# SCHOOL OF MEDICINE

**PROGRAMS**

Applied Health Behavior Research (M88)
Audiology & Communication Sciences (M89)
Biomedical Informatics (M18)
Biostatistics and Genetic Epidemiology (M21)
Clinical Investigation (M17)
Medical Physics (M91)
Occupational Therapy (M01)
Physical Therapy-Grad (M02)
Physical Therapy-PP-DPT (M22)
Population Health Sciences (M19)
Doctor of Medicine
- Anatomy & Neurobiology (M05)
  - Biochemistry & Molecular Biophysics (M15)
- Cell Biology & Physiology (M75)
  - Divisions, Institutes & Other Categories (M80)
- Elective Program-WUMS I (M04)
- Family Practice (M26)
- Internal Medicine (M25)
- Molecular Biology & Pharmacology (M70)
- Molecular Microbiology (M30)
- Neurology (M35)
- Obstetrics & Gynecology (M45)
- Ophthalmology & Visual Sciences (M50)
- Otolaryngology (M55)
- Pathology (M60)
- Pediatrics (M65)
- Psychiatry (M85)
- Radiology (M90)
- Research (M99)
- Surgery (M95)

Elective Program-Fourth Year Medical School

# APPLIED HEALTH BEHAVIOR RESEARCH PROGRAM

## APPLIED HEALTH BEHAVIOR RESEARCH (M88)

The graduate programs in Applied Health Behavior Research (AHBR) are housed in the Clinical Research Training Center (CRTC) in the Wohl Clinic.

**Master of Science in AHBR**
A 33-credit multidisciplinary, skills-based program designed for working professionals pursuing studies on a part-time basis, and for full-time graduate students. A one-year research-intensive option can be completed in three semesters. The AHBR program focuses on developing the applied skills needed to manage health behavior programs and research projects in academic, clinical, and community settings. Two concentrations are offered:
Health Behavior Research (HBR)
HBR Option (full- or part-time)
HBR-Research Intensive Option (full-time)
Health Education, Program Planning & Evaluation (HEPPE) (full- or part-time)

There is no thesis or practicum requirement for this program.

**Graduate Certificate in Health Behavior Planning and Evaluation**
A 15-credit hour program focused on the key applied and theoretical concepts in health behavior, and processes for managing program development and evaluation activities in clinical and community-based settings.

**Registration Instructions for students in AHBR graduate programs**
The AHBR Program Manager oversees student registration. Enrollment is subject to space available. Spring 2020 registration for degree-seeking students begins November 7, 2019. Contact ahbr@email.wustl.edu for more information.

**Registration Instructions for Students Outside of AHBR Programs**
Before registering, current Washington University students must obtain appropriate consent from their division/department. Students outside of the AHBR program must have permission from the AHBR Program to register. Please contact ahbr@email.wustl.edu prior to registration.

**Spring 2020 Academic Calendar**
Spring courses begin on January 13, 2020. Registration opens on November 7, 2019. The last day to drop a class and receive a full refund is January 29, 2020.

For the full AHBR academic calendar, please visit https://crtc.wustl.edu/courses/class-list/academic-policies/

**AHBR Program Leadership**
Amy McQueen, PhD, Program Director

**Further Information**
For more information, please visit our website or contact the Project Manager directly:
https://crtc.wustl.edu/programs/degrees/ahbr/
ahbr@email.wustl.edu.

# AUDIOLOGY AND COMMUNICATION SCIENCES

## AUDIOLOGY AND COMMUNICATION SCIENCES (M89)

The Program in Audiology and Communication Sciences (PACS) is located in the Central Institute for the Deaf (CID) Building, 4560 Clayton Avenue, Suite 2000 (2nd Floor). Please refer to School of Medicine campus map.

Contact Information

| | |
|---|---|
| Phone: | (314) 747-0104 |
| Fax: | (314) 747-0105 |
| Web: | http://pacs.wustl.edu |
| Email: | pacs@wustl.edu |
| Web: | http://pacs.wustl.edu |

**Minor - Speech and Hearing Sciences**
A minor in Speech and Hearing Sciences is available to qualified WUSTL students enrolled in the College of Arts & Sciences. This minor provides students with an introduction to the fields related to speech, hearing, language, and deafness, and can also be designed to meet prerequisite requirements for students interested in entering graduate programs in audiology, deaf education, or speech-language pathology. Please contact the PACS Office or your major advisor, or refer to the current Handbook of Academic Minors, for more information.

**Graduate Programs**
Doctor of Audiology (Au.D.)
Master of Science in Deaf Education (M.S.D.E.)
Doctor of Philosophy (Ph.D.) in Speech and Hearing Sciences

**Registration Instructions**
Enrollment in courses in the Minor in Speech and Hearing Sciences is open to students outside PACS, including undergraduates. Additional courses may also be open for registration by non-PACS students with instructor permission; refer to the course description for information.

**Academic Calendar**
The Program in Audiology and Communication Sciences follows the academic calendar of the College of Arts & Sciences. Final exam schedules are determined by PACS.

# BIOMEDICAL INFORMATICS

## BIOMEDICAL INFORMATICS (M18)

The graduate degree programs in biomedical informatics are housed in the Institute for Informatics (I2)

### Master of Science in Biomedical Informatics (MS BMI)

The MS in Biomedical Informatics (BMI) provides comprehensive and competency-based training in core BMI theories and methods for:

1) Recent college graduates with backgrounds in the biological and/or computational sciences

2) In-career learners with a broad range of experiences in biomedicine/biosciences mathematics, physical or computer information sciences or engineering, and cognitive and/or social sciences.

The 36-unit degree program offers grounded theory and a broad range of applied skills for three separate tracks:

1) Translational bioinformatics and clinical research informatics (TBI/CRI)
2) Clinical Informatics (CI)
3) Bioinformatics (BI).

Students can personalize approved electives and competency courses based on their chosen track and educational background. The degree can be completed full or part time and it will culminate with a thesis or capstone project.

### Certificate in Biomedical Informatics

To earn a certificate in Biomedical Informatics, scholars are required to select a track from above and complete 16 credits of core curriculum:

| | |
|---|---|
| M18-5302 | Biomedical Informatics I: Foundations |
| M18-5303 | Biomedical Informatics II: Methods |
| M18-5203 | Advanced Topics in Biomedical Informatics |
| M18-5200 | Biomedical Informatics Journal |
| M17-510 | Ethical and Legal Issues in Clinical Research |

Students will also take the following:
Biomedical Informatics Capstone
One additional elective

### Registration Instructions for MS and Certificate in Biomedical Informatics Candidates

The I2 Assistant Director of Education and Academic Advisor manage BMI enrollment. Enrollment is subject to space availability. Registration for degree-seeking students begins November 17, 2019. Contact Andrea Krussel at: krussela@wustl.edu for more information.

### Registration Instructions for Students Outside of BMI Programs

Students outside of the BMI programs must have permission from the BMI Program to register. Please contact krussela@wustl.edu prior to registration.

### 2019-2020 Academic Calendar

Courses follow the calendar of the College of Arts & Sciences.

### BMI Program Leadership

Philip R.O. Payne, PhD, FACMI
Program Director

Andrea Krussel, MA
Assistant Director, Education and Strategic Initiatives

### Further Information

For more information please visit our website at:
https://informatics.wustl.edu/

For specific questions about the Biomedical Informatics MS and certificate programs, please contact Andrea Krussel at krussela@wustl.edu

# BIOSTATISTICS & GENETIC EPIDEMIOLOGY PROGRAMS

## BIOSTATISTICS & GENETIC EPIDEMIOLOGY (M21)

The Division of Biostatistics offers two master's degrees and a certificate in Biostatistics, and a certificate as well as post-doctoral master's degree in Genetic Epidemiology. The program is located in the Becker Medical Library building at the corner of Euclid and Barnes-Jewish Hospital Plaza at 660 South Euclid, 5th Floor.

### Master of Science in Biostatistics (MSIBS)

This 42-credit hour, 18-month program is designed to prepare students for exciting careers in Biostatistics and Statistical Genetics. We seek those with undergraduate or higher degrees in quantitative sciences (mathematics, statistics, computer science, biomedical engineering, or a closely related field). A choice of two pathways is offered in either area of concentration: Biostatistics or Statistical Genetics.

### Master of Scince in Biostatistics and Data Science (MSBDS)

This 42-credit hour, 18-month program is designed to prepear students for exciting careers in Biostatistics with emphasis on Data Science training. We seek those with undergraduate or higher degrees in quantitative sciences (mathematics, statistics, computer science, biomedical engineering, or a closely related field).

### Biostatistics and Data Science Certificate

We offfer a Certificate in Biostatistics and Data Science, which may be earned with successful completion (with a minimum of a "B" average) of 6 core courses, totaling 18 credit hours. Students have up to two years to complete the certificate:
M21-560 Biostatistics I
M21-570 Biostatistics II
M21-550 Introduction to Bioinformatics
M18-5302 Intro to Biomedical Informatics: Foundations
M18-5303 Intro to Biomedical Infomratics: Methods
M21-660 Biomedical Data Mining

### Genetic Epidemiology Certificate

We offer a Certificate in Genetic Epidemiology, which may be earned with successful completion (with a minimum of a "B" average) of 7 core courses, totaling 19 credit hours. These courses are only offered in the summer and fall semesters and must be completed within one or two years:
M21-503 Statistical Computing with SAS®
M21-506 R for Data Science
M21-515 Fundamentals of Genetic Epidemiology
M21-550 Introduction to Bioinformatics
M21-560 Biostatistics I
M21-570 Biostatistics II
M21-5483 Human Genetic Analysis

### Genetic Epidemiology Master of Science (GEMS)

We also offer a post-doctoral master's degree in Genetic Epidemiology. Interested candidates with an existing doctoral degree in a relevant field may contact the program manager for additional information.

### 2020-2021 Academic Calendar

Courses follow the calendar of the College of Arts & Sciences. Entry for new students begins in the summer semester.

### Summer 2020 Schedule

Summer classes are intensive, meeting full days during the week. Early workshops are required at no cost to students enrolled in one or more summer or fall courses. Orientation is in early July.
M21-506 R for Data Science
M21-560 Biostatistics I
M21-503 Statistical Computing with SAS®

### Registration Instructions for M.S. Candidates

The degree programs are structured and sequential. Students cannot, therefore, register online but must register with the Biostatistics Program Manager.

### Registration Instructions for Students Outside the Degree Programs

Before registering, current Washington University students must obtain appropriate consent from their division/department. Students outside the degree/certificate programs enrolling in individual courses must also have permission of the course master. Contact the Biostatistics Program Manager to initiate.

### Further Information

Additional information can be found on our website at https://biostatistics.wustl.edu or contact the Program Manager for further information: telephone 314-362-1384 or email biostat-msibs@email.wustl.edu

# CLINICAL INVESTIGATION PROGRAM

## CLINICAL INVESTIGATION (M17)

The degree programs in clinical investigation are housed in the Clinical Research Training Center in the Wohl Clinic.

### Master of Science in Clinical Investigation (MSCI)

A 33-credit degree program for young investigators committed to pursuing academic careers in clinical research. This innovative program couples high-quality didactic courses with mentored research and a weekly, multi-disciplinary seminar to meet the needs of clinicians seeking training in clinical research. The Clinical Research Curriculum covers the full spectrum of T1 to T4 Translational Research. The degree program offers three tracks to degree completion: Clinical Investigation Track, Translational Medicine Track, and Genetics/Genomics Track. The degree culminates in a research thesis which can consist of a peer-reviewed manuscript or an entrepreneurial project.

### Certificate in Clinical Investigation

To earn a Certificate in Clinical Investigation, scholars are required to complete 16 credits of core curriculum:

| | |
|---|---|
| M17-513 | Designing Outcomes & Clinical Research |
| M17-522 | Introduction to Statistics |
| M17-524 | Intermediate Statistics |
| M17-510 | Ethical & Legal Issues in Clinical Research |
| M17-589 | Intermediate Methods for Clinical & Outcomes Research |
| M17-528 | Grantsmanship |
| | OR |
| M17-529 | Scientific Writing and Publishing |

### Registration Instructions for MS in Clinical Investigation candidates

The MSCI Curriculum Coordinator manages student registration. Enrollment is subject to space available. Registration for degree-seeking students begins November 8, 2019. Contact crtcmsci@email.wustl.edu for more information.

### Registration Instructions for Students Outside of MSCI Program

Before registering, current Washington University students must obtain appropriate consent from their division/department. Students outside of the MSCI program must have permission from the MSCI Program to register. Please contact crtcmsci@email.wustl.edu prior to registration.

### Spring 2020 Academic Calendar

Spring courses begin on January 13, 2020. Registration opens on November 8, 2019. The last day to drop a class and receive a full refund is January 29, 2020.

### MSCI Program Leadership

David K. Warren, MD, MPH
Program Director

Dominic N. Reeds, MD
Program Co-Director

### Further Information

For more information and the complete academic calendar, please visit our website at: https://crtc.wustl.edu/programs/degrees/msci/

For specific questions about the Clinical Investigation degree or curriculum, please contact crtcmsci@email.wustl.edu.

# MEDICAL PHYSICS

## MEDICAL PHYSICS (M91)

The Graduate programs in Medical Physics are housed in the Center for Advanced Medicine located at 4921 Parkview Place.

### Master of Science in Medical Physics

The MS in Medical Physics (MSMP) provides exposire to a wide array of radiation treatment techniques and quality control procedures as well as cutting edge research intended for:

1) Recent college graduates with backgrounds in Physics or Engineering sciences.

2) Post-bachs who are interested in preparing themselves to apply to Medical Physics clinical residency programs.

The 36-unit degree program offers the knowledge, skills, and experience necessary to preapre students for careers in medical physics with 2 tracks:

1) Clinical Project Stream
2) Thesis Research Stream

Students can select approved electives and optional summer research or clinical experiences based on their chosen track and educational background. The degree is intended to be completed full-time and it will culminate with a thesis or capstone project.

### Post PhD Certificate in Medical Physics

The Post PhD Certificate in Medical Physics is intended to provide those with PhD's in Physics an alternative pathway to preparation for entry into Medical Physics Clinical Residency Programs.The certificate is 18 credit hours of core courses and can be completed on a 1-year or 2-year schedule.

BIOL 4580: Principles of Human Anatomy/Development
MP 502: Radiological Physics and Dosimetry
MP 521: Radiation Protection and Safety
BME 589: Biological Imaging Technology
MP 505: Radiobiology
MP 506: Radiation Oncology Physics
MP 523: Advanced Clinical Medical Physics Lab

### Registration Instructions for Students in MP Graduate Programs

The MP Program Director and Program Coordinator manage academic enrollment. Enrollment is subject to space availability. Registration for degree-seeking students begins November 8, 2018. Contact Justina Dodson at: justina@wustl.edu for more information.

### Registration Instructions for Students Outside of MP Programs

Before registering, current Washington University students must obtain appropriate consent from their division/department. Students outside of the MP programs must have permission from the MP Program to register. Please contact justina@wustl.edu prior to registration.

### Spring 2019 Academic Calendar

Spring courses begin on January 14, 2019. Registration opens on November 8, 2018. The last day to drop a class and receive a full refund is January 29, 2019.

### MP Program Leadership

Rao Khan, PhD
Program Director

Tiezhi Zhang, PhD
Program Co-Director

### Further Information

For more information and the complete academic calendar, please visit our website at: https://radonc.wustl.edu/

For specific questions about the Medical Physics degree or curriculum, please contact justina@wustl.edu

# OCCUPATIONAL THERAPY PROGRAM

## OCCUPATIONAL THERAPY PROGRAM (M01)

The Program in Occupational Therapy is located at 4444 Forest Park Blvd. at the corner of Forest Park Blvd. and Newstead Ave. Please refer to the Medical Center map.

### Master of Science in Occupational Therapy

The Master of Science in Occupational Therapy (MSOT) is a professional, entry-level master's degree offered through the Washington University School of Medicine. The MSOT degree prepares generalist clinicians with the knowledge and skills to work as direct care providers, consultants, educators, managers and advocates for clients. The curriculum fulfills all of the requirements necessary to sit for the national certification exam for occupational therapists.

### Three-Two Program

Washington University undergraduates may elect to become part of the three-two program in occupational therapy. Undergraduates completing prerequisite

requirements, may apply to the graduate OT program in their junior year. For more information, or to explore occupational therapy as a career, please contact Kathleen Kniepmann, MPH, OTR/L at 286-1610. Several OT courses welcome undergraduate students with an interest in disability issues.

**Doctor of Occupational Therapy Degree Program**
The Clinical Doctorate of Occupational Therapy (OTD) is a professional degree offered by the School of Medicine. The OTD prepares graduates beyond the master's degree with in-depth knowledge in a specific area such as practice, advocacy, policy, education, research and program development. The curriculum fulfills all of the requirements necessary to sit for the national certification exam for occupational therapists.

**Registration Instructions**
Enrollment in any of the graduate level courses requires acceptance into the Program in Occupational Therapy or approval of the coursemaster. Students wishing to enroll should contact the program at 286-1600. Registration of matriculated graduate students is performed on-line by the administrative staff.

### Academic Calendar 2019-2020

**Fall Semester**

| | |
|---|---|
| Orientation | Aug 21 - 23 |
| Classes Begin | Aug 26 |
| Labor Day | Sep 2 |
| Thanksgiving Break | Nov 27 - 29 |
| Finals | Dec 11 - 18 |
| Winter Break | Dec 19 - Jan 13 |

**Spring Semester**

| | |
|---|---|
| Classes Begin | Jan 13 |
| MLK Holiday | Jan 21 |
| Spring Break | Mar 9 - 13 |
| Finals | Apr 29 – May 6 |
| Graduation | May 15 |

The program in Occupational Therapy is located at the corner of Forest Park Blvd and Newstead Ave at 4444 Forest Park Blvd. Please refer to the Medical Center map.

**Contact Persons**
Lisa Connor Ph.D, MSOT, OTR/L
Elias Michael Director
(314) 286-1600

Shannon Eckhoff
Academic Systems Manager
(314) 286-1600

The Program in Occupational Therapy hosts several events each year for Danforth students who wish to visit the Program and investigate occupational therapy as a career. For more information, please contact Kathleen Kniepmann at (314) 286-1610.

# PHYSICAL THERAPY PROGRAM

## PHYSICAL THERAPY PROGRAM (M02)

The Program in Physical Therapy is located at 4444 Forest Park Avenue - at the corner of Forest Park and Newstead Avenues. Please refer to the Medical Center map

**Contact Information**

| | |
|---|---|
| Phone: | (314) 286-1400 |
| Fax: | (314) 286-1410 |
| Web: | http://pt.wustl.edu |
| Email: | PTAdmissions@email.wustl.edu |

### Academic Calendar 2019-2020

**Fall Semester (1st, 2nd Year Classes)**

| | |
|---|---|
| 1st Year Orientation | Aug 13 - 16 |
| 2nd Year Orientation | Aug 15-16 |
| 1st Year Classes Begin | Aug 19 |
| 2nd Year Classes Begin | Aug 19 |
| Labor Day | Sep 3 |
| Fall Break | Oct 7 - 8 |
| Thanksgiving Break | Nov 27 - 29 |
| Finals | Dec 9 - 13 |
| Winter Break | Dec 16 - Jan 3 |
| **3rd Year Class:** | |
| CE III - | Jul 8 - Sep 13 |
| CE IV - | Sep 30 - Dec 20 |

**Spring Semester (1st, 2nd, 3rd Year Classes)**

| | |
|---|---|
| **1st Year Class:** | **Jan 6 – May 1** |
| Classes Begin | Jan 6 |
| MLK Holiday | Jan 20 |
| Spring Break | Mar 2 - 6 |
| Finals | Apr 27 – May 1 |
| CE I | May 11 – Jul 3 |
| **2nd Year Class:** | **Mar 9 – Jun 26** |
| CE II | Jan 6 - Feb 28 |
| MLK Holiday | Jan 20 |
| Spring Break | Mar 2 – 6 |
| Classes Begin | Mar 9 |
| Finals | Jun 22 – 26 |
| **3rd Year Class:** | **Jan 6 – May 5** |
| Classes Begin | Jan 6 |
| MLK Holiday | Jan 20 |
| Spring Break | Mar 2 – 6 |
| Finals | May 4 – 5 |
| Graduation | May 15 |

**DEGREE PROGRAMS –**

**Doctor of Physical Therapy**
An entry-level, full-time program that focuses on diagnosis and evidence based practice of physical therapy. This program refines scientific and biomedical knowledge incorporating additional clinical experiences and coursework to prepare students for the practice of physical therapy. This degree is offered through the School of Medicine and courses are coded M02.

**Course Restrictions**
Physical Therapy courses, with the exception of PT 5001 Independent Study, are open ONLY TO INDIVIDUALS ENROLLED IN THE PROGRAM IN PHYSICAL THERAPY (GP).

**Registration Information**
The Program in Physical Therapy is a structured three year curriculum for the Doctor of Physical Therapy degree. Registration for physical therapy students is NOT completed on-line. Withdrawal from required courses must be approved by either the program's Director, Division Director of Education, or the Associate Director for Professional Education.

# POPULATION HEALTH SCIENCES

## MASTER OF POPULATION HEALTH SCIENCES (M19)

The Master of Population Health Sciences (MPHS), offered by Washington University School of Medicine, is designed as a ten-month, full-time degree program that meets the needs of clinicians seeking training in population-based research methods. Its quantitative curriculum emphasizes the role of epidemiology and biostatistics in approaching clinical effectiveness and outcomes research. The MPHS does not require a research thesis/capstone. Instead, the program uses applied coursework to focus on the long-term application of skills. Using topics relevant to their careers and interests, the applied coursework allows MPHS students to practice the art of developing research study protocols, performing systematic reviews, designing epidemiologic studies and more. The MPHS program currently offers three concentrations: Clinical Epidemiology, Health Services and Psychiatric and Behavioral Health Sciences.

Successful applicants will have a strong academic record and relevant academic preparation with particular emphasis on quantitative skills, identified clear career goals that correlate to MPHS program competencies, and completed (or in the process of completing) a clinical training program at the doctoral level. ~~2019 – 2020 applications are due January 11, 2019.~~

MPHS students take seven required core courses; an introduction to SAS, a sequence of three courses in epidemiology, two courses in biostatistics, and research ethics. Eligible elective credits include courses offered through the MPHS program as well as other population health-related graduate courses offered at Washington University (program director approval required).

Graduating MPHS students will have demonstrated skill in program competencies including study design, program evaluation, data analysis (theory and application), use of statistical software packages (e.g. SAS), calculating rates, meta-analysis, statistical modeling, clinical trials, and observational studies.

The academic year is divided into four intensive 8-week quarters designed to allow full-time MPHS students to complete the program in ten months. Part-time study is allowed but students are expected to complete the degree within three years of matriculation. Students interested in part-time study need approval of the program director.

The MPHS Program Coordinator coordinates MPHS student registration. All other students register through

and according to their home program processes; enrollment is subject to instructor approval.

**2019-2020 MPHS Courses Calendar**

**Fall 2019**

Session Fall I: August 26, 2019 to October 18, 2019
Session Fall II: October 21, 2019 to December 13, 2019

**Winter 2020**

Session Winter: January 6, 2020 to January 10, 2020

**Spring 2020**

Session Spring I: January 13, 2020 to March 6, 2020
Session Spring II: March 9, 2020 to May 1, 2020

MPHS Program Leadership
Graham Colditz, MD, DrPH,
Program Director

Further information available at www.mphs.wustl.edu or by contacting Blanka Hodzic, MPHS Program Coordinator, bhodzic@wustl.edu or (314) 286-0881.

# DOCTOR OF MEDICINE PROGRAM

**ACADEMIC CALENDAR 2019-2020**

**June 2019**

| | |
|---|---|
| 13 – 14 | New 3rd year class: Clinic Orientation |
| 17 | 3rd, 4th year classes: Academic year begins |

**July 2019**

| | |
|---|---|
| 3 | Independence Day holiday begins, 5pm |
| 4 | Independence Day Observance |

**August 2019**

| | |
|---|---|
| 5 | 1st year class: Orientation, matriculation & initial payment of tuition/fees |
| 6 | 1st year classes: Academic year Begins |
| 19 | 2nd year classes: Academic year Begins |

**September 2019**

| | |
|---|---|
| 1 | Labor day holiday begins at 5 p.m. |
| 2 | Labor Day Observance |

**November 2019**

| | |
|---|---|
| 27 | Thanksgiving Day holiday begins, 5pm |
| 28 | Thanksgiving Day Observance |
| 29 | Holiday for all classes |

**December 2019**

| | |
|---|---|
| 20 | All classes: Winter recess begins, 5pm |

**January 2020**

| | |
|---|---|
| 6 | All classes: Winter recess ends and classes resume, 8am |
| 19 | Martin Luther King Day holiday begins, 5pm |
| 20 | Martin Luther King Day Observance |

**March 2020**

| | |
|---|---|
| 27 | 1st & 2nd year classes: Spring break begins, 5pm |

**April 2020**

| | |
|---|---|
| 2 | 3rd and 4th year classes: Spring break begins at 5 p.m. |
| 6 | All classes: Classes resume, 8am |

**May 2020**

| | |
|---|---|
| 1 | 2nd year class: Academic year ends, 5pm |
| 3 | Graduating students: Academic year ends, 5pm |
| 15 | Commencement (Friday) |
| 24 | Memorial Day holiday begins, 5pm |
| 25 | Memorial Day Observance |
| 29 | 1st year class: Academic year ends, 5 p.m. 3rd year class: Academic year and Clinical clerkships end, 5 p.m. |

**Schedule of Clerkship & Elective Intervals**

| | | |
|---|---|---|
| Weeks 1-4 | Jun 17 – Jul 14 | 2019 |
| Weeks 5-8 | Jul 15 – Aug 11 | 2019 |
| Weeks 9-12 | Aug 12 – Sep 8 | 2019 |
| Weeks 13-16 | Sep 9 – Oct 6 | 2019 |
| Weeks 17-20 | Oct 7 – Nov 3 | 2019 |
| Weeks 21-24 | Nov 4 – Dec 1 | 2019 |
| Weeks 25-28 | Dec 2 – Jan 12 (Winter recess 5pm (12/20-1/5) | 2019-20 |
| Weeks 29-32 | Jan 13 – Feb 9 | 2020 |
| Weeks 33-36 | Feb 10 – Mar 8 | 2020 |
| Weeks 37-40 | Mar 9 – Apr 5 | 2020 |
| Weeks 41-44 | Apr 6 – May 3 | 2020 |
| Weeks 45-48 | May 4 – May 29 | 2020 |

**Tuition Payment Deadlines**

| Class Level | Initial Payment | Final Payment |
|---|---|---|
| 1st Year | Aug 5, 2019 | Jan 10, 2020 |
| 2nd Year | Aug 23, 2019 | Jan 10, 2020 |
| 3rd & 4th Year | Jun 21, 2019 | Jan 10, 2020 |

**NOTE: The beginning and ending dates of each academic term will be published with individual class schedules.**

**Doctor of Medicine Program**

The School of Medicine is located in the Washington University Medical Center at 660 S. Euclid.

**Course Restrictions/Registration Procedures for Non-medical Students**

Courses listed in this section are restricted to students accepted into the Doctor of Medicine degree program unless otherwise noted in the course description. Students not in the degree program interested in registering for the allowed courses should register under the crosslisted number noted, following the procedures of the student's home school. Dates, refunds and policies regarding withdrawal from a course will also be determined by the student's home school. Payment of fees to the School of Medicine will be handled administratively. Please note: prerequisites and required instructor permission must be strictly enforced. Students enrolling in any course without following specified procedures will be removed from the roster without notice. Space is sometimes limited and medical students must be given priority. If you must be dropped from a course due to unforeseen space limitations, you will be contacted immediately.

**Registration Procedures for Medical Students**

Due to the structured nature of the program leading to the degree Doctor of Medicine, registration is most efficiently accomplished administratively. On-line registration will NOT be used for the current academic year for medical students. You will be notified of procedures specific to your class. Policies of the School of Medicine apply regarding performance, payment of fees, etc. and are published in the Bulletin, CAPES Regulations and other medical school publications that are distributed to medical students.

**Doctor of Philosophy/Doctor of Medicine and Master of Arts/Doctor of Medicine**

Graduate School of Arts and Sciences. Joint degree students should follow registration procedures of the division that will be prime in the semester for which you are registering.

**For additional information contact the Registrar's Office at 314-362-6848.**

**Availability of Medical Classes to Students Not Admitted to the Doctor of Medicine Program**

Registration for the following courses is open to students outside the Doctor of Medicine degree program only where noted in course descriptions, if all course prerequisites are met, and always with approval of the course director. Courses available for enrollment are identified as crosslisted. Students register in the division where the class is crosslisted and not with the medical school. Contact the School of Medicine at 362-6848 for further information about the availability of medical school courses.

# ELECTIVE PROGRAM— FOURTH YEAR MEDICAL SCHOOL

**Philosophy of the Elective Program**

The elective year allows the student to develop a flexible program which should be of great value and interest in the middle of an eight- to ten- year period of formal education. This flexible year occurs at a crucial time, helps the student decide on the rest of his/her formal education and helps focus productively upon already established interests. It also enables students to benefit from the wide range of specialized knowledge and skills found in the faculty. As there is not enough time for each student to be introduced to each of today's areas of specialization, the elective program permits the student to select, according to desire, the areas s/he wishes to explore in depth.

**Requirements**

To qualify for the degree of Doctor of Medicine at Washington University School of Medicine, students are required to satisfactorily complete a minimum of 32 weeks of approved electives in the fourth (final) year, in addition to a required four-week Capstone course. The fourth year encompasses a 44-week time block. At least 24 of the 36 weeks required time of the elective program must be taken on campus in the Washington University School of Medicine elective courses described in this catalog. Most students utilize most of the elective year for clinical electives. Clinical electives are generally of four weeks duration. Research electives are a minimum six weeks, and a maximum of 12 weeks duration. Special study electives are typically of four weeks duration. Reading electives may range from 1-4 weeks, but a student may not spend more than 4 weeks on reading electives.

**NOTE:** You should be aware that on January 1, 1996, the Medical Board of California, Assembly Bill 3497 added to Section 2089.5 of the Business and Professions Code a new requirement for four weeks of undergraduate clinical training in family medicine. This new family medicine requirement applies to all California licensing applicants who graduate from medical school after May 1, 1998.

Inquiries and correspondence should be directed to:
**Electives Office**
**Washington University School of Medicine**
**660 S. Euclid Avenue, Box 8214**
**St. Louis, Missouri 63ll0**
**(3l4) 362-6838**

Medical students participating in any of the electives described in this booklet will be providing services as members of a team under the direct supervision of an attending physician or senior resident. While Washington University School of Medicine strives to provide each student with maximum responsibility and experience, students will be supervised in their efforts at all times until they are fully licensed.
Visiting students should go to https://md.wustl.edu/academics/visiting-students/how-to-apply/ for eligibility requirements and additional information.

**Fourth Year Medical School**
Washington University School of Medicine offers an extensive array of electives and research opportunities at the 800 and 900 course levels for the 4th year medical student.

Specific areas of study and research opportunities are listed below. **Please access the website for further details of elective offerings:** https://md.wustl.edu/academics/curriculum/electives-fourth-year/

**Anatomy and Neurobiology**
(Level 800)
Advanced Dissection
(Level 900)
Research Opportunities

**Anesthesiology**
(Level 800)
Anesthesiology
Anesthesia for Neurosurgery
Cardiothoracic Anesthesiology
Cardiothoracic Critical Care
Critical Care
Obstetrical Anesthesia
Pain Management
Pediatric Anesthesia

**Biochemistry and Molecular Biophysics**
(Level 900)
Research Opportunities

**Cell Biology and Physiology**
(Level 900)
Research Opportunities

**Developmental Biology**
(Level 900)
Research Opportunities

**Genetics**
(Level 900)
Research Opportunities

**Internal Medicine**
(Level 800)
Adult Allergy and Clinical Immunology
Ambulatory Care – Jacqueline Maritz Lung Center
Ambulatory Infectious Disease
Bone and Joint Infectious Disease Consult
Bone and Mineral Diseases
Bone Marrow Transplantation & Stem Cell Biology
Cardiac Arrhythmias and Electrophysiology
Clinical Cardiology -- VA
Clinical Cardiovascular Medicine
Clinical Emergency Medicine, Barnes-Jewish Hospital
Clinical Gastroenterology and Hepatology
Clinical Internal Medicine – Hospitalist
Clinical Mentoring
Clinical Nephrology
Dermatology
Emergency Ultrasound
Endocrinology, Diabetes and Metabolism
General Inpatient Infectious Disease
Geriatric Medicine
Heart Failure/Cardiac Transplantation
Hematology and Hemostasis
Honors Medicine – Cardiology
Honors Medicine – General Medicine
Honors Medicine – VA Hospital
Inpatient Cardiology
Inpatient Internal Medicine/Oncology-Firm
Intensive Care Medicine – BJ North
Intensive ECG Interpretation
Medical Intensive Care
Medical Toxicology
Medicine Consult Service
Occupational/Environmental Medicine
Oncology-Inpatient
Oncology-Outpatient
Palliative Medicine
Pulmonary Clinic for the Underserved
Pulmonary Medicine, Barnes-Jewish Hospital
Pulmonary Medicine – VA Hospital
Rheumatology
Transplant Infectious Disease Consult
Wilderness Medicine
(Level 900)
Research Opportunities

**Molecular Microbiology**
(Level 900)
Research Opportunities

**Neurology**
(Level 800)
Adult and Pediatric Epilepsy
Clinical Aspects of Aging and Dementia
Clinical Neuroimmunology and Multiple Sclerosis
MS Center Outpatient – Missouri Baptist
Neonatal Neurology
Neuro-Oncology
Neurology Subinternship
Neurology Subinternship for Visiting Students
Neurology/Neurosurgery ICU
Pediatric Neurology
Physical Medicine and Rehabilitation
(Level 900)
Research Opportunities

**Neurological Surgery**
(Level 800)
Neurosurgery
(Level 900)
Research Opportunities

**Obstetrics and Gynecology**
(Level 800)
GYN Female Pelvic Medicine & Reconstructive Surgery (Urogynecology) Subinternship
GYN Oncology Subinternship
Maternal-Fetal Medicine Outpatient Care Subinternship
Maternal-Fetal Medicine Inpatient (Antepartum) Subinternship
Obstetrical Anesthesia
OB/GYN Endocrinology-Infertility Subinternship
OB/GYN Outpatient Care Subinternship
OB/GYN Ultrasound-Genetics
Special Topics in Reproductive Health
(Level 900)
Research Opportunities

**Ophthalmology and Visual Sciences**
(Level 800)
Ophthalmology
(Level 900)
Research Opportunities

**Orthopaedic Surgery**
(Level 800)
Orthopaedic Hand and Upper Extremity Surgery
Orthopaedic Oncology
Orthopaedic Pediatric Surgery
Orthopaedic Spine Surgery in Adult Patients
Orthopaedic Sports Medicine
Orthopaedic Surgery Externship For Visiting Students Only
Orthopaedic Surgery – Foot/Ankle Surgery
Orthopaedic Surgery – Shoulder/Elbow Surgery
Orthopaedic Trauma
Pediatric Orthopaedic Spine & Sports Surgery
Reconstructive and Joint Preservation Surgery
(Level 900)
Research Opportunities

**Otolaryngology**
(Level 800)
Ambulatory Otolaryngology For the Primary Care Physician
General Otolarnygology
Neurotology
Otolaryngology
Pediatric Otolaryngology
Practicum in Adult Clinical Audiology
(Level 900)
Research Opportunities

**Pathology**
(Level 800)
Autopsy Pathology
Clinical Laboratory Medicine
Dermatopathology
Diagnostic Hematopathology
General Cytopathology
Introduction to Neuropathology
Molecular Pathology
OB-GYN Pathology Subinternship
Surgical Pathology – Barnes/Jewish
(Level 900)
Research Opportunities

**Pediatrics**
(Level 800)
Clerkship in Rural Primary Care Pediatrics
Clinical Pediatric Pulmonary Medicine
General Pediatrics Subinternship – St. Louis Children's Hospital
Genetics and Genomic Medicine
Newborn Medicine
Pediatric Asthma and Allergy
Pediatric Cardiac Catheterization
Pediatric Cardiology-Outpatient Service
Pediatric Critical Care Medicine
Pediatric Emergency Medicine
Pediatric Endocrinology and Diabetes
Pediatric Gastroenterology, Hepatology and Nutrition
Pediatric Infectious Diseases
Pediatric Lung Transplantation
Pediatric Pulmonary Subinternship
Pediatric Renal Disease
Pediatric Rheumatology
Quality of Care Through Health Informatics
Subinternship in Pediatric Hematology and Oncology
(Level 900)
Research Opportunities

**Psychiatry**
(Level 800)
Child Psychiatry
Clinical Psychiatry-Inpatient Psychiatric Service
Forensic Psychiatry
Interventional Psychiatry
Introduction to Eating Disorders
Outpatient Community Psychiatry
Psychiatric Oncology
Psychiatry Consult Service
Schizophrenia Precursors and Prodromal States
(Level 900)
Research Opportunities

**Radiation Oncology**
(Level 800)
Clinical Radiation Oncology
(Level 900)
Research Opportunities

**Radiology**
(Level 800)
Clinical Nuclear Medicine
General Radiology
Interventional Radiology
(Level 900)
Research Opportunities

**Surgery**
(Level 800)
Cardiothoracic Surgery
Colon and Rectal Surgery, Acting Internship
Critical Care
Ethical Challenges in Surgery and Medicine
Hepatobiliary Pancreatic Surgery, Acting Internship
Minimally Invasive Surgery, Acting Internship
Organ Transplantation
Pediatric Surgery
Plastic Reconstructive Surgery
Plastic Surgery Externship For Visiting Students Only
Surgical Night Float and ER Subinternship
Surgical Oncology and Endocrine Surgery, Acting Internship
Trauma Service, Acting Internship
Urology
Vascular Surgery, Acting Internship
(Level 900)
Research Opportunities

**Additional Electives**
(Level 800)
Biomedical Innovation and Entrepreneurship
Fourth Year Capstone Course
The Business of Medicine
(Level 900)
Research Opportunities