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Website: <http://pediatrics.wustl.edu>

Courses

Visit online course listings to view offerings for M65 Peds (<https://courses.wustl.edu/CourseInfo.aspx?sch=M&dept=M65>).

M65 Peds 501 Introduction to Genetic Counseling I

This seminar provides an overview of genetic counseling and health care, and it discusses how individual differences can affect health care choices and belief systems. Students will become familiar with the process of genetic counseling, and they will build an awareness of related health professions, the health care system, and important terminology. Attendance and active participation are expected and required. Course activities will include interactive lectures, class discussions, class member presentations, guest presentations, and outside reading. This course is open to students in the Program in Genetic Counseling. Admittance may be offered to other students by request.

Credit 4 units.

M65 Peds 502 Current Topics in Human and Mammalian Genetics

This graduate-level course provides an overview of concepts in mammalian molecular genetics, especially as it pertains to human diseases. Guest lecturers will give seminars on their topics of research and assign relevant papers for discussion. Students should read assigned papers prior to each lecture and contribute to the class discussion.

Credit 3 units.

M65 Peds 503 Laboratory Genetic Counseling

This course is designed for genetic counseling students, and it focuses on a variety of areas related to genetic counseling in the laboratory. Students will become familiar with various laboratory testing methodologies, data interpretation, and report writing in addition to professional and regulatory scenarios encountered in the lab. Attendance and active participation are expected and required. The course will consist of lectures, class discussions, hands-on demonstrations and tutorials, laboratory tours, and written materials. Some travel will be required. This course is open to students in the Master's in Genetic Counseling Program. Admittance may be offered to other students by request.

Credit 3 units.

M65 Peds 504 Genetic Counseling Journal Club

This journal club is a monthly, two-hour discussion of a relevant topic in clinical genetics. Research articles are selected from the literature and presented by attendees (one article per attendee). Summaries of the articles include a critical appraisal of the study and its methodology and results; the potential implications of the results for clinical practice (if any); the limitations of the conclusions that can be drawn from the study; and any biases or conflicts of interest that could have affected the study results. This course is open to students in the Master's Program in Genetic Counseling. Admittance may be offered to other students by request.

Credit 1 unit.

M65 Peds 505 Introduction to Genetic Counseling II

This course is a seminar focusing on preparing students for their clinical rotations and learning and practicing basic counseling skills. Attendance and active participation is expected and required. Course activities will include interactive lectures, class discussions, class member presentations, guest presentations, and outside reading. This course is open to students in the Master's in Program in Genetic Counseling. Admittance may be offered to other students by request. Prerequisite for this course is Introduction to Genetic Counseling I.

Credit 4 units.

M65 Peds 506 Clinical Genetic Specialties

This course is a seminar focusing on a variety of specialty areas in clinical genetics. Attendance and active participation are expected and required. Course activities will include interactive lectures, class discussion, and class member presentations. There will be 2 examinations - mid-term and final. This course is open to students in the Master's Program in Genetic Counseling. Admittance may be offered to other students by request. Prerequisites for this course are Introduction to Genetic Counseling I and Laboratory Genetic Counseling.

Credit 3 units.

M65 Peds 507 Genetic Counseling Research Design and Ethics

This course will provide the foundation for the development and execution of the research project required for successful completion of the Master's of Science in Genetic Counseling degree. Through a series of interactive lectures, class discussions, student presentations, guest presentations, and outside reading, students will learn about common genetic counseling-relevant research methods; areas of active genetic counseling research on both a local and national level; and ethical guidelines for the conduct of responsible human subjects research. By the end of the course, students will select a topic for their research project and submit a research proposal. Students will register for Research Project I, II, and III to complete their research projects with faculty mentorship and peer support. This course is open to graduate students at Washington University School of Medicine. Prerequisites for this course are admission into the WUSM Graduate Program in Genetic Counseling or special permission from the instructor.

Credit 3 units.

M65 Peds 601 Advanced Genetic Counseling I

This course is a seminar focusing on starting to build advanced genetic counseling skills. Students will become familiar with unique aspects of various genetic counseling specialties, with a focus on prenatal genetics. Students will also learn about counseling theories, psychosocial assessment, psychosocial counseling techniques, and professional development skills. Attendance and active participation are expected and required.

Credit 4 units.

M65 Peds 602 Research Project II

The primary objective of this course series is to ensure the timely completion of student research projects. This course series provides research project scaffolding, mentorship, and opportunities for peer feedback. Research Project II is taken during the fall semester of the second year.

Credit 2 units.

M65 Peds 603 Clinical Fieldwork Rotations II

This course covers clinical fieldwork rotations. Participation as requested by supervisors is required. Clinical Fieldwork Rotations II involves two 14-day clinical rotations during the fall semester of the second year. Students who complete this course successfully will be able to demonstrate management of a genetic counseling case from contracting to follow-up and successfully use psychosocial counseling skills with patients.
Credit 3 units.

M65 Peds 604 Teratology

This course is a weekly seminar focusing on human teratogens. Students will become familiar with the mechanisms by which exposures affect human development, learn about known and potential teratogens, and understand the methods by which exposures are studied to understand their potential effects. Finally, students will learn how to incorporate data available in the medical literature and databases to provide information about teratogens to patients and providers. Attendance and active participation is expected and required. Course activities will include interactive lectures, class discussions, class member presentations, guest presentations, and outside reading. This course is open to students in the Master's Program in Genetic Counseling. Admittance may be offered to other students by request. Prerequisites for this course are Human Embryology (taken online via University of Cincinnati during the first year of study).
Credit 2 units.

M65 Peds 605 Advanced Genetic Counseling II

This course is a seminar focusing on building and honing advanced genetic counseling skills. Students will learn about complex issues such as family dynamics, crisis intervention, and implicit biases and use this knowledge to increase their psychosocial assessment and counseling skills. This course will also help prepare students for graduation with a focus on ABGC Board Examination readiness and learning how to use self-care techniques to assist with stress management. Course activities will include interactive lectures, class discussions, class member presentations, guest presentations, and outside reading. This course is open to students in the Program in Genetic Counseling. Admittance may be offered to other students by request. Prerequisite for this course is Advanced Genetic Counseling I (M65.601).
Credit 4 units.

M65 Peds 606 Clinical Fieldwork Rotations III

This course covers clinical fieldwork rotations. Participation as requested by supervisors is required. This includes two 14-day clinical rotations during the spring semester of the second year. This course is open to students in the Master's Program in Genetic Counseling. Prerequisites for this course are successful completion of Clinical Fieldwork Rotations I and II (M65.509 and M65.603).
Credit 3 units.

M65 Peds 607 Research Project III

The primary objective of the course series is to ensure the timely completion of student research projects. This course series provides research project scaffolding, mentorship, and opportunities for peer feedback. Research Project III is taken during the spring semester of the second year. This course is open to students in the Master's Program in Genetic Counseling.
Credit 2 units.

M65 Peds 811 Pediatric Critical Care (Clinical Elective)

This elective is designed to familiarize the student with the diagnosis and treatment of critical illness in infants and children. To this end, each student is made responsible for a small number of assigned cases under the direct supervision of pediatric residents, pediatric

critical care fellows, and faculty. The teaching activities emphasize the understanding of pathophysiological processes that lead to respiratory, circulatory, and central nervous system dysfunction and their therapy in the developing subject. Students are expected to participate in all the daily activities of the Pediatric Intensive Care Unit at St. Louis Children's Hospital and be on occasional call after hours.

M65 Peds 813 Pediatric Cardiac Catheterization (Clinical Elective)

This elective will focus on the interpretation of hemodynamic and angiographic data acquired in the cardiac catheterization laboratory.

M65 Peds 819 Outpatient Pediatric Cardiology (Clinical Elective)

Students will be exposed to the wide spectrum of pediatric cardiology on an outpatient basis. In addition to general cardiology clinics, several subspecialty clinics are also available, including heart failure/transplant, electrophysiology/inherited arrhythmias, pulmonary hypertension, William's syndrome, Down syndrome, cardiac neurodevelopmental, COVID-19/MIS-C, and preventative cardiology clinic. Students will independently evaluate clinic patients referred for a variety of cardiac complaints, such as cardiac murmurs, chest pain, syncope, arrhythmia, as well as a wide variety of congenital cardiac lesions, and report their findings to the attending. Cardiac auscultation skills will be enhanced through auscultation of cardiac patients in a clinic environment. Students will learn basics of ECG and echocardiogram interpretation by reviewing studies performed during clinic with the attending. Clinics are held at St. Louis Children's Hospital and the Children's Specialty Care Center in West County, Richardson Crossing clinic in Arnold, Graham Road clinic in North St. Louis County, and Shiloh clinic in Shiloh, IL. Students also have the option to participate in outreach clinics that occur on a monthly basis (locations include Cape Girardeau, Poplar Bluff, Rolla, Bonne Terre, and Columbia). Depending on interest, students may spend additional time in the echocardiography laboratory for more in-depth exposure to echocardiography, including fetal echocardiography. Participation in weekly surgical conference and daily cardiology educational conferences is encouraged.

M65 Peds 826 Genetics and Genomic Medicine (Clinical Elective)

The goal of this senior elective is to facilitate the acquisition of clinical skills and knowledge in genetics and genomic medicine. The student will actively participate in the diagnosis and management of pediatric and adult patients with genetic disease in both the ambulatory and inpatient settings. Emphasis will be placed on application of the science of genetics to the bedside and will include a broad exposure to patients with biochemical, metabolic, structural and complex genetic diseases. Students will have an opportunity to visit clinical laboratories involved with diagnosis of genetic disorders, including the cytogenetics, molecular genetics, and biochemical genetics laboratories. Students will be expected to participate in the weekly clinical case conference.

M65 Peds 828 Pediatric Hematology and Oncology (Clinical Elective)

Students will assume the responsibilities of a pediatric resident on the inpatient Hematology/Oncology service at St. Louis Children's Hospital. Serving in a classic subintern role, the student will perform evaluations and manage, under the supervision of a senior resident, patients who span the scope of diseases in our discipline. Additional educational activities include: regularly held didactic lectures, participation in our weekly "tumor board" conference, reviewing peripheral smears and bone marrow aspirate specimens obtained from our patients.

M65 Peds 836 Pediatric Rheumatology (Clinical Elective)

Opportunities are available to care for children with a variety of immunologic and rheumatologic disorders. Students will see patients in outpatient clinics and inpatient consultations. An in-depth approach to evaluating autoimmune disease and disorders of the immune system

will be provided. Students will participate in evaluation of new and return patients with a variety of rheumatologic diseases, including juvenile idiopathic arthritis (JIA), systemic lupus erythematosus (SLE), juvenile dermatomyositis (JDM), autoinflammatory/periodic fever syndromes, and scleroderma. The student will also learn the approach to patients with positive autoantibodies, joint pain, muscle pain, and other common complaints that a general pediatrician may encounter.

Locations include SLCH inpatient/outpatient, SLCH Specialty Care Center clinics, and Shriners Hospital clinics. Students will have the opportunity to attend multiple conferences.

M65 Peds 838 Pediatric Gastroenterology, Hepatology, and Nutrition (Clinical Elective)

The rotation in Pediatric Gastroenterology, Hepatology, and Nutrition provides broad exposure to specialized and common pediatric gastrointestinal and hepatobiliary problems. Division patients are seen in the outpatient suites and in the hospital. Students evaluate outpatients with common pediatric complaints like abdominal pain, constipation, and poor growth. Additionally, students experience the ongoing outpatient care of patients with liver disease, inflammatory bowel disease, short-gut syndrome, celiac disease, and other rare disorders. The inpatient service provides experience in caring for patients with acute illnesses such as gastrointestinal bleeding, malnutrition, liver failure, complications of inflammatory bowel disease, and pancreatitis as well as seeing patients on the pediatric gastrointestinal consultation service. Students participate in diagnostic and therapeutic endoscopic procedures. At weekly divisional conferences, faculty, fellows, and students review pathology slides from current cases and discuss difficult patient problems and topics of interest.

M65 Peds 839 Antimicrobial Use, Resistance, and Stewardship (Clinical Elective)

In 2013, the CDC estimated that 23,000 Americans die annually from antibiotic-resistant infections, and an additional two million are infected with one of these difficult-to-treat pathogens. The primary driver of this resistance is the use -- and, more importantly, the misuse -- of antibiotics. In 2015, the White House published the National Action Plan for Combating Antibiotic-Resistant Bacteria. This plan calls for improvement in antimicrobial use in human and agricultural medicine, better diagnostics, increased collaboration domestically and internationally, and the accelerated development of new antibiotic agents. This fourth-year elective rotation will be focused on educating the student on the current state of domestic and global antibiotic resistance and the mechanisms by which health care systems are addressing this problem. The student will participate in the daily antimicrobial stewardship activities conducted at St. Louis Children's Hospital, attend weekly stewardship and clinical infectious diseases meetings both at the hospital and BJC system levels, review antimicrobial use data, and participate in hands-on activities in the microbiology laboratory. At the end of this rotation, the student will be able to do the following: (1) List the antimicrobials and the pathogens they effectively treat; (2) Analyze bacteria for genotypic and phenotypic resistance through standard and rapid microbiologic techniques; (3) Describe the antimicrobial stewardship interventions that can be implemented in different health care settings; (4) List the social determinants that impact antimicrobial stewardship programs; and (5) Explain how the microbiome and resistome are important in our efforts to improve antimicrobial use.

M65 Peds 840 Pediatric Infectious Diseases (Clinical Elective)

This elective is designed to engage students in the clinical aspects of routine and complex infectious diseases in children (ages birth to 18 years). Students will perform ID specialty consultations on both inpatients and outpatients. Regular daily activities will include evaluation of new patients, work rounds on inpatient consults, and teaching rounds with the ID fellow and/or attending. Students will

attend the general pediatric ID clinic and the pediatric HIV clinic, one half-day each per week. Formal teaching includes HIV and ID Core Curriculum sessions, a weekly pediatric ID case conference, a weekly joint clinical conference with the adult ID division, and weekly clinical microbiology teaching rounds with Pathology faculty from the bacteriology and molecular diagnostics labs.

M65 Peds 845 Pediatric Emergency Medicine (Clinical Elective)

The goal of this elective is to provide the senior medical student with a broad introductory clinical experience in pediatric emergency medicine. Functioning as a subintern in the Emergency Unit of St. Louis Children's Hospital, the student will have the opportunity to evaluate and manage patients with a wide variety of emergent and urgent medical and surgical problems. Examples include: respiratory distress, abdominal pain, lacerations, bone injuries, rashes, fever, etc. Students will work either a day shift (7:30 am - 3:00 pm) or an evening shift (3:00 pm - 11:00 pm) in rotation. Daily teaching conferences are provided by the attending staff. A weekly meeting of the students and senior faculty will occur to review interesting cases. Also, attending staff and senior pediatric residents provide 24-hour on-site supervision. Each medical student will be asked to prepare a 20-minute presentation on a topic of his/her choosing.

M65 Peds 846 Child Abuse Pediatrics (Clinical Elective)

The medical student will work with the Child Protection (CPP) team at St. Louis Children's Hospital, which consists of two Child Abuse Pediatrics attending physicians, one Child Abuse Pediatrics fellow, a Pediatric nurse practitioner, a clinic nurse, and 2 social workers. Pediatric residents or Pediatric Emergency Medicine fellows also may be rotating with the team at the same time. The student will observe inpatient consults for physical and sexual abuse and outpatient clinic patients for physical and sexual abuse. The student may attend court cases (off campus) and watch expert witness testimony by the CPP physicians/nurse practitioner. The student may attend Fatality Review meetings (off campus). The student will observe a forensic interview at the Child Advocacy Center (off campus). The student may see acute sexual assault cases conducted by the Sexual Assault (SANE) nurse practitioners in the Emergency Department. The student will be asked to complete a short project on a topic related to child maltreatment and will present it to the team at the end of the rotation. The student will be given a list of readings/didactic activities to do during the rotation. The student will have daily (45 minute) lectures with one of the child abuse attending physicians on a variety of topics related to child maltreatment and will attend the Child Protection team meeting (1 hour) every day. The student can also attend Pediatric Residency noon conference during this rotation.

M65 Peds 849 Pediatric Endocrinology and Diabetes (Clinical Elective)

This elective is designed to include broad clinical experience in pediatric endocrinology and diabetes. The student will have an opportunity to evaluate both patients admitted to St. Louis Children's Hospital and patients referred for consultation in our three outpatient clinics each week. In addition to a divisional conference to review referred patients, several joint conferences with the adult Endocrinology and Diabetes Division (clinical rounds, journal club/research seminar, case conference) are held weekly.

M65 Peds 852 Clinical Pediatric Pulmonary Medicine (Clinical Elective)

This elective provides an excellent opportunity for students to be exposed to the full scope of respiratory diseases and sleep disorders in infants and children. Pediatric referrals will be seen in both inpatient and outpatient settings. Rotation goals for students include: 1. Gain greater insights into the genetics, epidemiology, pathophysiology, and clinical presentations of lung diseases in children. 2. Learn the

importance of the physical examination using inspection, percussion, and auscultation. 3. Understand indications and interpretation of diagnostic tests, such as chest imaging, blood gas measurements, polysomnography, pulmonary function testing, and flexible bronchoscopy. 4. Learn about various treatment modalities available for common lung diseases. Unique aspects of this rotation include: - A broad exposure to children with asthma, cystic fibrosis, sleep disorders, ciliopathies, interstitial lung diseases, chronic lung disease of infancy, congenital lung malformations, and advanced cardiopulmonary diseases referred for lung transplantation. - Weekly didactic sessions and divisional clinical conferences provide opportunities for the trainee to develop his or her presentation skills.

M65 Peds 861 Newborn Medicine (Clinical Elective)

The goal of this course is to allow students the opportunity to assume primary responsibility for patients in the Neonatal Intensive Care Unit (NICU) under the direct supervision of first or second year residents as well as fellows and attendings. Students will participate in formulation of diagnostic and treatment plans, coordination of care and communication with families. Throughout the rotation the students will broaden their understanding of pathophysiology as it relates to the transition from fetal to neonatal life and in common disease states affecting neonates. There will be emphasis on improving clinical problem-solving skills, communication within the team as well as with ancillary staff and families. Students during each rotation will have the option to rotate through the Neonatal Intensive Care Unit at St. Louis Children's Hospital and/or the Neonatal Assessment Center / Labor and Delivery services at Parkview Tower - Barnes-Jewish Hospital. Students assigned to the Labor and Delivery Service will routinely be involved in normal newborn care and delivery room management. Expectations during the rotation in the NICU (please check with your attending - schedules will vary): Arrive between 6:30 and 7 am (arrange timing with resident), daily Examine assigned patients and review your plan with the supervising resident/fellow on the team prior to rounds 8:00-8:30 am: attend NICU teaching rounds, Monday through Thursday. Location: 5100 conference room. (currently virtual) 8:30 to 8:45 am: Radiology rounds, Monday through Thursday. (currently virtual) 8:45 to 10 am: Patient care rounds, daily (please check expectations for presentations with your attending/fellow) 12 noon: All resident conference in SLCH auditorium. (currently virtual) 1:00 to 2:00 pm: Division conferences (Case Conferences, M&M and core lectures), Wednesdays only. Location: varies (verify with fellow/attending)

M65 Peds 870 Pediatric Clinical Immunology (Clinical Elective)

Students in the two-week or four-week pediatric immunology elective will learn to apply immunology knowledge to clinical practice by participation in caring for pediatric immunology patients in various settings, including Immunology, Allergy, Rheumatology, and Immunology BMT clinics. They will also participate in inpatient rounds with faculty and fellows in the immunology service.

M65 Peds 875 Pediatric Nephrology (Clinical Elective)

This course is designed to provide the student with a wide exposure to all aspects of pediatric renal disease and an opportunity to explore a desired aspect of the field in-depth. The student will be an integral part of the Renal Team and as such will see both inpatients and outpatients. Students will have an opportunity to follow the courses of patients with acute renal disease as well as those with more chronic problems and will help to plan the evaluation and therapeutic management of these patients. Discussions and rounds with the attending staff and fellows emphasize the relationship between clinical problems and the pathophysiology of the underlying disease. These informal teaching sessions are supplemented by more formal sessions. These include renal attending rounds, pediatric nephrology educational conferences, renal research rounds and grand rounds, which are conducted weekly in conjunction with the Renal Division of Barnes-Jewish Hospital. Renal

biopsy material is reviewed with the renal pathologists. Attendance at the weekly pediatric grand rounds and pediatric case conferences is encouraged. Opportunities in clinical and translational research projects will be discussed with interested students.

M65 Peds 876 Pediatric Lung Transplantation (Clinical Elective)

St. Louis Children's Hospital has the largest pediatric lung transplantation experience in the world. This flexible and unique clinical rotation will provide the potential for students to be exposed to the process of lung transplantation from referral and listing to surgical and post-operative care. The use of diagnostic tests, including flexible fiberoptic bronchoscopy with biopsies and bronchoalveolar lavage, histopathology of infection and graft rejection, and the complexities of immunosuppression will all be explored. In addition to both inpatient and outpatient exposure to pediatric lung transplant patients, students are encouraged to participate in weekly multidisciplinary meetings with our team, as well as meetings focused on program quality improvement and patient/family psychosocial issues. Our patient referral base is worldwide, and includes infants and children with cystic fibrosis, pulmonary hypertension, complex congenital heart defects, and congenital lung diseases including surfactant protein deficiencies. Because our patient volume is variable, students will also have the opportunity to participate in general inpatient and outpatient pediatric pulmonology clinics and inpatient services as their interests and time permit. Students are encouraged to reach out to the course director in advance of the rotation so that we can tailor the experience to best meet their needs.

M65 Peds 910 Pediatrics Advanced Clinical Rotation (ACR)

This is the general pediatric ACR. The student will be assigned to one of two inpatient pediatric floor teams at St. Louis Children's Hospital (10-100/green or 11-100/yellow teams). They will follow patients from initial evaluation through discharge. Students work directly under the supervision of the senior resident and manage their own patients without co-coverage by an intern. Teaching rounds are conducted by the faculty. With supervision, students will be expected to prround on their patients, present on rounds, perform daily tasks including calling consults, PMDs, writing orders (to be cosigned), and other various tasks, write notes (to be cosigned), and participate in handoffs. Students will spend 3 weeks on day shifts and 1 week on night shifts. The elective will provide experience in the management of many pediatric medical conditions (variable depending on floor) and will include the care of patients with various diseases including but not limited to pulmonary, infectious diseases, gastrointestinal, renal, endocrine, neurological, and rheumatologic issues. Other common conditions include failure to thrive, ingestions, and fever of unknown origin.

Credit 140 units.

M65 Peds 915 Newborn and Pediatric Critical Care Advanced Clinical Rotation (ACR)
