanosomes; structure-activity of antimalarial trioxanes

Department/Division: Pharmacy and Molecular Science

Faculty Name: Dr. Robert Siliciano

Research Topic(s): HIV latency, evolution, and persistence; HIV treatment and drug resistance; pharmacology of HIV drugs

Department/Division: Pharmacy and Molecular Science

Faculty Name: Dr. Barbara Slusher

Research Topic(s): Directs Johns Hopkins Drug Discovery which represents the largest integrated drug discovery program on campus

Department/Division: Pharmacy and Molecular Science

Faculty Name: Dr. Solomon Snyder

Research Topic(s): Molecular basis of neural signal transduction

Department/Division: Pharmacy and Molecular Science

Faculty Name: Dr. James Stivers

Research Topic(s): Structural and chemical biology of uracil metabolism and applications to cancer therapy; innate and adaptive immunity

Department/Division: Pharmacy and Molecular Science

Faculty Name: Dr. Saraswati Sukumar

Research Topic(s): Molecular alterations in breast cancer

Department/Division: Pharmacy and Molecular Science

Faculty Name: Dr. Sean Taverna

Research Topic(s): Histone and chromatin modifications; epigenetics and gene function; identification of histone building modules; small RNA directed gene slicing

Department/Division: Pharmacy and Molecular Science

Faculty Name: Dr. Craig A. Townsend

Research Topic(s): Organic and bioorganic chemistry: biosynthesis of natural products and biomimetic synthesis; protein isolation and mechanistic enzymology; molecular biology of secondary metabolism and the applications of biosynthetic systems; study of the role and inhibition of fatty acid synthesis in human cancer and tuberculosis

Department/Division: Pharmacy and Molecular Science

Faculty Name: Dr. Bert Vogelstein

Research Topic(s): Molecular genetics of human cancer

Department/Division: Pharmacy and Molecular Science

Faculty Name: Dr. Huijun Wei

Research Topic(s): Identifying and validating drug targets for the treatment of neurodevelopmental disorders

Department/Division: Pharmacy and Molecular Science

Faculty Name: Dr. Ethel Weld

Research Topic(s): Alternative delivery strategies for HIV prevention and treatment and expanding treatment options for special populations with TB and HIV

Department/Division: Pharmacy and Molecular Science
Faculty Name: Dr. Michael J. Wolfgang
Research Topic(s): Cellular and organismal metabolism

Department/Division: Pharmacy and Molecular Science
Faculty Name: DR. Srinivasan Yegnasubramanian
Research Topic(s): Understanding and exploiting alterations in the cancer genome and epigenome for development of biomarkers and therapeutics

Department/Division: Pharmacy and Molecular Science
Faculty Name: Dr. Heng Zhu
Research Topic(s): Signal transduction, protein network, host-pathogen interaction, biomarker identification

Department/Division: Physical Medicine and Rehabilitation
Faculty Name: Dr. P. Celnik
Research Topic(s): Neuroplasticity, transcranial magnetic stimulation

Department/Division: Physical Medicine and Rehabilitation
Faculty Name: Dr. M. Gonzalez-Fernandez
Research Topic(s): Stroke and dysphagia, prosthetics

Department/Division: Physical Medicine and Rehabilitation
Faculty Name: Dr. P. Raghavan
Research Topic(s): Motor recovery after stroke; Understanding and treating muscle stiffness; Biomarkers for chronic myofascial pain

Department/Division: Physical Medicine and Rehabilitation
Faculty Name: Dr. A. Reico
Research Topic(s): Recovery and regeneration in spinal cord injury

Department/Division: Physical Medicine and Rehabilitation
Faculty Name: Dr. C. Sadowsy
Research Topic(s): Recovery and regeneration in spinal cord injury

Department/Division: Physical Medicine and Rehabilitation
Faculty Name: Dr. S. Wegener
Research Topic(s): Chronic pain related to injury, chronic disease, or disability; cognitive-behavioral and self-management interventions; positive psychological variables (denial, positive coping, hope and spirituality) in health outcomes

Department/Division: Physiology
Faculty Name: Dr. Liudmila Cebotaru
Research Topic(s): CF Gene Therapy

Department/Division: Physiology

Faculty Name: Dr. Steven Claypool

Research Topic(s): Mitochondrial phospholipid metabolism in health and disease.

Department/Division: Physiology

Faculty Name: Dr. Valina Dawson

Research Topic(s): Molecular mechanisms of neuronal death and survival; cell death and cell survival signaling pathways in models of stroke and Parkinson's disease

Department/Division: Physiology

Faculty Name: Dr. Dax Fu

Research Topic(s): Zinc transporters: biochemistry, biophysics, and cell biology.

Department/Division: Physiology

Faculty Name: Dr. William Guggino

Research Topic(s): Genetic diseases resulting in defective ion channels.

Department/Division: Physiology

Faculty Name: Dr. Anastasia Kralli

Research Topic(s): Regulatory pathways that control adaptive metabolic responses in adipose and skeletal muscle tissues.

Department/Division: Physiology

Faculty Name: Dr. Svetlana Lutsenko

Research Topic(s): Human copper homeostasis: biochemical mechanisms of transport and compartmentalization of metal ions, the role of copper in lipid metabolism and cell differentiation, developing new approaches for treatment of human disorders of copper misbalance.

Department/Division: Physiology

Faculty Name: Dr. Jennifer Pluznick

Research Topic(s): Renal physiology; the role of sensory receptors in regulating renal function; localizing renal olfactory receptors and identifying their ligands in order to understand the role of each receptor in whole-animal physiology

Department/Division: Physiology

Faculty Name: Dr. Zhaozhu Qiu

Research Topic(s): Mechanisms of osmotic regulation in physiology and disease

Department/Division: Physiology

Faculty Name: Dr. Rajini Rao

Research Topic(s): Ion transporters in human health and disease. Calcium signaling in lactation and breast cancer. New roles for endosomal Na⁺/H⁺ exchangers in pH regulation, trafficking, and sodium homeostasis and their contributions to hypertension, autism, and glioblastoma

Department/Division: Physiology

Faculty Name: Dr. Shuying Sun

Research Topic(s): RNA metabolism dysfunction and RNA-targeting therapeutics in neurodegeneration

Department/Division: Physiology

Faculty Name: Dr. Paul Welling

Research Topic(s): Molecular Mechanisms of Salt Balance, Hypertension, and Kidney Disease

Department/Division: Physiology

Faculty Name: Dr. Guang Wong

Research Topic(s): Metabolic physiology of secreted hormones

Department/Division: Physiology

Faculty Name: Dr. Thomas Woolf

Research Topic(s): Molecular dynamics simulations of large conformational changes involved with function; Biophysics of membrane proteins; signaling networks, drug design, and allostery; Relative free energy calculations, estimates of entropy: enthalpy compensation, and insights into structure: function connections.

Department/Division: Plastic Surgery

Faculty Name: Dr. Gerald Brandacher

Research Topic(s): Reconstructive transplantation; research strategies to induce immune tolerance and enhance nerve regeneration after hand and face transplantation

Department/Division: Plastic Surgery

Faculty Name: Dr. Gedge Rosson

Research Topic(s): Dr. Rosson specializes in complex peripheral nerve surgery and microvascular perforator flap breast reconstructions, such as the DIEP (deep inferior epigastric artery perforator flap), the SIEA (superficial inferior epigastric artery flap), the SGAP (superior gluteal artery perforator flap)

Department/Division: Plastic Surgery

Faculty Name: Dr. Sami Tuffaha

Research Topic(s): Dr. Tuffaha leads a laboratory dedicated to basic and translation research aimed at developing strategies to (1) improve peripheral nerve regeneration and functional recovery; and (2) treat and prevent painful neuroma formation. His research efforts are tightly integrated with collaborators in Biomedical Engineering and Neurology. There are additional opportunities to become involved in ongoing clinical trials that stem from work in the laboratory.

Department/Division: Psychiatry and Behavioral Science

Faculty Name: Dr. Arnold Baker

Research Topic(s): Memory impairment in aging and disease; Neuroimaging in neurodegenerative disorders, schizophrenia, depression, and decision making; Clinical trials in Alzheimer's disease

Department/Division: Psychiatry and Behavioral Science

Faculty Name: Dr. Patrick Carroll

Research Topic(s): Opportunities for outcomes research and follow-up studies in patients seeking treatment for addictions

Department/Division: Psychiatry and Behavioral Science

Faculty Name: Dr. Raymond DePaulo

Research Topic(s): Depression and Bipolar Disorder: The impact on society, their causes and outcomes and research prospects

Department/Division: Psychiatry and Behavioral Science

Faculty Name: Dr. Fernando Goes

Research Topic(s): Bipolar Disorder and Major Depression: Opportunities are available for participant in a number of projects related to gene discovery, gene characterization, and gene-phenotypes studies. We have a number of genome-wide association and whole exome/genome st

Department/Division: Psychiatry and Behavioral Science

Faculty Name: Dr. Marco A. Grados

Research Topic(s): Research in genetic-epidemiology and clinical registry in children with obsessive-compulsive disorder (Pediatric OCD), Tourette syndrome and attention deficit hyperactivity disorder (ADHD). Risk genetic, neurocognitive, and clinical factors are examined i

Department/Division: Psychiatry and Behavioral Science

Faculty Name: Dr. Roland Griffiths

Research Topic(s): Human behavioral pharmacology of abused drugs

Department/Division: Psychiatry and Behavioral Science

Faculty Name: Dr. Angela Guarda

Research Topic(s): Eating disorders; anorexia nervosa and bulimia nervosa

Department/Division: Psychiatry and Behavioral Science

Faculty Name: Dr. Gerald Nestadt

Research Topic(s): Obsessive/compulsive disorder: doubt in decision-making

Department/Division: Psychiatry and Behavioral Science

Faculty Name: Dr. Glenn Treisman

Research Topic(s): Psychopharmacology; HIV; affective disorders

Department/Division: Psychiatry and Behavioral Science

Faculty Name: Dr. Peter Zandi

Research Topic(s): Depression and Bipolar Disorder: The impact on society, their causes and outcomes and research prospects

Department/Division: Radiation Oncology

Faculty Name: Dr. S Acharya

Research Topic(s): Pediatric oncology

Department/Division: Radiation Oncology

Faculty Name: Dr. F Bunz

Research Topic(s): Responses of cancer cells to DNA damage; human cell genetics

Department/Division: Radiation Oncology

Faculty Name: Dr. C Deville

Research Topic(s): Health equity, prostate cancer

Department/Division: Radiation Oncology

Faculty Name: Dr. M Goldstein

Research Topic(s): Prostate cancer, epigenetics

Department/Division: Radiation Oncology

Faculty Name: Dr. R. Hales

Research Topic(s): Lung cancer and thoracic oncology

Department/Division: Radiation Oncology

Faculty Name: Dr. R. Ivkov

Research Topic(s): Nanomaterials in targeting cancers

Department/Division: Radiation Oncology

Faculty Name: Dr. M. Kai

Research Topic(s): DNA damage response

Department/Division: Radiation Oncology

Faculty Name: Dr. A. Kiess

Research Topic(s): Head and neck cancer

Department/Division: Radiation Oncology

Faculty Name: Dr. L. Kleinberg

Research Topic(s): Diseases of the central nervous system cancer

Department/Division: Radiation Oncology

Faculty Name: Dr. M Ladra

Research Topic(s): Pediatric oncology

Department/Division: Radiation Oncology

Faculty Name: Dr. M. Laiho

Research Topic(s): Genetic response to DNA damage; transcription

Department/Division: Radiation Oncology

Faculty Name: Dr. T. McNutt
Research Topic(s): Radiation Physics

Department/Division: Radiation Oncology
Faculty Name: Dr. J Meyer
Research Topic(s): Gastrointestinal cancers

Department/Division: Radiation Oncology
Faculty Name: Dr. A. Narang
Research Topic(s): Pancreatic cancer

Department/Division: Radiation Oncology
Faculty Name: Dr. W Ngwa
Research Topic(s): Global health

Department/Division: Radiation Oncology
Faculty Name: Dr. H. Quon
Research Topic(s): Head and neck cancer

Department/Division: Radiation Oncology
Faculty Name: Dr. K. Redmond
Research Topic(s): Diseases of the central nervous system

Department/Division: Radiation Oncology
Faculty Name: Dr. D. Song
Research Topic(s): Genitourinary tumors; lung and thoracic tumors; prostate brachytherapy

Department/Division: Radiation Oncology
Faculty Name: Dr. A Viswanathan
Research Topic(s): Gynecologic Oncology

Department/Division: Radiation Oncology
Faculty Name: Dr. R. Voong
Research Topic(s): Lung cancer and thoracic oncology

Department/Division: Radiation Oncology
Faculty Name: Dr. J Wright
Research Topic(s): Patient quality and safety, breast cancer

Department/Division: Radiology and Radiological Sciences
Faculty Name: Dr. John Eng
Research Topic(s): Evidence-based radiology; statistical analysis of imaging tests and radiology informatics

Department/Division: Radiology and Radiological Sciences

Faculty Name: Dr. Laura Fayad

Research Topic(s): Anatomic, functional, and metabolic imaging of musculoskeletal tumors

Department/Division: Radiology and Radiological Sciences

Faculty Name: Dr. Elliot Fishman

Research Topic(s): Body CT; web-based education; use of social media for medical education and medical information sharing

Department/Division: Radiology and Radiological Sciences

Faculty Name: Dr. Philippe Gailloud

Research Topic(s): Neurointerventional radiology

Department/Division: Radiology and Radiological Sciences

Faculty Name: Dr. Ulrike Hamper

Research Topic(s): Ultrasound research

Department/Division: Radiology and Radiological Sciences

Faculty Name: Dr. Kelvin Hong

Research Topic(s): Value added research in interventional radiology

Department/Division: Radiology and Radiological Sciences

Faculty Name: Dr. Thierry Huisman

Research Topic(s): Advanced MRI imaging in Pediatric Neuroradiology; clinically oriented

Department/Division: Radiology and Radiological Sciences

Faculty Name: Dr. Pamela Johnson

Research Topic(s): High value care and quality & safety in radiology

Department/Division: Radiology and Radiological Sciences

Faculty Name: Dr. Ihab Kamel

Research Topic(s): Magnetic resonance imaging

Department/Division: Radiology and Radiological Sciences

Faculty Name: Dr. Dara Kraitchman

Research Topic(s): Molecular imaging; stem cell tracking; veterinary minimally invasive procedures and image-guided therapy

Department/Division: Radiology and Radiological Sciences

Faculty Name: Dr. Michael Kraut

Research Topic(s): Functional magnetic resonance imaging

Department/Division: Radiology and Radiological Sciences

Faculty Name: Dr. Sridhar Nimmagadda

Research Topic(s): Chemokine receptor target imaging, therapy, and biology

Department/Division: Radiology and Radiological Sciences

Faculty Name: Dr. Haris Sair

Research Topic(s): Resting state functional MR brain imaging for disease diagnosis and prediction

Department/Division: Radiology and Radiological Sciences

Faculty Name: Dr. Jeff Siewerdsen

Research Topic(s): Image quality in low dose CT; 3D printing in medical imaging; quantitative imaging of bone morphology as an image-based biomarker

Department/Division: Radiology and Radiological Sciences

Faculty Name: Dr. Clifford Weiss

Research Topic(s): Interventional radiology

Department/Division: Radiology and Radiological Sciences

Faculty Name: Dr. David Yousem

Research Topic(s): Functional magnetic resonance imaging

Department/Division: Radiology and Radiological Sciences

Faculty Name: Dr. Yun Zhou

Research Topic(s): Quantitative functional imaging with dynamic PET, CT and MRI and its applications in neurodegenerative disease and oncology

Department/Division: Radiology and Radiological Sciences

Faculty Name: Dr. Stefan Zimmerman

Research Topic(s): Investigating advanced cardiac MRI techniques for identifying imaging biomarkers in non-ischemic cardiomyopathies arrhythmias and pulmonary hypertension

Department/Division: Surgery and Surgical Sciences

Faculty Name: Dr. Nita Ahuja

Research Topic(s): Colon and breast cancer carcinogenesis; biomarkers; epigenetics; surgical outcomes; disparity research cancer

Department/Division: Surgery and Surgical Sciences

Faculty Name: Dr. Richard Battafarano

Research Topic(s): Clinical studies in lung and esophageal cancer; robotics in thoracic surgery; studies in geriatric thoracic surgery; case reports

Department/Division: Surgery and Surgical Sciences

Faculty Name: Dr. William Baumgartner

Research Topic(s): Heart/Lung transplantation and cardiac physiology

Department/Division: Surgery and Surgical Sciences

Faculty Name: Dr. Malcolm Brock

Research Topic(s): Translational research in biomarkers for early detection; recurrence and prognosis of thoracic malignancies

Department/Division: Surgery and Surgical Sciences

Faculty Name: Dr. Alan Dackiw

Research Topic(s): Clinical outcomes in endocrine surgery; endocrine tumor (thyroid, adrenal) carcinogenesis

Department/Division: Surgery and Surgical Sciences

Faculty Name: Dr. Susan Gearhart

Research Topic(s): Anorectal cancer outcomes; surgery for IBD +/- dysplasia

Department/Division: Surgery and Surgical Sciences

Faculty Name: Dr. John Harmon

Research Topic(s): Wound healing; esophageal cancer

Department/Division: Surgery and Surgical Sciences

Faculty Name: Dr. Lisa Jacobs

Research Topic(s): Breast cancer clinical trials in surgical outcomes and quality of life

Department/Division: Surgery and Surgical Sciences

Faculty Name: Dr. Henry Lau

Research Topic(s): Genetic engineering approaches to pancreatic islet cell transplantation

Department/Division: Surgery and Surgical Sciences

Faculty Name: Dr. Pamela Lipsett

Research Topic(s): Clinical trials in surgical intensive care; surgical infection; education and outcomes

Department/Division: Surgery and Surgical Sciences

Faculty Name: Dr. Thomas Magnusen

Research Topic(s): Clinical outcomes in bariatric surgery

Department/Division: Surgery and Surgical Sciences

Faculty Name: Dr. Martin Makary

Research Topic(s): Public health aspects of surgery

Department/Division: Surgery and Surgical Sciences

Faculty Name: Dr. Mahmoud Malas

Research Topic(s): Endovascular and minimally invasive vascular outcome analysis and devices development

Department/Division: Surgery and Surgical Sciences

Faculty Name: Dr. Michael Marohn

Research Topic(s): Surgical robotics; smart instruments; transluminal surgery; telesurgery; laparoscopic foregut; bariatric, colorectal, and solid organ surgery

Department/Division: Surgery and Surgical Sciences

Faculty Name: Dr. Bruce Perler

Research Topic(s): Outcomes analysis in vascular disease

Department/Division: Surgery and Surgical Sciences

Faculty Name: Dr. Michael Schweitzer

Research Topic(s): Clinical studies in obesity; metabolism and clinical outcomes

Department/Division: Surgery and Surgical Sciences

Faculty Name: Dr. Dorry Segev

Research Topic(s): Outcomes research and large-scale data analysis in transplantation

Department/Division: Surgery and Surgical Sciences

Faculty Name: Dr. Kimberly Steele

Research Topic(s): Clinical studies in obesity; metabolism and clinical outcomes

Department/Division: Surgery and Surgical Sciences

Faculty Name: Dr. Christopher Wolfgang

Research Topic(s): Biology of pancreatic cancer

Department/Division: Urology

Faculty Name: Dr. Mohamad Allaf

Research Topic(s): Minimally invasive surgery; robotics; kidney cancer; prostate cancer

Department/Division: Urology

Faculty Name: Dr. Arthur L. Burnett, II

Research Topic(s): Pelvic neurophysiology; pelvic anatomy; erectile dysfunction; voiding dysfunction; pelvic reconstructive surgery

Department/Division: Urology

Faculty Name: Dr. Woonyoung Choi

Research Topic(s): Systems biology approach on bladder cancer integrating large scale omics data (specially transcriptome data) and clinical data to understand underlying biology of bladder cancer. Development of bladder cancer classifiers, experimental therapeutics, tumor

Department/Division: Urology

Faculty Name: Dr. Marisa Clifton

Research Topic(s): Research elective in medical education, simulation, robotic simulation, neurourology, female urology, clinical outcomes.

Department/Division: Urology

Faculty Name: Dr. Andrew Cohen

Research Topic(s): Outcomes research in genitourinary trauma, urethral stricture disease, or prosthetic urology. Also active projects involving fluid dynamics of urine flow, novel imaging modalities, and the microbiome. Goal is mentorship, research skill development and stu

Department/Division: Urology

Faculty Name: Dr. Heather DiCarlo

Research Topic(s): Bladder exstrophy-epispadias-cloacal exstrophy complex (basic science of detrusor smooth muscle physiology, intra-operative imaging guided surgery of pelvic floor); renal transplantation; GU reconstructive surgery

Department/Division: Urology

Faculty Name: Dr. John P. Gearhart

Research Topic(s): Endocrine manifestations of ambiguous genitalia; bladder muscle nerve and collagen function in bladder exstrophy; long-term outcomes in ambiguous genitalia

Department/Division: Urology

Faculty Name: Dr. Misop Han

Research Topic(s): Oncology; outcomes research in prostate cancer; robotics in prostate cancer diagnosis and treatment

Department/Division: Urology

Faculty Name: Dr. John Isaacs

Research Topic(s): Development of new therapies for prostatic cancer and molecular mechanisms for control of metastasis

Department/Division: Urology

Faculty Name: Dr. William Isaacs

Research Topic(s): Molecular genetics of prostate cancer and benign prostatic hyperplasia; understanding molecular genetics of BRCA2 and ATM inherited prostate cancer.

Department/Division: Urology

Faculty Name: Dr. Max Kates

Research Topic(s): Urologic Oncology. Bladder cancer, clinical trials, NMIBC, MIBC

Department/Division: Urology

Faculty Name: Dr. Jun Luo

Research Topic(s): High-throughput oriented approaches to study molecular carcinogenesis of human prostate cancer and translational research on novel prostate markers identified using these approaches

Department/Division: Urology

Faculty Name: Dr. Shawn Lupold

Research Topic(s): Prostate cancer; microRNA biology; experimental therapeutics; high throughput library screens

Department/Division: Urology

Faculty Name: Dr. Brian Matlaga

Research Topic(s): Kidney stone disease and surgical treatment

Department/Division: Urology

Faculty Name: Dr. David McConkey

Research Topic(s): Genomic analysis of bladder cancers, bladder cancer experimental therapeutics; molecular mechanisms controlling bladder cancer invasion, migration, and metastasis.

Department/Division: Urology

Faculty Name: Dr. Naren Nimmagada

Research Topic(s): Endourology, BPH.

Department/Division: Urology

Faculty Name: Dr. Sunil Patel

Research Topic(s): Urologic oncology including renal, bladder, and testicular tumors. Environmental toxins; specifically, runs the active surveillance program for kidney cancer and director of testicular cancer

Department/Division: Urology

Faculty Name: Dr. Christian Pavlovich

Research Topic(s): Minimally invasive urologic oncologic surgery; urinary biomarkers for prostate cancer and prostatic diseases

Department/Division: Urology

Faculty Name: Dr. Kenneth Pienta

Research Topic(s): Cancer ecology; understanding prostate cancer metastasis; targeting tumor associated macrophages

Department/Division: Urology

Faculty Name: Dr. Phillip Pierorazio

Research Topic(s): Urologic oncology including renal, urothelial, prostate, and testicular tumors; specifically, runs the active surveillance program for kidney cancer and director of testicular cancer

Department/Division: Urology

Faculty Name: Dr. Nirmish Singla

Research Topic(s): Clinical and translational research in urologic oncology (kidney, urothelial, testicular, prostate cancers); precision oncology; multidisciplinary treatment approaches; clinical outcomes; biomarker discovery

Department/Division: Urology

Faculty Name: Dr. Dan Stoianovici

Research Topic(s): Urology robotics; image-guided interventions; new technologies

Department/Division: Urology

Faculty Name: Dr. E. James Wright

Research Topic(s): Male and female voiding dysfunction; neurourology; pelvic reconstructive surgery