Notice of Nondiscrimination Policy

Thomas Jefferson University is committed to providing equal educational and employment opportunities for all persons, without regard to race, color, national or ethnic origin, religion, sex, sexual orientation, age, disability, or veteran’s status.

Thomas Jefferson University complies with all relevant local ordinances and state and federal statutes in the administration of its educational and employment policies and is an Affirmative Action Employer.

Jefferson has reviewed its policies for recruiting, advertising, job evaluation, and compensation to ensure conformance to the requirements of the Sex Discrimination Guidelines for Government Contractors, Sexual Harassment Guidelines, the Pregnancy Discrimination Amendment to the Civil Rights Act of 1964, the Rehabilitation Act of 1973, the Vietnam Era Veterans Readjustment Assistance Act of 1974, and the Americans with Disabilities Act. The University’s leave policy is nondiscriminatory, and disability due to pregnancy is treated like any other illness or injury.

Equal opportunity is not only the law, it is the firm policy of Thomas Jefferson University, and our managerial and supervisory personnel are directed to assign great importance to it.

The University has established monitoring, review, and grievance procedures to ensure affirmative action matters receive the attention of appropriate personnel at all levels up to and including the Senior Officers of the University.

Any inquiries may be directed to the Manager of Employee Relations or to the University’s Affirmative Action Officer at 238 Martin building, (215) 503-7758.

Credits: This catalog was compiled and edited by Dorissa Bolinski, JMC Editor; Susan Rattner, MD, MS, FACP Vice Dean, Academic Affairs; and John Caruso, MD, Associate Dean, Graduate Medical Education and Affiliations. Cover design and inside layout by Dorissa Bolinski. Photography by Karen Kirchhoff, Dave Lunt and Dave Super of Jefferson’s Medical Media Services.
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A bird’s eye view of the Jefferson campus.
Mission Statement

Jefferson Medical College is committed to: educating physicians who will form and lead the integrated healthcare delivery and research teams of tomorrow; discovering new knowledge that will define the future of clinical care through investigation from the laboratory to the bedside, and into the community; and setting the standard for quality, compassionate and efficient patient care for our community and for the nation. Jefferson recognizes that a diverse community is imperative to achieving excellence in patient care, education, and research. As we carry out our mission, we are committed to the highest standards of professionalism and aspire to be a community of discovery, learning, and inclusion.

History and Development

Dr. George McClellan and his colleagues founded “the Jefferson Medical College of Philadelphia” in 1824 with the firm but then outrageous belief that medical students should participate, under proper supervision, in the diagnosis and care of patients. However scandalous and unorthodox his views may have seemed, they proved so popular that it soon became necessary to move classes from Dr. McClellan’s own office to the Old Tivoli Theater at 518-20 Prune Street (now Locust Walk). On May 9, 1825, Dr. McClellan performed the first operation in the new infirmary, and Jefferson was well on its way to becoming the largest private medical school in the country. After two years, this space proved insufficient and plans were made to build facilities at 10th and Sansom Streets. These were opened in August of 1828.

The name was derived from the Jefferson College at Canonsburg, Pennsylvania, whose Board of Trustees met in the summer of 1824, to formally act upon a letter requesting the establishment of a medical school under their aegis but located in Philadelphia. Formal recognition by the Board was received in October 1824. Articles of union were signed, and the first class was graduated from Jefferson Medical College on April 19, 1826. Since that time, the number of graduates has totaled more than 27,000, of whom more than 9,700 are living. A class has graduated every year since 1826, except 1944 when, due to wartime needs, two classes were graduated.

The popularity of Dr. McClellan’s clinical approach and the talents of the other faculty members were indisputable, and expansion became essential. In 1838 the Pennsylvania Legislature granted an independent charter with full university rights and privileges to “the Jefferson Medical College.” Doctorates of philosophy have been granted since 1949, nursing certificates since 1893, and the College of Health Professions (now the Jefferson College of Health Professions) granted its first baccalaureate
degrees in 1972. The postgraduate and undergraduate program of the College of Graduate Studies (now the Jefferson Graduate School of Biomedical Sciences) has granted over 2,500 degrees.

Jefferson’s faculties and alumni through the years have been recognized for their outstanding contributions to medicine. Washington L. Atlee (Class of 1829) was a popular authority on abdominal surgery. Silas Weir Mitchell (Class of 1850) and William W. Keen (Class of 1862) combined their interests to form the modern study of neurology, and Dr. Keen later performed the first successful removal of a brain tumor in America that led to a cure. Carlos Finlay (Class of 1855) discovered the carrier of yellow fever. Samuel David Gross (Class of 1828) is recognized as the outstanding surgeon of the 19th century. He is immortalized in the famous portrait, The Gross Clinic,” painted by Thomas Eakins, who studied anatomy at Jefferson. Jefferson graduates were instrumental in the founding of ten medical schools in the United States.

A new faculty was established in 1841 and contributed significantly to medical progress in the 19th century. One of these, Dr. Robley Dunglison, had been the personal physician to Thomas Jefferson and became known as the “Father” of American human physiology.

Jonathan Letterman (Class of 1849) conceived of and implemented America’s first effective ambulance corps system for the removal of wounded from the battlefield during the Civil War. At least two dozen major hospitals have been named for Jefferson alumni, including Colonel Letterman. Jonathan Messersmith Foltz (Class of 1830) was not only the first White House physician, but also the first Surgeon General of the U.S. Navy. J. Chalmers DaCosta (Class of 1885), editor of Gray’s Anatomy and of an English edition of Zuckerkandl’s Operative Surgery, and author of A Manual of Operative Surgery, was selected to attend President Wilson at the Paris Peace Conference in 1919. Chevalier Jackson (Class of 1886), whose improvements in the design of the bronchoscope and innovative bronchoscopic techniques introduced to the world a new medical procedure. He occupied chairs in five Philadelphia medical schools simultaneously, all of which had been created especially for him.

Jefferson’s leadership was recognized in 1910 when Abraham Flexner published his influential report that stressed science as a proper base for medical education in the United States. Flexner wrote, “A good library, excellently administered, is to be found at Jefferson, at Buffalo, and at Galveston.” Flexner cited these libraries as exceptions to the general picture at that time. In all, 19 of the 42 Presidents have been treated by Jefferson alumni or faculty before, during, or after their terms of office.
In 1870, the Jefferson Alumni Association was founded by Samuel D. Gross, who was also its first president. It quickly demonstrated its loyalty by an immediate response to an appeal for a separate hospital building, which was opened in 1877. Although the College had always provided hospital facilities in the interests of its students and the public, this was Jefferson’s first structure dedicated to this purpose.

The following are among the most illustrious of Jefferson’s more recent faculty and alumni: John H. Gibbon, Jr. (Class of 1927), who opened a new era in cardiac surgery with the development of the heart-lung machine; Hobart A. Reimann and John H. Hodges (Class of 1939) who substantiated a viral cause for pneumonia and gastroenteritis; James M. Hunter (Class of 1953), who developed the first artificial tendon for use in the rehabilitation of impaired hands; Allan J. Erslev, who was the first to demonstrate the existence of a renal hormone that stimulated red blood cell production, later known as erythropoietin; Benjamin Kendall, who made it possible to obtain a prenatal electrocardiogram; Laird Jackson, who developed a method for first-trimester diagnosis of severe congenital disease; and Robert C. Gallo (Class of 1963), who isolated interleukin-2 and associated the HIV virus with AIDS. Darwin J. Prockop, former director of the Institute of Molecular Medicine, discovered the defective gene responsible for producing aortic aneurysms and a gene that causes a type of familial arthritis. Carlo M. Croce, an internationally renowned geneticist who founded the Kimmel Cancer Institute and the Kimmel Cancer Center, discovered the involvement of immunoglobulin loci and the C-myc oncogene in Burkitt’s lymphoma, and identified the gene, bel-2, that is involved in follicular lymphoma.

A number of current faculty and alumni continue the JMC tradition of being on the cutting edge of research and medicine. Some include the following. Scott A. Waldman, MD, PhD has devoted a large portion of his research career investigating applications of the detection of Guanylyl Cyclase C (GCC) to colorectal cancer. The results of his work are very encouraging to patients. His studies to date have discovered that GCC, which appears normally inside the intestinal track, evidently only appears outside of the intestine when CRC has spread. Richard G. Pestell, MD, PhD, Director of the Kimmel Cancer Center, focuses his research focused on identifying molecular markers of pre-malignant disease to develop preventive approaches to cancer. He has made significant contributions to our understanding of cell cycle regulation and the disturbances that can lead to the malignant transformation of cells.

On July 1, 1969, Thomas Jefferson University was established. It includes Jefferson Medical College, Jefferson Graduate School of Biomedical Sciences, Jefferson School of Health Professions, Jefferson
School of Nursing, Jefferson School of Pharmacy and Jefferson School of Population Health.

During the 2011 fiscal year, Thomas Jefferson University faculty members were awarded more than $120 million of sponsored research. Currently, more than 3,000 full-time, part-time, and voluntary, active faculty members provide instruction to approximately 1,040 medical students.

Jefferson Medical College has been recognized for its balanced approach to medical education, and approximately one fourth of all medical school applicants throughout the country apply to Jefferson.

Accreditation

Jefferson Medical College is accredited by the Liaison Committee on Medical Education for its medical education program leading to the M.D. degree.

In addition, the Continuing Medical Education program is accredited by the Accreditation Council for Continuing Medical Education; and the Residency programs are accredited by the Accreditation Council for Graduate Medical Education. Thomas Jefferson University is a member of the Middle States Association of Colleges and Schools.
Admissions Requirements

Application Procedure

Correspondence pertaining to admissions should be addressed to Clara Callahan, MD, the Lillian H. Brent Dean of Students and Admissions, 1015 Walnut Street, Philadelphia, Pennsylvania 19107-5083, (215) 955-6983.

Jefferson Medical College participates in the American Medical College Application Service (AMCAS). Applications should be submitted to AMCAS between June 1 and November 15. The AMCAS application is available via the AMCAS Web site (www.aamc.org/students/amcas).

AMCAS
Association of American Medical Colleges - Student Services
2501 M St., NW
Lobby-26
Washington, DC 20037-1300

On receipt of the verified AMCAS application, Jefferson will send, via email, notification of receipt. Also included will be instructions for completing the Jefferson Medical College online secondary application with online payment capability. The Committee on Admissions will begin reviewing the application when all supplementary materials have been received including: 1) the Jefferson Medical College Secondary Application Form, 2) the nonrefundable $80.00 application fee, 3) MCAT scores, and 4) the required letters of recommendation.

Letters of recommendation are required to complete the application. Letters of recommendation should be transmitted via AMCAS. A recommendation from a preprofessional committee is preferred, however, if there is no such committee, letters should be provided by individual faculty members; one letter each from biology, chemistry, physics, and humanities. Applicants who have been involved in graduate programs are encouraged to provide additional letters from their graduate schools. The deadline for the receipt of letters of recommendation is January 1. Applicants are responsible for seeing that applications are complete, that the $80.00 application fee has been paid or waived, and that the required letters of recommendation have been received by the specified deadline.

Requirements for Admission

The medical profession is a career for those prepared for a lifetime of service to the ill, regardless of diagnosis, and has as its objective the development of professional men and women prepared to adhere to the highest standards of conduct and behavior asked of few others in our society.
1. Academic and Technical Criteria

Jefferson Medical College concurs with the concept that certain minimum academic and technical standards are essential for the successful completion of a medical education and for the granting of the degree of Doctor of Medicine.

Applicants should read, understand, and be able to meet the requirements for admission outlined below with or without reasonable accommodations. If there are any questions regarding these standards, contact the Office of Admissions for clarification.

Among the requirements for Admission to Jefferson Medical College are:

- The ability to observe demonstrations and experiments in the basic sciences.
- The ability to analyze, synthesize, solve problems, and reach diagnostic and therapeutic judgments.
- Sufficient use of the senses of vision and hearing and somatic sensation necessary to perform a physical examination using observation, palpation, auscultation, and percussion and the ability to execute motor movements reasonably required to provide both general patient care and emergency treatment.
- The ability to relate to patients and to establish sensitive, professional relationships with patients.
- The ability to work as an effective member of the health care team.
- The ability to communicate in writing and verbally with patients and medical colleagues with accuracy, clarity, and efficiency in both routine and emergency conditions.
- The ability to learn and perform certain laboratory and diagnostic procedures.
- The ability to use good judgment in the assessment and treatment of patients.
- The ability to accept criticism and to respond by appropriate modification of behavior.
- No infectious disease which would prevent the performance of essential clinical activities required to complete the curriculum.
- The perseverance, diligence, and consistency to complete the medical school curriculum and to enter the independent practice of medicine.
A code of professional conduct is in place at Jefferson Medical College. It embraces ethical standards of professional conduct for the Thomas Jefferson University community, including students, faculty, administrators, and house staff. Details of the Code are contained in the Student Handbook and starting on page 38 of this book.

2. **Degree Criteria**

The Medical College Admission Test and a baccalaureate degree from an accredited college or university in the United States or Canada are required. Credit for degrees granted by foreign institutions and for foreign course work must be validated and/or accepted by an accredited U.S. college or university. It is preferable to have courses graded by the traditional grading system rather than by pass/fail grades.

3. **Course Requirements**

A strong preparation in the sciences basic to medical school studies is advised. A variety of college course formats and combinations, including biology, general and organic chemistry, and physics are a minimum. Courses taken to meet the basic requirements should be, in general, comparable to courses accepted for concentration in these disciplines. Courses taken should be supplemented by laboratory experiences. Biochemistry is recommended.

Students may take upper level science courses out of educational interest or to fulfill the requirements of their major. If advanced placement credits in required subjects are submitted, additional courses in similar subjects are encouraged.

Breadth of education is expected. The pursuit of some discipline in-depth is encouraged. A successful medical student must effectively acquire, synthesize, apply, and communicate information. These are skills that can be developed through a great variety of academic disciplines. Studies in the humanities, the social and behavioral sciences, and the development of effective writing skills are strongly suggested. Proficiency in a second language is regarded favorably.

Honors courses and independent study or research are encouraged to explore in depth an area of knowledge and to provide scholarly experience which will facilitate a lifelong habit of self-education. All academic requirements must be completed prior to matriculation.

4. **Medical College Admission Test**

All applicants to Jefferson Medical College are required to take the Medical College Admission Test (MCAT). The test should be
taken no more than three years prior to the time of application and no later than September of the year of application.

**Selection Factors**

The selection of students is made after careful consideration of many factors, including college attended, academic record, letters of recommendation, scores on the MCAT, performance in nonacademic areas, including record of service, and assessment by the Committee on Admissions.

We aspire to train physicians and future leaders in medicine who will address the disparities in health care in our nation, and we expect that our students will be respectful, collaborative healthcare professionals who embrace all dimensions of diversity. Thus, consideration is given to students from groups that are underrepresented in medicine, and individuals who demonstrate a commitment to the healthcare needs of the diverse populations that we serve, including rural and urban underserved areas.
Interviews are by invitation. The Committee on Admissions would like to interview every applicant; however, the volume of applications precludes this possibility. Each year approximately 800 applicants are interviewed at Jefferson. The interview serves several purposes: (a) information can be verified and clarified; (b) the applicant can explain unique aspects of the application; (c) the applicant can become better acquainted with the medical school; and (d) intellect, ability to communicate, personal qualities such as maturity, compassion, dedication, integrity, commitment, and motivation can be assessed. The interview aids in deciding which applicants will most likely benefit from Jefferson’s program and is a requirement for acceptance.

A student who has previously attended another medical school and failed academically or was dismissed for unsatisfactory conduct will not be considered for admission.

Jefferson Medical College will carefully review an applicant’s criminal background to determine suitability as a medical student.

**Provisions governing Acceptance of an Applicant**

All offers to accept an applicant for admission to Jefferson Medical College are conditional upon: (1) satisfactory completion of current enrollment; (2) meeting all entrance requirements (including all academic and technical standards of the College and requirements for licensure); (3) satisfactory medical status; (4) agreement to comply with the rules and regulations of the University, the Honor Code and Shared Code of Professional Values; (5) agreement to accept curriculum changes as approved by the faculty and tuition charges as determined by the Board of Trustees; and a satisfactory criminal background check.

The Commonwealth of Pennsylvania enacted a Medical Practice Act in 1985 (Act 112 of 1985) that specifies the qualifications for a license to practice medicine according to the Pennsylvania Board of Medical Education and Licensure. The Board will not issue a license to an applicant who has been convicted of a felony under the act of April 14, 1972 (P. L. 223, No. 64), known as The Controlled Substance, Drug, Device, and Cosmetic Act, or of an offense under the laws of another jurisdiction which, if committed in this Commonwealth, would be a felony under The Controlled Substance, Drug, Device, and Cosmetic Act.

**Application/Acceptance Timetable for First-Year Class**

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
</tr>
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<tbody>
<tr>
<td>Filing of AMCAS application</td>
<td>Earliest: June 1, Latest: November 15</td>
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School application fee to all applicants: $80.00 (nonreturnable)
Acceptance notice to regular applicants
   Earliest date: October 15

Early Decision Program (EDP)
   EDP application period: June 1 - August 1
   Applicants notified by: October 1

Applicants’ response to acceptance offer
   Maximum time: Two weeks

Deposit to hold place in class (applied to tuition): $100.00
Deposit due prior to: No later than May 15; refundable prior to May 15

Estimated number of new students: 260

Accepted applicants requiring special accommodations should contact the Admissions Office as early as possible.

Transfer/Advanced Standing Students

Applications for transfer into the third-year class are considered (for compelling reasons) from students who are satisfactorily completing the first two years in an LCME accredited medical school, or in those situations where institutional agreements exist, as capacity allows. Transfer students must have passed the United States Medical Licensing Examination Step 1 before they will be allowed to matriculate. Applications for transfer should be requested in writing after December 1.

   For students with exceptional backgrounds who may be seeking advanced standing, action by the Admissions Committee provides general acceptance only. The Committees on Student Promotion and Curriculum must then review the candidate’s qualifications and credentials to determine appropriate placement in the program.

Cooperative Programs

Physician Shortage Area Program (PSAP)
The PSAP recruits and educates medical students from rural areas and small towns who are committed to practicing in similar areas. Special consideration for admission and financial aid is given to students who agree to practice medicine in an underserved area.

The Delaware Institute for Medical Education and Research
The Delaware Institute for Medical Education and Research (DIMER) program is a joint medical education program involving the University of Delaware, Christiana Care Hospitals, and Jefferson Medical College. The program provides for up to 20 places for qualified Delaware residents
in each class at Jefferson Medical College. All applicants must be legal residents of Delaware.

The Pennsylvania Accelerated Program
An accelerated premedical program was begun in 1963 as a cooperative agreement between Penn State College of Science and JMC. Students earn both the BS and MD degrees in six or seven years after graduation from high school. Students spend the first two/three years at University Park and then proceed to JMC for its regular four-year curriculum. The BS is awarded after one or two years at JMC and the MD after the fourth year.

Post Baccalaureate/Pre-Health Programs
Post Baccalaureate/Pre-Health Programs (PBPH) exist between Jefferson Medical College and the University of Pennsylvania College of General Studies, Bryn Mawr College, Columbia University School of General Studies and the Jefferson Graduate School of Biomedical Sciences. The programs are an early decision plan for entry in the MD program at JMC for candidates accepted into the PBPH programs. A baccalaureate degree plus the need for additional course work to meet the prerequisites for entry into medical school are required. Suitability for a career in medicine is based on academic credentials, motivation, and personal qualities. Completion time for course work is one year, full time, and two years, half time (with full time employment).

Medical Scholars Program
Jefferson Medical College and the University of Delaware have developed a joint Medical Scholars Program (MSP) which began in Fall 1991. The program links college to medical school with an early assurance process for qualified students in the program.

International Medical University (IMU) Program
Jefferson Medical College is one of 24 medical schools in the English speaking world who have entered into a joint arrangement with the IMU to assist it in the establishment ultimately of an MD degree granting institution in Kuala Lumpur, Malaysia. Currently students spend two and a half years at the IMU undergoing their preclinical training, joining one of the partner schools after the successful completion of the preclinical phase for their clinical education and an MD degree. Representatives of the partner schools have been involved from the outset in the design and evaluation of the educational program offered at the IMU through membership on its Academic Council. The aim of the IMU is to improve the health care of the populations of Malaysia and the other countries of the Southeast Asian region. Jefferson is the only U.S. participant in this innovative approach to medical education, which began when the then-International Medical College (IMC) was launched in 1992.
Joint MD/MBA-MHA Program in Health Administration
Recognizing that vast economic, organizational, and political changes have dramatically affected the practice of medicine and transformed it into a huge industry, Jefferson Medical College has sought to prepare future graduates for leadership roles in this enterprise. A joint five year MD/MBA (and MHA) program exists for highly motivated students as a result of an educational partnership with Widener University in Chester, Pennsylvania, approximately 25 minutes from the main Jefferson campus. An additional MD/MBA opportunity is available through the University of Delaware at its main campus in Newark, DE, 40 miles from Center City Philadelphia. These joint programs are under the direction of the Jefferson School of Population Health. Interested students are urged to contact the Office of the Dean, Jefferson School of Population Health, at the earliest possible time, preferably during the admissions process, in order to explore more fully the requirements, prerequisites, and other detailed aspects of this unique joint program. Opportunities for research, administrative field placements, and potential fellowship support exist. For more information, you may also go to http://www.jefferson.edu/jmc/admissions/programs.cfm or contact April Smith, MD/MBA Program coordinator at april.smith@jefferson.edu, telephone (215)503-5305.

Combined MD/MPH Program
A dual MD/MPH program is available on campus at Thomas Jefferson University. The program allows medical students to complete the master of public health (MPH) degree program in one additional year. After the second of third year of medical school, MD/MPH students take a year of public health courses including a short community-based public health experience and begin their final year capstone project which may be completed during their elective time in their final year of medical school. For more information, please contact Rob Simmons, DPH, MPH Program Director at (215)955-7312 or by email at rob.simmons@jefferson.edu. More information is available at www.jefferson.edu/population_health/dual_degrees/md_mph.cfm.

Combined MD/PhD Program
Jefferson Medical College and the Jefferson Graduate School of Biomedical Sciences jointly sponsor a program for the training of medical scientists that requires approximately eight years of study and leads to both the MD and PhD degrees. The purpose of the combined degree program is to provide a small number of highly qualified individuals with, not only the broad biomedical background and clinical insights of a physician, but also, the rigorous research training that is characteristic of a basic science PhD. There are currently five fully funded MD/PhD positions.
The MD/PhD training sequence consists of two preclinical years of medical school followed by four years of graduate research leading to a doctoral dissertation, and then the final two years of medical school clinical clerkships. During the first two years, students complete the coursework requirements established by Jefferson Medical College for satisfactory completion of preclinical training. During years three through six, students must satisfy curricular requirements established by the Jefferson Graduate School of Biomedical Sciences and the specific doctoral program in which the student is enrolled.

At the time of acceptance into the program, students are assigned to an appropriate member of the Combined Program Selection Committee, as an advisor for their preclinical years, to assist in planning and completing required laboratory rotations. During the initial two years, while trainees complete the first and second year medical school curriculum, exposure to basic research is encouraged through established seminar programs in various basic and clinical departments at Jefferson. Students spend the summer after their first (and possibly second) year of medical school in rotations through at least two laboratories in order to familiarize themselves with modern experimental approaches to research problems and to explore potential sites for their future thesis research.

Following successful completion of the two preclinical years, candidates take a leave of absence from Jefferson Medical College and transfer to the Jefferson Graduate School of Biomedical Sciences. The following four years are devoted mainly to completing graduate-level coursework, conducting an original research project in the laboratory of a faculty preceptor and writing a doctoral thesis. Typically, the PhD thesis is defended at the end of this period. During the graduate school phase, trainees maintain contact with clinical affairs through established seminar programs in clinical departments at Thomas Jefferson University.

In the final two years, students transfer back to Jefferson Medical College and complete the clinical courses and clerkships that comprise the third and fourth year medical school curriculum.

Trainees may select one of the seven PhD programs offered by the Jefferson Graduate School of Biomedical Sciences. These include: biochemistry and molecular biology; genetics; immunology and microbial pathogenesis; cell and developmental biology; molecular pharmacology and structural biology; molecular physiology and biophysics; neuroscience; and tissue engineering and regenerative medicine.
The program seeks to recruit students with superior records of undergraduate science preparation. Major emphasis is placed on the candidate’s previous involvement in research and a strong motivation toward a career in academic medicine and the biomedical sciences.

Interested students to the combined MD/PhD program must 1) apply through AMCAS, 2) indicate Combined Degree application type, and 3) complete secondary application to Jefferson Medical College. The deadline for application to the MD/PhD program is October 15.

For application materials and more information, please contact: Jefferson Medical College, 1015 Walnut Street, Suite 110, Philadelphia, PA. Phone: (215) 955-6983. Fax: (215) 955-5151.

Registration

All students must register before the beginning of the school year. The University Office of the Registrar will inform each student of the manner, time and place of registration, by mail and/or email, in advance of the registration period.

Students assigned to affiliated hospitals for their first teaching block, when travel time to the hospital is more than two hours, should contact the Office of Student Affairs to make appropriate arrangements concerning their class Orientation program obligation.

A student who fails to complete registration, including payment of all financial obligations at the date designated, will be deprived of the privileges of the College. Reinstatement within one week of the appointed date is obtained by acquiring the permission of the Dean after the student has made provision for the financial obligations to be met, including the payment of the late fee of $25.
Financial Obligations

The Board of Trustees reserves the right to amend or add to the regulations concerning fees and method of payment, and to make such changes applicable to present, as well as future, students in the college.

Comprehensive Fee

The tuition and fees for 2012 - 2013 has been set at:

$50,936 - First Year  $50,936 - Third Year
$50,936 - Second Year  $50,936 - Fourth Year

This covers tuition, information technology fee, and library fee.

Medical Insurance

Health insurance is required for all students attending Jefferson Medical College. The 2012-2013 fee for participating in health-care insurance sponsored by the College is $4,085, collected in equal halves, along with Tuition and Fees, on or before the scheduled payment date. Students who can provide evidence of comparable health insurance coverage may waive the medical coverage with the approval of the Student Affairs Office. Coverage for dependents is also available through the Jefferson Medical Plan and is due at the time of first payment of the Comprehensive Fee.

Schedule of Payments

Each year’s Tuition and Fee cost is payable in two equal installments. The first payment is due on or before the scheduled date for registration/orientation for the first teaching block. The second payment is due on or before January 1.

Rules Governing Payment

Payments may be made in cash, by check, bank draft, or postal money order drawn to the order of the Thomas Jefferson Medical College by mail or in person. Payments by either VISA or Master Card may be made using Banner Web.

Students are emailed a statement of their charges for the first payment in advance of registration for the first teaching block, and a statement of charges for the second payment in December.

Payments submitted by mail should be addressed to Thomas Jefferson University and mailed to the address on ebill with the remittance stub.

Students must present evidence of payment in order to complete their registration. The Student Accounts Office can be reached at (215) 503-7669, tuition.office@jefferson.edu.
Penalty for Non-Payment of Comprehensive Fee

First Payment Period
A student who fails to complete registration, including the payment of all financial obligations at the date designated for registration, will be denied privileges of the College. Reinstatement within one week of the appointed date may be obtained by acquiring the permission of the Dean after the student has made provisions for the payment of the financial obligations, including the payment of the late fee of $25.

Second Payment Period
A student who fails to make payment for the second payment period by January 15, shall (1) not receive credit and grades for the teaching block currently enrolled in and (2) shall not be permitted to continue to the next teaching block. Reinstatement may be obtained by acquiring the permission of the Dean after the student has made provisions for the payment of the financial obligations, including the payment of the late fee of $25.

A late fee of $25 per month, or part thereof, will be imposed until the bill is fully paid.

All students who are aware in advance that they may have difficulty meeting the deadline for payment for the first or second payment period should contact, in person, the Tuition-Cashier Office at least two weeks prior to deadline, and explain the circumstances surrounding their anticipated late payment.

Tuition Refund Policy
A student who withdraws (or is requested to withdraw for failure to maintain a satisfactory scholastic standard) or who is granted a leave of absence during either the first or second payment period of the academic year will be eligible for a refund of the tuition in accordance with the following policy. The effective date of separation is the date on which the Office of the Dean receives a written request for withdrawal or leave of absence from the student.

Jefferson Medical College has two billing periods within each academic year. For students who withdraw, are dismissed or take a leave of absence, tuition will be prorated based on the percent of tuition that has been charged and the number of weeks completed in proportion to the total number of weeks expected to be completed for the entire academic year.

EXAMPLE: Please Note: The following examples are for illustrative purposes ONLY and do not apply to the specific calculation of an individual student’s tuition obligation.
- 1st Year student withdraws during the 8th week of enrollment (approx. end of September). JMC 1st Year number of weeks for the year is 41. Tuition obligation would be 8/41 (19.5%) of the annual tuition for the year.

- 3rd Year Student is approved for a leave of absence after the 2nd rotation of the year (12 weeks). JMC 3rd Year number of weeks is 48. Tuition obligation would be 12/48 (25%) of the annual tuition for the year.

If you are a financial aid recipient, you should also be familiar with TJU’s Federal Title IV Refund Policy

A student who is required to withdraw or is dismissed because of violation of college regulations shall receive no refund by reasons of such withdrawal/dismissal.

Other Fees

A. Transcript Fee
Students who are currently enrolled may request transcripts at $5 per transcript. All other requests for transcripts will be charged $10 per transcript. Please visit www.jefferson.edu/registrar/transcripts.cfm for further information.

Veteran Registration

The College is approved for training veterans and children of veterans under the appropriate Public Laws. All students who wish to obtain the educational benefits should apply to the nearest office of the Veterans Administration for a Certificate of Entitlement in advance of the registration period. At registration, students must complete a certification of enrollment in order to receive benefits from this program.

Address questions on Veteran Registration to the University Office of the Registrar.
Expenses

Estimated expenses for a single student (2012 - 2013):

<table>
<thead>
<tr>
<th>Total Aid</th>
<th>1st Year (11 Months)</th>
<th>2nd Year (11 Months)</th>
<th>3rd Year (12 Months)</th>
<th>4th Year (11 Months)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Student</td>
<td>Tuition Fees</td>
<td>Books &amp; Supplies</td>
<td>Instruments</td>
<td>Room &amp; Board</td>
</tr>
<tr>
<td></td>
<td>$50,936</td>
<td>660</td>
<td>249</td>
<td>16,698</td>
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<td>$50,936</td>
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<td>___</td>
<td>18,216</td>
</tr>
<tr>
<td></td>
<td>$50,936</td>
<td>660</td>
<td>___</td>
<td>___</td>
</tr>
</tbody>
</table>

The tuition, fees, and other charges described are good faith projections for the academic year. They are, however, subject to change from one academic term to the next as deemed necessary by the College in order to meet its financial commitments and to fulfill its role and mission.

Graduation Day!
Financial Aid

The primary responsibility for financing the cost of medical education rests with the student and his or her family. However, it is recognized that increasing numbers of students and their families are unable to meet the costs of a medical education without some type of assistance.

When need is established and the resources of the student and family are clearly identified, the student is directed to first obtain a minimum of $10,000 in the Federal Unsubsidized Stafford Loan. Due to the Federal Budget Control Act of 2011, graduate and professional students are not eligible to borrow the Federal Direct Subsidized Stafford Loan beginning with the 2012-2013 academic year. If need exists beyond this, then Jefferson will attempt to meet a portion of this need from programs such as the Federal Perkins Loan Program, Primary Care Loan Program, and Jefferson’s loan and scholarship/grant funds. Students demonstrating exceptional financial need, as defined by Health and Human Services, may also be considered for funding under the Loans for Disadvantaged Students and Scholarships for Disadvantaged Students programs. All awards are contingent upon the availability of funding and eligibility for all forms of financial aid is determined on an annual basis.

If a student demonstrates financial need, but is ineligible for federal grants or loans due to default on a prior educational loan and/or negative credit rating, Jefferson Medical College will not commit institutional funds to remedy the default or negative credit status, or to compensate for the ineligibility for federal funds. The student is ultimately responsible for resolving all problems involving loan delinquencies, defaults, and/or any other circumstances that would result in the student being ineligible to borrow through any federal loan program.

The University Office of Student Financial Aid also offers students information about alternative loan programs offered via public, governmental and private agencies. See the Financial Aid Office Web site at www.jefferson.edu/financial_aid

Financial aid programs administered by the University are subject to change or termination at any time without notice or obligation.

Jefferson Scholarships and Loans

A limited number of need-based scholarships and loans are available to students attending Jefferson Medical College. To apply for Jefferson institutional funds, a student is required to submit a completed FAFSA form, including parents information; a completed Jefferson Financial Aid Application; verification worksheet; and copies of the student’s, spouse’s, and parent’s most recently signed income tax returns. A description of each scholarship and loan can be found in the current Jefferson Medical College Financial Aid Handbook and at www.jefferson.edu/financial_aid.
Jefferson-Administered Federal Aid

Federal Perkins Loan
Effective with the 2008 Reauthorization of the Higher Education Act, the annual maximum Federal Perkins loan that may be awarded to graduate and professional students is $8,000, with the aggregate maximum increased to $60,000. The aggregate maximum includes any amounts students may have been awarded during their undergraduate or prior graduate education. To be eligible, students must be accepted for enrollment or enrolled at an eligible postsecondary institution and must demonstrate financial need. The interest of five percent is subsidized until repayment begins, which is nine months after graduation. Students are allowed a maximum period of 10 years to repay this loan.

Federal Work Study Program (FWSP)
Federal Work Study represents a form of funding under which students earn their awards through part-time employment on campus. Students may apply for Federal Work Study to help reduce the amount they may need to borrow through alternative loan programs. Students interested in applying must complete the Federal Work Study application, in addition to completing the general financial aid application requirements.

First-year students are eligible to participate in the Federal Work Study Program on or after January 1 of their initial academic year of enrollment at Jefferson Medical College.

It is the policy of Jefferson Medical College that students employed under the Federal Work Study Program may not be employed in a second position within the University and/or hospital.

Loans for Disadvantaged Students (LDS)
The LDS program provides loan funds to students who meet the “financial need” and “disadvantaged” criteria as defined by Health and Human Services. Annual awards may not exceed the cost of tuition plus $2,500, but actual awards are contingent upon the amount of available funding. The interest rate of five percent is subsidized until repayment begins. Repayment begins one year after enrollment ceases, but may also be deferred during advanced professional training (e.g., internship/residency). Loans are repayable over a 10-year period. Eligibility for LDS funds is reviewed on an annual basis and is contingent upon the applicant’s unmet need, the number of eligible applicants, and availability of funding.

Scholarships for Disadvantaged Students (SDS)
The SDS program is authorized by section 737 of the Public Health Service (PHS) Act. Under this program, the Secretary awards funds to eligible schools for the purpose of providing scholarships to eligible
students from “disadvantaged backgrounds” (as defined by Health and Human Services) who are enrolled (or accepted for enrollment) as full-time students in medical school. SDS awards are based on the student’s unmet need. Eligibility is reviewed on an annual basis and is contingent upon the availability of funds and the number of eligible applicants.

**Federal Unsubsidized Stafford Loan Program**
Due to the Federal Budget Control Act of 2011, graduate and professional students are not eligible to borrow the Federal Direct Subsidized Stafford Loan beginning with the 2012-2013 academic year. The annual maximum typically applied for under the Federal Unsubsidized Stafford program is $38,500 (for a nine-month academic year) and $47,166 (for a 12-month academic year). The aggregate limit for the Federal Direct Stafford Loan program is $224,000. Interest begins accumulating on the Federal Unsubsidized Stafford loan as of the date the funds are disbursed from the lender, and continues to accrue throughout the life of the loan. The interest rate is 6.8% fixed for all Federal Direct Unsubsidized Stafford loans disbursed after July 1, 2006. An Origination Fee of 1-3% may be charged on this loan. Deferment provisions while in school and forbearance provisions while in residency are available on the Federal Direct Stafford loan program. Application for deferment or forbearance must be made, on an annual basis, directly to the servicer. Federal Direct Stafford Loan borrowers have a maximum of 10 years to repay the loan in its entirety, exclusive of periods of forbearance. Other repayment options from the servicer can be made available during repayment. The Federal Direct Stafford Loan Master Promissory Note (MPN) can be completed online at http://studentloans.gov.

**Federal Grad PLUS**
Starting July 1, 2006, graduate and professional students have another loan option available through the PLUS Loan program. Under the Grad PLUS loan program, the student is the borrower. Grad PLUS loans are federal, non-need credit based and have a fixed interest rate of 7.9%. Like the Federal Unsubsidized Stafford Loan, the interest starts accruing at the date of disbursement. The Grad PLUS charges up to 4% in origination fees, deducted from each disbursement. Other features of the Grad PLUS include a repayment period of up to 25 years, deferment privileges and cancellation upon death/permanent disability. Loan eligibility is calculated as the cost of education (as established by the Financial Aid Officer) less all other financial aid received.

**Federal Service Commitment Programs**

**Armed Forces Health Professions Scholarship Program (AFHPS)**
The program known as the AFHPS Program is as follows: an eligible student applies to one of the three branches of the armed forces of his or her choice. If selected, he or she is commissioned as a second
lieutenant or ensign in the inactive reserve. While in the program, the student receives a stipend of (currently) $2,088 per month (as of 2011-2012 year), except during an annual 45-day active duty tour for which he or she will receive approximately $3,000. In addition, the service will pay all tuition, mandatory fees, and related academic expenses of the student.

The student incurs an obligation of one year of active commissioned service for each year or fraction of a year of program participation. All participants incur a minimum tour of three years.

For further information concerning AFHPS, students should contact the local recruiter or write to one of the following addresses as soon as possible.

Air Force
Health Professions Recruiter
United States Air Force Recruiting Office
1150 First Avenue, Suite 502
King of Prussia, PA 19406
Telephone: (610) 491-9717

Army
U.S. Army Health Care Recruiter
U.S. Army Health Care Recruiting Station
2201 Route 38 E., Suite 105
Cherry Hill, NJ 08002
Telephone: (877) 228-1952

Navy
Navy Recruiting District
2385 W. Cheltenham Avenue
Philadelphia, PA 19150
Telephone: (215) 886-0012

It is important to note that these programs are quite competitive, and early application is suggested. The selection process can begin as early as January, preceding the academic year for which you are applying.

National Health Service Corps Scholarship Program
Some of the provisions of this scholarship program include: a $1,289 monthly stipend (for the 2011-2012 year) payable twelve (12) times a year, for living expenses, payment of tuition, and other reasonable educational expenses, a private practice service option, guaranteed deferments of up to three years to complete postgraduate training, and employment only by the National Health Service Corps under Civil Service or Commissioned Corps appointment.
Scholarship recipients agree to serve one year of full-time clinical practice in a federally designated Health Manpower Shortage Area for each year of scholarship support. The minimum commitment is two years.

Please note: Selection priority will be given to (1) applicants who have previously received NHSC scholarships; (2) applicants who have participated in federal “Scholarship Program for Students of Exceptional Financial Need” at their medical schools; and (3) applicants who come from disadvantaged backgrounds and who possess the characteristics that increase the probability they will continue to practice in Health Professional Shortage Areas (HPSA) after they complete their service obligations. The most important of these characteristics is the applicants’ commitment to be a primary health care provider (specifically family medicine, general internal medicine, general pediatrics, obstetrics/gynecology, and general psychiatry).

Further information about this program is available from the following:

NHSC Scholarships
5600 Fishers Lane, Room 8A - 55
Rockville, MD 20857
Toll Free: (800) 221-9393
http://nhsc.hrsa.gov

Primary Care Service Commitment Programs
Information about other, primary care, service commitment programs, such as Primary Care Loan (PCL), and federal and state Loan Forgiveness Programs may be obtained by referring to Jefferson Medical College’s Financial Aid Handbook.

Other Sources of Aid

Delaware Institute for Medical Education and Research (DIMER) Loan Program
Through DIMER, Delaware has a relationship with Jefferson Medical College of Thomas Jefferson University, resulting in Jefferson Medical College functioning as a Delaware Medical School.

Eligible applicants must be legal residents of the State of Delaware and meet the premedical academic requirements of Jefferson Medical College.

In 2002, DIMER established a need-based scholarship program for Delaware students entering Jefferson in 2001 or after. Scholarships vary in dollar amount. Students who are receiving full tuition scholarships (e.g., military scholarships, MD/PhD fellowships) are not eligible for DIMER funding.
To apply, accepted Delaware students must submit a complete financial aid application to the University Office of Student Financial Aid, Jefferson Medical College, no later than July 15. This includes submitting the Jefferson Institutional Application, the Verification Worksheet, a signed copy of the student Federal Income Tax Return, and a signed copy of the parent Federal Income Tax Return to the University Office of Financial Aid and submitting the Free Application for Federal Student Aid (FAFSA) to the federal processor indicated on the application. Please note that parental information must be included on the FAFSA and parental tax returns must be submitted to the Financial Aid Office for scholarship consideration. Students must also submit an Information Release Form for the purpose of releasing applicable information to DIMER.

For more information about this program, please contact:

University Office of Student Financial Aid
Jefferson Medical College
1025 Walnut Street, Room G-1
Philadelphia, PA 19107
Telephone: (215) 955-2867
Email: financial.aid@jefferson.edu

Delaware Higher Education Commission
820 North French Street
Wilmington, DE 19801
Telephone: (302) 577-5240
http://www.doe.state.de.us/high-ed

**Scholarship Incentive Program**

Consideration is given to students who demonstrate substantial financial need and are enrolled full time in an undergraduate degree program at a regionally accredited college in Delaware or Pennsylvania. Students must have a minimum 2.5 Grade Point Average. Graduate students whose major is not available in Delaware are considered. Scholarships have a $2,200 maximum annual award for undergraduates, $1,000 for graduate students.

Application Deadline: April 15

Apply to:

Delaware residents will be considered for ScIP if their FAFSA is received by the federal processor by April 15. Students meeting the April 15 deadline will be notified of additional deadlines to submit (1) enrollment information and (2) GPA verification. For more information, go to http://www.doe.k12.de.us/dheo or send an email to delaware_scholarships@doe.k12.de.us.
**Student Financial Aid Program of the Delaware Academy of Medicine**
Any resident of Delaware or a bonafide resident of Delaware who may have temporary residency in another state may be eligible for loans ranging from $2,500 to $9,000. Loans have a moderate interest rate, which is deferred during studies. Loans and interest must be repaid usually within five (5) years from the date of graduation. However, other limited repayment options may be offered.

Application Deadline – May 15.

Delaware Academy of Medicine, Inc.
Attn: SFA Program
4765 Ogletown Stanton Road, Suite L10
Newark, DE 19713
Telephone: (302) 733-3900
Fax: (302) 733-3949
http://www.delamed.org

**Private Financing Options**
Students should consider private loan funding only after the maximum eligibility of Federal Direct Stafford Loan funds has been secured.

The amount of private loan borrowed may not exceed the student budget in combination with Federal Stafford Loans, institutional aid, and/or other financial aid resources. Total aid may not exceed total amount of the student annual budget.

Private educational loans are offered by many lenders. They are not federal and therefore have different parameters than the federal loan programs. Many lenders offer private loans using the following parameters:

- Credit based; usually requiring a 700 FICO score or above
- Interest rate based on prime rate or 30 or 91 day LIBOR plus 1 to 8 percentage points (varies by lender based on credit score)
- Interest rate may be fixed or variable; variable rate loans are usually not fixed
- No ceiling on variable interest rate loans
- May have processing fees
- Interest accrues when funds are disbursed; payment of interest is deferred while in school
Interest is usually not compounded until repayment begins
Grace and deferment periods offered after graduation
Not cancelled upon death or permanent disability

If interested in a private loan, please refer to the Financial Aid Office Web site for a listing of frequently used lenders or contact the Financial Aid Office for additional assistance.

For all your financial aid questions, refer to the Office of Financial Aid's Web site at www.jefferson.edu/financial_aid/.
The Educational Program

Notice of Equal Opportunity

Thomas Jefferson University is committed to providing equal educational and employment opportunities for all persons without regard to race, color, national or ethnic origin, marital status, religion, sex, sexual orientation, gender identity, age, disability or veteran’s status. The consideration of factors unrelated to a person’s ability, qualifications and performance is inconsistent with this policy. Any person having inquiries or complaints concerning Thomas Jefferson University’s compliance with Title VI, Title IX, the Age Discrimination Act of 1975, the Americans with Disabilities Act, or Section 504 of the Rehabilitation Act is directed to contact their Student Affairs Dean or Human Resources – Employee Relations, who have been designated by Thomas Jefferson University to coordinate the institution’s efforts to comply with these laws. Any person may also contact the Assistant Secretary for Civil Rights, U.S. Department of Education, Washington, D.C. 20202, or the Director, U.S. Department of Education, Office for Civil Rights, Region Three, Philadelphia, Pennsylvania, regarding the University’s compliance with the equal opportunity laws.

The Jefferson community is deeply committed to upholding the ethical standards and professional values of Medicine. The sections that follow, which have been adopted by the students, the Executive Council and the Professorial Faculty, are our expression of this commitment.

Professionalism and the Shared Code of Values

The Core Values of Jefferson Medical College

At Jefferson, we are committed to the highest principles of professionalism. We aspire to be a community that is not only academically and fiscally successful, but also a community of discovery, learning, caring, and sharing. The core values of professionalism guide our actions. At Jefferson:

- Our word is our bond (Integrity).
- We respect each other and all with whom we come into contact (Respect).
- We contribute to society’s intellectual, cultural, and spiritual well-being to the highest possible extent (Social Responsibility).
- We recognize that diversity and excellence go hand-in-hand, enhancing our education and patient care and welcome our ability to interact with other people (Diversity).
 We care about and attempt to ameliorate the suffering and pain of illness; we care about and attempt to ameliorate the trials and tribulations of the Jefferson family (Compassion).

 We are committed to excellence and the life-long pursuit of new knowledge and personal and professional growth (Excellence).

 We aspire to do the right thing, for the right reason, even if it involves pain or sacrifice (Altruism).

 We are committed to each other and to those we serve. We work together to achieve our mission and goals (Collaboration).

 We are committed to the prudent use of the resources made available to us by the hard work of the faculty, the tuition of our learners, the support of the public, and the philanthropic giving that sustains us and helps us grow (Stewardship).

Professionalism: Faculty Commitment

At this time when the medical profession is beset by an explosion of technology, changes in market forces, serious problems in health care delivery, conflicts of interest, and the threat of bioterrorism, the Faculty of Jefferson Medical College reaffirms its commitment to professionalism. Understanding that at its core the medical profession places the welfare of the patient above self-interest, we accept our responsibility to educate future physicians in the values and ethical standards of medical professionalism. We acknowledge that we can best achieve this by serving as role models and advocates while maintaining professional relationships based on mutual respect and concern. We must promote an atmosphere of cooperation and learning, of intellectual openness, honesty, and sincerity in order to constantly protect and redefine and make meaningful our core values and covenant of trust with society.

Professionalism: The Teacher-Student Relationship

The faculty of Jefferson Medical College is committed to principles of mutual respect and trust between teachers and students. Training future physicians who are entrusted with the lives of others must be based on faculty embodying the values of professionalism. A critical part of the values of professionalism in the teacher-student relationship is that faculty should not use their professional position to engage in romantic or sexual relationships with students. Faculty must behave as role models and mentors in their interaction with each other, students, nursing staff and other health professionals, as well as patients. In all of these relationships, the faculty acts to enhance the learning experience based on shared professional values.
Professionalism: Self-Regulation

As part of its contract with society, Medicine is given the privilege of self-regulation. As part of self-regulation, faculty and students must contribute to the spirit and principles of the Jefferson Medical College Honor Code. The faculty and students have individual responsibility and community responsibility, to uphold the Honor Code.

The Jefferson Medical College Honor Code

As Jefferson students and faculty we seek to establish a community based on honor, integrity and awareness of others. Our commitment to this community begins with our first day of professional or educational association with Jefferson Medical College when we sign a pledge to uphold the values and rules of the Honor Code that follows:

As faculty, residents, fellows, and medical students, we pledge to embrace the academic and social integrity on which Jefferson was founded, pursuing honesty, equality and fairness in all aspects of our lives. This includes not seeking an unfair advantage over our peers, teachers, students, residents, fellows or any other member of the Thomas Jefferson University community. These goals are dependent on our personal concern for ourselves and one another, as well as our collective concern for the maintenance of the community standards that are reflected in the Code.

The Honor Code assumes that all faculty, residents, fellows, and students conduct themselves in an ethical and professional manner. Altruism, accountability, commitment to excellence, duty to serve, honor, integrity and respect for others are essential characteristics of a physician. In addition, the code is dependent on the collective desire of all members of the academic community to prevent and deter violations, rather than on proceedings to impose penalties after violations have occurred. If violations do occur within this system, each member of the community is expected to support and uphold all aspects of the code.

Community — A goal of each member of the college is to foster an environment of trust and cooperation with respect for the work and efforts of others. When we speak of community we imply the student body, the faculty, the staff, and the administration, each of which contributes to the combined concept of community.

Academic Integrity — We seek to enhance our knowledge of medicine and achieve excellence in our time spent at Jefferson but not at the cost of honesty, integrity and trust, all integral aspects to the development of a physician.
Social Integrity — Jefferson is dependent on equality among all its members, regardless of race, culture, religion, gender, or sexual orientation. Each individual should be treated with equal respect by his or her peers, faculty and staff.

Responsibility — All members of the college must be willing and encouraged to discuss with their peers and all members of the community any action or issue that appears to be unacceptable and take the necessary actions in a timely manner to address the situation. The failure to deal with the breach in professional conduct not only jeopardizes the strength of the code but also puts the observer in direct violation of the code.

Mediation — Resources exist for students, faculty and staff to meet with other people within the Jefferson community to work out any differences and disagreements with the help of a third party. If these efforts fail to reach a resolution, further resources through official college channels can be used to review any disagreement and determine the appropriate course of action.

Each year at Orientations and the White Coat Ceremony, the students and faculty recite the following:

Shared Professional Values of Jefferson Medical College

In entering the profession of medicine, and in the process of crafting future physicians as students and educators, we recognize the implicit trust that patients and society have granted us. As such, we must commit to embodying the highest standards of civility, honesty, and integrity in all aspects of our personal and professional lives. This must include our interpersonal relationships, our academic pursuits, and our medical practices. We must treat everyone compassionately, and respect and protect his or her privacy, dignity, and individuality. As part of the trust that society has placed in us, we must advocate for outstanding patient care for all people. Accordingly, we must always recognize those attitudes and values of ours that may limit our ability to do so.

As medical professionals, we must also recognize limitations in our knowledge and skills, and accordingly, we must accept our duty to provide and receive constructive feedback with the goal of improving our ability to care for our patients. This eagerness to improve is central to our commitment to excellence, and will be the foundation upon which we build our practice of lifelong learning.

The Curriculum

The curriculum at Jefferson Medical College has been developed to provide learning opportunities that enable medical students to acquire fundamental knowledge, develop professional attitudes and basic skills,
and appreciate principles relevant to healthcare in the context of the community. We strive to foster in each student the lifelong desire and expertise to seek and evaluate new information both in pursuit of solutions to medical problems, and to educate our patients and colleagues. Our aim is to enable each student, as part of a larger healthcare team, to practice with clinical competence and effectively utilize healthcare resources. We welcome our students into the profession of medicine, and our goal throughout the four years of education and training is to facilitate each individual’s professional growth and development. We commit to embodying the highest standards of civility, honesty, and integrity in all aspects of our personal and professional lives.

In recent years, curricular changes have been introduced to keep pace with the rapid expansion in scientific knowledge and dramatic changes in our healthcare delivery system. The curriculum balances the acquisition of a “core” of scientific information and the development of demonstrable communication and interpersonal skills and in medical problem-solving.

The primary goals of the curriculum at Jefferson Medical College are to: (1) provide each student with a core curriculum that contains the sine qua non that should pertain to all physicians; (2) provide each student with advanced curriculum opportunities in order to explore in greater depth areas of basic and clinical medical sciences; and (3) enable the future physician to develop a humanistic, collaborative and scientific approach toward prevention and the care of people with medical problems.

Additional goals are to: (1) teach students the tentative nature of scientific conclusions; (2) encourage students to assume responsibility for their own education and to diminish their dependence on the teacher as a sole source of information; (3) encourage students to think critically and independently within the framework of social responsibility; and (4) encourage students to develop a logical approach to the analysis and management of clinical problems and (5) prepare students to function effectively in our complex health care system. Recognizing that entering students have multiple backgrounds and goals and will pursue varied careers, the curriculum at Jefferson incorporates sufficient breadth and flexibility to address individual educational needs.

One of the biggest challenges facing students in adapting to medical school curriculum is absorbing and understanding the information presented to them. Even though the quantity of material is challenging, it is nonetheless a careful distillation of available information in basic and clinical sciences into a core program. Students will find that the material is intrinsically no more difficult from a conceptual viewpoint.
than that presented in any advanced undergraduate college science course. The only difference is the amount of material presented during the medical curriculum. Success in mastering the material demands that students develop excellent study habits and always keep current on class material.

The four-year curriculum has been designed to achieve these goals. In the first year, the biomedical sciences emphasize normal human structure and function. These topics are taught in conjunction with the first phase of the medical practice curriculum that stresses the relationships of these sciences to professional development, systems-based care, evidence-based medicine, the biopsychosocial model of health and clinical skills. The second year shifts the science focus to the pathophysiology of disease and methods used to diagnose and treat illness. The medical practice curriculum continues with added emphasis on the development of “bedside” skills. The third and fourth years are an immersion in clinical medicine, and primary and specialty care in outpatient and inpatient settings. Emphasis is placed on core medical specialties with many opportunities for electives. All students revisit the biomedical sciences during the third and fourth years, in core clerkships, during the advanced basic science courses and by choosing to conduct independent research.

Medical school is the first formal step in the lifelong process of medical education. The skills developed in meeting the challenges of adjusting to medical school will be honed as each individual progresses through residency training and into a career in medicine. There is no one formula for success. Each individual must take responsibility for his or her own mastery of the curriculum and professional development. The faculty, administration, staff, and fellow students are here to guide you through this challenging and rewarding experience.

Jefferson Medical College Competencies*
(revised June 2012)

Professionalism and Altruism
By the time of graduation, all students must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. This includes:

1. An understanding of the ethical theory and the major ethical dilemmas/conflicts in medicine including those faced by students.

2. A commitment to compassionate treatment of patients, and respect for their privacy, dignity, and individuality. This includes basic courtesies such as wearing professional attire and timeliness.
3. A commitment to honesty and integrity in all aspects of professional life (clinical, decision making, scientific pursuits, and interpersonal interactions).

4. An understanding of the need to collaborate in individual patient care as demonstrated by respect for the unique cultures, values, roles, responsibilities and expertise of other health professionals.

5. A commitment to advocate for quality patient care for all people, with sensitivity to diversity in gender, ability, age, culture, race, religion, and sexual orientation.

6. An understanding of the challenges to medical professionalism posed by the conflicts of interest inherent in various financial and organizational arrangements within the practice of medicine.

7. An understanding of the responsibility to provide fiscally-responsible health care.

8. A commitment to provide care to patients who are unable to pay and to be advocates for access to health care for the traditionally underserved populations.

Medical Knowledge

*By the time of graduation, all students must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioral sciences, as well as the application of this knowledge to patient care. This includes:*

1. Knowledge of the normal structure and function of the body (as an intact organism) and each of its major organ systems.

2. Knowledge of the molecular, cellular, biochemical, and physiologic processes that are important in maintaining the body’s homeostasis.

3. Knowledge of the multiple causes (e.g. genetic, developmental metabolic, toxic, microbiologic, autoimmune, neoplastic, degenerative, psychogenic, and traumatic) of maladies and the ways in which they affect the body (pathogenesis).

4. Knowledge of the altered structure and function (pathology and pathophysiology) of the body and its major organ systems that are seen in various diseases and conditions.

5. An understanding of the power of the scientific method in establishing the cause of disease, and in evaluating the efficacies of traditional and nontraditional therapies.
6. Knowledge of the important environmental, economic, psychological, social, and cultural factors that contribute to the development, chronicity and mitigation of maladies.

7. Knowledge of the natural history and epidemiology of common/important illnesses within defined populations, and the individual and systematic strategies for health promotion and disease prevention.

8. The knowledge and ability to identify factors that place individuals at risk for disease, injury, or disability and to select appropriate methods for screening or early detection, and to determine strategies for responding appropriately.

9. The ability to explain the roles and responsibilities of other care providers, and how the team works together to provide optimal care.

10. Knowledge of the process and value of research in the basic and clinical sciences.

**Patient Care**

*By the time of graduation, all students must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. This includes:*

1. The ability to obtain an accurate, relevant medical history that covers all essential aspects of the history, including information related to age, gender, functional status, and socioeconomic status.

2. The ability to perform both a complete and focused physical examination, including a mental status examination.

3. The ability to perform routine technical procedures.

4. The ability to appropriately select and interpret diagnostic tests used for screening and diagnosis of common/important illnesses, taking into account the cost and availability.

5. The ability to reason deductively in solving clinical problems.

6. The ability to care for patients with common conditions (acute, chronic and terminal), taking into consideration benefits, risks, functional status and patient preferences.

7. The ability to recognize patients with immediately life-threatening (e.g. cardiac, pulmonary, or neurological) conditions regard less of etiology and to institute appropriate initial therapy.
8. The ability to relieve pain and ameliorate the suffering of patients, including the provision of end-of-life care.

9. The ability to recognize ethical dilemmas and develop a framework for resolution.

10. The ability to identify medico-legal risks and resources.

**Interpersonal and Communication Skills**

*By the time of graduation, all students must demonstrate interpersonal and communication skills that result in the effective exchange of information and facilitate collaboration. These include:*

1. The ability to communicate effectively, both orally and in writing, with patients, patients’ families, colleagues, and others with whom physicians interact in the professional setting.

2. The ability to maintain comprehensive, timely, and legible medical records.

3. The ability to work within a patient care team to provide safe and effective care by striving for a common understanding of information, treatment, and care decisions. This is accomplished by:
   a. Listening actively
   b. Communicating effectively
   c. Encouraging ideas and opinions of other team members and
   d. Expressing one’s knowledge and opinions with confidence, clarity and respect.

4. The ability to use understanding of the patient-doctor relationship in a therapeutic, supportive and culturally sensitive way for patients and their families.

5. The ability to critically evaluate the medical literature and to seek opportunities to expand understanding and appreciation of scientific discoveries and their applications.

6. The ability to effectively teach patients, families, colleagues and other health professionals.

**Lifelong Learning**

*Medical school is the first formal step in the lifelong process of medical education. To build and sustain professional competence, by the time of graduation, all students must have:*

1. The capacity to recognize limitations in one’s own knowledge and clinical skills, to seek advice and to use constructive feedback to improve performance.
2. The capacity to recognize one’s own attitudes, including personal strengths, limitations, and vulnerabilities, to employ appropriate coping strategies and seek assistance when needed.

3. An understanding of the need to be continuously setting personal learning and achievement goals and to engage in lifelong learning to stay abreast of relevant advances in medical care.

4. The ability to retrieve (from electronic databases, electronic health records, and other resources), manage, and use biomedical information for solving problems and making appropriate clinical decisions for individuals and populations.

5. The ability to use “lessons learned” in the classroom and patient care setting (from patients, families, staff, peers, residents, faculty, etc) to guide one’s own professional development.

**Systems-based Practice**

*Students must demonstrate a basic understanding of the impact that health care delivery systems have on patient care. This includes:*

1. Basic knowledge of the various approaches to the organization, financing and delivery of health care at the national and state levels.

2. Basic knowledge regarding the impact of regulatory bodies (ACGME, JCHO) on medical practice.

3. An understanding of the impact of system-based errors on patient care and of methods available to identify and address these errors.

4. An understanding of the impact of cost on patient care in the hospital and outpatient settings from the individual and population perspectives.

5. The skills to work effectively in various health care delivery settings and systems.

6. An understanding of the attributes of highly functioning teams and the responsibilities and practices of effective team membership and effective team leadership.

* Developed and adopted in 2000 with reference to the AAMC Medical School Objectives Project Guidelines (2000); revised 2006; revised in 2009 with reference to the ACGME Common Program Requirements (2007); revised in 2012 with reference to the AAMC Core Competencies for Interprofessional Collaborative Practice (2011).
The Academic Calendar

First Year
(Class of 2016)

July 30, (2012) Monday  Registration 8:00 a.m.-12:00 p.m.
July 30, Monday        First Payment comprehensive fee
due at registration
July 30-August 4, Monday-Friday Orientation Week
August 4, Friday       White Coat Ceremony

First Teaching Block (Human Form and Development & ICM-1)
August 6, Monday       Course begins 8:00 a.m.
October 26, Friday     Course ends 5:00 p.m.

Second Teaching Block (Molecular and Cellular Basis of Medicine & ICM-1)
October 29, Monday     Classes begin 8:00 a.m.
November 21, Wednesday Thanksgiving Holiday begins 12:00 p.m.
November 26, Monday    Classes resume 8:00 a.m.
December 21, Friday    Winter Recess Begins 5:00 p.m.
January 7, (2013) Monday Classes resume 8:00 a.m.
January 7, Monday      Second payment comprehensive fee
due
January 25, Friday     Course ends 5:00 p.m.

Third Teaching Block (Systems I: Medical Physiology and Microscopic Anatomy & ICM-1)
January 28, Monday     Course begins 8:00 a.m.
March 11-15, Monday-Friday Spring Break
April 24, Wednesday    Course ends 5:00 p.m.

Fourth Teaching Block (Systems II: Neuroscience)
April 29, Monday       Course begins 8:00 a.m.
May 27, Monday         Memorial Day holiday
June 7, Friday         Third Teaching Block ends 5:00 p.m.
                        Summer Recess begins 5:00 p.m.
August 26, Monday      Summer Recess ends 8:00 a.m.

Calendar dates are subject to change.
Second Year
(Class of 2015)

August 20, (2012) Monday 2nd Year Orientation
August 20, Monday First Payment comprehensive fee due

First Teaching Block (Foundations of Pathology & Pharmacology)
August 21, Tuesday Course begins 8:00 a.m.
September 7, Friday Course ends 5:00 p.m.

Second Teaching Block (Immunity, Infection & Disease & ICM-2)
September 10, Monday Course begins 8:00 a.m.
November 9, Friday Course ends 5:00 p.m.

Third Teaching Block (Clinical Skills & Foundations of Clinical Medicine & ICM-2)
November 12, Monday Course begins 8:00 a.m.
November 21, Wednesday Thanksgiving Holiday begins 5:00 p.m.
November 26, Monday Classes resume, 8:00 a.m.
December 21, Friday Winter Recess Begins 5:00 p.m.

January 7 (2013), Monday Classes resume 8:00 a.m.
January 7, Monday Second payment comprehensive fee due

March 11-15, Monday-Friday Spring Break
May 10, Friday Course ends 5:00 p.m.
May 13 - June 28 Second Year Comprehensive Examination/USMLE Step 1 Review Period
End of Second Year

July 8, Monday Clinical Curriculum Begins (anticipated)

Calendar dates are subject to change.
Clinical Curriculum 2012 - 2013

July 9, 2012 Monday  
Orientation – Office of Student Affairs  
Pre-Clerkship Review  
Class of 2013  
Class of 2014

July 9, 2012 Monday  
First payment Comprehensive Fee due

December 21, 2012 Friday  
Holiday begins 5:00 p.m.

January 7, 2013 Monday  
Holiday ends 8:00 a.m.

January 7, 2013 Tuesday  
Second Payment Comprehensive Fee due

May 30, 2013  
Commencement Exercises

June 21, 2013 Friday  
All Phase I must be completed at the conclusion of 12-08 for the Class of 2014

July 5, 2013 Friday  
End of last teaching block

Clinical Curriculum 2013 - 2014

July 8, 2013 Monday  
Orientation – Office of Student Affairs  
Pre-Clerkship Review – TBA  
Class of 2014 - Time and location to be announced.  
Class of 2015 - Time and location to be announced

July 8, 2013 Monday  
First payment Comprehensive Fee due

December 20, 2013 Friday  
Holiday begins 5:00 p.m.

January 6, 2014 Monday  
Holiday ends 8:00 a.m.

January 6, 2014 Monday  
Second Payment Comprehensive Fee due

TBA  
Commencement Exercises

June 20, 2014 Friday  
All Phase I must be completed at the conclusion of 13-08 for the Class of 2015

July 3, 2014  
End of last teaching block

*Calendar dates are subject to change.*
There is no official Thanksgiving vacation during clinical rotations. Thanksgiving will be treated as a Sunday. Students are expected to report to their clerkship for this period. (Students will be informed by each department as to their obligations for Thanksgiving Day itself). Students enrolled in clinical courses in the third-year have a seven-day commitment for all weeks in the course except the last week of the course, which ends on Friday.
The First Year Curriculum 2012 - 2013

The academic year for the first-year students at Jefferson Medical College consists of 40 weeks for a total of 66 credits. (Course descriptions start on page 52.)

<table>
<thead>
<tr>
<th>Course</th>
<th>Calendar</th>
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<tbody>
<tr>
<td><strong>Block I</strong></td>
<td></td>
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<tr>
<td>Introduction to Clinical Medicine I (Full Year)</td>
<td></td>
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<tr>
<td><strong>Block II</strong></td>
<td></td>
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<tr>
<td>Molecular and Cellular Basis of Medicine – BIOC. 105</td>
<td>Nov. - Jan.</td>
</tr>
<tr>
<td><strong>Block III &amp; IV</strong></td>
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<tr>
<td>Systems I: Medical Physiology and Microscopic Anatomy – IDPT. 105</td>
<td>Feb. - June</td>
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<tr>
<td>The Systems II: Neuroscience – IDPT. 150</td>
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</tbody>
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The Second Year Curriculum 2013 - 2014

The academic year for the second year students at Jefferson Medical College consists of 36 weeks for a total of 66 credits. (Course descriptions start on page 55.)

<table>
<thead>
<tr>
<th>Course</th>
<th>Calendar</th>
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<tbody>
<tr>
<td><strong>Block I</strong></td>
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<tr>
<td>Infection, Immunity and Disease – MICR. 201</td>
<td>Sept. - Nov.</td>
</tr>
<tr>
<td>Introduction to Clinical Medicine II* – IDPT. 201</td>
<td>Sept. - April</td>
</tr>
<tr>
<td><strong>Block II</strong></td>
<td></td>
</tr>
<tr>
<td>Clinical Skills/Physical Diagnosis – IDPT. 204</td>
<td>Nov. - May</td>
</tr>
<tr>
<td>Foundations of Clinical Medicine – IDPT. 202</td>
<td>Nov. - May</td>
</tr>
<tr>
<td>Introduction to Clinical Medicine II* – IDPT. 201</td>
<td>Sept. - April</td>
</tr>
</tbody>
</table>

*Half day per week
The First-Year Core Curriculum

Block I

ANAT. 105 Human Form and Development
(Dr. Schmidt and Faculty)
Credits 16. Maximum enrollment: 20

This course is a foundational course emphasizing key concepts in human development and gross anatomy. All major anatomical regions are covered from a combined lecture and dissection approach. Dissection sessions provide each student with an opportunity to verify all that he or she has been exposed to via reading and lecture regarding the gross structure of the human body, i.e., evidence-based medicine in its simplest form. The sequence in which the regions are approached are as follows: back, upper limb, thorax, abdomen, pelvis and perineum, lower limb, and head and neck. The didactic experience also includes several imaging lectures focusing on MRI, CT and routine radiographic approaches. There is a clear focus upon the anatomical relationships of structures and a continuous emphasis as to the clinical relevance of these relationships. Embryology lectures begin with gametogenesis and fertilization and then progress to a systemic approach to development. Clinical skills and surface anatomy sessions are also incorporated which serve to reinforce the concepts gleaned from lecture and dissection. These sessions are interspersed, where relevant, throughout the various regions as the course progresses. We also assess a number of competencies in this course in addition to basic medical knowledge, e.g., communication skills and professionalism, by using several peer assessment sessions during the dissection module. Computer-assisted instruction provides ample opportunity for review and self-directed learning. This course is taught concurrently with Introduction to Clinical Medicine.

Block II

BIOC. 105 Molecular and Cellular Basis of Medicine
(Drs. Ronner, Butler, Fortini, Hoek, and Menko)
Credits 16.

This core course presents basic concepts from the fields of molecular biology, genetics, cell biology, biochemistry, and cell physiology as they apply to current and future medical practice. Material is presented in lectures and problem-solving sessions with a case-based learning component. Topics include: DNA and RNA structure and function; protein structure and turnover; cellular structures; cell-cell communication; the cell cycle; genetics; cytogenetics; stem cell biology; cancer; cancer genetics; blood; metabolism of carbohydrates, lipids, amino acids, and nucleotides; diabetes; osmotic forces, membrane potentials, action potentials, and
This course presents a coordinated discussion of normal structure and function of the human body at the tissue, organ-system and integrative regulatory level. Presentations of the microscopic anatomy of tissues and organ system precede discussions on the physiologic function and regulation of those tissues and systems. Microscopic Anatomy topics include: tissues (i.e., epithelium, connective and supportive tissues), muscle, nerve, blood, as well as tissues of the gastrointestinal, cardiovascular, immune, cutaneous, respiratory, renal, endocrine and reproductive systems. In addition, there is an introduction to histopathology at the systems level. Topics in Medical Physiology include the autonomic nervous system, smooth, skeletal and cardiac muscle function and regulation, gastrointestinal, cardiovascular, pulmonary, renal, exercise and endocrine physiology as well as acid-base and temperature regulation. Clinical Correlation lectures are presented for each physiological system. Teaching is done by lecture, video demonstrations, small group digital microscopy labs, computer simulations, and problem-solving sessions.

IDPT. 150 The Systems II: Neuroscience  
(Dr. Brainard)

Credits 6.

The first year ends with a six week section dedicated to the morphology (gross and microscopic) and function of the human nervous system with applications to clinical medicine. Topics include: anatomy and physiology of the brain and spinal cord, neurotransmitters, sensory and motor pathways, special senses, suprassegmental and cortical functions. Teaching is done in lectures, patient presentations in Grand Rounds format, small group laboratory exercises, small group clinical skills sessions, and small group case studies. This course is team taught in collaboration with eleven basic science and clinical departments.

Introduction to Clinical Medicine I  
(Drs. Jerpbak and McNett)

Credits 12.

The first year of medical school is a critical and pivotal time in the professional development of a physician. It is during this year that the life-long learning requisite to providing all patients with excellent medical care begins. This course is designed to introduce students...
to the tools needed to function skillfully in our evolving health care environment, as a clinician and as an integral part of the health care team. Topics include professionalism, medical ethics, system-based care, interprofessional care, medical informatics, evidence-based medicine, cultural diversity, and behavioral science. Clinical skills training include history-taking, communication and interpersonal skills, and basic physical exam skills. Educational venues include the classroom, small group settings, the clinical skills center, office-based practices, hospitals, and the community. Small group and other interactive teaching methods provide ample opportunity for active, collegial learning and reflection. This course provides the basis for clinical practice and weds the art of medicine with the science of medicine.

College within the College (“CwiC”)

The “College within the College” Scholarly Concentrations Program at Jefferson provides highly motivated students with academic opportunities outside of the traditional medical curriculum. This program currently offers two choices: Population Health (emphasizing Public Health, Global Health and Community Medicine) and Clinical-Translational Research.

This 3.5 year co-curricular program places emphasis on longitudinal mentored relationships, group seminars/courses and scholarly work. Students must be in good academic standing to participate and will be selected in early February of Year 1. They will attend didactic sessions, seminars and experiential programs in Years 1 and 2, and complete clinical rotations and electives related to their concentration in Years 3 and 4. In the summer between Year 1 and 2, students will work in areas related to their area of concentration. Additionally, each student must produce a “scholarly product” before completing the program. Scholarly products may take the form of published papers, conference presentations, curriculum modules, policy analysis, and/or other scholarly work. Students may have the opportunity to publish their work and/or present at regional and/or national conferences.

In addition to the longitudinal mentorship and enhanced curriculum, benefits to students include annotation of the transcript, discussion of the SC in students’ Dean’s Letters and a certificate upon completion of the program.
The Second-Year Core Curriculum

Block I

IDPT. 200  Foundations of Pathology/Pharmacology  
(Drs. Beck and Fenderson)

Credits 10.

This module presents fundamental concepts in pathology and pharmacology in preparation for the integration of these disciplines in the Foundations of Clinical Medicine course. The pathology component focuses on mechanisms of disease, including cell injury, inflammation, wound healing, amyloidosis, environmental pathology, neoplasia, developmental/genetic diseases, and hemodynamic disorders. Students learn in lectures, case studies, and interactive discussion/review sessions.

In pharmacology, the concepts of pharmacodynamics, pharmacokinetics, pharmacogenetics, drug metabolism, toxicology, and clinical and translational research are presented. These principles are applied in the autonomic nervous system pharmacology section (lectures and a case-based workshop). Students learn the first of many classes of drugs they will learn throughout the year. Other key topics include use of drugs in special patient populations (neonates, pregnancy and nursing, children, and the elderly), medication adherence, over-the-counter drugs and botanical medicine, clinical and translational research, and federal drug laws applying to prescription medications. The Medical Letter on Drugs and Therapeutics is used to introduce concepts of independent lifelong learning about pharmacology and students take on online quiz about current issues. There is an online exercise using pharmacokinetics software and an in-class prescription-writing workshop. Students learn in lectures, in workshops, and with online exercises.

MICRO. 200  Immunity, Infection and Disease  
(Dr. Abraham)

Credits 12.

The objective of this course is to study how the immune system functions, how it contributes to the development of diseases and the relationship between the immune response and infectious diseases. The course provides the background for understanding the composition and mechanisms of the immune response, the diseases associated with the immune response, the biology of organisms which cause the infectious diseases of humans, the interaction between the immune system and infectious diseases and the pharmacology of therapies used to control immunological and infectious diseases. This course is divided into three sections with Section 1 covering Immunology and Virology, Section 2 covering Bacteriology and Section 3 covering Parasitology, Mycology and Infectious Diseases. The course is comprised of lectures, clinical
correlations and laboratory sessions. The goal of the clinical correlations is to present clinical applications of the material covered in the course. Laboratories cover areas, using a case based approach, that are deemed necessary to give a physician insight into obtaining and interpreting laboratory data for proper patient care. Procedures that can be done in a physician’s office or in the emergency setting to help make tentative diagnoses are stressed.

**IDPT. 201 Introduction to Clinical Medicine II**  (Dr. Axelrod)
Credits 6. Year long.

The Introduction to Clinical Medicine II course seeks to help students understand the clinical implications of topics covered in the basic science courses. The course is closely linked to the other second year courses so that issues discussed in ICM II follow the modules of the IID and FCM courses. Much of the course is spent in small group sessions that lend themselves to informal discussion of clinical cases, articles from the medical literature and especially issues of professionalism and ethics. Students also attend Grand Round sessions where senior faculty members interview patients and discuss how the process of medical decision making takes form. During these sessions, students have the opportunity to interact with and ask questions of patients in order to better understand how medical diseases impact on the lives of these patients. Standardized patient interviews are conducted and videotaped with feedback to the students regarding interviewing skills. During ICM II Clinical Skills Sessions, students have the opportunity to examine patients with abnormal physical findings and to learn about the clinical presentations of various disease processes.

**Block II**

**IDPT. 202 Foundations of Clinical Medicine**  
(Drs. Herrine, Strayer, and Beck)
Credits 32.

The objective of this course is to expose the student to fundamentals of clinical medicine, integrating the specialties of medicine with clinical skills, pathology and pharmacology. The course is organized by systems: cardiovascular, dermatologic, gastrointestinal, hematologic, musculoskeletal, neurologic, ophthalmologic, pulmonary, renal/urologic, reproductive, and psychiatric. Each section starts with a review of the clinical skills specific to the system, followed by the salient pathology, providing the pathophysiologic basis of the disorders that affect the system. The important associated clinical entities are presented, including the pharmacologic basis of therapeutics for each set of disorders. Teaching methods include lectures, small group sessions, team learning
exercises and interactive review sessions. This course is tightly integrated with IDPT 204, Clinical Skills and IDPT 201, Applications in Clinical Medicine, following the same organ system organization.

The Foundations of Clinical Medicine course is designed to serve as a transition from the basic sciences to clinical medicine. Every effort is made to keep the teaching and learning patient-centered, to foster an ethic of self-directed and life-long learning and to provide the student with the background necessary to succeed in the clinical years of their medical education. Resources provided in this course will also be useful background review for clinical rotations.

**IDPT. 204 Clinical Skills/Physical Diagnosis** (Dr. Mangione)  
Credits 6.

This course provided a foundation for physical examination maneuvers and findings. It includes an introductory series of lectures in the followed by system-specific lectures which are integrated into the Foundation of Clinical Medicine course. Didactic sessions include the use of individual wireless stethophones for the teaching of cardiac and pulmonary sounds, and “hands-on” experiences at the Jefferson Clinical Skills Center with standardized patients and simulations. There is also a series of supervised encounters with hospitalized patients at TJUH and our local clinical affiliates. Assessment of students’ knowledge and skills will takes place periodically throughout the course.

*Students practice their suturing skills.*
The Third and Fourth Years

Third-Year Clinical Curriculum

- Internal Medicine/Neurology: 12 Weeks
- Obstetrics/Gynecology: 6 Weeks
- Psych/Human Behavior: 6 Weeks
- Pediatrics: 6 Weeks
- Surgery/Surgical and Medical Selectives: 12 Weeks

Fourth-Year Clinical Curriculum

- Electives: 16 Weeks
- Senior Medicine: 4 Weeks
- Inpatient Sub-1: 4 Weeks
- Outpatient Sub-1: 4 Weeks
- EM/ACS: 4 Weeks
- ABS/SFM: 4 Weeks
The academic year for the third- and fourth-year students involved in clinical clerkships at Jefferson Medical College consists of 100 weeks over the two-year period for a total of 126 credits.

I. Schedule

A. The clinical curriculum starts in July after the United States Medical Licensing Examination Step I and consists of 100 weeks as follows: 84; two weeks of vacation during each December holiday period (total four); two weeks vacation in June; two weeks vacation immediately prior to graduation; eight weeks of vacation to be scheduled to fit the needs of the student.

B. The basic unit of the calendar is a six-week block in Year 3 and predominantly four-week blocks in Year 4. A student may take an approved course for:

II. Course Requirements

A. Phase I (Course descriptions start on page 64.)

1. During the first 48 weeks, the sequence of courses may vary, but at the end of the 48 weeks (end of the eighth six-week block of the third year), all students must have completed:

   a. Six weeks of Family Medicine (FAMED. 350)
   b. Twelve weeks of General Surgery, Surgical and Medical selectives (SURG. 350)
   c. Twelve weeks of Internal Medicine and Neurology (MED. 350)
   d. Six weeks of Pediatrics (PED. 350)
   e. Six weeks of Psychiatry and Human Behavior (PSYHB. 350)
   f. Six weeks of Obstetrics and Gynecology (OB/GYN. 350)

B. Phase II (Course descriptions start on page 74 and in Department listings starting on page 103.)

1. Prior to graduation, the student will complete the following courses:

   a. Four weeks of Senior Medicine
   b. Four weeks of Scientific Foundations of Clinical Medicine or Advanced Basic Science (IDPT. 420)
c. Four weeks of Emergency Medicine/Advanced Clinical Skills (EMGR 400)
d. Four weeks of Inpatient Subinternship in either Family Medicine (FMED 402), Internal Medicine (MED 401), General Surgery (SURG 450) or Pediatrics (PED 402)
e. Four weeks of an Outpatient Subinternship in either Family Medicine (FMED 401 or FMED 406), Internal Medicine (MED 402), Obstetrics/Gynecology (OBGY 402), Pediatrics (PED 401), or Psychiatry and Human Behavior (PSYH 405 or PSYH 408)
f. Sixteen weeks of electives

The calendars on the preceding pages represent the College’s best judgment and projection of the course of conduct of the College during the periods addressed therein. It is subject to change due to forces beyond the College’s control or as deemed necessary by the College in order to fulfill its educational objectives.

*SimBaby, one of the high-tech simulation mannequins used during medical training.*
Clinical Affiliates

The Thomas Jefferson University Hospitals (TJUH) have 925 acute care beds and house major programs for a large number of clinical specialties. Services are delivered at several locations – Center City, Jefferson Hospital for the Neurosciences, Methodist Hospital (South Philadelphia), and several ambulatory care satellites and radiation therapy centers. Jefferson University Hospital is one of only a few hospitals in the United States that is both a Regional Trauma Center and a federally designated regional Spinal Cord Injury Center. TJUH is one of the founding members of the Jefferson Health System, the largest health system in the Delaware Valley with more than 3,600 beds.

Assignments will be made through affiliation arrangements for teaching by members of the College faculty in the following institutions:

*Abington Memorial Hospital* — This state-of-the-art hospital offers outstanding academic training in a supportive community environment. In addition to strong community outreach and service, Abington has a diverse patient population.

*Albert Einstein Medical Center* — Based in Philadelphia, this teaching hospital became a Jefferson affiliate in 1998. Clinical instruction is offered in Internal Medicine, Pediatrics, Psychiatry, Surgery, Obstetrics and Gynecology, Orthopaedics, Emergency Medicine, and Neurology/Rehabilitation.

*Crozer-Keystone Health System* — Numerous challenging and fully accredited residency programs are offered at one of the leading health care systems in the Delaware Valley. Notably, Crozer-Keystone offers stellar allopathic residencies in Family Practice, Internal Medicine, Obstetrics and Gynecology, Pediatrics and Transitional Year, as well as Osteopathic Internal Medicine, podiatric residency and a variety of osteopathic and allied health training programs.

*DuPont Hospital for Children* — This children’s hospital of 150 beds became affiliated with the Medical College in 1989 and is now the primary location of Jefferson’s Department of Pediatrics. Clinical courses are offered in Pediatrics and Pediatric subspecialties.

*Excela Health Latrobe Hospital* — Westmoreland County’s largest employer, joins together 725 medical professionals in 35 specialties to provide health care to Westmoreland County and parts of Fayette and Indiana counties. With a workforce of 4,500, Excela Health offers traditional inpatient care through hospitals in Greensburg, Jeannette, Latrobe and Mount Pleasant, and outpatient treatment and specialty services to rank as the region’s third largest health care network.
Bryn Mawr Hospital — This hospital of 283 beds became a major affiliate of Jefferson in 1972. The clinical educational program includes Anesthesiology, Family Medicine, Orthopaedic Surgery, Urology, Surgery and Emergency Medicine.

Bryn Mawr Rehabilitation Hospital — This 118-bed hospital became an affiliate of Jefferson Medical College in 1982. Clinical instruction in Rehabilitation Medicine is offered.

Christiana Care Health Services — With two locations, one in Newark, Delaware and the other in Wilmington, Delaware, it became affiliated with Jefferson in 1970. It is a 1180 bed complex in northern Delaware, 27 miles from the Jefferson campus. Clinical instruction is offered in Family Medicine, Medicine, Obstetrics and Gynecology, Psychiatry, Surgery, Anesthesia, Emergency Medicine, Neurology, Radiology, Surgical Subspecialties and Rehabilitative Medicine.

Aria Health — The Torresdale campus, became an affiliate of Jefferson in 1999 at this 239-bed facility. Clinical instruction is offered in Emergency Medicine, Surgery, and Internal Medicine.

Jefferson Hospital for the Neurosciences — JHN is the home of one of the nation’s busiest neurosurgery programs. It also houses the Farber Institute for Neurosciences, a neuroscience research institute, the Department of Neurology and the Jefferson Geriatric Psychiatry Program.

Lankenau Hospital — This 351-bed hospital entered into affiliation with Jefferson in 1966. Instruction is offered in the Departments of Anesthesiology, Medicine, Neurology, Obstetrics and Gynecology, Orthopaedic Surgery, Surgery, and Emergency Medicine.

Magee Rehabilitation Hospital — This specialty hospital of 96 beds is devoted to Rehabilitation Medicine. This affiliation was established in 1975.

Methodist Hospital — The Methodist Division of Thomas Jefferson University Hospital since 1996, as a community hospital with 203 beds, is dedicated to excellence in patient care in a neighborhood setting. Methodist Hospital is now the sole provider of acute care services and houses the only Emergency Department in South Philadelphia. Clinical instruction is offered in Internal Medicine, Surgery and Emergency Medicine.

Paoli Hospital — Paoli is recognized regionally and nationally for outstanding medical and surgical services, sophisticated technology and a personalized approach to medical care. The list of innovative programs and services is endless - our Wound Center with Hyperbaric Chambers helping diabetics and others who have hard to heal, severe wounds, the
Sleep Center is expanding to meet the increasing needs of our community and the Hattersley Family Centered Maternity Unit where nearly 2,300 babies were born at Paoli in our private birthing suites.

*Reading Hospital and Medical Center* — This 664-bed hospital became affiliated with Jefferson Medical College in 2000. Clinical instruction is offered in Family Medicine.

*Veterans Medical and Regional Office Center* — This 100-bed general hospital became affiliated with Jefferson Medical College in 1979. Instruction is offered in Medicine, Neurology, Surgery and Urology.

*Underwood-Memorial Hospital* — This 310-bed nonprofit community hospital became an affiliate of Jefferson’s in 1997. Clinical instruction is offered in Family Medicine.

*Virtua Hospital* — This 277-bed hospital became affiliated with Jefferson Medical College in 1991. Clinical instruction is offered in Obstetrics and Gynecology, and Family Medicine.

*Wills Eye Institute* — This specialty Institute became affiliated with Jefferson in 1972. Clinical instruction is offered in Ophthalmology and all subspecialties of Ophthalmology. It is located at 9th and Walnut Streets in Philadelphia.

*York Hospital* — What began in 1880 has become a 558-bed community teaching hospital that employs more than 3,400 people and serves a population of 520,000 in south central Pennsylvania. In addition to being named a top 100 hospital for the sixth time, York Hospital has also been ranked among the top 100 open heart surgery programs and recognized by *US News and World Report* as one of the country’s top 50 hospitals for orthopedics. There are clerkships in Family Medicine, Internal Medicine, Obstetrics and Gynecology and Surgery at this affiliate.

In addition to the above mentioned facilities, our medical students see out-patients with our on-campus faculty in the Medical Office Building at 11th and Walnut Streets, the Clinical Office Building at 909 Walnut St., 833 Chestnut Street and at the Ben Franklin House at 9th and Market Streets.


Required Clinical Curriculum

Phase I

FAMED. 350  Clinical Clerkship  (Dr. Markham)
Credits 7.  1st through 8th Teaching Blocks.
Students focus on the diagnosis and management of acute and chronic
problems in the outpatient setting; health maintenance, preventive
medicine, psychosocial and life stage contexts, time management, and
cost effective delivery of care.

Location:
01  Thomas Jefferson University Hospital
04  Bryn Mawr
05  Christiana Care Medical Center
08  Excela Health Latrobe Hospital
21  Crozer Keystone
23  Underwood
30  Virtua
39  Reading
43  York
44  Abington

FAMED. 351  Final Written Examination in Family Medicine
Credits 2.

SURG. 350  12-Week Surgery and Surgical/Medical Selective
Rotation  (Dr. Isenberg)
Credits 14.  12-Week Surgery Rotation

Third Year Surgery Rotation consists of a six-week Clinical Clerkship
Rotation and a six-week Surgery Specialty for a total of 12 weeks.  Stu-
dents will spend six weeks on a general surgery, three weeks on one
surgery specialty service, and three weeks on a second surgery or medical
specialty service at either Thomas Jefferson University Hospital or one
of the hospitals affiliated with Jefferson Medical College.  During this
teaching block, the student is expected to assimilate the knowledge, skills,
and attitudes concerning surgery that are expected of every physician.
The students are assigned the responsibility of the preoperative evalu-
ation of surgical patients and their postoperative care and participate
in the surgical procedures performed on their assigned patients.  Their
work is closely supervised and evaluated, and they are encouraged to
develop initiative and increasing responsibility.  Students participate in
patient rounds, conferences, and case presentations.  Didactic material
is presented by each of the participating hospitals and in a series of
seminars at Jefferson.
**Required Reading**
Lawrence: *Essentials of General Surgery*, Peter F. Lawrence (4th edition) and *Essentials of Surgical Specialties* (2nd edition). These textbooks are extremely well written with excellent graphics. The books were written expressly for the third-year student.

Mann: *Surgery A Competency-Based Companion with Student Consult Online Access*, Barry Mann, MD.

**Recommended Reading**
Jarrell and Carabasi: *Surgery* (2000 4th edition). This text is probably used by most students. It is extremely comprehensive and written in outline form. It is largely authored by Jefferson and affiliate faculty.

Each student is expected to develop a working clinical knowledge of general surgery, and have surgical knowledge common to all specialties. Students are given an End of Clerkship Surgery OSCE (Objected Structured Clinical Evaluation) at the end of the rotation and the results are included in the clinical clerkship grade.

At the conclusion of the twelve-week teaching block, the faculty submits a clinical evaluation of each student’s performance during the clerkship. The National Board of Medical Examiners Subject Examination in Surgery is required of all students and is administered at the conclusion of the clerkship. This final examination measures the core knowledge and problem solving abilities gained during the clerkship and is separately recorded in the transcript as Surgery 351.

**Location: General Surgery**
01 Thomas Jefferson University Hospital  
  Dr. Isenberg  
04 Bryn Mawr  
  Dr. Barrio  
07 Lankenau Hospital  
  Dr. Walker  
10 Methodist Hospital  
  Dr. Koniaris  
15 Christiana Care Health Services  
  Dr. Kalina  
22 Department of Veterans Affairs Medical Center  
  Dr. Witmer  
27 DuPont  
  Dr. Katz  
37 Aria Health  
  Dr. Renza-Stingone  
38 Albert Einstein Medical Center  
  Dr. Somers
Each student must select one of the following three-week rotations. Each student may choose to do a second rotation from this list or may instead choose a medical selective (see below).

**ANEST. 352** (Dr. Rattan)
The clinical curriculum in anesthesiology is directed at teaching the students those aspects of anesthesiology that should be understood by all practicing physicians. Preoperative evaluation, choice of appropriate anesthetic techniques, and postanesthetic problems that may develop are covered. Operating room experience demonstrates mask ventilation, the use of airway adjuncts, and endotracheal intubation.

*Location:*
01 Thomas Jefferson University Hospital—maximum 5
03 Bryn Mawr Hospital—maximum 2

**DERM. 352** (Dr. Keller)
The third year selective in dermatology is meant to introduce medical students interested in all fields of medicine this specialty. During this rotation students will be introduced to many aspects of dermatology with a focus on common dermatologic diagnoses and their treatments. Students will be introduced to common dermatologic surgery and diagnostic techniques such as KOH preps, oil preps and tzanck smears.

*Location:*
01 Thomas Jefferson University Hospital—maximum 3

**FAMED. 352 (Geriatrics)** (Dr. Salzman)
The clinical curriculum for geriatric medicine is directed at teaching students essential principles in caring for older adults that are vital for all practicing physicians in an aging population. Key aspects of geriatrics that are covered in the rotation include: medication management related to the elderly, cognitive and behavioral disorders, falls and gait disorders, atypical presentations of disease in older adults, hazards of hospitalization, understanding self-care capacity, end-of-life care, and advance care planning. Students are exposed to geriatric medicine in a variety of settings including outpatient-office, inpatient consultations, and long-term care.
**Location:**

01 Thomas Jefferson University Hospital—maximum 1
05 Christiana Care Health System—maximum 1
07 Lankenau Hospital—maximum 1

**MED 352 (Primary Care) (Dr. Motz)**

The student on this Selective will spend 3 weeks working one-on-one with teaching faculty in a general internal medicine practice recognized as a Patient-Centered Medical Home. The student will not only be exposed to a wide array of acute, chronic and preventive health issues, but also learn about systems of care and population health management through electronic medical records and quality improvement processes. The practice is located on the hospital campus, so that the student will have access to student and resident conferences, the hospital computers and library, as well as free on-campus dormitory style housing and parking and a daily cafeteria meal allowance.

**Location:**

39 Reading Hospital & Medical Center

**NSRG. 352 (Dr. Tjoumakaris)**

This course introduces the student to the field of Neurological surgery and the scope of neurological diseases. Specific, emphasis is on cerebrovascular, neuro-oncologic and spinal diseases, and the principles underlying their management. The course will build on the neuroscience curriculum in which students participate at the end of their first year, as well as expand on the concepts derived in the general medicine and surgical core clerkships.

Due to the diversity in the field of neurologic diseases treated at Jefferson the students will rotate between Thomas Jefferson University Hospital and Jefferson Hospital for Neuroscience. The curriculum encourages daily clinical exposure involving outpatients, inpatients and operating room experience. Students will also have the opportunity to participate in the Department’s conference and lecture series.

**Location:**

01 Thomas Jefferson University Hospital—maximum 5 students per block

**OPTH. 352 (Dr. Jaeger and Uhler)**

The Department of Ophthalmology at Wills Eye Institute participates as a surgical specialty selective. Up to 10 students may choose ophthalmology for any three-week period. The rotation begins with an introductory
session in which the students will draw a partner’s optic nerve area of
the retina. A second introductory session covers the techniques of an
ocular examination including familiarity with the slip lamp.

Subsequently, there are eight lectures by faculty that cover various aspects
of ophthalmology with emphasis on ocular abnormalities associated
with systemic diseases. There are six resident supervised sessions which
cover unknown case presentations.

Following the morning didactic session, students are assigned to the
general ophthalmology clinic, the emergency room, as well as the sub-
specialty and OR areas. Students are expected to attend selected resident
education conferences, including Chiefs’ Rounds each Friday morning
and the Wednesday Noon-time neuro-ophthalmology conference. An
open book take-home examination is completed during the course of
the elective.

Location:

14 Wills Eye Institute — maximum 7

ORTHO. 352 (Orthopaedics and Musculoskeletal Disease)
(Dr. Hillibrand)

This course introduces the students to the scope of problems affecting
the musculoskeletal system and the principles underlying their man-
gagement. The students are divided among the University Hospital and
its affiliates.

Primary teaching sites include The Bryn Mawr Hospital, Lankenau Hos-
pital, and Albert Einstein Medical Center. At each of these facilities, the
students will work under the direction of Orthopaedic surgeons who
will guide them through a series of inpatient, operative, and outpatient
experiences reflective of the musculoskeletal problems seen and man-
aged by Orthopaedist.

At Thomas Jefferson University Hospital, the students will spend three
weeks in a weekly rotation to include:

1) One week learning inpatient management of Orthopaedic pa-
tients (including closed treatment of Orthopaedic injuries, periop-
erative and postoperative management, and evaluation and treat-
ment of spinal cord injuries).

2) One week spent in the operating room and outpatient clinics
of the inpatient services (adult reconstruction and spine)

3) One week assigned to individual faculty members in each of
four other orthopaedic subspecialties (sports, shoulder and el-
bow foot and ankle, and hand)
As an alternative, students may elect to rotate at the A.I. DuPont Institute in Wilmington, DE where they can receive a more intensive focus on Pediatric Orthopaedics (2 weeks) and a third week at Christiana Hospital for an exposure to general orthopaedics.

**Location:**

01  Thomas Jefferson University Hospital – maximum (0 in First and Second Teaching Blocks; 6 (3 per 3 week rotation) in Third through Eighth Teaching Blocks)
02  A.I. DuPont Institute and Christiana Hospital
03  Bryn Mawr Hospital—maximum 3
07  Lankenau Hospital—maximum 1
38  Albert Einstein Medical Center—maximum 3

**OTLO. 352**  
(Drs. Boon and Artz)

Students in groups of seven are assigned to the Otolaryngology service for a total of three weeks. Lectures cover the important aspects of our field relevant to all facets of medicine. In addition, a manual covering core topics of Otolaryngology is distributed to all students at the beginning of the rotation.

Students are expected to work with the residents and attendings on service and should plan to participate in seeing inpatients and rounding in the morning with the residents. Typically, rounds begin between 6:30 and 7:00 a.m.

Clinical experience is provided in the office, hospital and operating room. Students should spend at least one to two days with an attending during their office hours and should otherwise anticipate time spent observing and participating in surgery.

The rotation is graded based on participation of students during their time on service. Giving a presentation in a given topic makes students eligible to receive honors provided they had good performance in their clinical duties. If students are unsure of a topic to present, guidance will gladly be provided.

**Location:**

01  Thomas Jefferson University Hospital—maximum 5
28  duPont Hospital for Children—maximum 2

**RADONC. 352**  
(Dr. Bar-Ad)

The third year selective in radiation oncology is meant to introduce medical students interested in all fields of medicine to this specialty. During this rotation students will be introduced to many aspects of radiation oncology through multidisciplinary teams. These teams will focus on patient intake and evaluation, simulation studies and radiation therapeutic planning. Students will participate in departmental conferences.
REHAB. 352  (Dr. Ankam)
The clinical curriculum in rehabilitation medicine is designed to teach students those aspects of the recognition of disability and the care of the disabled that should be understood by all practicing physicians. Role of the various levels of rehabilitative care, assistive devices, modalities, adaptive equipment, and therapies are covered. Functional history, neuro-musculoskeletal physical exam, and recognition of the preventable sequelae of common rehabilitation diagnoses (which may include low back pain, stroke, spinal cord injury, traumatic brain injury, spina bifida, cerebral palsy,) will be emphasized in both the inpatient and outpatient setting.

Location:
01 Thomas Jefferson University Hospital—maximum 3

UROL. 352  (Drs. Lallas and Frank)
This basic course introduces the student to the diagnosis and treatment of urologic disease. Responsibilities include: inpatient and outpatient evaluation, conferences, and operating room participation. The University and affiliated hospitals present a well-rounded curriculum, and opportunity for Grand Round presentations, and comprehensive lecture series that provide an excellent introductory exposure to modern urology.

Location:
01 Thomas Jefferson University Hospital—maximum 1
27 A.I. duPont Hospital for Children—maximum 2
03 Bryn Mawr Rehabilitation Hospital—maximum 2
44 Moss Rehabilitation Hospital—maximum 2
45 Magee Rehabilitation Hospital—maximum 2

SURG. 351  Final Written Examination in Surgery
Credits 2.

MED. 350  Internal Medicine Clerkship  (Dr. Salt)
Credits 14. 10th through 21st teaching blocks.
Students are expected to perform or assist with admission evaluations, progress notes, and daily care and treatment of assigned patients. Students are required to act professionally at all times. Students are exposed to a variety of procedures, including phlebotomy, intravenous catheter placement, arterial blood sampling and central venous catheter placement. Students may have the opportunity to rotate on subspecialty services during their four weeks at Thomas Jefferson University Hospital. Reading is expected from Internal Medicine Essentials for Students, Cecil’s, Harrison’s or other textbooks of Internal Medicine. Students are evaluated by their house staff and attending preceptors at the end of the rotation, and are required to obtain mid-term feedback from them during their rotation so that they can work on their clinical skills throughout their clinical time in Internal Medicine.

**Location:**

01 Thomas Jefferson University Hospital
07 Lankenau Hospital
10 Methodist Hospital
15 Christiana Care Health Services
22 Department of Veterans Affairs Medical Center
38 Albert Einstein Medical Center
39 Reading Hospital & Medical Center
43 York

**MED. 351 Final Written Examination in Medicine** (NBME Subject Examination)
Credits 2.

**PED. 350 Pediatrics Clerkship** (Dr. LoSasso)
Credits 7. 1st through 8th teaching blocks.

Pediatricians care for patients during the first two decades of life with a strong focus on disease prevention, anticipatory guidance and wellness; however, pediatrics also encompasses all the standard sub-specialty areas (e.g., cardiology, endocrinology, etc.) and several specialties that are unique to pediatrics (e.g., neonatology). Students spend six weeks on the core pediatric rotation where they learn and practice how to approach patients of different ages and are exposed to common clinical problems. Experiences in the inpatient, outpatient and newborn nursery ensure that every student sees a balanced patient mix. Students learn from a core “clinical case based” curriculum and enhance their interviewing, physical exam and technical skills at a clinical skills day, through structured direct observation and videotaping of patient interviews.

Students are expected to see patients on their own under the close supervision of an attending and/or senior resident and are actively involved in all aspects of patient care.
Location:
01 Thomas Jefferson University Hospital
   Dr. LoSasso
03 Bryn Mawr
   Dr. Caruso
15 Christiana Health Care Services
   Dr. Soykan
28 The duPont Hospital for Children
   Dr. Consolini
38 Albert Einstein Medical Center
   Dr. Schindler
39 Reading Hospital and Medical Center
   Dr. Wang

PED. 351 Final Written Examination in Pediatrics (NBME Subject Examination)
Credits 2.

PSYHB. 350 Psychiatry Clerkship
   (Drs. Cohen, Best, and JMC/Affiliate Faculty)
Credits 7. 1st through 8th teaching blocks.

This core clinical experience prepares all physicians to recognize and plan treatment for the most prevalent psychiatric disorders. Students also learn techniques for managing their reactions to disturbing patient symptoms and behavior. In this clerkship students gain experience developing therapeutic relationships with patients and establishing treatment boundaries. Third-year students have the opportunity to evaluate and follow the progress of patients with a variety of psychiatric disorders. Students evaluate and follow patients under faculty supervision, observing and participating in all treatment, rehabilitative, and preventive programs within the clinical setting. The six-week clerkship is divided into two three-week clinical placements to provide breadth of exposure to patients, disorders, clinical teams and treatments. Core clinical skills sessions and didactic seminars are scheduled for a half-day per week and attended by all students. Students learn to differentiate common mental-life problems that present to the general physician and can be treated in that setting from severe disorders that require specialized evaluation and management. Over the course of the clerkship student training and evaluation focus on increasing competence in the following aspects of clinical psychiatry: 1. Developing appropriate treatment relationships with patients; 2. Working effectively with a clinical team; 3. Demonstrating responsibility and accountability in patient care; 4. Growth in reasoning skills required in comprehensive case formulation; 5. Application of the general psychiatric knowledge base; and, 6. Mastery of clinical skills, especially ability to obtain a psychiatric history and
conduct a comprehensive mental status examination. 6. Competence in
treatment planning, including integration of psychiatric medications,
behavioral and supportive psychotherapies, and practical problem-solving
to improve patient quality of life.

Location:
01 Thomas Jefferson University Hospital
   Dr. Cohen and Jefferson Faculty
03 Bryn Mawr Hospital
   Dr. Walzer and Affiliate Faculty
15 Christiana Care Health System
   Dr. Marcus and Affiliate Faculty
38 Albert Einstein Medical Center – Main campus
   Drs. Best, Ryan and Affiliate Faculty
41 Belmont Behavioral Health Network of AEMC
   Drs. Best, Ryan and Affiliate Faculty

PSYHB. 351 Final Written Examination in Psychiatry (NBME
Subject Examination)
Credits 2. 1st through 8th Teaching Blocks

OB/GYN 350 Obstetrics and Gynecology (Drs. Wolf and Lackritz)
Credits 7. 1st through 8th Teaching Blocks.

The aim of this clerkship is for students to learn basic skills, attitudes
and knowledge essential for the care of women. The program in each
location is designed to provide a parallel experience involving confer-
ces, outpatient and inpatient activities.

On obstetrics, the student is assigned in rotation to the office, to the
delivery room, or to patients with complications who have been admit-
ted to the hospital for evaluation and management. In the office, the
student is exposed to the fundamentals of prenatal care for normal
and complicated pregnancies. The delivery room experience affords
the opportunity to observe and follow patients during labor and the
postpartum period and to assist in their delivery. Selected patients with
pregnancy complications admitted to the hospital are assigned to the
student for evaluation. The student participates in their management
under supervision of the resident staff and the faculty.

On gynecology, the student is assigned in rotation to the office and to
patients with a gynecologic disorder who have been admitted to the
hospital. The student is responsible for the history and physical examina-
tion and is required to outline a course of management for each assigned
patient. The student follows the course of the patient in the hospital
with the resident staff under supervision by the faculty. Assignment to
the operating room affords the opportunity to assist on surgical proce-
dures performed on assigned patients. Correlation of surgical findings with the microscopic pathology is an integral part of the experience.

At the completion of the course, the student should (1) have developed knowledge, attitudes and skills relevant to the care of the normal adolescent, reproductive and aging female specifically competently performing relevant history and genitourinary exam; (2) be able to identify patients requiring specialized obstetric and gynecologic consultation; and (3) have expanded knowledge in the social problems of the patient and of society.

Location:
01 Thomas Jefferson University Hospital
Drs. Wolf and Lackritz
03 Bryn Mawr
Dr. Hirshman
07 Lankenau Hospital
Dr. Belden
15 Christiana Care Health Services
Dr. Hochman
30 West Jersey Health System
Drs. Brandwine and McCullen
38 Albert Einstein Medical Center
Dr. Myers
39 Reading Hospital
Dr. Jiang
43 York Hospital
Dr. Robinson

OB/GYN. 351 Final Written Examination in Obstetrics and Gynecology (NBME Subject Examination)
Credits 2.

Phase II

IDPT. 420 Advanced Basic Science/Scientific Foundations of Clinical Medicine
Credits 9. 17th and 18th Teaching Blocks

This is a four week course dedicated to revisiting the exciting interplay between the basic sciences and clinical medicine. Six clinical topics in different disciplines will each be reviewed for one or two days using varied educational styles. In addition, the course will feature “teaching how to teach” with weekly interactive seminars. A weekly journal club will highlight critical reading skills with articles related to the topics being presented that week. This course can substitute for Advanced Basic Science course.

Location:
01 Thomas Jefferson University Hospital
Dr. Isenberg—maximum 60
Students may choose to fulfill the Advanced Basic Science requirement through independent study. Application materials and full instructions are available in the Office of the Registrar. Students must submit the request with a brief proposal that meets criteria described in the application. The independent study project can be developed in any of the sciences included in the first two years of the medical school curriculum. A specific faculty member must be identified who will supervise the independent study program. The goals of the independent study program must be described along with the scope of the student’s involvement. Plans for a formal summary of the project at completion (such as an abstract, presentation, summary report) must be described. The program of study must be completed within a specific four-week block.

Faculty contacts for the ABS Independent Study are:

Anatomy – Dr. Schmidt
Biochemistry and Cell Biology – Dr. Ronner
Computer Sciences – Dr. Frisby
Epidemiology – Dr. Rattner
Health Policy – Dr. Nash
Histology (Microscopic Anatomy) – Dr. Grunwald
Microbiology and Immunology – Dr. Abraham
Neurosciences – Dr. Brainard
Pathology – Dr. McCue
Physiology – Dr. Siegman
Pharmacology – Dr. Beck

Other approved Advanced Basic Science courses include:

Anatomy
ANAT 401
ANAT 403
ANAT 404

Dermatology
DERM 402

Ophthalmology
OPTH 407

Pathology
PATH 401
PATH 402

Pharmacology
PHAR 401
EMGR 400  Emergency Medicine/Advanced Clinical Skills  
(Dr. Kolecki)

Credits 6. 10th through 20th Teaching Blocks

The Emergency Medicine / Advanced Clinical Skills (EM/ACS) Clerkship is a mandatory rotation for all fourth-year Thomas Jefferson Medical Students. Students will work closely with Emergency Medicine (EM) attendings and residents in the diagnosis and management of patients who present to the Emergency Department (ED). Students will work between 24 and 32 hours per week in the Emergency Department.

Students will attend didactic lectures, clinical skill laboratories, and patient simulations during the clerkship. Students will use the Patient Encounter Log System (PELS) during the clerkship. In addition, students will have the opportunity to take the Advanced Cardiac Life Support (ACLS) Course and or the Pediatric Advanced Life Support (PALS) course during the clerkship. At the end of the clerkship, all students will take a mandatory multiple-choice examination.

The curriculum for the first Monday of the clerkship and every Friday during the clerkship will be held on campus at Jefferson. All students will attend the first Monday orientation day at Jefferson and all Friday teaching/testing days at Jefferson. During the other days, students will work in the Emergency Department at either Thomas Jefferson or one of the affiliates. Students will rotate through only one Emergency Department.

Location:
01 Thomas Jefferson University Hospital  
Maximum 7 & 2 visiting students allowed per block
02 A.I. Dupont Medical Center  
Maximum 3
03 Albert Einstein Medical Center  
Maximum 4
04 Bryn Mawr Hospital  
Maximum 1
05 Christiana Care Medical Center  
Maximum 4
06 Lankenau Hospital  
Maximum 1
07 Methodist Hospital  
Maximum 4
Senior Medicine  

(Dr. Wong)

The Senior Medicine Clerkship is a required rotation for all fourth year students. The goal of this clerkship is to revisit clinical internal medicine as a fourth year, after the completion of the required third year clerkships. Themes found in internal medicine, but generalizable to other specialties will be explored in the context of the more mature understanding of a fourth year student. This clerkship is intended to reinforce critical internal medicine knowledge and skills prior to graduating, and to expose students to professionalism, systems-based practice and practice-based learning/performance improvement concepts at an level appropriate for a fourth year student. Students choose an elective from the approved list of internal medicine electives. In addition to fulfilling the clinical requirements of their chosen electives, students attend one half-day didactic session per week for a total of four sessions. These sessions are case-based and highly interactive. During each session, core internal medicine topics are used to illustrate advanced diagnostic and management principles, challenge students to engage in critical thinking, and help them learn to function within the health care system in a way that will promote their patients’ health. Grading will be based on clinical evaluations, participation in/preparation for the academic half day, and the completion of any assigned projects.

Approved Rotations*:

Med 431 Hematology  Jefferson/Lankenau
Med 433 Hematology/Oncology  Methodist/Einstein
Med 434 Hematologic Malig/Bone Marrow Transplant  Jefferson
Med 441 Nephrology/Hyper  Jefferson/Lankenau/Methodist/Einstein
Med 457 Clinical Cardiology  Jefferson/Lankenau/Methodist/Einstein
Med 467 Pulmonary  Jefferson/Lankenau/Methodist/Einstein
Med 473 Infectious Disease  Jefferson/Lankenau/Einstein
Med 478 Hepatology  Jefferson/Einstein
Med 479 Gastro/Hepatol  Jefferson/Lankenau/Methodist/Einstein
Med 481 Geriatric Medicine  Einstein
Med 489 Rheumatology  Jefferson/Lankenau/Einstein
Med 490 Women’s Health  Jefferson
Med 491 Endocrinology  Jefferson/Methodist
Med 495 Clinical Oncology  Jefferson

*No Exceptions
Other Course Descriptions

For descriptions of the other required Advanced Basic Science options, inpatient subinternships (Internal Medicine, Pediatrics and General Surgery), and outpatient subinternships (Family Medicine, Internal Medicine, Pediatrics, Obstetrics/Gynecology and Psychiatry & Human Behavior), as well as electives, please check the Departmental listings, starting on page 103.
Student Evaluation

Jefferson Medical College recognizes that it has obligations not only to its students, but also to the faculty of the institution, to the medical profession, and most important, to society. A candidate for the Doctor of Medicine degree must demonstrate abilities and skills in a number of areas including: observational, communicative, motor, conceptual, integrative and quantitative, and behavioral and social. Candidates for the degree of Doctor of Medicine must be certified by the faculty to exhibit the requisite knowledge, skills and attitudes to complete the prescribed course of study. Students must also possess personal qualifications and attributes deemed necessary to perform the duties of the medical profession.

Core Curriculum

1. Grading System

a. Courses in years one and two

Courses are evaluated on an Honors, Pass, Fail basis. Honors will be given for final averages of 90% or greater. A grade of Fail will be given for final averages below 70%. For first-year and second-year courses, a score of 70% or above must be earned in all components of each course to earn a grade of Pass. In order for students to be able to track their own progress throughout the course, students will receive numerical scores for their performance on interim evaluations.

b. Courses in years three and four

All Phase I and Phase II courses and electives will be recorded in the student’s academic record with the following grades: High Honors-5, Excellent-4, Good-3, Marginal Pass-2, Incomplete-I, Failure-1. For Phase I and II courses with a final written examination, the minimum passing grade is 70. Students are reminded that all courses must be passed for promotion or graduation.

For a more complete explanation of all grading, evaluation and promotion policies, please refer to the Jefferson Medical College Student Handbook.

Reasonable Accommodations for JMC Students

Jefferson will make reasonable accommodations which do not impose an undue hardship on the Medical College on behalf of qualified individuals with disabilities or handicaps of which Jefferson is aware. Jefferson also will make reasonable accommodations which do not impose an undue hardship on Jefferson with regard to a student’s religious observances, practices and beliefs of which Jefferson is aware. Students are required to fulfill the technical standards of the Medical College, with or without accommodation. Technical standards for admission to medical school can be found on the Admissions Office Web site at http://www.jefferson.
Qualifications for License in the Commonwealth of Pennsylvania

The Commonwealth enacted a new Medical Practices Act in 1985 (Act 112 of 1985) that specifies the qualifications for obtaining a license to practice medicine from the Pennsylvania Board of Medical Education and Licensure.

“The Board shall not issue a license or certificate to an applicant unless the applicant establishes with evidence, verified by an affidavit or affirmation of the applicant, that the applicant is of legal age, is of good moral character, and is not addicted to the intemperate use of alcohol or the habitual use of narcotics or other habit-forming drugs and that the applicant has completed the educational requirements prescribed by the Board and otherwise satisfies the qualifications for the license or certificate contained in or authorized by this act.

“The Board shall not issue a license or certificate to an applicant who has been convicted of a felony under the act of April 14, 1972 (P.L.233, No. 64), known as The Controlled Substance, Drug, Device and Cosmetic Act, or of an offense under the laws of another jurisdiction which, if committed in this Commonwealth, would be a felony under The Controlled Substance, Drug, Device and Cosmetic Act, unless:

1) at least ten years have elapsed from the date of conviction;

2) the applicant satisfactorily demonstrates to the Board that he has made significant progress in personal rehabilitation since the conviction such that licensure of the applicant should not be expected to create a substantial risk of harm to the health and safety of his patients or the public or a substantial risk of further criminal violations; and

3) the applicant otherwise satisfies the qualifications contained in or authorized by this act.

“As used in this section the term ‘convicted’ shall include a judgment, an admission of guilt or a plea of nolo contendere.”

The Family Educational Rights and Privacy Act

The Family Educational Rights and Privacy Act (FERPA) affords students certain rights with respect to their education records. They are:

1. The right to inspect and review the student’s education records within 45 days of the day the University receives a request for access.
Students should submit to the Senior Associate University Registrar written requests that identify the record(s) they wish to inspect. The University Office of the Registrar will make arrangements for access and notify the student of the time and place where the records may be inspected. If the records are not maintained by the University official to whom the request was submitted, that official shall advise the student of the correct official to whom the request should be addressed. The right to request the amendment of the student’s education records that the student believes are inaccurate or misleading.

2. The right to request the amendment of the student’s education records that the student believes are inaccurate or misleading.

Students may ask the University to amend a record that they believe is inaccurate or misleading. They should write to the University official responsible for the record, clearly identify the part of the record they want changed, and specify why it is inaccurate or misleading. If the University decides not to amend the record as requested by the student, the University will notify the student of the decision and advise the student of his or her right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.

3. The right to consent to disclosures of personally identifiable information contained in the student’s education records, except to the extent that FERPA authorizes disclosure without consent.

One exception that permits disclosure without consent is disclosure to school officials with legitimate educational interests. A school official is a person employed by the University in an administrative, supervisory, academic or research, or support staff position (including law enforcement unit personnel and health staff); a person or company with whom the University has contracted (such as an attorney, auditor, or collection agent); a person serving on the Board of Trustees; or a student serving on an official committee, such as a disciplinary or grievance committee, or assisting another school official in performing his or her tasks.

A school official has a legitimate educational interest if the official needs to review an education record in order to fulfill his or her professional responsibility.

The University, at its discretion, may provide directory information in accordance with the provisions of the Act to include: the student’s name, address, telephone listing, date and place of birth, major field of study, academic schedule, participation in officially recognized activities, dates of attendance, degrees and awards received, photo, university
sity electronic mail address, campus key and the most recent previous educational agency or institution attended by the student. Students wanting directory information withheld should notify the Registrar in writing within 10 calendar days after the first scheduled day of class of the academic year of such election.

4. The right to file a complaint with the U.S. Department of Education concerning alleged failures by Thomas Jefferson University to comply with the requirements of FERPA. The name and address of the Office that administers FERPA is:

   Family Policy Compliance Office  
   U.S. Department of Education  
   400 Maryland Avenue, S.W.  
   Washington, DC, 20202-4605

Revisions and clarifications will be published as experience with the law and University policy warrant.

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Dean Tykocinski presents an award to a graduating senior at Class Day.
Facilities for Instruction

Jefferson Medical College is situated on a 13-acre urban campus in Center City Philadelphia. Located in the adjoining College and Curtis Buildings are the College’s administrative offices, as well as laboratories and the administrative offices of many of the academic departments. These two buildings also contain significant educational facilities: numerous small group classrooms in the recently renovated Connelly Conference Center and the Paul C. Brucker Learning Center, as well as a 275-seat high-tech auditorium in the reconfigured McClellan Hall. The Herbut and DePalma Auditoriums are also housed in the College Building. Additional academic and administration departments, laboratories, and the Solis-Cohen and Brent Auditoriums are located in Jefferson Alumni Hall. It also provides formal and informal small group study space, the University’s recreational facilities and two student lounges.

The Bluemle Life Sciences Building, opened in 1991, doubling the space available for research. Although it is primarily a research facility, including the Kimmel Cancer Center, it also houses flexible meeting space for testing, seminars and symposia.

Scott Memorial Library is highly rated in student surveys and is considered one of the finest health science libraries in the region. As more of the literature has been made available in electronic format, the Library, in consultation with the University Library Committee, has been reducing the number of journals in print format each year. The library makes available more than 500 electronic journals, several electronic databases and many electronic books in addition to approximately 500 print journals and more than 200,000 print volumes. Study areas, public access computers and JEFFLINE are available 24 hours a day, all year. JEFFLINE allows users to search the catalog of Scott Library’s books, journal titles and audiovisuals, as well as the electronic journals and books.

The Scott Learning Resources Center (LRC) has recently been upgraded to accommodate the preferred learning style of many students. The redesigned space allows students to study in small groups and complements the many individual carrels throughout the Library. The LRC also houses many models and simulations devices that are used to teach clinical skills and procedures.

Opened in 2007, the Dorrance H. Hamilton Building is one of the nation’s first centers for interdisciplinary health instruction and the first medical school facility in Philadelphia to offer interdisciplinary learning and an integrated curriculum to medical, nursing, physical and occupational therapy students.
The six-story, state-of-the-art academic building houses a technologically-advanced auditorium, small and large group classrooms and a two-floor clinical skills center featuring virtual diagnostic and surgical suites. It is located on Locust Street between South 10th and 11th streets.

**Ground Floor**
300 seat technologically advanced auditorium Designed for large group lectures

**Second Floor**
19 classrooms

**Dr. Robert and Dorothy Rector Clinical Skills Center (3rd and 4th floors)**
The Clinical Skills Center was renamed for Dr. Robert and Dorothy Rector in 2004.

**Third Floor**
- Obstetrics simulation lab
- Home of “Noelle,” simulated Ob/Gyn patient for training students to assess obstetric events and complicated births
- Acute Care simulation lab
- Home of “Sim Man,” simulated patient for training students to manage and treat life-threatening emergencies
- 14 exam rooms, library

**Fourth Floor**
- Operating Room simulation lab
- Surgical procedures
- Pre/Op-Post/Op simulation lab
- Preparation and follow-up care after surgery
- 14 exam rooms

**Fifth Floor**
- Intensive Care Unit simulation lab
- Critical care
- Trauma simulation lab
- Acute, time-sensitive care
- Anesthesia simulation lab
- Intubation, difficult airways, ventilation
- Occupational Therapy simulation lab including mock apartment: A simulated bathroom, bedroom and kitchen used to train students how to help patients navigate their living space

**Continuing Medical Education**

**Joseph L. Seltzer, MD, Senior Associate Dean**
The Office of Continuing Medical Education (CME) assists the faculty
of Jefferson Medical College in the development and implementation of educational activities to maintain and increase physician knowledge and skills, and to improve the quality of patient care. Activities are offered in response to practice needs and interests of faculty and alumni of Jefferson Medical College and local, regional, and national physician groups.

Seminars and symposia dealing with broad issues and concerns are offered both regionally and nationally, and faculty for these programs are drawn from the faculty of the Medical College as well as from other institutions. Activities for independent study (CD-ROM, Internet-based, monographs) are also developed through the Office of CME. The Office also supports certification of many grand rounds series on campus. A Visiting Professor Series, presented at affiliated and community hospitals by Jefferson Medical College faculty, addresses specific topics using lecture, case discussion and/or teaching round formats. Communications are facilitated through the CME Web site http://jeffline.jefferson.edu/jeffcme/.

Jefferson Medical College is accredited by the Accreditation Council for Continuing Medical Education. As an accredited sponsor of CME, the Medical College may designate credit for programs that meet the requirements of the Physicians Recognition Award of the American Medical Association.

Jefferson Graduate School of Biomedical Sciences

Gerald B. Grunwald, PhD, Dean

The Graduate School of Biomedical Sciences is responsible for the planning, operation, and administration of academic programs of Thomas Jefferson University that lead to the Master of Science and Doctor of Philosophy degrees, as well as for administration of postdoctoral training. The purpose of the Graduate School is to educate qualified students as biomedical scientists and professionals in health-related disciplines. Most faculty members of the Jefferson Graduate School of Biomedical Sciences share appointments in Jefferson Medical College or other Jefferson schools and are active in stimulating research and educational projects across traditional school boundaries.

The Jefferson Graduate School of Biomedical Sciences offers PhD programs in Biochemistry and Molecular Biology, Genetics, Immunology and Microbial Pathogenesis, Cell and Developmental Biology, Molecular Pharmacology and Structural Biology, and Neuroscience, and Molecular Physiology and Biophysics. The Jefferson Graduate School of Biomedical Sciences and Jefferson Medical College jointly offer an MD/PhD program. The Graduate School also offers MS programs in Biomedical Sciences, Cell and Developmental Biology, Microbiology,
and Pharmacology, and a Postbaccalaureate Pre-Professional Program. In 2011-2012, approximately 300 graduate students were enrolled in graduate level courses.

Financial assistance in the form of University fellowships or loans is available to all qualified students in the Graduate School. Further information may be obtained from the Office of the Dean, Jefferson Graduate School of Biomedical Sciences, Jefferson Alumni Hall, Philadelphia, (215) 503-8986, or from the college web site at www.jefferson.edu/biomedical_sciences.

Jefferson School of Health Professions

Janice P. Burke, PhD, OTR/L, FAOTA, Dean

The Jefferson School of Health Professions (JSHP) was established in 2006 as part of the reorganization of Jefferson College of Health Professions. Education in the health-related fields has been part of the Jefferson tradition since its founding, with hospital training programs in allied health being introduced in 1929. Under the direction of founding Dean Janice P. Burke, the School has grown, increasing the number of: programs (including advanced degrees), students, professional presentations and publications by faculty and students and funded research and training projects.

Jefferson School of Health Professions offers undergraduate and graduate degree programs (master’s degree and clinical doctorate) in six departments: Bioscience Technologies (Biotechnology, Cytotechnology and Medical Laboratory Science), Couple and Family Therapy, General Studies, Occupational Therapy, Physical Therapy and Radiologic Sciences (Cardiac Sonography, Computed Tomography, General Sonography, Invasive Cardiovascular Technology, Magnetic Resonance Imaging, Medical Dosimetry, Nuclear Medicine, Radiation Therapy, Radiography, Vascular Sonography, PET/CT). A new seventh department of Physician Assistant Studies has been established and will admit its first class in 2014. During the 2011-2012 academic year, 888 students were enrolled in the Jefferson School of Health Professions and 300 students graduated in May 2012.

The Jefferson School of Health Professions is committed to Interprofessional education, training and research. The faculty and students participate in all JCIPE activities.

For more information about the Jefferson School of Health Professions, contact the Office of Admissions at 215-503-8890 or visit www.jefferson.edu/health_professions.
Jefferson School of Nursing

Beth Ann Swan, PhD, CRNP, FAAN, Dean

Nursing education began at Jefferson in 1891 and has been continuous ever since, with the Jefferson School of Nursing consistently at the forefront of educating the region’s most respected nurse clinicians. The mission of the Jefferson School of Nursing is to educate qualified, diverse individuals at the bachelor’s, master’s and doctoral levels. The faculty is dedicated to educating professional nurses who will form and lead the integrated healthcare delivery and research teams of tomorrow; discovering new knowledge that will define the future of clinical care through investigation from the laboratory to the bedside and into the community; and setting the standard for quality, compassionate and efficient education and patient care for our community and for the nation. The mission is carried out in an atmosphere of teaching excellence, scholarship and community service.

The School offers a continuum of academic nursing programs including Bachelor of Science in Nursing (BSN) level, programs for RNs, Master of Science in Nursing (MSN) degree in nine specialty areas, a dual MSN-MPH degree program, post-master’s certificates and Doctor of Nursing Practice (DNP) program. All programs integrate advanced science and simulation with compassionate care and hands-on learning with a challenging curriculum taught by a nurturing faculty. In the 2011-2012 academic year, 1060 students were enrolled in all programs in the School of Nursing.

Members of the Jefferson School of Nursing faculty are involved in research, with federally-funded project and research grants including support for ESL students and expansion of online MSN and DNP programs to the School’s rural campus located at Geisinger Medical Center.

For information about Jefferson School of Nursing, contact the Office of Admissions at 215-503-8890 or visit www.jefferson.edu/nursing.

Jefferson School of Pharmacy

Rebecca S. Finley, PharmD, Dean

The Jefferson School of Pharmacy (JSP) was established by the Trustees of Thomas Jefferson University in March of 2006 to address the national shortage of pharmacists and to advance the TJU strategic initiative of enhancing interprofessional education and training. JSP currently offers the Doctor of Pharmacy degree (PharmD) which is required for licensure as a pharmacist in the U.S. Prior to enrollment, applicants must complete a minimum of 68 credits of pre-pharmacy coursework. The 140-credit, four-year curriculum includes basic sci-
ence, pharmaceutical science, clinical and administrative coursework, as well as extensive experiential training across a variety of pharmacy practice settings. The program of study facilitates the development of the requisite knowledge, skills and attitudes to provide patient-centered and population-based care and fosters values centered around social, personal and professional responsibility. Consistent with the mission of Thomas Jefferson University, JSP faculty strive to advance health sciences through basic and applied research.

In June of 2012, the Accreditation Council on Pharmacy Education granted JSP full accreditation. Additional information regarding the JSP accreditation status and admission requirements are available at www.jefferson.edu/pharmacy or by contacting the Office of Admissions at 215-503-8890.

Jefferson School of Population Health

David B. Nash, MD, MBA, Dean
Jefferson School of Population Health (JSPH), founded in 2008, prepares leaders with global vision to develop, implement, and evaluate health policies and systems that improve the health of populations and thereby enhance the quality of life. JSPH fulfills this mission by providing exemplary graduate academic programming, continuing education courses and conferences, and sustained research and consulting in areas of health policy, population health, healthcare quality and safety, healthcare quality and safety management and health care economics and outcomes research.

Jefferson School of Population Health offers a Doctor of Population Health Sciences (PhD), offered part-time, on-site/online. Master of Science in Applied Health Economics and Outcomes Research. Master of Public Health (MPH), offered on-site as a part- or full-time option. Juris Doctor/Master of Public Health (JD/MPH) and Master of Jurisprudence/Master of Public Health (MJ/MPH) with the Widener School of Law; Master of Social Services/Master of Public Health (MSS/MPH) with Bryn Mawr College; MD/MPH dual degree program with Jefferson Medical College. Master of Science in Health Policy (MS-HP), Healthcare Quality and Safety (MS-HQS) and Management and Chronic Care Management (MS-CCM), all offered part-time and online. Certificates offered: Public Health, Healthcare Quality and Safety and Health Policy.

In addition to its academic programming, JSPH offers customized continuing professional education programs, conferences and symposia designed to enrich and develop the skills and knowledge of adult learners who work in the healthcare arena. The School convenes monthly Health Policy Forums that are open to the community at

Facilities for Instruction
large. JSPH publishes the quarterly *Health Policy Newsletter* and serves as the editorial home for the scholarly journals *American Journal of Medical Quality, Population Health Management, Biotechnology Healthcare, Pharmacy & Therapeutics*, and *American Health and Drug Benefits*. JSPH conducts, via major grant funding, research and continuing education programming in health policy, especially in areas of healthcare quality and safety, chronic care management, and other policy areas.

The School’s research operations are organized into four divisions: Quality and Safety, Health Economics and Outcomes Research, Health Policy and Health Services Research, and Public Health. In addition to the activities of the four divisions, the Research team has convened several research interest groups, designed to stimulate new research ideas and to foster sharing of ideas among faculty and staff with shared interests.
Student Support Services

Office of Student Affairs and Career Counseling

The goal of the Office of Student Affairs and Career Counseling (OSACC) is to be available for academic and personal advising, to advocate for student needs, to foster career counseling, and to improve student access to the medical college. The office is located in Jeff Alumni Hall at 1020 Locust Street, Suite 157 and is open from 8:00 a.m. to 5:00 p.m. The number for the OSACC is (215) 503-6988 during business hours. For emergencies after business hours, please page the on-call Dean for Student Affairs at (877) 656-4437. Information can be found on the OSACC Pulse site at https://pulse.jefferson.edu/webapps/portal/frameset.jsp?tab=community&url=%2Fbin%2Fcommon%2Fcourse.pl%3Fcourse_id%3D_5436_1.

Academic Advising

The OSACC maintains a proactive stance regarding student academic performance. The Student Affairs deans along with course directors and the deans for Undergraduate Medical Education, are available for students with academic concerns or difficulty.

Clinical Mentor Program

The Clinical Mentor Program is designed to provide students with ongoing contact with a clinical mentor starting in the first year. Clinical mentors are assigned to incoming students to provide not only clinical exposure, but also guidance and direction throughout the medical school career.

Personal Counseling

The Student Personal Counseling Center offers confidential and accessible contact with a mental health professional to discuss personal and academic concerns. The psychiatrists and therapists of the Counseling Center are available to discuss all types of issues including, but not exclusive to, stress management, problems with personal or family relationships, feelings of depression or anxiety, and issues involving eating disorders or substance abuse.

The Director of the Student Personal Counseling Center, Deanna Nobleza, MD of the Department of Psychiatry, may be reached directly and confidentially at 215-503-2817 to set up an appointment either with her or another therapist or psychiatrist, on or off the Jefferson Campus. If there is an after-hours emergency, students should go to the Thomas Jefferson University Hospital Emergency Room (located in the Main Hospital Building at 10th and Sansom Streets, 215-955-6840) and ask to speak to the psychiatrist on call.
Career Planning

There are a number of resources available to students as they seek counseling for career choices, suggestions for residency training, and clarification in the application process. The Office of Student Affairs and Career Counseling (OSACC) is available to provide guidance and advice to each student regarding his or her career selection. The annual meeting with your assigned dean of Student Affairs is an excellent opportunity to discuss the career selection process. The Career Planning Workshops, also offered through the OSACC several times throughout the third year, are interactive workshops designed to help students make better-informed career choices. Students are also encouraged to identify specialty-specific advisors, as well as continue to meet with their clinical mentor, assigned in the first year, for additional guidance in the career planning process.

Office of Diversity and Minority Affairs

The establishment of the Office of Diversity and Minority Affairs affirms Jefferson Medical College’s commitment to a community of cultural understanding and mutual respect among students, faculty and staff while promoting the overall mission of excellence in education, scholarship, research and patient care.

The Office of Diversity and Minority Affairs’ mission is to promote multicultural initiatives that help to establish an institutional framework that acknowledges diversity and promotes understanding and sensitivity to the needs of all individuals. These initiatives seek to redefine the Jefferson community as one in which all individuals, regardless of race, class, physical ability, gender, religion, age or sexual preference can live and interact in a safe, cooperative and supportive environment. Programmatic activities include educational programs that promote social justice and diversity; lectures that promote cultural competency and equitable healthcare for diverse patients; cultural events and activities; community outreach programs in underserved communities; and, diversity training sessions and consultant services. Cultural and celebratory events include Latin Heritage Month, Black Heritage Month, Expressions of Asia Disabilities Awareness Month, LGBTQ Month, Native American History Month, Women’s History Month and Diversity Week at Jefferson.

ODAMA is also charged with the recruitment and retention of underrepresented students in medicine. To achieve the goal of increasing the existing diversity within the Jefferson community, ODAMA has established an aggressive recruitment and retention program that attracts individuals from diverse backgrounds.
Due to the changing demographics of this country, ODAMA recognizes that there is a great need to also promote programs that focus on culturally competent and linguistically appropriate healthcare to underserved communities. The office has implemented a multi-faceted language program called the Jefferson Medical Language Immersion Program (JEFF MED LIP). This program provides students with the cultural and linguistics tools to bridge the gap with non-English proficient patients. Medical Spanish and Medical Chinese courses are offered each year, free of charge, to the entire TJU community. The courses include medical terminology, discussions on cultural and ethnic healthcare issues, role playing, physicals on standardized patients, and community outreach opportunities in local clinics and hospitals. In addition, students who participate in this program or those who are proficient in the language will have the opportunity to participate in ODAMA’s JEFF MED LIP/Global Health Initiative. Through the Global Health Initiative, students can participate in a summer abroad language immersion and clinical shadowing experience. Students in their fourth year can also do a clerkship through these established linkage programs. Program sites include the Dominican Republic, Mexico, Argentina, Chile and Peru. Other immersion sites will be added in the future.

**Student Activities**

**Student Council**

The Student Council is comprised of elected and appointed student representatives from each class at Jefferson Medical College of Thomas Jefferson University. Responsibilities of the Council include supervision of student organizations, disbursement of university funds, and the dissemination of information on issues pertinent to student life at the Medical College. Furthermore, the Council acts as the liaison between the students, faculty and administration. Council representatives serve with faculty on standing committees in the areas of Admissions, Affiliations, Alumni, Curriculum, Research, Student Affairs, and Technology. As the collective voice of the student body, the Council works continuously with faculty and administration to recommend and implement changes that will positively affect students at the Medical College and within the University community.

**Orientation**

Orientations are mandatory and are held for each of the classes at the beginning of the new academic year. Third and fourth year student orientations are held early in July, focusing on the clinical rotations and the residency application process. Orientation for the second-year class, held in August, provides an overview of the second year curriculum. First year students have a week-long orientation in August that
includes programs to acquaint the new students with the curriculum, services, organizations, and activities.

**Yearbook**

*The Clinic* is Jefferson’s annual student yearbook. It serves the dual purpose of honoring the graduating class and chronicling the events of the academic year. The Clinic pursues an independent editorial policy, and staff participation is open to all students. Editorial and photographic contributions are welcomed. The yearbook is published under the auspices and overall review of the Student Council of the Medical College, which approves selection of both the editor and business manager of the publication.

**Societies and Organizations**

Students have many opportunities to participate in different medical societies and service organizations such as Alpha Omega Alpha, Asian Pacific Medical Student Association, Dermatology Society, Emergency Medicine Society, Family Medicine Society, Gibbon Surgical Society, American Medical Association (AMA), American Medical Student Association (AMSA), American Medical Women’s Association (AMWA), and Jeff HOPE, just to name a few. The Office for Student Affairs and Career Counseling, the JMC student council, and the University Activities Office have information regarding these activities.

**JeffHope**

From the first through the fourth year, students are invited to participate in JEFF HOPE (Health Opportunities for Prevention and Education), a student-initiated program that provides medical care and patient advocacy to Philadelphia’s homeless under supervision of the Departments of Medicine and Family Medicine. The year-round program includes a seminar series as well as on-site, interdisciplinary clinical experience for students in all four years of medical school.

**Learning Societies**

Eight learning societies have been created and students are assigned to one of these societies upon matriculation. The mission of the societies is to promote communities of students and faculty that are committed to the core values of Jefferson Medical College and to nurture professional and personal development. The goals are to: 1) enhance a sense of community within Jefferson; 2) promote the exchange of ideas, companionship, and mentorship; 3) highlight the importance of community service; 4) develop skills in leadership, communication, doctoring, and professionalism; and 5) create an opportunity for longitudinal education.

The societies have been named after esteemed Jefferson graduates: Dr. John Biddle Society; the Jacob DaCosta Society, the Dr. Robley Dungli-
son Society, the Juan Carlos Finlay Society, the Carla Goepp Society, the Samuel Gross Society, the Algernon Jackson Society, and the William Keen Society.

Student Facilities

Housing
In order to minimize the time spent finding accommodations in the Philadelphia area, you are encouraged to use the services of the University Housing Office:

Department of Housing and Residence Life
Thomas Jefferson University
1000 Walnut Street, Suite 103
Philadelphia, PA 19107-5518
Telephone: (215) 955-8913

The University Department of Housing and Residence Life provides permanent on-campus housing and a welcoming community environment for Jefferson students and eligible affiliates. The University Housing Office assists interested students with apartments and room assignments. This includes notifying students of housing assignments, assisting throughout the assignment process, and remaining a liaison between the residents and facilities services once students are on campus. For students that are interested in off campus accommodations, the University Housing Office also distributes information regarding off-campus housing. Please visit their Web site at: www.jefferson.edu/housing.

The following two sections explain Housing and Residence Life services. The first section is On-Campus Housing and the second section explains the Off-Campus Housing Services.

On-Campus Housing
The on-campus residential facilities are conveniently located within walking distance of Philadelphia’s shopping, cultural, and recreational activities.

Application
An on campus housing assignment is guaranteed to eligible accepted first-year students who apply for housing by May 31st. Contact the Housing Office for details. Interested parties are invited to apply for an apartment or residence hall space prior to acceptance to the College. Applications may be obtained by writing or telephoning the Housing Office. Housing information and applications are also accessible for downloading from their web site.
**Orlowitz Residence:** The Orlowitz Residence Hall is a 20-story apartment facility located on the southwest corner of Tenth and Walnut Streets in the Jefferson complex, directly across the street from classes and adjacent to Lubert Plaza. This modern facility has 237 apartments of which 170 have one bedroom, 56 have two bedrooms, and eleven have three bedrooms. The Orlowitz Residence has a small fitness room on-site.

**Barringer Residence:** The Barringer Residence Hall is a 10-story apartment facility on the southeast corner of Tenth and Walnut Streets. This facility has 138 apartments; 12 are efficiency apartments, 54 have one bedroom, 63 have two bedrooms and nine have three bedrooms. The Barringer Residence also has a small fitness room on-site.

Each Barringer and Orlowitz apartment has wall-to-wall carpeting, air conditioning, kitchen appliances, access to Jefferson wireless internet, and cable TV hook-up availability. Both buildings have updated units, many containing microwaves and dishwashers. Storage lockers and laundry facilities are located in each basement. A social lounge with a large screen cable TV is available for tenant use. The Orlowitz building has an adjoining outdoor courtyard. Both buildings offer 24-hour desk and emergency maintenance coverage. The Barringer and Orlowitz Residences are managed by Philadelphia Management Company (PMC). PMC representatives have an office within the Department of Housing and Residence Life at the Orlowitz Residence, Suite 103.

**Martin Residence:** The Martin Building is an eight-story office and residential building located at 201 South Eleventh Street. It is adjacent to the Scott Memorial Library and Lubert Plaza and across the street from the Foerderer Pavilion of Thomas Jefferson University Hospital. The building has furnished rooms and can accommodate approximately 180 students.

The Martin Residence is undergoing a multi-year renovation project. Floors one through six have been renovated and include updated life safety features. The seventh and eighth floors will be renovated within the next two years.

Depending on occupancy needs, the building may accommodate both coed and single sex floors in double or single occupancy rooms. Each furnished, air-conditioned room is equipped with a Microfridge (microwave/refrigerator/freezer). Common bath and shower accommodations are available on each floor. Each floor has a snack kitchen for limited food preparation that contains a refrigerator, freezer and a microwave.

The Martin building provides a study room, recreation lounge with a large screen cable TV and vending areas. Students have access to Jef-
The Department of Housing and Residence Life is committed to meeting the needs of its individual tenants and the residential community. The Department consists of three coordinated areas designed to meet these needs:

**Housing Operations, Residential Property Management and Residence Life**

There are two Resident Assistants (RAs) assigned to the Barringer Building, three to the Orlowitz Building and seven to the Martin Building. The RAs provide residents with information regarding the buildings, TJU and Philadelphia; refer residents to University or community services; offer building and campus activities; help residents in their adjustment to university living; and serve as a liaison between residents and housing management. When necessary, Residence Life sponsors town meetings where residents are encouraged to discuss building-wide issues.

An RA is on call to assist residents whenever the Housing Office is closed. Contact can be made through the front desk of your building (numbers are listed below). Residents may also voice concerns or request an RA’s assistance any time by contacting an RA individually. You may contact any RA by leaving a note in his or her mailbox, or you may obtain their phone number through the Front Desk.

There is an RA on call after regular business hours (Monday - Friday, 5:00 p.m. to 8:00 a.m.; Saturday, Sunday and holidays, 24 hours a day). The RA on duty can be called to assist by the Front Desk Clerk.

The Assistant Director of Residence Life is a live-in advisor available after business hours to respond to emergencies. Contact can be made through the RA on duty or the Front Desk of your building.

**Phone Numbers**

Barringer Front Desk: (215) 955-8967  
Orlowitz Front Desk: (215) 955-6726  
Martin Front Desk: (215) 503-5811

**Off-Campus Housing Services**

The Housing Office provides an off-campus information service. You should begin your search for off-campus housing for the upcoming academic year in May. This will provide you with enough time to identify the various accommodations available.
If you will be visiting Philadelphia, visit their Web site for the most current information. The Housing Office also maintains a listing of local real estate agents and apartment facilities. Jefferson affiliates interested in off campus accommodations can request information by contacting the Housing Office (215) 955-8913.

**Student Health**

**Location and Hours**

University Health Services (UHS) is open to all students enrolled at Thomas Jefferson University. UHS is located in Suite 205, 833 Chestnut Street. The hours of operation are Monday through Friday 7:30 a.m. until 4:00 p.m. It is closed for a staff meeting on Thursdays only from 12 noon until 1:00 p.m. During evenings and weekends, students should report to the Emergency Department if an urgent medical problem arises. Any charges incurred by such visits will be billed to the student’s insurance. The UHS Web site may be accessed at www.jeffersonhospital.org/uhs.

**Staff**

The UHS medical staff consists of two nurse practitioners, a physician and three nurses. The secretarial staff is available to assist with immunization records and health information. UHS coordinates psychiatric care through the Student Personal Counseling Center. See below for details about psychiatric services.

**Immunization Requirements**

UHS is required to comply with the infection control policies of the Hospital Infection Control Committee and the Commonwealth of Pennsylvania. It is required that all students complete a student health form prior to attending the university. This consists of a medical history and up-to-date immunizations for measles, mumps, rubella, varicella (chicken pox), pertussis, tetanus and hepatitis B. A physical exam performed by the student’s physician no greater than one year prior to enrollment is mandatory. For a list of immunization requirements, please refer to the UHS Web site at www.jeffersonhospital.org/uhs.

**Services and Costs**

**Episodic Care**

General medical problems may be addressed at UHS on a walk-in basis. Walk-in hours are Monday through Friday 7:30 a.m. – 11:00 a.m. and 1:00 p.m. – 3:30 p.m.

**Psychiatric Services**

The Student Personal Counseling Center (SPCC), directed by Deanna Nobleza, is actively involved in the planning and implementation of
programs to foster student emotional and mental health. Consultations and initial three evaluations with a staff psychiatrist/psychologist are provided free of charge to JMC students, but appointments are necessary. For ongoing therapy, a reduced fee will be charged. Insurance is accepted whenever possible. Students may call the SPCC directly at (215) 503-2817 to arrange an appointment.

**Evaluation of Potentially Infectious Illnesses**

Students with potentially infectious illnesses should report to UHS for an evaluation prior to reporting to their clinical rotations. Questions regarding any exposures to illnesses, i.e. varicella (chicken pox or shingles), influenza, tuberculosis, viral conjunctivitis, may be addressed by calling (215) 955-6835 or by visiting UHS. Fitness for duty will be determined with the guidance of the Hospital Infection Control Policy.

**Annual Tuberculosis Screening**

All students are required under the Hospital Infection Control Policy to undergo annual screening. Testing for second year students takes place in the Microbiology lab section, and results of this testing are forwarded to UHS for inclusion in the student’s chart. The student is responsible for completion of the test in the third and fourth years. The PPD may be done in UHS or at an outside physician’s office as long as the results are forwarded to UHS. All students with a history of a positive PPD must complete the annual questionnaire regarding the signs and symptoms of tuberculosis.

**Hepatitis B Vaccine**

Completion of the three-dose series followed by an antibody titer to document immunity is required as part of the pre-matriculation requirements. UHS will assist with the completion of the series for those students who are unable to complete the series before matriculation. Vaccines may be administered through UHS for a nominal fee.

**Flu Vaccination**

The annual influenza vaccination is required for all JMC students. The vaccine is offered free of charge by UHS and compliance is tracked through the Office of Student Affairs. For those students who chose to be vaccinated elsewhere, proof of vaccination must be submitted annually to UHS. Medical and religious exemptions will be considered as per the current TJUH Mandatory Annual Influenza Vaccination Policy.

**Occupational Exposure to Blood and Body Fluids**

Students who are exposed to patients’ blood or body fluids during the course of their clinical rotations should report to UHS as soon as possible after the exposure. If the exposure occurs after normal working
hours, the student should report to Jefferson’s Emergency Department. UHS follows the Public Health Service’s Guidelines for Exposure to HIV, Hepatitis C and Hepatitis B. If a student is on a rotation outside of Jefferson, he/she is advised to contact UHS for direction. Students unable to return to UHS or to Jefferson’s Emergency Department should be seen in the closest emergency department. Care for this visit is charged to the student’s insurance. Further information regarding our exposure protocol may be viewed on the UHS Web site: www.jefferson.edu/uhs.

Confidentiality of Medical Records

All health services records, including psychiatric visits, are strictly confidential. They are not available to any person other than the UHS healthcare provider without the student’s written permission. For questions or appointments, call (215) 955-6835.

Computing and Library Resources

The Scott Memorial Library is open and staffed 100 hours per week and the first and fourth floors provide 24-hour access to workstations and the Internet. The Library’s collection is considered one of the finest in the region and reflects the University’s interests in the life sciences, clinical care, patient education, and the history of the health sciences. The collection includes approximately 80,000 books and bound print journals; over 5,000 electronic journal subscriptions; 900 plus e-books; the University Archives; and significant holdings of rare books dating to the 15th century. The University’s wifi network is available on all floors of the library.

AISR Education Services provides faculty support in instructional design and educational technologies. Education Services staff provide workshops and online training materials for Jefferson’s academic resources in JEFFLINE, Pulse (the campus installation of the Blackboard learning management system), PowerPoint, and other popular applications. AISR Education Services develops educational software for use in Jefferson’s undergraduate, graduate, and CME activities.

The Learning Resources Division of AISR acquires and manages a wide variety of non-bibliographic educational resources. These include anatomical models, videos, human skeletons, etc. LR staff manages all of the computing labs, classrooms, and public access computers on campus. Many of these resources are integrated into the operations of the Scott Library building. In addition, a Learning Resources Center is located within Jefferson Alumni Hall which includes a suite for use of faculty and students to edit digital video and conduct both teleconferencing and webcasting. Laptop computers are also available for individual use, and there is a growing support base for mobile computing. Special-
ized software available on AISR-managed public computers include: 3D anatomy visualization, SAS/SPSS, GIS applications as well as Microsoft Office Suite. Support staff is available to assist students and faculty in the use of all technologies.

Medical Media Services supports Jefferson’s audio and visual communication resources as well as design and production services for professional presentations, publications, and teaching. Specific groups support: scientific photography, graphics and medical illustration, electronic presentations, and audio and video production. Medical Media Services also provides support for audiovisual equipment services including videoconferencing and web conferencing.

**AISR Contact Information**

Web Site: [http://jeffline.jefferson.edu](http://jeffline.jefferson.edu)

AISR Administration: 215-503-8848

Scott Library Reference Desk: 215-503-8150

AISR Education Services: 215-503-2830

Scott Library LRC: 215-503-8407

JAH LRC: 215-503-7563

Medical Media Services: 215-503-7841

Scott Memorial Library
1020 Walnut Street
Philadelphia, PA 19107

JAH Learning Resource Center
1020 Locust Street, M-13
Philadelphia, PA 19107

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**Campus Bookstore**

The Jefferson Medical and Health Science Bookstore, located at 1009 Chestnut Street, is a full service campus bookstore operated for the benefit of students, faculty, and employees. The Bookstore offers a 10% discount off the publisher’s list price of all books. Bookstore services include special orders for all books in print as well as specialty merchandise for student organization activities. Commuter Services and the Photo ID Center are also located within the Bookstore. Activities Office discount tickets are available for purchase at the Jefferson Bookstore.

The Jefferson Medical and Health Science Bookstore offers a wide range of online services at [www.jefferson.edu/bookstore](http://www.jefferson.edu/bookstore). A 10% discount is available off most online book purchases. The Bookstore website also offers book buyback and textbook rental. Academic supplies, technology products, apparel, and graduation and recognition items are also available for online purchase.

The “Course Book Lookup” option, located under the “Current Students” link, provides information, including ISBN, pricing and availability about required and recommended books at the time of class registration.
Finally, students are encouraged to share their Bookstore experience and suggestions by completing a Customer Survey found on the Bookstore Web site.

The store is open from 7:00 a.m. to 5:30 p.m. Monday to Friday and from 9:00 a.m. to 1:00 p.m. on Saturday. The store is closed on Sunday and all University holidays. For more information call 215-955-7922. Visit us at www.jefferson.edu/bookstore.

The Jefferson Bookstore Advisory Committee serves to advise the University Bookstore and to foster communication between the bookstore management and the campus community. The Committee meets on a monthly basis to discuss such topics as product mix, marketing/promotion, customer service, policies and procedures, and textbook adoption. Student representatives from each College and School serve on the Committee. Anyone interested in serving on the Committee or needing additional information may contact the Jefferson Bookstore.

**Equipment and Clothing Requirements**

The Division of Anatomy requires that surgical scrubs be worn in the dissecting room. These may be purchased at a local uniform store. Protective aprons and latex gloves are provided by the division. If allergic to latex, students may also purchase disposable nitrile gloves available in the Jefferson Bookstore.

**Dissecting Instruments**

Students must obtain a set of instruments that are suitable for dissecting the cadaver. A sample kit of such instruments will be available for inspection and sale at the Jefferson Bookstore.

**Protective Eyeware**

The use of protective eyewear, either prescription glasses or plastic goggles, is strongly recommended, especially if contact lenses are worn.

**JMC Alumni Association**

The Jefferson Medical College Alumni Association was founded in 1870 by one of America’s greatest surgeons, Samuel D. Gross, MD, Class of 1828. There are more than 10,500 living graduates of the College and nearly 4,200 graduates of other medical schools who have completed postgraduate training at Jefferson. These physicians are practicing in all specialties in 50 states and many foreign countries.

The Alumni Association keeps alumni informed of College activities and developments through the quarterly Alumni Bulletin. The office directs the Annual Giving campaign and hosts a reunion weekend and receptions around the country throughout the year.
The Alumni Association also coordinates programs and projects that benefit the medical students, residents and fellows. Some of these projects include the following:

Career Day is an event in which medical students are given the opportunity to learn about 30 medical specialties in an afternoon program that includes question and answer sessions with physicians in every field. Parents Day is a full day of programs for the families of JMC students, which includes faculty and student presentations, lunch and campus tours. Senior Reception takes place the week of Commencement as a way for students to celebrate graduation with their family and peers.

In addition to social events, the Alumni Association sponsors academic activities such as the “buddy” mentor program, which matches interested first- and second-year students with alumni in the Philadelphia area who serve as personal advisors to the students. Jefferson alumni also mentor first-year students who are in good academic standing during their summer vacation. The Association also runs the Alumni Host Program for students who travel across the country interviewing for residencies. Through this program, Jefferson alumni and postgraduate alumni provide accommodations to a student interviewing for residencies in their cities.

The Jefferson Annual Giving program, conceived by Louis H. Clerf, MD, Class of 1912, has grown since its inception in 1948 from $100,000 a year to $1,600,000 a year. Alumni, postgraduate alumni, and faculty of Jefferson have contributed more than $87,000,000 to date to Annual Giving in support of the education, research and healing missions of the College.

The Alumni Association office is located at 925 Chestnut St., Suite 110, Philadelphia, PA 19107. The telephone number is (215) 955-7750 and the email address is jmc-alumni.office@jefferson.edu. Phillip J. Marone, MD, Class of 1957, is the Associate Dean for Alumni Relations and the Executive Director of the Alumni Association.
Courses of Instruction

The course descriptions below are based upon reasonable projections of faculty and faculty availability and appropriate curriculum considerations. The matters described are subject to change based upon changes in circumstances upon which these projections were based and as deemed necessary by the College to fulfill its role and mission.

Anesthesiology

Chairman
Zvi Grunwald, MD, Professor of Anesthesiology, Chairman of the Department

Vice Chairman
David P. Maguire, MD, Associate Professor of Anesthesiology, Vice Chairman of the Department

Coordinators
Neeru Rattan, MD, Instructor of Anesthesiology and Medical Student Coordinator for IDEPT
Rehana A. Jan, MD, Associate Professor of Anesthesiology and Medical Student Coordinator for Anesthesia Electives

Education Coordinators
Sheri Engelke
Marilyn Reiter

Clinical Curriculum

ANEST. 402 Subinternship (Dr. Jan and Staff)
Credits 6. 11th (10th block not available) through 21st Teaching Blocks.
Enrollment: minimum 1, maximum 5
Enrollment by arrangement only (Contact Marilyn Reiter at 215-955-6161.)

This comprehensive elective introduces the medical student to preoperative evaluation, intraoperative and postoperative anesthesia management of surgical patients. Emphasis is placed on the principles of anesthesia (general and regional), physiology of various organ systems, anesthetic pharmacology and hemodynamic monitoring.

The medical student works as a member of the anesthesia care team, interacting with staff anesthesiologists and residents.
Hands on technical experience of establishing intravenous access, non-invasive/invasive hemodynamic monitoring, various airway management and regional anesthesia techniques are taught under close staff supervision. The operating room teaching is supplemented by twice weekly lectures. During their rotation, students do not have any overnight call obligations.

The last week of the rotation can be spent in the subspecialty of the student’s choice; i.e., cardiac, neurosurgery, obstetrics anesthesia or acute pain management.

ANEST. 403 Pain Management (Dr. Wang and Staff)
Credits 6. 11th (10th block not available) through 21st Teaching Blocks.
Enrollment: minimum 1, maximum 1.
Enrollment by arrangement only (Contact Marilyn Reiter at 215-955-6161.)

The student is a member of the pain management team and applies the principles of evaluation of patients with acute and chronic pain syndromes. Time will be spent in the postoperative acute pain service and in the chronic pain clinic. Teaching stresses the need for a complex, multidisciplinary approach to pain problems. The course is useful for students planning a career in anesthesia as well as those who will encounter patients with chronic pain syndromes in family medicine, internal medicine, and surgical practices.

ANEST. 425 Research
Credits 6. All Teaching Blocks.
Enrollment: by arrangement.
Biochemistry and Molecular Biology

Chairman
Jeffrey Benovic, PhD, Professor of Biochemistry and Molecular Biology and Chairman of the Department

Course Director
Peter Ronner, PhD, Associate Professor of Biochemistry and Molecular Biology

Students have many opportunities to engage in research at JMC.
Dermatology and Cutaneous Biology

Chairman
Jouni J. Uitto, MD, PhD, Professor of Dermatology and Cutaneous Biology and Chairman of the Department

Vice Chairs
Mon-Li Chu, PhD, Professor of Dermatology and Cutaneous Biology and Vice Chair for Research for the Department
Young C. Kauh, MD, Professor of Dermatology and Cutaneous Biology and Senior Vice Chair for Departmental Development
Jason B. Lee, MD, Clinical Associate Professor of Dermatology and Cutaneous Biology, Clinical Vice Chair of the Department of Dermatology and Cutaneous Biology, Director, Departmental Residency Training Program

Faculty
Tatyana Humphreys, MD, Clinical Professor of Dermatology and Cutaneous Biology, Chief, Division of Cutaneous Surgery, and Director, Center for Laser Surgery and Cosmetic Dermatology
Patrice Hyde, MD, Clinical Assistant Professor of Dermatology and Cutaneous Biology, Chief, Pediatric Dermatology
Sergio Jimenez, MD, Professor of Dermatology and Cutaneous Biology, Director of Jefferson Scleroderma Center
Matthew Keller, MD, Clinical Assistant Professor of Dermatology and Cutaneous Biology, Clerkship Director and Clinical Preceptor for medical students

Education Coordinator
Carol Biscieglia

Clinical Curriculum

DERM. 401 Senior Clerkship in Dermatology (Staff)
Credits 6. 10th through 14th and 16th through 21st Teaching Blocks.
Enrollment: Scheduled with registrar.

This clerkship includes examination and treatment of patients in the outpatient department, PowerPoint presentations of common skin diseases, conferences on dermatologic literature, and consultation service on inpatients. A formal presentation at the end of the clerkship will be required.

DERM. 402 Basic Dermatopathology
Credits 6. 10th through 15th Teaching Blocks.
Enrollment: By arrangement.
The rotation will provide the student with in-depth knowledge of dermatopathology. The student will have the opportunity to engage in all facets of the activities in a dermatopathology laboratory, including, but not limited to, processing of the skin specimens, daily sign outs at the microscope, and research activities. The student will have the opportunity to work with pathology and dermatology residents, fellows, and faculty members. Oral presentation at the end of the rotation is a requirement.

(Approved Advanced Basic Science Rotation)
Emergency Medicine

Chairman
Theodore A. Christopher, MD, FACEP, Professor of Emergency Medicine and Chairman of the Department

Vice Chairs
Bernard L. Lopez, MD, MS, Associate Professor of Emergency Medicine and Vice Chair, Academic Affairs;

Directors
Elisabeth Edelstein, MD, Assistant Professor in Emergency Medicine; Assistant Director, Undergraduate Medical Education; and Director, Wilderness Medicine

Alan T. Forstater, MD, Clinical Assistant Professor of Emergency Medicine and Director, Information Technology

Ron Hall, MD, Assistant Professor in Emergency Medicine; Residency Director; and Director of Resident Simulation Education

Edward H. Jasper, MD, Clinical Assistant Professor of Emergency Medicine; Director, Center for Bioterrorism Disaster Preparedness

Paul F. Kolecki, MD, Associate Professor of Emergency Medicine and Director, Undergraduate Medical Education

Bon Ku, MD, Assistant Professor of Emergency Medicine; Director of Public Health Initiatives; and Director, Ultrasound Education; Co-Director Global Health Fellowship

J. Matt Fields, MD, Fellowship Director of Emergency Ultrasound Fellowship

Xinliang Ma, MD, PhD, Professor of Emergency Medicine and Director, Cardiovascular Injury Research (Basic Science)

Daniel Monti, MD, Associate Professor of Emergency Medicine and Director, Jefferson-Myrna Brind Center of Integrative Medicine

Mischa Mirin, MD, Instructor of Emergency Medicine and Director, Emergency Medicine Services (EMS)

Kenneth J. Neuburger, MD, Clinical Assistant Professor of Emergency Medicine and Director, Travel Medicine

Frederick Randolph, MD, Instructor of Emergency Medicine and Vice Chairman/Medical Director Methodist Hospital Division

Raymond F. Regan, MD, Professor of Emergency Medicine and Director, Central Nervous System Injury Research (Basic Science)
Nara Shin, MD, Instructor of Emergency Medicine and Assistant Residency Director

Harsh Sule, MD, Assistant Professor of Emergency Medicine, Co-Director, Global Health Fellowship, and Associate Residency Director

Education Coordinator
Steve Bulizzi

**Clinical Curriculum**

**EMERG. 400 Emergency Medicine/Advanced Clinical Skills**
(Dr. Kolecki)

Credits 6. 10th through 20th Teaching Blocks.

The Emergency Medicine/Advanced Clinical Skills (EM/ACS) Clerkship is a mandatory rotation for all fourth-year Thomas Jefferson Medical Students. Students will work closely with Emergency Medicine (EM) attendings and residents in the diagnosis and management of patients who present to the Emergency Department (ED). Students will work between 24 and 32 hours per week in the Emergency Department.

Students will attend didactic lectures, clinical skill laboratories, and patient simulations during the clerkship. Students will use the Patient Encounter Log System (PELS) during the clerkship. In addition, students will have the opportunity to take the Advanced Cardiac Life Support (ACLS) Course and or the Pediatric Advanced Life Support (PALS) course during the clerkship. At the end of the clerkship, all students will take a mandatory multiple-choice examination.

The curriculum for the first Monday of the clerkship and every Friday during the clerkship will be held on campus at Jefferson. All students will attend the first Monday orientation day at Jefferson and all Friday teaching/testing days at Jefferson. During the other days, students will work in the Emergency Department at either Thomas Jefferson or one of the affiliates. Students will rotate through only one Emergency Department.

**Location:**

1. Thomas Jefferson University Hospital
   - 7 & 2 visiting students allowed per block
2. A.I. duPont Medical Center
   - 3 students allowed per block
3. Albert Einstein Medical Center
   - 4 students allowed per block
04 Bryn Mawr Hospital
  1 student allowed per block
05 Christiana Care Medical Center
  4 students allowed per block
06 Lankenau Hospital
  1 student allowed per block
07 Methodist Hospital
  4 students allowed per block

**EMGR. 403 Emergency Medicine Elective**  
(Dr. Kolecki)  
Credits 6. 10th through 21st Teaching Blocks.

Students who desire to participate in an Emergency Medicine Elective need to arrange this rotation with that particular department. All questions should be directed to that Emergency Department.

**EMGR. 425 Research Elective**  
(Dr. O’Malley)

This elective rotation will provide the student with a concentrated research experience within this specialty discipline. The specific research project and tasks will be agreed upon by the student and faculty research mentor, and approved by the course director listed above. For this approval, the student must submit in writing to the course director a description of the proposed project, a list of goals for the month, and the name of the faculty mentor prior to scheduling this elective.

**EMGR. 495 Integrative Medicine**  
(Dr. Monti)  
Credits 6. All Teaching Blocks Except Block 11.

Integrative medicine guided by the scientific principles and practices of conventional Western medicine, combined with evidence-based lifestyle interventions and complementary therapies. A primary goal is to address the whole person - body, mind, and spirit - health and well being. Learning goals for this course are: (1) Master core concepts and principles of integrative medicine; (2) Gain familiarity, the practice of integrative medicine, including: patient assessment and treatment planning; (3) Explore specific complementary therapies that can be part of an overall integrative medicine treatment plan, such as stress reduction techniques, nutritional strategies, and acupuncture; of integrative medicine; (4) Reinforce a personal commitment to personal and professional wellness.

Students will accompany integrative medicine physicians and complementary therapy providers during patient care. Because of the nature of this practice, students will generally not perform independent, complete evaluations of patients.
The clinical practice of the Jefferson-Myrna Brind Center of Integrative Medicine is located at 925 Chestnut Street, Suite 120.

Course requirements include: clinical observation; shadowing for at least one full week each of at least two of the Center’s onsite Integrative Medicine physicians and one complementary therapy practitioner; completion of a three hour Web-based nutrition module; development and completion of a personal wellness goal for the month; completion of directed readings. A small presentation (to be arranged with course director) is necessary for a grade of honors.
Family and Community Medicine

Chairman
Richard C. Wender, MD, Alumni Professor and Chair, Department of Family and Community Medicine

Vice Chairs
Christine Arenson, MD, Associate Professor and Vice Chair for Academic Affairs, DFCM, Co-Director, Jefferson InterProfessional Education Center, TJU, Director, Eastern Pennsylvania - Delaware Geriatric Education Center

George Valko, MD, Gustave and Valla Amsterdam Professor & Vice-Chair for Clinical Programs, DFCM

Course Directors
Christine M. Jerpbak, MD, Assistant Professor, DFCM, Director of Medical Student Education, Course Director, Introduction to Clinical Medicine 1

Fred W. Markham, Jr., MD, Professor of Family and Community Medicine, DFCM, Director, Clinical Clerkship and Sub-Internships

James Plumb, MD, MPH, Professor, DFCM, Director, Center for Urban Health, Course Director, Community Medicine

Christine Hsieh, MD, Assistant Professor, DFCM, Associate Director of the Eastern Pennsylvania and Delaware Geriatric Education Center (EPaD GEC), Course Director, Geriatric Sub-Internship

Lara Weinstein, MD, Assistant Professor, DFCM, Course Director, Homeless Care Continuum

Rajwender Deu, MD, Instructor, DFCM, Course Director, Sports Medicine

Christina Hillson, MD, Instructor, DFMC, Course Director, Family Centered Obstetrics

Randa Sifri, MD, Associate Professor, DFCM, Director, Research Development, Course Director, Family Medicine Research

Susan Parks, MD, Associate Professor, DFCM, Director, Division of Geriatric Medicine and Palliative Care

Education Coordinator
Lisa Michaluk

Clinical Curriculum

FAMED. 350  Clinical Clerkship (Dr. Markham)
Credits 7.  1st through 8th Teaching Blocks.
Students focus on the diagnosis and management of acute and chronic problems in the outpatient setting; health maintenance, preventive medicine, psychosocial and life stage contexts, time management, and cost effective delivery of care.

Location:
01 Thomas Jefferson University Hospital
04 Bryn Mawr
05 Christiana Care Medical Center
08 Excela Health Latrobe Hospital
21 Crozer Keystone
23 Underwood
30 Virtua
39 Reading
43 York
44 Abington

FAMED. 351 Written Examination
Credits 2.

FAMED. 401 Outpatient Subinternship (Dr. Markham)
Credits 6. 10th through 21st Teaching Blocks.

Students are given progressive responsibility, with supervision, for outpatient care. For the senior taking the preceptorship early in the academic year, emphasis is on developing skill in formulating an assessment and plan. For the advanced senior student, further teaching emphasis is on patient management and acute care. Students will enhance interpersonal skills in interview technique, understanding of the dynamics of the physician-patient relationship; and the reaction towards illness of physicians, patients, and the family. Students will develop primary care diagnostic, and psychosocial skills, promoting a positive transition to the intern year. Students will self-identify specific educational objectives for the rotation. Examples include honing physical exam skills, improving interview skills, improving time management skills, learning about practice planning and financial management.

Location:
01 Thomas Jefferson University Hospital
05 Christiana Care Medical Center
08 Latrobe
Preceptorship sites (designated by the Department)
23 Underwood
Other Affiliates by Arrangement

FAMED. 402 Inpatient Subinternship (Dr. Markham)
Credits 6. 10th through 21st Teaching Blocks.
Students encounter the diverse range of medical conditions and complex multiple diagnoses typical of hospitalized patients and learn comprehensive patient management for hospitalized patients. The inpatient subinternship student in Family Medicine assumes a high level of responsibility for patient management. The student pre-rounds on his or her patients in the morning, checks labs, and writes orders. The student presents succinctly to the faculty preceptor the diagnosis, assessment, and treatment plan; and is the primary point of care for the patient throughout their hospitalization. Medical, social, economic and psychological factors are addressed. Students participate in family meetings, including end-of-life and other complex decision-making processes. The student communicates with the patients’ ambulatory physician, interacts with consultants, and arranges all necessary follow-up and aftercare.

Location:
01 Thomas Jefferson University Hospital
Other Affiliates By Arrangement

FAMED. 403 Indian Health Service (Dr. Markham)
Credits 6. 10th through 21st Teaching Blocks.
Enrollment: By arrangement.

Students may go to any of the Indian Health Service sites (a division of the US Department of Health and Human Services). IHS sites provide care exclusively for native Americans. At IHS sites students take on considerable responsibility for patient care, and challenge themselves both medically and personally.

FAMED. 404 General Elective in Family Medicine away/abroad (Dr. Markham)
Credits 6. 10th through 21st Teaching Blocks.
Enrollment: By arrangement.

Students may choose to take a four-week elective at another residency program, or go abroad. Students are expected to generate their own educational goals and objectives in advance.

FAMED. 405 Palliative Care (Beth Wagner, CRNP)
Credits 6. 10th through 21st Teaching Blocks.

The student functions as a full-member of the Palliative Care team and rounds with the team on a daily basis. Responsibilities include seeing and evaluating patients, writing consultative notes, presenting to the Palliative Care team and communicating with the primary team about palliative care recommendations.
Students also:
1. have the opportunity to spend time at an inpatient hospice.
2. participate in weekly palliative care conferences.
3. receive small group interactive discussions on Palliative Care topics twice a week. Drs. Axelrod, Arenson and Parks and NP Reville will lead the discussions.
4. be expected to present a case report during the Palliative Care conference at the end of the rotation.
5. have an opportunity to participate in ongoing research projects or start their own research project.

Location:
01 Thomas Jefferson University Hospital

FAMED 406 Geriatric Subinternship (fulfills the outpatient subinternship requirement) (Dr. Hsieh)
Credits 6. Teaching Blocks 10 through 21

Students are given responsibility for care of geriatric patients in a variety of settings including academic and community-based primary care geriatric practices, home visits, palliative care and geriatric consultation, geriatric assessment, and rehabilitation and long-term care settings. Students participate in weekly didactic and case-based geriatric conferences and clinical team meetings. Students develop primary care/geriatric diagnostic, and psychosocial skills, promoting a positive transition to the intern year. Students self-identify specific educational objectives for the rotation such as balancing priorities for patients with multiple chronic conditions, and providing patient- and family-centered care for older adults.

Location:
01 Thomas Jefferson University Hospital

FAMED 407 Community Medicine (Dr. Plumb)
Credits 6. Teaching Blocks 10 through 21

Students spend each day with Office to Advance Population Health staff. Responsibilities include attending and participating in community-based health education programs (including Diabetes Self Management, Weight Management, Asthma, Nutrition and Breast Health), screenings (including stroke, diabetes, blood pressure and cholesterol) and staff meetings. The student functions as a full member of the Office Staff.

Students also:
1. Participate in weekly clinic and health education sessions at St. Elizabeth’s Primary Care Center at 23rd and Berks.
2. Attend community and coalition meetings.
3. Learn to access and utilize health data sets through computer based instruction.
4. Analyze a community health problem using a planning model.
5. Assist in grant writing.
6. Assist in identifying funding opportunities.
7. Participate in on-going research projects.
8. Attend weekly educational sessions on principles and practice of community medicine.

Location:
01 Thomas Jefferson University Hospital

**FAMED. 408 Faith-Based Community Medicine**  (Dr. Plumb)
Credits 6. 10th through 21st Teaching Blocks.

Responsibilities include attending and participating in community health education church-based programs and screenings on Diabetes, Heart Disease & Hypertension/Stroke, Asthma, and Nutrition. Students participate in weekly clinic and health education sessions as scheduled, attend community and collaborative meetings, and learn to access and utilize health data sets through computer based instruction.

Students also:
1. Analyze a community health problem using a planning model.
2. Analyze a community health problem using literature review, data analysis and survey/focus group data using the PRECEDE-PROCEED Planning Model.
3. Describe a potential intervention to address the identified problem that integrates theory.

Location:
01 Thomas Jefferson University Hospital

**FAMED. 409 Homeless Care Continuum**  (Dr. Weinstein)
Credits 6. 10th through 21st Teaching Blocks.

Students spend time each week with the Project HOME Outreach Team; participate in weekly clinic and health education sessions at St. Elizabeth’s Primary Care Center at 23rd and Berks which serves former homeless men, women and children; attend community and coalition meetings related to homeless care, prevention and public policy; and aid homeless patients in transitions from TJUH ED and hospital-based care to community settings in an effort to break the cycle of homelessness.
Students also:
1. Participate in weekly Jeff HOPE clinics.
2. Assist in identifying funding opportunities.
3. Participate in on-going research projects.
4. Attend weekly educational sessions on principles and practice of community medicine.

Location:
01 Thomas Jefferson University Hospital

FAMED. 410 Approaches to Obesity Prevention and Control
(Dr. Plumb)
Credits 6. 10th through 21st Teaching Blocks.
Enrollment: By arrangement.

Students spend each day with Office to Advance Population Health staff involved in the Clinic Community Intervention Program (CCIP), as part of Jefferson’s Center for Excellence in Obesity Research. Responsibilities include attending and participating in Lifestyle Counseling efforts and community-based health education programs and staff meeting, functioning as a full-member of the CCIP Staff.

Students also:
1. Participate in the implementation of the We-Can program in local churches.
2. Participate in weekly clinic and health education sessions at St. Elizabeth’s Primary Care Center at 23rd and Berks.
3. Attend CODA (Childhood Origins of Diseases of Adults) meeting(s).
4. Attend community and coalition meetings, including the Action Teams of the Philadelphia Urban Food and Fitness Alliance (PUF FA) related to Food Systems/Local Access, Nutrition, and the Built Environment.
5. Learn to access and utilize health data sets through computer based instruction.
6. Participate in the implementation of a Built Environment plan in a Philadelphia neighborhood.
7. Assist in grant writing.
8. Assist in identifying funding opportunities.
9. Participate in on-going research projects.
10. Attend weekly educational sessions on principles and practice of community medicine.

Location:
01 Thomas Jefferson University Hospital
FAMED. 412  **Sports Medicine**  (Dr. Deu)
Credits 6.  10th, 11th and 16th Teaching Blocks.

Students assist in the diagnosis and management of common sports and musculoskeletal problems in an outpatient setting; provide direct patient care with sports medicine faculty supervision in outpatient settings both in the Family Practice Center at 833 Chestnut Street and at Rothman Institute Center City, South Philadelphia, King of Prussia, and other locations. Students conduct pre-participation sports physicals; attend high school, college, or professional events as they may be scheduled; perform joint injections; and attend a weekly sports medicine conference.

**Location:**
01  Thomas Jefferson University Hospital

FAMED. 413  **Family Practice Obstetrics**  (Dr. Hillson)
Credits 6.  12th through 21st Teaching Blocks.

Students see pre-natal and post-partum patients with the supervision of designated Family Medicine Obstetrics faculty using the standard precepting model, take call, assist and observe in gynecology surgeries, assist and observe colposcopies, assist and observe in deliveries, and attend morning report, grand rounds, and resident conferences as they occur (when not on call or participating in deliveries).

**Location:**
01  Thomas Jefferson University Hospital

FAMED 425  **Research in Family Medicine**  (Dr. Sifri)
Credits 6.  10th through 21st Teaching Blocks.

This elective rotation will provide the student with a concentrated research experience within this specialty discipline. The specific research project and tasks will be agreed upon by the student and faculty research mentor, and approved by the course director listed above. For this approval, the student must submit in writing to the course director a description of the proposed project, a list of goals for the month, and the name of the faculty mentor prior to scheduling this elective.

Specific learning objectives for this rotation include the demonstration of:

1. A commitment to professionalism, specifically demonstrated by honesty and integrity in this scientific pursuit.
2. An understanding of the need to engage in lifelong learning.
3. An understanding of the power of the scientific method in establishing the causes of disease, the power of diagnostic testing and
the efficacies of traditional and non-traditional treatments.
4. Knowledge of the process and value of research in the basic and clinical sciences.
5. The ability to critically evaluate the medical literature and to seek opportunities to expand understanding and appreciation of scientific discoveries and their applications.
6. The ability to document research findings using appropriate scientific conventions.

Two students check out the old time medical instruments in the Eakins Lounge.
Medicine

Chairman
Gregory C. Kane, MD, Interim Chairman, Vice Chairman for Education, Professor of Medicine

Vice Chairmen
Howard H. Weitz, MD, Division Director, Cardiology, Professor of Medicine, Senior Vice Chairman for Academic Affairs

Program Director, Internal Medicine Residency
Gretchen Diemer, MD

Course Directors
Jessica Salt, MD, Clerkship Director
Emily Stewart, MD, Sub-Internship and Gateway to Internship Director
Lim Wong, MD, Director, Fourth Year Medicine
Dale Berg, MD, Course Director, Advanced Physical Diagnosis
Joseph Majdan, MD, Director, Clinical Skills Elective, Professional Development, Rector Clinical Skill Center
Albert Lee, MD, Course Director, Outpatient Sub-Internships
Linda Gallagher, RD, MA, Course Director, Clinical Nutrition
Paul Bray, MD, Course Director, Hematology
Joanne Filicko, MD, Course Director Hematologic Malignancies/Bone Marrow Transplant & Medical Oncology
Rakesh Gulati, MD, Course Director, Nephrology and Hypertension
David Wiener, MD, Course Director, Cardiology Heart Station, Cardiology Acute Care, Clinical Cardiology
Matthew DeCaro, MD, Course Director, Coronary Care Unit
Mani Kavuru, MD, Course Director, Pulmonary Medicine & Critical Care Medicine
Salvatore Mangione, MD, Course Directors, Clinical Skills/Physical Diagnosis
Joseph DeSimone, MD, Course Director, Infectious Diseases
Steven Herrine, MD, Course Director, Hepatology and Foundations of Clinical Medicine
Robert Coben, MD, *Course Director, Gastroenterology and Hepatology*

Nina Mingioni, MD, *Course Director, Geriatric Medicine (Einstein)*

Oscar Irigoyen, MD, *Course Director, Rheumatology*

Erin Ney, MD, *Course Director, Women’s Health*

Serge Jabbour, MD, *Course Director, Endocrinology*

Tung Chan, PhD, *Director, Research Elective*

**Division Directors**

Howard Weitz, MD, *Cardiology*

Mani Kavuru, MD, *Pulmonary/Critical Care*

Serge Jabbour, MD, *Endocrinology*

Anthony J. DiMarino, MD, *Gastroenterology/Hepatology*

Paul Bray, MD, *Hematology*

Kathleen Squires, MD, *Infectious Disease*

Barry Ziring, MD, *Internal Medicine*

Rakesh Gulati, MD, *Nephrology (Acting)*

Oscar Irigoyen, MD, *Rheumatology*

**Education Coordinator**

Stacey Lee Mullen

**Clinical Curriculum**

**MED. 350 Clinical Clerkships and Outpatient Clinics**  
(Dr. Salt and Faculty)  
Credits 14. 10th through 21st Teaching Blocks.

For a full description, please see the Educational Program section of this catalog.

**MED. 401 Inpatient Subinternship**  
(Dr. Stewart and Faculty)  
Credits 6. 10th through 21st Teaching Blocks.

The Internal Medicine Senior Inpatient Subinternship is the advanced experience for the acquisition of knowledge, skills, attitudes and behaviors necessary to care for adult patients in the hospital environment. These attributes, gained over the four weeks of this rotation, are important aspects of the skills of physicians in all disciplines of Medicine. Clinical students serve as subinterns and, as such, have responsibilities for patient evaluation and management. They participate in night and weekend duties but have regular college vacations and holidays.
The approach to the diagnosis and treatment of assigned patients is determined and outlined by the subinterns, and the plan is implemented after discussion with and approval by supervising physicians. The problem-oriented approach to patient illness is emphasized and the various problems defined by the student are reviewed, analyzed, and discussed in depth. Problems may be social and economical as well as biological. The pertinence of the current medical literature is emphasized, and its use is encouraged as a source for continuing self-education for improved patient care.

**Location:**

- 01 Thomas Jefferson University Hospital  
  Maximum 14
- 07 Lankenau Hospital  
  Maximum 6
- 10 Methodist Hospital  
  Maximum 2
- 15 Christiana Care Health Services-Christiana Hospital  
  Maximum 2
- 22 Wilmington V.A. Medical Center  
  Maximum 4
- 38 Albert Einstein Medical Center  
  Maximum 6
- 39 Reading Hospital & Medical Center
- 43 York Hospital

**MED. 402 Outpatient Subinternship** (Dr. Lee and Faculty)

Credits 6. 10th through 21st Teaching Blocks.

Clinical students function as a first-year house officer, assisting in the diagnosis and management of problems, presenting to the outpatient general medical services. The student will receive special instructions in sharpening skills of history taking and physical diagnosis as well as interpretation of x-ray and laboratory data. Emphasis is directed toward comprehensive patient care in the Internal Medicine setting. MED 402 is scheduled by arrangement only. There are approximately nine physician offices available (at Jefferson and affiliates) providing 21 spots per block. The following group is most frequently requested:

Jefferson Internal Medicine Associates (JIMA): The goal of this outpatient subinternship is to expose fourth-year medical students to the principles of outpatient medicine in the Division of Internal Medicine’s ambulatory care practice. Students will be assigned to a division member and participate in office hours both morning and afternoon in the 833 chestnut Street. A syllabus and didactic lectures will be provided.
Location:
01 Thomas Jefferson University Hospital and Affiliates

MED. 411 Clinical Nutrition (L. Gallagher, RD, MA)
Credits 6. 13th, 14th, 17th, 18th and 20th Teaching Blocks.

This elective provides the student with a variety of experiences focusing on the medical nutrition management of patients in the hospital and outpatient settings. The student will learn techniques to assess nutritional needs, calculate nutritional requirements, and write nutritional prescriptions, including for those patients receiving tube feedings and/or total parenteral nutrition. In addition, the student will perform initial assessments and follow patients, participate in nutrition counseling sessions with patients, attend rounds and related conferences.

Location:
01 Thomas Jefferson University Hospital
Linda Gallagher, RD, MA—by arrangement

MED. 421 General Ambulatory Medicine
Same as MED. 402, but offered as a four week elective.

Location:
Nonaffiliate only: By arrangement.

MED. 426 Research (Dr. Chan and Faculty)
Credits 6. All Teaching Blocks.
Enrollment: By arrangement.

MED. 431 Hematology (Dr. Bray)
Credits 6. 10th through 21st Teaching Blocks.

In this externship, students work closely with the attending hematologist, fellows, and residents in the diagnosis and management of patients with hematologic diseases. Students make daily rounds, attend one morphology conference, and hematology grand rounds each week. Students may elect to spend time in the outpatient office. In addition, students are exposed to clinical laboratory techniques through the Cardeza Foundation Special Hematology and Hemostasis Laboratories.

Location:
01 Thomas Jefferson University Hospital
Maximum 2
15 Christiana Care Health Services-Christiana Hospital
Maximum 1

MED. 433 Hematologic Malignancies/Bone Marrow Transplant (Dr. Filicko and Faculty)
Credits 6. 10th through 21st Teaching Blocks.
Medical students will be exposed to topics in the related fields of hematopoietic progenitor cell transplant and hematologic malignancies. In most cases, the rotation will be divided in half. The students will spend two weeks in the Blood and Marrow Transplant unit (BMTU) and two weeks with the hematologic malignancy service (HMS) on the regular hospital floor. In the BMTU, students will follow inpatients with residents and attending physicians. These will include patients with a wide variety of hematologic malignancies and focus primarily on those undergoing autologous or allogeneic transplants. Discussions on rounds will be based primarily on patient encounters. Students will be expected to read the appropriate literature in reference to BMT and hematologic malignancies and to contribute to discussions on rounds.

On the HMS, students will work with the hematology/oncology fellow and the attending. They will see consults, care for patients admitted for elective chemotherapy and interact with the Blue Medicine team. For students who have already spent a month rounding on the Blue Medicine team as part of the third or fourth year, there is an option to spend all four weeks in the BMTU. Students are welcome to see patients in the outpatient BMT practice as well, and to observe new patient consultations. Students are invited to attend weekly management conferences attended by the BMT team including physicians, nursing staff, social work and pharmacy.

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**MED. 441 Nephrology and Hypertension** (Dr. Gulati)

Credits 6. 10th through 21st Teaching Blocks.

In this externship, students work with patients with diseases of the kidney, including hypertension, and gain experience in diagnostic techniques, dialysis and renal transplantation through rounds, conferences, and seminars.
Location:
01 Thomas Jefferson University Hospital
  Maximum 2
07 Lankenau Hospital
  Maximum 2
10 Methodist Hospital
  Maximum 2
15 Christiana Care Health Services-Christiana Hospital
  Maximum 1
22 Wilmington V.A. Medical Center
  Maximum 2
38 Albert Einstein Medical Center
  Maximum 2
43 York Hospital
  Maximum 2

MED. 451  Cardiology—Heart Station
           (Dr. Wiener and Faculty)
Credits 6. 10th through 21st Teaching Blocks.
During this elective, students have the opportunity to learn how to interpret electrocardiograms under the direct supervision of Dr. Chung, assisted by a cardiology fellow assigned to the heart station. Thus, the students will be expected not only to learn ECG interpretation, but also to understand the electrophysiologic mechanisms of various electrocardiographic abnormalities in conjunction with clinical correlations. The in-depth study of the electrocardiographic analysis with clinical applications will expose students to common cardiology problems. Students are expected to attend daily conferences within the division.

Location:
Nonaffiliate only

MED. 455  Cardiology—Acute Care CCU/ICCU  (Dr. Wiener)
Credits 6. 10th through 21st Teaching Blocks.
The medical student is assigned to these units and makes daily rounds with the house staff and the attending cardiologist for any given month. The student is exposed to the basics of arrhythmia monitoring, arrhythmia therapy, and hemodynamic monitoring, and will attend all invasive procedures on patients when these are performed in the CCU catheterization laboratory. The student is not expected to work up or directly manage these patients, but is present during the initial workup by the assigned intern and participates daily in the management conferences of the division.
Location:
Nonaffiliate only

**MED. 457  Clinical Cardiology**  (Dr. Wiener)
Credits 6.  10th through 21st Teaching Blocks.

This elective is designed to acquaint the student with the basics of diagnosis and management of a wide variety of cardiovascular problems. The student is expected to work up all new admissions and follow them through the hospital course. The student is expected to make daily rounds with the cardiac fellow assigned to this service and with Dr. Wiener, and present new work-ups at this time and review the progress of those patients already on the service. The student is expected to review catheterization films with appropriate faculty and fellows. The student attends daily conferences in the section.

It is possible that the student may be assigned, as well, to the patients of other members of the division, depending upon the case load and whether medical house officers also are electing this rotation. In any event, the same type of bedside, individual teaching will be adhered to.

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**MED. 458  Coronary Care Unit**  (Dr. DeCaro)
Credits 6.  10th through 21st Teaching Blocks.

This course is an experience in diagnosis and management of patients with acute cardiac events. Students are exposed to patients, ECG, echocardiography, cardiac catheterization, invasive monitoring, and rounds with resident team and teaching attendings.
Students work up four or five patients each week in CCU and follow up, including admitting history and physical examination; order (with appropriate countersignature); and with supervision, perform selected procedures.

Students are provided the opportunity to learn to recognize and manage acute cardiac problems from presentation to discharge.

**Location:**
- 01 Thomas Jefferson University Hospital
  Maximum 1
- 03 Albert Einstein
  Maximum 1

**MED. 467 Pulmonary** (Dr. Kavuru and Faculty)
Credits 6. 10th through 21st Teaching Blocks.
This externship provides clinical experience with patients with pulmonary diseases, including tests of pulmonary function and other diagnostic techniques through rounds, conferences, and seminars.

**Location:**
- 01 Thomas Jefferson University Hospital
  Maximum 2
- 07 Lankenau Hospital
  Maximum 1
- 10 Methodist Hospital
  Maximum 2
- 15 Christiana Care Health Services-Christiana Hospital
  Maximum 1
- 22 Wilmington V. A. Medical Center
  Maximum 1
- 38 Albert Einstein Medical Center
  Maximum 2
- 43 York Hospital
  Maximum 1

**MED. 469 Critical Care Medicine** (Dr. Kavuru and Faculty)
Credits 6. 10th through 21st Teaching Blocks.
This externship emphasizes the care of patients with respiratory failure and its complications. Included are daily rounds with radiology review and discussion of equipment, multidiscipline approach to acute care, and special problems of patient multisystem failure.

**Location:**
- 01 Thomas Jefferson University Hospital
  Maximum 1
This elective is designed to provide the student with experience in the consultative practice of Infectious Diseases. This includes the diagnosis and management of a variety of clinical problems, correlation with the medical literature, appropriate use and interpretation of microbiologic and other diagnostic studies, and antibiotic prescribing. Daily rounds with the Infectious Diseases fellow and attending consist of presentation and discussion of new cases, follow-up of service patients, and bedside teaching. The student is expected to attend weekly conferences within the division. In addition, students are provided with special teaching sessions conducted by fellows and attendings in which core material in Infectious Diseases is reviewed.

Location:

01 Thomas Jefferson University Hospital
   Maximum 2

07 Lankenau Hospital
   Maximum 1

15 Christiana Care Health Services-Christiana Hospital
   Maximum 1

38 Albert Einstein Medical Center
   Maximum 2

39 Reading Hospital
   Maximum 1

MED. 474 Advanced Physical Diagnosis (Dr. Berg)
Credits 6. 12th, 15th, and 17th Teaching Blocks Only.

Physical examination is a powerful but underutilized set of tools to assist primary care physicians in giving quality and efficient patient-centered health care. Advanced Physical Diagnosis is a month-long course which consists of a set of sessions designed to teach the basic and advanced techniques, outcomes and interpretation used in physical examination. Topics include: HEENT, musculoskeletal, eye, skin, abdomen, cardiovascular, pulmonary, male and female genitourinary and neurological examinations will be covered in depth. The topics will
be discussed in a symptom or problem-based format with emphasis on what basic and advanced physical examination techniques may be performed to most effectively and efficiently evaluate these specific complaints and assist the clinician in diagnosis. There will be ample opportunity to utilize and refine these psychomotor skills by practicing on standardized patients and patient-equivalents and via physical diagnosis finding rounds. A critical review of literature and concepts of predictive values in using these techniques will be discussed.

Location:
01 Thomas Jefferson University Hospital
Maximum 20

MED. 475 Clinical Skills Elective (Dr. Majdan)
Credits 6. Block 13 only
By arrangement only

Location:
01 Thomas Jefferson University Hospital

MED. 478 Hepatology (Dr. Herrine)
Credits 6. 10th through 21st Teaching Blocks.

Students are involved in the care of patients with a wide variety of liver disorders including viral hepatitis, alcoholic liver disease, cholestatic liver diseases and metabolic liver diseases. By participating in daily hospital rounds on the busy hepatology service, students will be exposed to the diagnosis and management of chronic liver disease and liver transplantation. Students will also attend out patient clinics and conferences dealing with transplantation evaluation and listing, immunosuppression, interpretation of liver biopsies and management of non-transplantation aspects of hepatology.

Location:
01 Thomas Jefferson University Hospital
Maximum 2
38 Albert Einstein Medical Center
Maximum 2

MED. 479 Gastroenterology and Hepatology (Dr. Coben)
Credits 6. 10th through 21st Teaching Blocks.

This externship provides clinical experience with patients with diseases of the gastrointestinal tract and liver, including indications for endoscopic and other diagnostic procedures and observer participation in these procedures. Students will participate in rounds, conferences, and seminars.
Location:

01 Thomas Jefferson University Hospital
  Maximum 3
07 Lankenau Hospital
  Maximum 2
10 Methodist Hospital
  Maximum 2
15 Christiana Care Health Services-Christiana Hospital
  Maximum 1
22 Wilmington V. A. Medical Center
  Maximum 2
38 Albert Einstein Medical Center
  Maximum 2

MED. 481  **Geriatric Medicine**  (Dr. Mingioni)
Credits 6. 10th through 21st Teaching Blocks.

Students are exposed to geriatric practices at multiple sites, including inpatient, primary care, consultation service, ambulatory practices, nursing homes, hospices and home care. Students also participate in weekly geriatrics seminars and general medicine conferences. Topics focus on chronic illnesses, functional disability and long-term care.

Location:

38 Albert Einstein Medical Center
  Maximum 2

MED. 488  **Introduction to Medicine-Pediatrics**  (Dr. Friedland)
Credits 6. 10th through 21st Teaching Blocks.

The student will gain an appreciation of the breadth and scope of combined medicine-pediatrics practice. Emphasis will be placed on the development of skills required to address the primary care problems that affect adults and children. Students rotate through inpatient services in pediatrics and internal medicine, spending two weeks in each. Students also attend the medicine-pediatrics outpatient clinic one half day per week and are encouraged to follow up on patients discharged from their inpatient service. Formal didactic conferences include morning report, noon lectures and grand rounds. Students are closely supervised by full-time faculty during the inpatient and outpatient components of the rotation.

Location:

Christiana Care Health Services-Christiana Hospital
by arrangement with Dr. Friedland-Christiana—maximum 1
10th, 11th, 12th, 13th, 18th, 19th, 20th, 21st Blocks only.
**MED. 489  Rheumatology** (Dr. Irigoyen and Faculty)
Credits 6. 10th through 21st Teaching Blocks.

This externship provides clinical, laboratory, and radiologic study of patients with musculoskeletal-articular disorders or diseases. There is evaluation, treatment, and follow-up of inpatients and outpatients under the guidance of rheumatology fellows and attending staff. Literature reviews and seminars complement the clinical program.

*Location:*

01 Thomas Jefferson University Hospital
Maximum 2

07 Lankenau Hospital
Maximum 1

15 Christiana Care Health Services-Christiana Hospital
Maximum 1

22 Wilmington V. A. Medical Center
Maximum 1

39 Reading Hospital
Maximum 1

43 York Hospital
Maximum 1

**MED. 490  Women’s Health** (Dr. Ney)
Credits 6. For 2009-2010: Not offered in Blocks 10, 14, 15, or 16.

The Women’s Health Elective allows the student to experience providing health care for women from a multi-disciplinary approach. The student spends time with surgery and radiation oncology reviewing breast cancer; obstetrics and gynecology learning the basics of the pelvic exam, infertility and contraception issues; maternal fetal medicine reviewing medical disorders during pregnancy; rheumatology reviewing osteoporosis; internal medicine to review primary care and preventative health care issues in women; and visit an inpatient facility for patients with eating disorders.

There is a weekly journal club session to review current women’s health care topics in the current literature.

*Location:*

01 Thomas Jefferson University Hospital
Maximum 1 student per block

**MED. 491  Endocrinology** (Dr. Ahmed and Faculty)
Credits 6. 10th through 21st Teaching Blocks.
This externship includes patient work-up and daily rounds with fellows, residents, and staff. This course is designed to acquaint the student with basic clinical material on diabetes, endocrinology, and metabolism. The focus is on the outpatient setting with additional material covered in weekly clinical and didactic conferences.

**Location:**
01 Thomas Jefferson University Hospital  
Maximum 2
10 Methodist Hospital  
Maximum 1
15 Christiana Care Health Services-Christiana Hospital  
Maximum 1
43 York Hospital  
Maximum 1

**MED. 495 Clinical Oncology** (Dr. Filicko and Faculty)
Credits 6. 10th through 21st Teaching Blocks.

The goal of this elective is to introduce the student to the outpatient evaluation of ambulatory cancer patients. Examples of tumors that the student will have an opportunity to evaluate include melanoma, lymphoma, colorectal cancers, and breast cancer. Selected reading will be recommended based on the clinical material.

**Location:**
01 Thomas Jefferson University Hospital  
Maximum 2, 11th to 21st Blocks only.
15 Christiana Care Health Services-Christiana Hospital  
Maximum 1
39 Reading Hospital  
Maximum 1

**MED. 498 Preceptorship** (Dr. Salt)

Preceptorships in focused areas of study are available upon arrangement with individual faculty members. Examples of these electives would include Aerospace Medicine, Clinical Research with a member of the Department of Medicine, or basic laboratory research with a member of the Department.

**Location:**
Nonaffiliate only
MED. 499  **Gateway to Internship**  
Credits: 6  
18th Teaching Block  
Maximum 60  
Enrollment: By lottery.

The Goal of the Gateway course is to provide fourth year medical students with the tools necessary to make the transition from medical school to internship and residency regardless of their future specialty. This course will be offered Block 18 only and will be filled on a LOTTERY basis. During this month long course students will be exposed to didactic sessions covering core management topics and then use this information in simulated patient settings and small group Evidence Based Medicine discussions. They will learn the art of signout and crosscovering while managing the stresses of multitasking as an intern. They will demonstrate their newly acquired skills with simulation and standardized patient encounters. Students will also acquire skills on health literacy, transitions of care and end of life/death issues. Additionally, sessions and activities on how to manage stress/anger, maintaining personal health and nutrition and work/life balance during residency will be included. The course is primarily interactive and will have a medicine track (IM, preliminary year interns), a surgery track (general surgery, surgical subspecialties and obstetrics/gynecology) and a Pediatric/EM/FM track (including Peds, EM and FM).

![Image of students in white coats](image-url)  
*The JMC Alumni Association provides students with their white coats, which they receive during orientation.*
Microbiology and Immunology

Chairman
Tim L. Manser, PhD, Professor of Microbiology and Immunology, Chairman of the Department

Program Directors
David Abraham, PhD, Professor of Microbiology and Immunology and Course Coordinator for MICRO 201, Infection, Immunity and Disease

Arthur M. Buchberg, PhD, Associate Professor of Microbiology and Immunology and Genetics Graduate Program Director

Jay Rothstein, PhD, Associate Professor of Otolaryngology and Associate Professor of Microbiology and Immunology and Immunology and Microbial Pathogenesis Graduate Program Director

Laurence C. Eisenlohr, VMD, PhD, Professor of Microbiology and Immunology and Microbiology and codirector of the JMC/CGS MD/PhD Program

Core Curriculum

MICRO. 201  Infection, Immunity and Disease  
(Dr. Abraham and Faculty)

Credits 12. First Teaching Block. Second year.

For a full description, please see the Educational Program section of this catalog.

Clinical Curriculum

MICRO. 425  Research Elective in Microbiology  
(Dr. Abraham and Staff)

Credits 6. Enrollment: Minimum 1

Individual short-term projects are arranged for students interested in Immunology or Microbiology. This course is offered only after prior consultation with the appropriate staff.
Molecular Physiology & Biophysics

Chairperson
Marion J. Siegman, PhD, Professor of Physiology

Vice Chairperson
Thomas M. Butler, PhD, Professor of Physiology

Clinical Curriculum

PHYSI. 405 Physiologic Research (Staff)
Credits 6. 10th through 20th Teaching Blocks.
Enrollment: Open.

This course involves participation in ongoing projects within the Department as well as those in other Departments at Jefferson that are approved by us. Within the Department projects include smooth muscle activation, regulation and energetics, molecular biology of ion channels and exocytosis, and signal transduction mechanisms: role of G-proteins and phosphatases. Research projects performed in other departments require an approved research proposal that includes rationale, specific aims, and experimental design. Upon completion of the course a written paper is required which may also be a manuscript suitable for publication.

Since each student that takes this course is enrolled in an individual laboratory, there is no minimum or maximum necessary.

Approved Advanced Basic Science Rotation.
Neurology

Chairman
A.M. Rostami, MD, PhD, Chair and Professor, Department of Neurology

Vice Chairman
Rodney Bell, MD, Professor of Neurology and Vice Chairman for Hospital Affairs

Michael Sperling, MD, Professor of Neurology and Vice Chair for Outpatient Services

Directors
Christopher Skidmore, MD, Assistant Professor of Neurology and Director of Residency Education

George Brainard, PhD, Professor of Neurology and Course Coordinator, First Year Neuroscience: Neurology

Daniel Kremens, MD, Assistant Professor of Neurology and Course Coordinator, Medical Student Education: Neurology Clerkship

Scott Mintzer, MD, Associate Professor of Neurology and Course Coordinator, Second Year Foundations of Clinical Medicine: Neurology

Education Coordinators
Jody Volpe, MBA, Graduate Medical Education Coordinator

Deborah Salvatore, Undergraduate Medical Education Coordinator

Clinical Curriculum

NEUR. 401 Neurology
(Dr. Kremens)
Credits 6. 10th through 21st Teaching Blocks.

A clinical clerkship on the wards at Thomas Jefferson University Hospital or affiliated hospitals is offered for each four-week block. During this period, the student acts as extern under the supervision of resident house officers and attending neurologists. Students must have completed IDPT400 Neurology/Rehab course before being allowed to take this elective. Department approval is also required.

Location:
01 Thomas Jefferson University Hospital
Maximum 2
NEUR. 425  Research Elective  (Dr. Oshinsky)

This elective rotation will provide the student with a concentrated research experience within this specialty discipline. The specific research project and tasks will be agreed upon by the student and faculty research mentor, and approved by the course director listed above. For this approval, the student must submit in writing to the course director a description of the proposed project, a list of goals for the month, and the name of the faculty mentor prior to scheduling this elective.
Neurological Surgery

Chairman
Robert H. Rosenwasser, MD, FACS, FAHA, The Jewell L. Osterholm Professor and Chair Department of Neurological Surgery, Professor of Radiology

Division Directors
David W. Andrews, MD, FACS, Professor of Neurological Surgery, Vice Chairman for Clinical Services and Director of the Division of Neuro-Oncologic Neurosurgery and Stereotactic Radiosurgery

Ashwini D. Sharan, MD, FACS, Associate Professor of Neurological Surgery and Neurology, Director of the Division of Functional Neurosurgery

James S. Harrop, MD, FACS, Associate Professor of Neurological and Orthopedic Surgery, Director of Division of Spine and Peripheral Nerve Disorders

Aaron S. Dumont, MD, FACS, Associate Professor of Neurological Surgery, Director of the Division of Neurovascular Surgery and Endovascular Neurosurgery

Jack Jallo, MD, PhD, FACS, Professor of Neurological Surgery, Director of the Division of Neuro-Trauma and Critical Care

Education Coordinator
Janice Longo

Clinical Curriculum
NSRG. 401 Clinical Clerkship in Neurosurgery (Drs. Rosenwasser, Tjoumakaris and staff) Credits 6. 10th through 21st Teaching Blocks.

Students participate in the inpatient service activities as well as outpatient sessions. They are responsible for history taking and physical examinations. Special emphasis is placed upon the neurological examination. The student participates in diagnostic studies and their interpretation, as well as rounds, conferences, and operative procedures. Individual students may elect to attain specific knowledge goals within this field, and a faculty member is assigned in consultation. The student will have scheduled meetings with the clerkship director reviewing the basics of the neurological examination as it pertains to the field of Neurological Surgery. Upon topic review with Dr. Tjoumakaris, students will review a topic and write a brief presentation following evidence based data research. Students will attend office hours once
or twice a week, with attendings from the different Neurosurgery divisions.

Location:
01 Thomas Jefferson University Hospital
Minimum 3, Maximum 20.

NSRG. 403  Research Elective in Neurosurgery  
(Drs. Rosenwasser, Tjoumakaris and staff)  
Credits 6. 10th through 21st Teaching Blocks.  
Enrollment: Maximum 2

Individual short-term projects are arranged for students interested in transmitter biochemistry, electrophysiology, bioengineering, spinal cord injury, cerebrovascular disease, molecular genetics, neurooncology, or brain tumor research. This course is offered only after prior consultation with the appropriate staff. Students can contact Dr. Tjoumakaris to discuss and propose research projects within the field of Neurosurgery.

Students at the release party for the Jefferson literary/arts magazine, one of the many extracurricular activities available to students.
Obstetrics and Gynecology

Chairman
William Schlaff, MD, Paul A. and Eloise B. Bowers Professor and Chair of the Department

Vice Chairman
Thomas A. Klein, MD, Clinical Professor of Obstetrics and Gynecology

Division Directors
Vincenzo Berghella, MD, Professor of Obstetrics and Gynecology, Director of the Division of Maternal Fetal Medicine

Gregory T. Fossum, MD, Associate Professor of Obstetrics and Gynecology, Director of the Division of Reproductive Endocrinology and Infertility

Jay Goldberg, MD, Associate Professor of Obstetrics and Gynecology, Director of the General Obstetrics and Gynecology

Kristen McCullen, MD, Instruction of Obstetrics and Gynecology, Assistant Program Director

Joseph Montella, MD, Associate Professor of Obstetrics and Gynecology, Director of the Division of Gynecologic Oncology

Norman G. Rosenblum, MD, Professor of Obstetrics and Gynecology, Director of the Division of Gynecologic Oncology

Stuart Weiner, MD, Associate Professor of Obstetrics and Gynecology, Director of the Division of Obstetric Ultrasound

Abigail Wolf, MD, Associate Professor of Obstetrics and Gynecology, Residency Program Director

Undergraduate Education
Katherine Lackritz, MD, Instructor of Obstetrics and Gynecology, Assistant Clerkship Director

Abigail Wolf, MD, Associate Professor of Obstetrics and Gynecology, Clerkship Director

Education Coordinators
Deborah Cini
Brenda Harkins

Clinical Curriculum

OB/GYN 350  Clerkship in Obstetrics and Gynecology
(Dr. Wolf and Faculty)
Credits 7. 1st through 8th Teaching Blocks.
For a full description, please see the Educational Program section of this catalog.

**OB/GYN. 351 Final Written Examination in Obstetrics and Gynecology**

Credits 2.

**OB/GYN. 402 Outpatient Sub-Internship** (Dr. Wolf and Staff)

Credits 6. 10th through 21st Teaching Blocks.

Enrollment: One per site

The objective of this rotation is to provide fourth year medical students with the opportunity to work independently in the outpatient setting. Students learn routine ambulatory preventative gynecologic care; competently perform breast and pelvic exams; competently evaluate and counsel patients presenting for contraceptive, preconception and menopausal care; recognize gross and microscopic gynecologic pathology; and learn routine care of uncomplicated antepartum patients. Students will see patients with an upper-year resident or an attending. They will see both obstetric and gynecologic patients in continuity. They also attend several subspecialty clinics during the rotation including an optional weekly session at Planned Parenthood. Students are assigned a mentor from the clinic attending staff who writes the final evaluation based on feedback from residents, faculty and staff.

**OB/GYN. 405 Fourth-Year Clerkship in Obstetrics and Gynecology** (Dr. Wolf and Faculty)

Prerequisite: OB/GYN 350-351

Credits 6. 10th through 21st Teaching Blocks

This fourth-year clerkship is expressly designed for those students with a particular interest in that specialty. This includes not only those students who plan to make a career in obstetrics and gynecology, but also students who plan careers in family medicine, internal medicine, surgery, or the neurosciences. The content of the clerkship is designed to give more in-depth experience than obtained in Ob/Gyn 350-351, and is specifically tailored to meet the needs of each student, in consultation with the program director in the assigned hospital.

*Location:*

07 Lankenau Hospital

Dr. Belden and Faculty—maximum (1)

At this site students spend two weeks on the MFM service and two weeks on the gynecologic gynecology service. Both portions of this rotation are primarily outpatient with direct involvement with attending physicians.
OB/GYN. 407  **Gynecologic Endocrinology**  (Dr. Fossum and Staff)
Credits 6.  10th through 21st Teaching Blocks.
Enrollment: maximum 1.

This elective provides the student experience in both inpatient and outpatient care of problems in reproductive endocrinology. The skills to be developed during this elective include an understanding of reproductive physiology, the diagnosis of common endocrinopathies, and therapeutics for these problems in the clinical setting. A portion of each working day is devoted to formal presentations, conferences, and patient care. The student is responsible for presenting material during this time, including case reports to various conferences and literature reviews in a journal club.

OB/GYN. 408  **Gynecologic Oncology**  (Dr. Rosenblum and Staff)
Credits 6.  10th through 21st Teaching Blocks.
Enrollment: maximum 1.

This clerkship is conducted as a preceptorship, with the student becoming part of the gyn oncology team and working closely with the physicians of the team. The student participates in hospital rounds, in the initial work-up and evaluation of patients, and in therapy planning. The student attends outpatient follow-up clinics and will accompany patients to the operating room to either observe or assist. The student participates in the clinics and conferences held jointly by the Division of Gynecologic Oncology, the Department of Radiation Oncology and the Department of Pathology.

OB/GYN. 409  **Maternal Fetal Medicine (Inpatient)**  (Dr. Berghella and Staff)
Credits 6. 10th through 21st Teaching Blocks.
Enrollment: maximum 1 per site.

The Jefferson Maternal-Fetal Medicine division has 4 full-time faculty members who afford the student the opportunity for varied exposure to the management of the high-risk pregnant patient.

Clinical experience in the inpatient elective will consist of obstetric consults, medical management of disease in pregnancy, obstetric complications, and ultrasound. The student will participate actively in the Maternal Fetal Medicine team consisting of an attending, a fellow and three residents. The student will be involved directly in patient workup, management and high-risk deliveries.

Additional educational sessions will include a weekly MFM patient-discussion conference, monthly research meeting, monthly U/S conference, and biweekly fetal-therapy meetings. A summary evaluation will be written based upon individual attending evaluations.
Students will also participate in the high risk clinic at Jefferson Ob/Gyn Associates (JOGA).

**Location:**
01 Thomas Jefferson University Hospital—maximum (1)
27 West Jersey Virtua

**OB/GYN. 411 Maternal Fetal Medicine (MFM) Out-patient Elective**

(Drs. Shah and Berghella)

Credits 6. All Teaching Blocks
Enrollment: 1 student per block

The purpose of this rotation is to further develop skills in diagnosis and management of common and uncommon obstetric complications in the outpatient setting. Common issues such as preterm labor, pre-eclampsia, diabetes in pregnancy, fetal anomalies and illicit drug use in pregnancy will be addressed. Students will be asked to present a specific topic to the MFM team and to become expert on that topic.

The rotation is divided between Jefferson Ob/Gyn Associates (JOGA) at 834 Chestnut St., Suite 420 and West Jersey Hospital in Vorhees, NJ. Students will see patients in the outpatient clinic under the direction of the MFM team. Students will also participate in ultrasound, out-patient procedures and consults. Students will attend the MFM conference from 8:00 to 10:00 on Thursdays at Jefferson. There are no weekend or evening hours. Students will be evaluated by residents, fellows and attendings on the MFM service.

**Location:**
27 West Jersey Virtua—maximum (1)

**OB/GYN. 425**

(Dr. Baxter)

This elective rotation will provide the student with a concentrated research experience within this specialty discipline. The specific research project and tasks will be agreed upon by the student and faculty research mentor, and approved by the course director listed above. For this approval, the student must submit in writing to the course director a description of the proposed project, a list of goals for the month, and the name of the faculty mentor prior to scheduling this elective.
Ophthalmology

Chair
Julia A. Haller, MD, Professor of Ophthalmology, Ophthalmologist-in-Chief, Wills Eye Institute and Chair, Department of Ophthalmology

Directors
Robert S. Bailey, Jr. MD, Associate Professor of Ophthalmology and Director of the Cataract/Primary Eye Care Service
Mark H. Blecher, MD, Clinical Assistant Professor of Ophthalmology and Co-Director of the Cataract/Primary Eye Care Service
Carl D. Regillo, MD, Professor of Ophthalmology and Director of the Retina Service
Christopher J. Rapuano, MD, Professor of Ophthalmology and Director of the Cornea Service
Ann P. Murchison, MD, Associate Professor of Ophthalmology and Co-Director of the Emergency Services
Michael A. DellaVecchia, MD, Assistant Professor of Ophthalmology and Co-Director of the Emergency Services
Ralph C. Eagle, Jr., MD, Professor of Ophthalmology and Director of the Ocular Pathology Service
David H. Fischer, MD, Associate Professor of Ophthalmology and Co-Director of the Retina Service
Joseph C. Flanagan, MD, Professor of Ophthalmology and Director Emeritus of the Oculoplastic Service
Edward A. Jaeger, MD, Professor of Ophthalmology and Director of Medical Student Education
L. Jay Katz, MD, Professor of Ophthalmology and Director of the Glaucoma Service
Peter R. Laibson, MD, Professor of Ophthalmology and Director Emeritus of the Cornea Service
Sharon S. Lehman, MD, Associate Professor of Ophthalmology and Director of Ophthalmology at duPont Hospital for Children
Alex V. Levin, MD, Professor of Ophthalmology and Director of the Pediatric and Ocular Genetic Services
Robert B. Penne, MD, Associate Professor of Ophthalmology and Director of the Oculoplastic Service
Robert C. Sergott, MD, *Professor of Ophthalmology and Director of the Neuro-Ophthalmology Service*

Carol L. Shields, MD, *Professor of Ophthalmology and Co-director of the Oncology Service*

Jerry A. Shields, MD, *Professor of Ophthalmology and Director of the Oncology Service*

Arunan Sivalingam, MD, *Associate Professor of Ophthalmology and Co-director of the Retina Service*

George L. Spaeth, MD, *Professor of Ophthalmology and Director Emeritus of the Glaucoma Service*

William S. Tasman, MD, *Professor of Ophthalmology and Chairman Emeritus of the Department of Ophthalmology*

Tara A. Uhler, MD, *Assistant Professor of Ophthalmology and Director of Residency Training*

**Education Coordinator**
Karen Carlucci

**Clinical Curriculum**

**OPHT. 401  Clinical Clerkship in Ophthalmology**  
*(Drs. Jaeger, Uhler and Staff)*
Credits 6. 10th through 21st Teaching Blocks.

The clerkship in ophthalmology is clinically oriented with emphasis placed upon examination techniques and the diagnosis and treatment of common eye problems. The student participates in all activities of the Department of Ophthalmology, including conferences, the emergency room, the operating room, and outpatient care services. A multiple choice test is given at the conclusion of the clerkship.

**Location:**
07 Lankenau Hospital  
Dr. Santore—Maximum 1
14 Wills Eye Institute  
Drs. Jaeger and Uhler—Maximum 2
25 Wilmington Hospital

**OPHT. 407  Basic Ocular Pathology**  
*(Dr. Eagle and Staff)*
Credits 6. 10th through 21st Teaching Blocks.
Enrollment: Maximum 2.
This course is designed to familiarize the student with ocular structure, microscopic anatomy, and the basic principles of ocular disease. The student will participate in the daily activity of the ocular pathology laboratory as well as study from a slide set of common ocular conditions. The course is limited to those interested in Ophthalmology. A written test is given at the conclusion of the clerkship.

(Approved Advanced Basic Science Rotation.)

IDPT. 352 Surgical Subspecialties
Credits 9. All Teaching Blocks.
Enrollment: Maximum 39.

For a full description, please see the Educational Program section of this catalog.

IDPT. 425 Basic Research
(Drs. Eagle, Jaeger, Uhler and Staff)
Credits 6. 10th through 21st Teaching Blocks.
Enrollment: Maximum 2.

Open to students who have interest in research as well as Ophthalmology, this block may be taken at Wills Eye Institute, but must meet the approval of the course coordinators. Generally, students accepted for this clerkship have been involved in an ongoing research project.

OPHT 408 Ocular Genetics
(Dr. Levin and Staff)
All Blocks Except August – Maximum 1.

The ocular genetics program at Wills cares for children and adults with genetic eye disease or genetic systemic disease with ocular involvement. Students will attend clinics, genetic counseling sessions, clinics of medical geneticists, didactic sessions and case conferences. There is an opportunity to write a case report for publication. The student will be actively involved in patient care including management of our ocular genetics database.

OPHT 482 Pediatric Ophthalmology and Strabismus
(Dr. Levin and Staff)
All Blocks – Maximum 1.

A comprehensive experience in pediatric ophthalmology and strabismus including direct patient care in the clinic setting and surgical observation. Students will be exposed to all aspects of the specialty, attend didactic sessions and case conferences, and have the opportunity to write case report for publication is desired.
Orthopaedic Surgery

Chairman
Todd J. Albert, MD, Richard H. Rothman Professor & Chair Professor of
Neurosurgery

Division Directors
Alan S. Hilibrand, MD, Professor of Orthopaedic Surgery, Director of
Medical Education and Course/Clerkship Director

James J. Purtill, MD, Associate Professor of Orthopaedic Surgery and
Director of Residency

Javad Parvizi, MD, Professor, Department of Orthopaedic Surgery; Vice
Chairman of Research; Director, Clinical Joint Research

Education Coordinator
Susan Randolph

Clinical Curriculum

ORTH. 401 Clinical Clerkship (Dr. Hilibrand and Staff)
Credits 6. 10th through 21st Teaching Blocks.

This is a fourth year elective designed for medical students interested
in pursuing a career in orthopaedic surgery. It is an intensive subin-
ternship style experience. The student will spend two weeks on one
of the primary inpatient services (either spine service or total joint
service), as well as two weeks on one of the other orthopaedic services
(foot and ankle, hand, sports, shoulder or pediatrics). Students will be
assigned to a chief resident “mentor” who will be responsible for fol-
lowing the students during the two week subrotation. Under the direc-
tion of the chief resident the student will rotate through the operating
room and office hours with various attendings. They will also be given
the opportunity to participate and help manage patients and general
inpatient work with the junior residents.

A previous completion of IDEPT Orthopaedic Elective is necessary
as a prerequisite to this course. Please note that this course is only of-
fered at Thomas Jefferson University Hospital (with the exception of
the pediatric rotation which is at the AI DuPont Institute). Additional
electives are available at our affiliate, Albert Einstein Medical Center.

ORTH 402 Research Elective (Dr. Parvizi and Staff)
Credits 6. 10th through 21st Teaching Blocks.

IDPT. 410 Surgical Subspecialties
Credits 9. All Teaching Blocks.
Enrollment: Maximum 39.

For a full description, please see the Educational Program section of
this catalog.
Otolaryngology/Head and Neck Surgery

Chairman
William M. Keane, MD, *The Herbert Kean, MD, Professor of Otolaryngology/Head and Neck Surgery and Chairman of the Department*

Residency Director
Edmund Pribitkin, MD, *Professor of Otolaryngology/Head and Neck Surgery*

Associate Residency Director
Maurits Boon, MD, *Assistant Professor of Otolaryngology/Head and Neck Surgery*

Medical Student Coordinators/Directors
Maurits Boon, MD, *Assistant Professor of Otolaryngology/Head and Neck Surgery*
Gregory Artz, MD, *Assistant Professor of Otolaryngology/Head and Neck Surgery*

Education Coordinator
Karen Keane

Clinical Curriculum

**OTOL. 401** Clerkships and Outpatient Clinics  
(Dr. Keane and Faculty)  

Students are assigned to the Otolaryngology Service at Thomas Jefferson University Hospital for a four week block. They have an opportunity to work with each of the attendings, attend surgery, work in the outpatient clinics, make rounds on a daily basis, participate in Grand Rounds and go to teaching conferences which are held on a regular basis on Wednesdays. Students attend a series of clinical conferences on the various aspects of otolaryngology and outpatient clinics where they are instructed in history taking, physical examination, differential diagnosis and a course of management. They write progress notes and orders which are reviewed and signed by resident faculty. Elective students are treated as though they were junior interns.

**OTOL 425**  
(Dr. Artz)

This elective rotation will provide the student with a concentrated research experience within this specialty discipline. The specific research project and tasks will be agreed upon by the student and faculty research mentor, and approved by the course director listed above. For this approval, the student must submit in writing to the course director
a description of the proposed project, a list of goals for the month, and the name of the faculty mentor prior to scheduling this elective.

Surgical Specialties and Selectives
Credits 9. All Teaching Blocks.
Enrollment: 6 students per block.

For a full description of each component, please see p. 66 of the Educational Program section of this catalog.
Pathology, Anatomy and Cell Biology

Chairman
Stephen C. Peiper, MD, Peter A. Herbut Professor and Chair of Pathology, Anatomy and Cell Biology

Vice Chairmen
Richard R. Schmidt, PhD, Professor of Pathology, Anatomy and Cell Biology and Director, Human Form and Development

Joannes B. Hock, PhD, Professor of Pathology, Anatomy and Cell Biology and Vice Chair for Research

Peter A. McCue, MD, Professor of Pathology, Anatomy and Cell Biology and Director of the Division of Anatomic Pathology

A. Sue Menko, PhD, Professor of Pathology, Anatomy and Cell Biology and Vice Chair, Anatomy

Theodore F. Taraschi, Professor of Pathology, Anatomy and Cell Biology and Director of Education Programs

Education Coordinator
Sharon Egleston

Core Curriculum

ANAT. 105 Human Anatomy Form and Development
(Drs. Schmidt and Zhang)

For a full description, please see the Educational Program section of this catalog.

IDPT. 105 The Systems
(Dr. Grunwald and Staff)
For a full description, please see the Educational Program section of this catalog.

IDPT. 200 Foundations of Pathology and Pharmacology
(Drs. Fenderson, Strayer and Burkart)

For a full description, please see the Educational Program section of this catalog.

IDPT. 202 Foundations of Clinical Medicine
(Drs. Herrine, Beck, Strayer and Burkart)

For a full description, please see the Educational Program section of this catalog.
Clinical Curriculum

PATH 401  Advanced Basic Sciences in Pathology  
(Drs. Burkart, Curtis and Chan)  
Credits 6.  10th through 20 Teaching Blocks  
Maximum Enrollment: 6 students per teaching block  
Permission Only  
This course is an elective that may be taken by senior students. This course satisfies the advanced basic science elective in the fourth-year curriculum. This four-week course gives students the opportunity to gain a better understanding of the role of Pathology in the diagnosis and management of patients. Students rotate through various services within the department, including Surgical Pathology, Autopsy Pathology, and Laboratory Medicine. A number of departmental and interdepartmental teaching and patient conferences are available for student attendance. Evaluation is based on student attendance and participation.  
(Approved Advanced Basic Science Rotation.)

ANAT. 401  Special Topics in Anatomy  
(Dr. Zhang)  
Credits 6.  11th, 12th, and 13th Teaching Blocks.  
Enrollment: Maximum 18.  
This course consists of didactic exposure to cross-sectional anatomy and examination of corresponding CT scans with a focus on the thorax, abdomen and pelvis. Students also participate in the teaching of dissection laboratories for first-year medical students. Presentations involving each of the dissections during the current block are made prior to the actual laboratory experience.  
(Approved Advanced Basic Science Rotation.)

PATH. 402  Hematopathology  
(Drs. Gong and Dulau)  
Credits 6.  10th through 20 Teaching Blocks  
Maximum Enrollment: 1 student per Teaching Block  
Permission Only/401 as a pre-requisite  
This course is an elective that may be taken by senior students who plan to pursue a future career in pathology or hematology/oncology. This course satisfies the advanced basic science elective in the fourth-year curriculum. This four-week course allows students to participate in the daily activities of the Hematopathology section of the department. Students develop a better understanding of pathophysiology, morphology, and clinical features of hematologic disorders. A number of departmental and interdepartmental teaching and patient conferences
are available for student attendance. Evaluation is based on student attendance and participation, as well as an end of rotation clinical case presentation. Students must take PATH 401 as a pre-requisite.

**ANAT. 402 Research** (Drs. Gong and Dulau)
Credits 6. All Teaching Blocks.
Enrollment: by arrangement.

The project is selected to meet the needs and background of the student in the field of expertise of a clinical or anatomy basic science staff member. This research may be done at Jefferson or at another institution, and must have a marked anatomical focus. Consent of both the selected professor and project approval by the Subcommittee on Advanced Basic Science is required.

**ANAT. 403 Advanced Neuroanatomy** (Dr. Grunwald and Staff)
Credits 6. 16th Teaching Block.
Enrollment: by arrangement.

This course covers advanced topics in neuroscience and involves the in-depth research of a mutually agreeable topic and the presentation (written or oral) of a comprehensive review of this topic. Laboratory research on a related topic may also be applicable to the fulfillment of this course.

(Approved Advanced Basic Science Rotation.)

**PATH. 404 Advanced Rotation in Pathology**
(Drs. Curtis and Wood)
Credits 6. 10th through 20 Teaching Blocks
Maximum Enrollment: 2 students per teaching block.
Permission Only

This course is an elective that may be taken by senior students. This course may only be taken as an additional elective in Pathology for students who have already completed PATH 401 (Advanced Basic Sciences in Pathology). This four-week course allows students to participate in a more intensive fashion in activities of the Post-mortem (autopsy) service, and emphasizes the gross and microscopic aspects of various disease states and clinical-pathologic correlation. A number of departmental and interdepartmental teaching and patient conferences are available for student attendance. Evaluation is based on student attendance and participation.

**ANAT. 404 Applied Anatomy** (Dr. Shea)
Credits 6. 16th Teaching Block.
Enrollment: Minimum 4, maximum 16.
Students are assigned to the dissecting room to gain experience in planning prosections. Regional or systemic approaches are determined in consultation with the instructor. Aside from tutorials, students are expected to organize weekly conferences to discuss osteology, surface anatomy and cross sectional imaging.

(Approved Advanced Basic Science Rotation.)

**PATH. 408 Research Pathology** (Drs. Curtis and Wood)
Credits 6. 10th through 20 Teaching Blocks.
Maximum Enrollment: 2 students per teaching block.
Permission Only

This course is an elective that may be taken by senior students. This course satisfies the advanced basic science elective in the fourth-year curriculum. This four-week course allows students to pursue research interests in various aspects of medicine that are related to Pathology. Interested students must arrange for a specific research project in advance with a specific faculty mentor. If the mentor is not a member of the Pathology department, the Pathology department can still sponsor the research (provided there is a Pathology component to the project). Interested students must submit in writing a description of their proposed project (including name of faculty mentor) for approval prior beginning the elective. Evaluation is based on student attendance and participation and is to be completed by the designated faculty mentor.

*Note:* All of the above fourth-year electives in Pathology may be taken as way rotations. To schedule an away rotation in Pathology, the interested student must submit in writing a description of their proposed elective (including name of faculty mentor) for approval prior beginning the elective. Evaluation is based on student attendance and participation and is to be completed by the designated faculty mentor.
Pediatrics

Chairman
Jay S. Greenspan, MD, Professor of Pediatrics and Chairman of the Department

Vice Chairmen
J. Carlton Gartner, Jr., MD, Professor of Pediatrics and Vice Chairman of the Department

Steven M. Selbst, MD, Professor of Pediatrics and Vice Chairman of the Department

Directors
Alisa LoSasso, MD, Associate Professor of Pediatrics and Director of Medical Education for the Department

Deborah M. Consolini, MD, Associate Professor of Pediatrics and Associate Director of Medical Education for the Department

Education Coordinator
Sybil Fullard-McLaurin

Clinical Curriculum

PED. 350  Clinical Clerkships  (Dr. LoSasso)
Credits 7.  1st through 8th Teaching Blocks.

For a full description, please see the Educational Program section of this catalog.

PED. 351  Final Written Examination in Pediatrics
Credits 2.

PED. 401  Outpatient Subinternship  (Pediatric Faculty)
Credits 6.  10th through 21st Teaching Blocks.

This clerkship may be taken at Einstein, Jessup Street duPont practice, and Christiana Care Health Services—Wilmington Hospital. The student works with the house staff in caring for outpatients and has responsibility for managing these patients commensurate with his/her skills and experience. This clerkship may be taken from the tenth through twentieth teaching blocks at other hospitals by arrangement, but will not be considered as the required course.

Location:
01  Thomas Jefferson University Hospital
   Maximum 1
PED. 402  **Inpatient Subinternship**  (Pediatric Faculty)
Credits 6. 10th through 21st Teaching Blocks.

This clerkship may be taken at Thomas Jefferson University Hospital, The duPont Hospital for Children, Christiana Care Health Services—Christiana Hospital, or Bryn Mawr Hospital. The student acts as an intern, being assigned pediatric inpatients and supervised by the house staff. This experience includes history taking, physical examination and formulation of a diagnosis and plan of therapy, as well as supervised performance of diagnostic procedures. This rotation may be taken at other hospitals by arrangement, but will not be considered as the required course.

*Location:*
- 01 Thomas Jefferson University Hospital
  Maximum 1
- 03 Bryn Mawr Hospital
  Maximum 1
- 15 Christiana Care Health Services
  Maximum 1
- 28 The duPont Hospital for Children
  Maximum 4
- 38 Einstein Medical Center
  Maximum 1

PED. 403  **Intensive Care Nursery**  (Neonatology Faculty)
Credits 6. 10th through 21st Teaching Blocks.
Enrollment: by arrangement.

This elective allows the student to participate in the management of premature and sick newborn infants under the direction of the senior staff and the house officers assigned to the intensive care nursery. It offers an opportunity to learn about current methods of managing such problems as respiratory distress, hyperbilirubenemia, hypoglycemia, and neonatal surgical emergencies. This elective may be taken at other hospitals by arrangement.

*Location:*
- 01 Thomas Jefferson University Hospital
  Maximum 1
PED. 404  Neurodevelopmental Pediatrics  (Dr. Ross)
         Credits 6.  10th through 21st Teaching Blocks.
         Enrollment: Maximum 1.

This elective at Einstein Medical Center offers the student the opportunity to observe and participate in evaluations of children with a variety of developmental problems, such as autism, cerebral palsy, and attention deficit disorders. This includes observation of psychological evaluations of preschool and school-age children. The student also participates in conferences held with the parents of the children being evaluated. At the completion of the elective, the student should have a fine appreciation of normal child development and the types of developmental problems confronted by pediatricians and by schools.

Location:
38   Einstein Medical Center
     Maximum 1

PED. 405  Pediatric Emergency Medicine  (Dr. DePiero)
          Credits 6.  10th through 20th Teaching Blocks.
          Enrollment: By arrangement.

This elective provides the student with a general pediatric experience in the emergency department setting. A wide range of pediatric problems are seen in children from newborn to age 21. The student performs histories and physical examinations under direct supervision of a pediatric attending. Topics in pediatric emergency medicine and/or ER case conferences are held three times per week. There are opportunities to learn about pediatric resuscitation and management of other acute emergencies. (DOES NOT COUNT TOWARD REQUIRED EMERGENCY MEDICINE CLERKSHIP).

Location:
28   The A.I. duPont Hospital for Children
     Maximum 1

PED. 410  Adolescent/Pediatric Gastroenterology  (Gastroenterology Faculty)
          Credits 6.  10th through 21st Teaching Blocks.
          Enrollment: By arrangement.

The student works in a preceptorial relationship, helping in the evaluation and management of children and adolescents with a variety of gastrointestinal disorders such as inflammatory bowel disease, eating disorders, chronic constipation, gastroesophageal reflux, and motility
disorders. The experience encompasses both ambulatory and inpatient evaluations. This elective may be taken at other hospitals by arrangement.

*Location:* 
01  Thomas Jefferson University Hospital  
28  The A.I. duPont Hospital for Children  
\[\text{Maximum 1}\]

**PED. 411  Pediatric Allergy  (Dr. McGeady)**  
Credits 6. 10th through 21st Teaching Blocks.  
Enrollment: By arrangement.

This elective involves both inpatient and outpatient activities and introduces the student to such procedures as skin testing and hyposensitization. Current concepts of immunology and pulmonary physiology are reviewed. Experience in managing status asthmaticus and chronic respiratory disease is also offered. This elective may be taken at other hospitals by arrangement.

*Location:* 
28  Thomas Jefferson University Hospital/The duPont Hospital for Children  
\[\text{Maximum 1}\]

**PED. 412  Pediatric Dermatology**  
Credits 6. All Teaching Blocks.  
Enrollment: By arrangement.

**PED. 413  Pediatric Cardiology  (Dr. Ritz)**  
Credits 6. 10th through 21st Teaching Blocks.  
Enrollment: By arrangement.

This elective offers experience in the diagnosis and management of cardiac disease in infants and children. Didactic emphasis involves: (1) perinatal cardiac physiology, (2) congenital cardiac disease, (3) basic pediatric electrocardiography, and (4) echocardiography and cardiac catheterization. Attendance at Pediatric Cardiology Clinic as well as hospital rounds on cardiac patients, is expected. In-depth review in any area relevant to pediatric cardiology can be arranged on an individual basis. This elective may be taken at other hospitals by arrangement.

*Location:* 
28  The duPont Hospital for Children  
\[\text{Maximum 1}\]

**PED. 415  Pediatric Neurology  (Dr. Falcek)**  
Credits 6. 10th through 21st Teaching Blocks.  
Enrollment: By arrangement.
This elective offers the student the opportunity to participate in the evaluation and management of both common and unusual pediatric neurological disorders. The student should learn to perform a thorough pediatric neurological examination on patients seen in the outpatient department and on admission to the hospital. The student also participates in the neurology consult service.

Location:
28 The A.I. duPont Hospital for Children

PED. 417 Pediatric Nephrology
Credits 6. 10th through 20th Teaching Blocks.
Enrollment: By arrangement.

This elective exposes the student to acute renal emergencies as well as chronic disease care. Both inpatient and outpatient exposure will be available. Course objectives emphasize pathophysiology, evaluation, and treatment. This elective may be taken at other hospitals by arrangement.

Locations:
28 The A.I. duPont Hospital for Children

PED. 418 Pediatric Rheumatology (Dr. Rose)
Credits 6. 10th through 21st Teaching Blocks.
Enrollment: By arrangement.

This elective at The duPont Hospital for Children provides the student with the opportunity to develop skills in history taking, physical assessments, evaluation of laboratory parameters, and management of pediatric patients with juvenile arthritis and selected forms of other rheumatic diseases. Patients are evaluated in both the inpatient and outpatient areas.

PED. 419 Pediatric Hematology/Oncology (Dr. Walter)
Credits 6. 10th through 21st Teaching Blocks.
Enrollment: By arrangement.

The Pediatric Hematology/Oncology rotation is designed to provide exposure to a wide range of inpatient and outpatient pediatric hematology/oncology patients. Students are expected to participate in the evaluation of new consults. They are involved with the daily hematology/oncology teaching rounds, weekly psychological conference, weekly Tumor Board, and the monthly hematology/oncology teaching conference. They are also required to give a 20 to 30 minute talk on a pediatric hematology/oncology subject.
**Location:**  
28 The A.I. duPont Hospital for Children

**PED. 420**  Psychology  
Credits 6. All Teaching Blocks.

**PED. 421**  Pediatric Endocrinology  
(Dr. Doyle)  
Credits 6. 10th through 21st Teaching Blocks.  
Enrollment: By arrangement.

This elective covers both inpatient and outpatient experiences. The student evaluates all new patients in the clinic and consults on the inpatient service. Daily tutorials as well as a combined pediatric/internal medicine endocrine conference are provided. Abnormal growth, diabetes, puberty, and sexual differentiation cases are evaluated.

**Location:**  
28 The A.I. duPont Hospital for Children

**PED. 425**  Children’s Rehabilitation Medicine  
(Pediatric Rehabilitation Medicine Faculty)  
Credits 6. 10th through 21st Teaching Blocks.  
Enrollment: By arrangement.

The focus of this elective is on multidisciplinary care of chronically ill and physically handicapped children. The student admits and follows patients with a variety of diagnoses on the inpatient service, observes outpatient therapy services, and participates in physical medicine rounds in the Department of Rehabilitation Medicine. This elective is offered at The duPont Hospital for Children.

**Location:**  
28 The A.I. duPont Hospital for Children

**PED. 426**  Pediatric Research  
(Various Faculty)  
Credits 6. 10th through 21st Teaching Blocks.

This elective allows the student to participate in pediatric research projects currently being performed by the pediatric staff at Jefferson Medical College and at The duPont Hospital for Children. This elective may be taken only by arrangement. It may be taken at other hospitals by arrangement.

**PED. 430**  Advocacy and Community Partnerships Elective  
(Drs. Chung and Plumb)  
One-month elective: (flexible dates).

This elective is offered to PL-2 and PL-3 pediatric and family and community medicine residents and 4th year medical students who will re-
Trainees will receive intensive training in community health and advocacy. Trainees will spend 2.5 days per week in patient care at the Jefferson Pediatric, Jeff OB/GYN practices, or Jefferson Family and Community Medicine practices, and 2.5 days per week at one of the community partner sites.

Trainees will be expected to complete a mutually agreeable project by partnering with an established community organization. The trainees will have the opportunity to present their project at an Advocacy Cafe. Other components of the elective will include participation in the following: Community and Advocacy Cafés, Advocacy Journal Club, Seminar Series.

**Location:**
01 Jefferson

**PED. 431 Diagnostic Referral Services** (Faculty)

Credits 6. 10th through 20th Teaching Blocks.

Enrollment: by arrangement.

To provide students a unique learning experience in pediatrics; providing to them the opportunity to combine and enhance the outpatient and inpatient skills acquired during the 3rd year Pediatric rotation. The Diagnostic Referral Division has 5 members and will see a diverse group of pediatric patients. Our primary role in the Diagnostic Referral Division is the care of children with multiple complex medical problems and as to act as these patients medical home. This includes seeing new and follow-up patients in our outpatient clinic, our primary patients and new consults on the inpatient service, and one day a week at the KenCrest Transitional homes for children. The KenCrest homes are intermediate care facilities for children with technological needs that cannot be provided for at home. Student will see pediatric diagnostic dilemmas referred to our clinic and in the inpatient setting. Students will also gain exposure to the medical management of both pre- and post-transplant patients as part of our role in the Division of Solid Organ Transplant.

**Location:**
28 duPont Hospital for Children

**PED. 432 The Patient Experience: Navigating the System** (Dr. Rosen)

Enrollment: By arrangement

This course will combine patient care and project-related work to achieve a novel curriculum. This curriculum will focus on definitions of patient-centered care, introduction to tools for process improvement, introduction to the field of patient experience and lessons in
service from industries outside of health care. This curriculum will be achieved while working as part of a multidisciplinary team on the Pediatrics service.

**PED. 473 Pediatric Infectious Disease** (Dr. Eppes)
Credits 6. 10th through 21st Teaching Blocks.
Enrollment: By arrangement.

This elective is designed to give the student a wide exposure to the many pediatric infectious disease problems including HIV, Lyme, and FUO, as well as experience in evaluation, diagnosis, and treatment of seriously ill inpatients. Weekly conferences in infectious disease are provided. Pediatric Infectious Disease is offered at duPont Hospital for Children, but may be taken at other hospitals by arrangement.

*Location:*
28 The A.I. duPont Hospital for Children

**PED. 480 Pediatric Critical Care** (Dr. Cullen)
Credits 6. 10th through 21st Teaching Blocks.
Enrollment: By arrangement.

This elective is available at duPont Hospital for Children, and offers the student the opportunity to observe and participate in the evaluation and management of critically ill pediatric patients. Patients assessment, evaluation of laboratory data, and assessment of newer technologic advances are the primary mode of education. Pediatric educational conferences are provided.

*Location:*
28 The A.I. duPont Hospital for Children

**PED. 481 Pediatric Pulmonary Medicine** (Dr. Padman)
Credits 6. 10th through 20th Teaching Blocks.
Enrollment: By arrangement.

Students work up and follow children hospitalized on the cystic fibrosis and general pulmonary services and examine youngsters in the outpatient pulmonary, cystic fibrosis, tuberculosis, muscle respiratory, and technology-dependent clinics. Patients encountered while on rotation include those with CF, bronchopulmonary dysplasia, asthma, acute and chronic respiratory failure from diverse etiologies, obstructive/sleep apnea, and empyema. Students have the opportunity to view bronchoscopies and learn pulmonary function testing. Contact with the attending pulmonologists is daily, and teaching is one-on-one.

There are specific lectures and conferences devoted to selected topics in pulmonary medicine and updates in new developments in the form
of grand rounds, state-of-the-art lectures, and case management conferences. There is no call. Students are evaluated by the attending staff, using the standard Jefferson format.

Location:  
28 The A.I. duPont Hospital for Children

**PED. 482 Pediatric Ophthalmology**  
(Dr. Lehman)  
Credits 6. 10th through 20th Teaching Blocks  
Enrollment: By arrangement

This course is designed to familiarize the student with ocular structure, microscopic anatomy, and the basic principles of ocular disease. The student will participate in the daily activity of the ocular pathology laboratory as well as study from a slide set of common ocular conditions. The course is limited to those interested in Ophthalmology. A written test is given at the conclusion of the clerkship.

Location:  
28 duPont Hospital for Children

**PED. 462 Otolaryngology (ENT)**  
(Dr. Deutsch)  
Credits 6. Monthly

Students are assigned to the Otolaryngology Service at duPont Hospital for Children for a four week block. They have an opportunity to work with each of the attendings, attend surgery, work in the outpatient clinics, make rounds on a daily basis, participate in Grand Rounds and go to teaching conferences which are held on a regular basis on Wednesday mornings. Students attend a series of clinical conferences on the various aspects of otolaryngology and outpatient clinics where they are instructed in history taking, physical examination, differential diagnosis and a course of management. They write progress notes and orders which are reviewed and signed by resident faculty. Elective students are treated as though they were junior interns.

Location:  
28 duPont Hospital for Children
Pharmacology and Experimental Therapeutics

Chairman
Scott A. Waldman, MD, PhD, Professor of Pharmacology and Experimental Therapeutics

Faculty
Tatiyana V. Apanasovich, PhD, Assistant Professor of Pharmacology & Experimental Therapeutics
Carol L. Beck, PharmD, PhD, Assistant Professor of Pharmacology & Experimental Therapeutics
Inna Chervoneva, PhD, Assistant Professor of Pharmacology & Experimental Therapeutics
Constantine Daskalakis, ScD, Associate Professor of Pharmacology & Experimental Therapeutics
Louise Y. Fong, PhD, Associate Professor of Pharmacology & Experimental Therapeutics
Terry Hyslop, PhD, Associate Professor of Pharmacology & Experimental Therapeutics
Walter Kraft, MD, Clinical Associate Professor of Pharmacology & Experimental Therapeutics
Benjamin E. Leiby, PhD, Assistant Professor of Pharmacology & Experimental Therapeutics
Giovanni M. Pitari, MD, PhD, Associate Professor of Pharmacology & Experimental Therapeutics
Stephanie Schulz, PhD, Research Assistant Professor of Pharmacology & Experimental Therapeutics

Education Coordinator
Joan Faust

Clinical Curriculum

PHARM. 401 Clinical Pharmacology (Dr. Kraft and staff)
Credits 6. Block 19 only
Enrollment: 0-100

Clinical pharmacology deals with the effects of drugs in man and how drugs are used most effectively to treat diseases. The overall objectives of this course are to provide the student with the scientific and practical basis of successful drug therapy, and thus, to prepare him/her for
the house staff years. The lectures are derived from the Departments of Medicine, Neurology, Psychiatry, Obstetrics & Gynecology, Emergency Medicine, Pharmacy, and Pediatrics.

Specific goals of the course include reviewing the principles of clinical pharmacokinetics; presenting students with practical information on the clinical pharmacology of the major drug classes and the application of such information to the solution of therapeutic problems; providing students with the latest in the development of therapeutic objectives, strategies and guidelines in the management of the major medical disorders; and enhancing students' ability to evaluate critically, and use effectively, current information sources on clinical pharmacology and therapeutics. Drug informatics, identification and evaluation of medical literature, prescribing law, and drug development/utilization issues will also be covered.

The objectives of the course are to present clinical pharmacology and practical therapeutics, including fundamental principles, mechanisms of action, rationales for drug selection, optimization of drug therapy, and assessment of therapeutic efficacy and outcome.

PHARM. 403  Research  (Staff)
Credits 6. 10th through 21st Teaching Blocks.
Enrollment: By arrangement

(Approved Advanced Basic Science Rotation.)
Psychiatry and Human Behavior

Chairman
Michael J. Vergare, MD, Michael J. Vergare, MD, The Daniel Lieberman Professor of Psychiatry and Human Behavior and Chairman of the Department

Vice Chairs
Mitchell J.M. Cohen, MD, Associate Professor of Psychiatry and Human Behavior and Vice Chair for Education
Elisabeth J. Kunkel, MD, Professor of Psychiatry and Human Behavior and Vice Chair for Clinical Affairs

Education Directors
Kenneth M. Certa, MD, Associate Professor of Psychiatry and Human Behavior and Director of Adult Residency Training
Mitchell J.M. Cohen, MD, Associate Professor of Psychiatry and Human Behavior, Vice Chair for Education, and Clerkship Director
Karl Doghramji, MD, Professor of Psychiatry and Human Behavior and Director of the Sleep Medicine Fellowship
Abigail Kay, MD, Assistant Professor of Psychiatry and Human Behavior, Assistant Clerkship Director for Curriculum
Elisabeth J. Kunkel, MD, Professor of Psychiatry and Human Behavior and Director of Fellowship in Psychosomatic Medicine
James Luebbert, MD, Associate Professor of Psychiatry and Human Behavior and Director of Child and Adolescent Fellowship

Program Directors
Salman Akhtar, MD, Professor of Psychiatry and Human Behavior and Director of Adult Outpatient Programs
Jonathan Beatty, MD, Instructor of Psychiatry and Human Behavior and Co-Director of Acute Psychiatric Services
Mitchell J.M. Cohen, MD, Associate Professor of Psychiatry and Human Behavior and Director of Pain Medicine Program
Karl Doghramji, MD, Professor of Psychiatry and Human Behavior and Director of the Sleep Disorders Center
Abigail Kay, MD, Assistant Professor and Director, Narcotic Addiction Rehabilitation Program
Elisabeth J. Kunkel, MD, *Professor of Psychiatry and Human Behavior and Director of Consultation-Liaison Psychiatry*

Mandeep Gogia, MD, *Instructor of Psychiatry and Human Behavior and Co-Director of Acute Psychiatric Services*

Rodney Pelchat, MD, *Assistant Professor of Psychiatry and Human Behavior and Medical Director, Geriatric Psychiatry Unit (13 Thompson)*

Barry W. Rovner, MD, *Professor of Psychiatry and Human Behavior and Neurology and Director of Geriatric Psychiatry*

Ronald D. Serota, MD, *Assistant Professor of Psychiatry and Human Behavior and Director of Intensive Outpatient Program for Addiction Treatment*

Robert Sterling, PhD, *Research Professor of Psychiatry and Human Behavior and Director of Substance Abuse Programs*

**Education Coordinator**

Danielle Stull

**Clinical Curriculum**

**Phase I**

**PSYHB. 350 Psychiatry Clerkship**

(Drs. Cohen, Kay, Best, and JMC/Affiliate Faculty)

Credits 7. 1st through 8th Teaching Blocks.

This core clinical experience prepares all physicians to recognize and plan treatment for the most prevalent psychiatric disorders. Students also learn techniques for managing their reactions to disturbing patient symptoms and behavior. In this clerkship students gain experience developing therapeutic relationships with patients and establishing treatment boundaries. Third-year students have the opportunity to evaluate and follow the progress of patients with a variety of psychiatric disorders. Students evaluate and follow patients under faculty supervision, observing and participating in all treatment, rehabilitative, and preventive programs within the clinical setting. The six-week clerkship is divided into two three-week clinical placements to provide breadth of exposure to patients, disorders, clinical teams and treatments. Core clinical skills sessions and didactic seminars are scheduled for a half-day per week and attended by all students. Students learn to differentiate common mental-life problems that present to the general physician and can be treated in that setting from severe disorders that require specialized evaluation and management. Over the course of the clerkship student training and evaluation focus on increasing competence
in the following aspects of clinical psychiatry: 1. Developing appropriate treatment relationships with patients; 2. Working effectively with a clinical team; 3. Demonstrating responsibility and accountability in patient care; 4. Growth in reasoning skills required in comprehensive case formulation; 5. Application of the general psychiatric knowledge base; and, 6. Mastery of clinical skills, especially ability to obtain a psychiatric history and conduct a comprehensive mental status examination. 7. Competence in treatment planning, including integration of psychiatric medications, behavioral and supportive psychotherapies, and practical problem-solving to improve patient quality of life.

Location:
01 Thomas Jefferson University Hospital
   Dr. Cohen and Jefferson Faculty
38 Albert Einstein Medical Center - Main campus
   Drs. Best, McCafferty and Richardson
41 Belmont Behavioral Health Network of AEMC
   Drs. Best, McCafferty and Richardson
03 Bryn Mawr Hospital
   Dr. Marc Burock will take his place as of July 1st.
22 Christiana Care Health System
   Dr. Marcus

PSYHB. 351 Final Written USMLE Psychiatry Subject Exam
   Credits 2. 1st through 8th Teaching Blocks.

Phase II
(Students should make contact at least two weeks prior to beginning each rotation) Contact information is available through Danielle Stull, Education Coordinator: (215) 955-9823)

PSYHB. 401-01 Adult Inpatient Psychiatry at Jefferson
   (Dr. Certa and Faculty)
   Credits 6. 10th through 21st Teaching Blocks.
   Enrollment: By arrangement.

The student is assigned to an adult inpatient unit to function as a sub-intern in this setting. The assignment is a continuation of the inpatient work of the junior clerkship, but at a higher level of responsibility. Broad exposure to serious psychiatric disorders is provided. The inpatient service also has beds dedicated to medical/surgical patients with prominent psychiatric co-morbidity. The sub-intern will be afforded the opportunity to function as a house officer and will have primary responsibility for his or her patients. The unit embraces the entire biopsychosocial model as well as the multidisciplinary treatment team approach. Student participate in a weekly faculty-led patient interview
and case conference. Students will thereby enhance their diagnostic and treatment skills as well as their abilities to assume a leadership role. Students are evaluated by attending psychiatrists, residents, and treatment team members through direct observation of interactions with patients and families, assessment of sophistication of chart entries, and competence obtaining and presenting patient histories, formulating cases, carrying out basic treatment planning.

**PSYHB. 401-38 Adult Inpatient Psychiatry at Albert Einstein Medical Center**  
(Dr. Best and Affiliate Faculty)  
Credits 6. 10th through 21st Teaching Blocks.  
Enrollment: By arrangement.

The goal is to learn skills in diagnostic interviewing, diagnostic psychiatry, and to develop a basic knowledge of psychopharmacology, short-term psychotherapy, mental health law, consultation and liaison with other specialties. The senior student functions at the first-year resident level with considerable responsibility for a few patients under his/her direct care. The senior student is an integral part of a multidisciplinary team and participates in team meetings and case conferences. Learning Resources include daily on-site supervision and comprehensive medical psychiatric library, case conferences and Grand Rounds. The student is evaluated by faculty and other treatment team members through direct observation of interactions with patients and competence utilizing basic knowledge and patient history in formulating diagnosis and planning treatment.

**PSYHB. 401-41 Adult Inpatient Psychiatry at Belmont Behavioral Health Network**  
(Dr. Best and Affiliate Faculty)  
Credits 6. 10th through 21st Teaching Blocks.  
Enrollment: By arrangement.

The goal is to learn skills in diagnostic interviewing, diagnostic psychiatry, and to develop a basic knowledge of psychopharmacology, short-term psychotherapy, mental health law, consultation and liaison with other specialties. The senior student functions at the first-year resident level with considerable responsibility for a few patients under his/her direct care. The senior student is an integral part of a multidisciplinary team and participates in team meetings and case conferences. Learning Resources include daily on-site supervision and comprehensive medical psychiatric library, case conferences and Grand Rounds. The student is evaluated by faculty and other treatment team members through direct observation of interactions with patients and competence utilizing basic knowledge and patient history in formulating diagnosis and planning treatment.
PSYHB. 403  Special Interest Elective in Psychiatry
            (Faculty by arrangement)
            Credits 6. 10th through 21st Teaching Blocks.
            Enrollment: By arrangement.

This course number is used to accommodate any special interest or clinical exposure not covered by other numbers. It may be elected only with the permission of the Education Coordinator, Florence Spencer, after presentation of a brief written description from involved Jefferson or non-Jefferson faculty. To be considered, all Jefferson and non-Jefferson special interest electives require a prepared statement of goals, objectives, and description of the educational experience as well as a letter of support from a supervising faculty member.

PSYHB. 405-01 Outpatient Subinternship in Sleep Disorders
        Medicine at Jefferson
            (Drs. Doghramji and Markov)
            Credits 6. 10th through 21st Teaching Blocks.
            Enrollment: Maximum 1 student per block.

This is one of two outpatient subinternships that meet the senior student’s ambulatory requirement (see also PSYHB 408). Students engage in all aspects of clinical work in the Sleep Disorders Center, an outpatient program for the evaluation and management of sleep disorders. The program encompasses an outpatient clinic and a sleep laboratory. Students are expected to observe the evaluation and management of patients and, after training, to gather an initial database, formulate a differential diagnosis, and develop recommendations for further workup and management. Students are directly supervised by attending physicians most of the time, and, to a lesser degree, house staff including residents in psychiatry, fellows in pulmonary and critical care medicine, and fellows in sleep medicine. Students observe polysomnographic studies and become familiar with sleep monitoring and scoring techniques. They are involved in performing consultations for inpatients. Reading material is provided as reference. Students are encouraged to complete an academic project by the end of the rotation, which can take many forms, including detailed case reports, topical presentations, and literature reviews. Evaluation is accomplished through direct observation of student interactions with patients by faculty and housestaff as well as assessment of sophistication of chart entries and competence presenting patient information and assigned projects.

PSYHB. 408-01 Subinternship in Adult Outpatient Psychiatry at
        Jefferson
            (Drs. Kay, Serota and Faculty)
            Credits 6. 10th through 21st Teaching Blocks.
            Enrollment: Maximum 2 students per block.
This sub-internship is designed to help the fourth year medical student develop the advanced skills needed to be a competent intern. The skills developed during this rotation will be equally relevant to students planning to pursue psychiatry residency and students planning careers in other specialties. This rotation is primarily based at the outpatient Addictions clinic, but the training focus includes substance use disorders and the broad range of ambulatory psychiatric disorders affecting this population, including mood, anxiety, and personality disorders.

During this rotation students develop their skills in the following areas: interviewing a patient and presenting a comprehensive history and mental status exam, developing a differential diagnosis, and planning treatment. In recognition of the ubiquitous nature of substance use disorders, students will be expected to develop an understanding of the signs and symptoms of intoxication and withdrawal from various substances of abuse and the full spectrum available pharmacologic, behavioral, and psychotherapeutic treatment options. In addition the sub-intern student will be expected to act as a “supervisor” to the third-year medical students who are rotate on the service. This rotation provides the unique opportunity for students to gain experience in the management of outpatients in a psychiatric clinic. Students are encouraged to follow patients, as frequently as once a week, throughout their rotation. Students will also have the opportunity to observe senior attending physicians’ with different sub-specialty expertise (e.g. psychoanalysis, psychopharmacology, mood disorders) evaluate new patients. Students will also participate in case conferences in the general adult outpatient service.

PSYHB. 421-38 Child and Adolescent Emergency Psychiatry at AEMC (Drs. Best, Luberes, Randall and Affiliate Faculty)
Credits 6. 12th through 21st Teaching Blocks.
Enrollment: By arrangement.

Students learn components of child/adolescent psychiatric diagnostic evaluation in the crisis setting. Medical students gain an appreciation of the educational, juvenile justice and social service systems that impact on children and adolescents and how they provide important assessment information and are utilized in treatment planning and disposition. Students gain exposure to a range of child psychopathology and become acquainted with DSM-IV. Students learn the importance and process of evaluating the child and home environment for safety. Medical students observe and then participate in the evaluation of children and adolescents presenting to the Crisis Response Center (CRC). Students work with Child and Adolescent Psychiatry fellows and attending physicians. An Attending Psychiatrist supervises all cases seen.
in the CRC. Medical students write up all cases they are involved with and present cases to housestaff and faculty. Students are given readings on the clinical interview and mental status examination for children and adolescents. They also are provided with a list of literature references. Methods of evaluation include observation, case presentation, and documentation in the medical record.

**PSYHB.431-01 Consultation and Liaison Psychiatry at Jefferson**  
(Drs. Becker, Kunkel and Faculty)  
Credits 6. 10th through 21st Teaching Blocks.  
Enrollment: By arrangement.

During this elective the student (1) develops skill in the evaluation and treatment of psychiatric illness in the medical setting, (2) develops an appreciation for the interface between psychological/social factors and medical illness, and (3) learns about the variety of consultation services provided by a psychiatrist in the general hospital. The student functions as an integral clinical member of the Consultation-Liaison Service. He or she is responsible for performing initial consultations and follow-up as indicated. Because the C-L service receives requests for consults from virtually all clinical services at Thomas Jefferson University Hospital, a student has the opportunity to gain experience with the management of a wide range of clinical issues. The student is supervised by the attendings and resident(s) assigned to the service and fellow(s) in psychosomatic medicine. Students participate in daily teaching rounds. There is a formal didactic meeting each week and weekly grand rounds.

**PSYHB. 431-38 Consultation-Liaison Psychiatry at AEMC**  
(Drs. Best, Hales and Affiliate Faculty)  
Credits 6. 10th through 21st Teaching Blocks.  
Enrollment: By arrangement.

The student develops skills in evaluating and treating general hospital (medical, surgical, obstetrical, etc.) patients who develop psychiatric problems. The student also develops supportive skills with patients with chronic illness. The medical student becomes part of the Consultation Service at a sub-intern level. He or she evaluates patients on whom consultation was requested, and follows these patients as necessary. The student may become involved with dialysis patients or surgical transplant patients as part of the liaison work the Psychiatry Department performs in these special programs.

Supervision is offered by attendings and the resident assigned to the service. Readings are selected based on the special interests of the student and clinical problems seen during the rotation. Grand Rounds are offered weekly. The student is evaluated by the residents and at-
tendings based on performance on rounds and during supervision. Immediate feedback is given on a daily basis.

**PSYHB. 436-41 Child and Adolescent Inpatient Psychiatry at Belmont** (Drs. Best, El-Gabalawi and Affiliate Faculty)
Credits 6. 10th, 11th, 12th and 13th Teaching Blocks.
Enrollment: By arrangement.

Medical students gain experience in the diagnostic and evaluation process of adolescent psychiatric disorders. Students learn basic dynamics of family therapy. Students learn and apply the major paradigms for normal adolescent development. Medical students become an integral part of the treatment team and gain experience in the comprehensive treatment approach used on the Adolescent Psychiatry Unit. Students are assigned two patients to follow throughout the rotation and become experienced in the family approach to treatment of adolescents with psychiatric disorders. Students are assigned readings on normal adolescent development and adolescent disorders. Students participate in all case conferences and family therapy conferences. Students meet with their individual supervisor weekly to review their cases. Students are evaluated via observation, by participation in supervision, by the treatment team regarding their function on the team, and by assessment of their documentation in the medical record.

**PSYHB. 437-41 Co-Occurring Disorders Unit at Belmont**
(Dr. Richardson and Affiliate Faculty)
Credits 6. 10th through 21st Teaching Blocks.
Enrollment: By arrangement.

Students learn various regimens of detoxification. Students are familiarized with the 12-step recovery model. Students become familiar with the dual diagnosis program. Students learn about the method and theories of Addiction Psychiatry. Students learn the assessment and treatment of patients with co-occurring substance and psychiatric disorders. They have the opportunity to follow several patients in a “team” model with the attending, nursing staff, counselors and social workers. They are exposed to detoxification and 12-step recovery models of addiction treatment. Appropriate reading is assigned. Students participate in treatment team meetings and all case conferences and are supervised by the attending physician. Students are evaluated via observation, by participation in supervision and by documentation in medical record.

**PSYHB. 438-38 Emergency Psychiatry at AEMC**
(Drs. Best, Haves and Affiliate Faculty)
Credits 6. 10th through 21st Teaching Blocks.
Enrollment: By arrangement.
This four-week elective rotation is designed to introduce the student to the basics of emergency psychiatric medicine. Teaching emphasizes the following clinical areas: evaluating the individual patient; managing acute psychosis; the use of psychotropic medication; crisis intervention and interviewing skills; medical illness presenting as a psychiatric emergency; evaluating the dangerous patient; disposition and follow-up. Learning resources include regularly scheduled lectures, supervised clinical management, and exposure to a broad variety of psychopathology. Methods of evaluation include clinical observation and regularly scheduled supervision.

**PSYHB. 439-38 Geriatric Psychiatry**  
(Drs. Best, Zisselman and Affiliate Faculty)  
Credits 6. 10th through 21st Teaching Blocks.  
Enrollment: By arrangement.

The objectives and goals of this course include developing competence in the knowledge, attitudes and skills necessary to diagnose and treat the psychiatric disorders of the geriatric population. Training takes place in a comprehensive setting which includes a general and a private psychiatric hospital with inpatient, outpatient, day programs, nursing homes, and life-care communities. Supervised patient care, inter-departmental conferences with general internal medicine and its sub-specialties, neurology, and psychology, and advanced training in neurology are included. Students learn fundamental skills and knowledge base of geriatric psychiatry, the use of psychiatric medications in the geriatric population, and special attention to the management of patients with depression and dementia. Learning resources include the Geriatric Psychiatry Fellowship staff and fellows, who provide intensive clinical supervision, case conferences, a neurology series including a review of MRI, CAT and SPECT data as well as EEG interpretation, and a Grand Rounds series. Methods of evaluating student are direct observation of student’s performance with patients and families, assessment of performance during seminars and sophistication of chart entries, and function as team members. Faculty, housestaff, and treatment team members provide input on all these aspects of performance.

**PSYHB. 445-41 Eating Disorders Unit at Belmont**  
(Drs. Best, Itskov and Affiliate Faculty)  
Credits 6. 10th through 21st Teaching Blocks.  
Enrollment: By arrangement.

Medical students learn the differential diagnosis of eating disorders and become familiar with various appropriate levels of care and treatment options for patients with eating disorders. Medical students learn the importance of, and systematic approach to diagnosis of co-morbid
psychiatric disorders. Medical students learn the importance of working as a member of a team in treating severely impaired patients. Medical students become familiar with the assessment and treatment of patients with eating disorders, and as time allows, other psychiatric disorders. The student has the opportunity to follow several patients in a “team” model with the attending physician, psychologist, nursing staff, social workers, individual therapists, and group therapists. Appropriate reading material will be assigned. Medical students attend and participate in Morning Rounds, Treatment Teams, Case Conferences, and “Lunch n’ Lecture.” Students are encouraged to observe family therapy sessions where appropriate. Methods of evaluating students include direct observation of the medical student’s performance with patients, interactions with staff, and student entries in the medical record. Ability of the student to synthesize core knowledge in formulating a differential diagnosis and initial treatment plan will be assessed.

**PSYHB. 491 Clinical Research in Psychiatry**  
(Departmental Faculty)

Credits 6. 10th through 21st Teaching Blocks.

Enrollment: By arrangement.

Students work on ongoing or new clinical research projects with a faculty mentor in the Department. Students pursue a short-term independent research project or participate in ongoing research, based on student interests and availability of faculty mentors. Emphasis is placed on the development of basic skills in research methodology. Faculty mentors provide individual supervision. Research projects are normally clinically oriented; however, collaborative projects with other clinical and/or basic science departments are possible. Students who wish to elect this program must work out arrangements in advance with a sponsoring faculty member and obtain written approval from the sponsor and from the Vice Chair for Education. If a student knows of a faculty member’s research interests, this knowledge provides a good starting point for developing a plan. A student who is not familiar with active departmental research and faculty expertise should visit Ms. Florence Spencer to obtain current information about faculty members, their scholarly interests, and ongoing research projects.
Radiation Oncology

Chairman
Adam P. Dicker, MD, PhD, Professor and Chair, Department of Radiation Oncology; Professor, Department of Pharmacology and Experimental Therapeutics

Division Directors
Bo Lu, MD, PhD, Professor and Director, Division of Molecular Radiation Biology
Yan Yu, PhD, MBA, Professor and Vice Chair, Division of Medical Physics

Course Director
Voichita Bar-Ad, MD, Clinical Associate Professor, Radiation Oncology

Education Coordinator
Theresa Malatesta

Clinical Curriculum

RADONC. 401 Clinical Clerkship in Radiation Oncology
(Dr. Bo Lu and Staff)
Credits 6. 10th through 21st Teaching Blocks.
Enrollment: By arrangement.

Students spend time on inpatient and outpatient services. They participate in the diagnostic work-up and treatment decision of patients referred to the department and are integrated into the work of the department. They participate in all departmental conferences and are under direct supervision of several faculty radiation oncologists. Students are exposed to diagnostic processes and treatment of patients with all forms of cancer.

RADONC. 403 Radiation Oncology Research
(Dr. Bo Lu and staff)
Credits 6. 10th through 21st Teaching Blocks.
Enrollment: By arrangement.

This course includes laboratory research in experimental radiation oncology, translational research and selected clinical topics in radiation oncology. Students are encouraged to present findings at national meetings and to submit manuscripts under the direct supervision of a faculty advisor.

RADONC. 405 Ambulatory Oncology Elective
Credits 6. All Teaching Blocks.
Enrollment: By arrangement.
RADONC. 431  Biology of Human Cancer Radiotherapy  
(Dr. Leeper and Staff)  
Credits 6.  10th through 21st Teaching Blocks.  
Enrollment: By arrangement.  

This is an elective didactic course introducing students to the nature of ionizing radiations, the effects of such radiations on human cells and tissues, and the molecular and biological basis for the use of ionizing radiations in the treatment of human cancer. Subjects stressed are the molecular and cellular response to radiation, the radiation syndrome in humans, the radioresponsiveness of tumors and normal tissues, time-dose relationships, and oxygen sensitization.  

Students at Match Day, the day they learn where they will spend their residencies.
Radiology

Chair
Vijay M. Rao, MD, Professor of Radiology and Chair of the Department

Vice Chairmen
Geoffrey Gardiner, MD, Professor of Radiology and Vice Chair for Clinical Practice
Barry B. Goldberg, MD, Professor of Radiology and Vice Chair for Strategic Planning
Ethan Halpern, MD, Professor of Radiology and Vice Chair for Research
Chris Merritt, MD, Professor of Radiology and Vice Chair for QA and Performance Improvement
Levon Nazarian, MD, Professor of Radiology and Vice Chair for Education

Directors
Adam Flanders, MD, Professor of Radiology and Co-Director of Neuroradiology/ENT Radiology
David P. Friedman, MD, Associate Professor of Radiology and Co-Director of Neuroradiology/ENT Radiology
Barry B. Goldberg, MD, Professor of Radiology and Director of Ultrasound
Charles M. Intenzo, MD, Professor of Radiology and Director of Nuclear Medicine
Oksana Baltarowich, MD, Professor of Radiology, Director of Medical Student Education
Donald Mitchell, MD, Professor of Radiology and Director of MRI
William Morrison, MD, Associate Professor of Radiology and Director of Musculoskeletal Radiology
Laurence Needleman, MD, Associate Professor of Radiology and Director of Body CT
Levon Nazarian, MD, Professor of Radiology, Director, Residency Training Program, and Chair of Radiology Education Committee
Barbara Cavanaugh, MD, Clinical Associate Professor of Radiology and Director of Breast Imaging
Daniel Brown, MD, Professor of Radiology and Director of Interventional Radiology
Coordinator
David Friedman, MD, Associate Professor of Radiology and Coordinator of Medical Student Course in Neuroradiology/ENT

Rick I. Feld, MD, Professor of Radiology and Coordinator of Medical Student Course in Cross-Sectional Imaging

Carin Gonsalves, MD, Associate Professor of Radiology, Coordinator of Medical Student Course in Interventional Radiology

Oksana Baltarowich, MD, Professor of Radiology, Director of Medical Student Education and Coordinator of Medical Student Course in Diagnostic Radiology

Education Coordinator
Pamela Coyle

Clinical Curriculum

RAD. 401 Diagnostic Radiology (Dr. Baltarowich)
Credits 6. 10th through 21st Teaching Blocks.

Students attend didactic lectures that include a radiology core curriculum and subspecialty introductory lectures in chest, cardiac, abdominal, musculoskeletal, computed tomography, ultrasound, MRI, interventional radiology, neuroradiology, mammography, nuclear medicine, physics, and pediatric radiology. Students participate in a variety of exercises with partners, in groups or teams to reinforce learning. This includes a hands-on Ultrasound Workshop, where students scan each other. Students also participate in image interpretation sessions with attending radiologists, residents and fellows during clinical rotations in Chest, Musculoskeletal, Fluoroscopy, Body CT, Ultrasound, MRI, Neuroradiology, Interventional Radiology, Mammography, and Nuclear Medicine. In addition each student spends an evening with the radiology resident covering the Emergency Department. Students learn appropriateness criteria for ordering diagnostic imaging studies and have various case discussions concerning optimal imaging utilization. Each student is required to prepare a power point presentation on a case that s/he encounters during the rotation and discuss the radiologic manifestations of the patient’s disease. There is a midterm quiz and a final examination, both of which include image interpretation. The final grade is based on test scores, power point presentation and class participation.

Location:
01 Thomas Jefferson University Hospital
(Minimum 10, maximum 28) Not offered in block 13
03  Bryn Mawr Hospital
    1 student
07  Lankenau Hospital
    1 student
38  Albert Einstein Medical Center
    4 students blocks 12-20 only

RAD. 403  Neuroradiology  (Dr. Friedman)
Credits 6.  11th through 21st Teaching Blocks.
Enrollment: Maximum 1.

Students are exposed to the entire gamut of neuroradiological procedures, including angiograms, myelograms, computed tomography, and magnetic resonance imaging. They participate in the interpretation of extra-cranial head and neck imaging studies and are given the opportunity to attend and participate in all neuroradiological and otolaryngological radiology conferences. A teaching file of outstanding cases is available.

RAD. 406  Cross Sectional Imaging (Ultrasound, Computed Tomography, and Magnetic Resonance Imaging)  (Dr. Feld)
Credits 6.  10th through 21st Teaching Blocks.
Enrollment: Maximum 2.

Each medical student rotates for an interval of two weeks in ultrasound, one week in CT, and one week in MRI. The students participate in the ongoing daily morning conferences and combined US/CT/MRI conference from 8:00 to 8:30 a.m., which is held three times a week. Use also is made of the extensive videotape library on cross sectional imaging. Selected videotapes are assembled, and a special viewing carrel is set aside for student use. In addition, the students rotate within the various areas of CT and MRI. During this time, the students observe many different procedures being performed by the technologist and review cases with the physicians. Medical students going through this rotation are expected to come away with a basic understanding of the usefulness of ultrasound, computed tomography, and MRI and acknowledge of how these procedures are performed.

RAD. 407  Cardiovascular/Interventional Radiology  (Dr. Gonsalves)
Credits 6.  10th through 21st Teaching Blocks.
Enrollment: Maximum 2.

During their month in cardiovascular/interventional radiology, students become familiar with the wide range of invasive procedures performed by the radiologist through first-hand observation of cases. They participate in case review sessions held every morning with the
residents and fellows. The students accompany the residents and fellows on morning rounds for follow-up evaluation of patients who have had both vascular and nonvascular procedures. Students have an opportunity to review the extensive collection of cases in the teaching files and may assist with various research projects in progress. By the end of the month, the students should have a better understanding of both the diagnostic and interventional capabilities of this section of the Department of Radiology, and should be more familiar with the management of patients with liver cancer, uterine fibroids, and biliary or renal obstruction.

**RAD. 425  Research Elective**
Credits 6. All Teaching Blocks.
Maximum 2

The third year selective in Radiology is meant to introduce medical students interested in all fields of medicine to this specialty. During this rotation students will be introduced to many aspects of radiation oncology through multidisciplinary teams. These teams will focus on patient intake and evaluation, simulation studies and radiation therapeutic planning. Students will participate in departmental conferences
Rehabilitation Medicine

Chairman
John L. Melvin, MD, MMSc, The Jessie B. Michie Professor of Rehabilitation Medicine and Chairman of the Department

Directors
Nethra Ankam, MD, Assistant Professor of Rehabilitation Medicine and Director of Undergraduate Medical Education
Christopher S. Formal, MD, Clinical Professor of Rehabilitation Medicine and Director of Graduate Medical Education, Course Director, PM&R Clinical Elective at Magee Rehabilitation Hospital Director, PM&R Clinical Elective at Magee Rehabilitation Hospital

Assistant to the Chairman
Carol Abbott

Education Coordinator
Patricia Ann Williams

Clinical Curriculum

REHAB. 352 Selective in Rehabilitation Medicine
Offered the last 3 weeks of odd numbered blocks and the first 3 weeks of even numbered blocks only.
(1B, 2A, 3B, 4A, 5B, 6A, 7B, 8A.)

As the prevalence of disability in the United States rises as both the baby boomer generation ages, and modern medical advancements keep more individuals with disability alive, principles of rehabilitation become more relevant to every medical and surgical specialty. The purpose of this selective is to provide students with exposure to physical medicine and rehabilitation in various settings in order to facilitate understanding of the continuum of rehabilitative care. At the end of the rotation, students should begin to explain how a person’s disease process and functional abilities intersect with their environment, societal roles, and societal norms to affect quality of life.

There are two options. One option is adult rehabilitation, where there are four sites to choose from. At Magee or Moss, students will be working on inpatient and outpatient specialty services including spinal cord injury, stroke or traumatic brain injury services. At Bryn Mawr, students will have the opportunity to work closely with an attending who specializes in spasticity management, and have an opportunity to learn this skill in depth. This high volume outpatient office at Bryn Mawr will allow students to see multiple neurologic rehabilitation diagnoses at various stages of the rehabilitation process. At Jefferson, students
will have the opportunity to rotate on the general inpatient rehabilitation unit, where they will see a wide variety of pathology including neurologic, medical and orthopedic rehabilitation diagnoses. Both Magee and Jefferson sites will have the opportunity to spend time in the psychiatric outpatient offices of the Rothman Institute and Jefferson Pain Center. The other option will be a pediatric rehabilitation option based out of A. I. duPont Hospital for Children, where students will have the opportunity to rotate in acute inpatient rehabilitation unit, outpatient day rehabilitation hospital and consultation services, along with outpatient clinic settings to see a wide variety of pediatric patients with congenital and acquired disability. With both options, students will be able to closely work with both attending and resident physicians, along with other members of the rehabilitation team.

Goal 1: Gain experience and competency in development of a rehabilitation problem list that can include medical, functional, social, and vocational problems. This goal will be accomplished through rounding on inpatient services, seeing patients in consultation, and working up patients in outpatient clinic. There will also be formal didactics, and competency will be assessed via a rehabilitation problem list and plan that the students will present to the course director and their peers on the last day of the rotation.

Goal 2: Gain experience and competency in neuromusculoskeletal examination and interpretation, especially as it pertains to diagnosis and function. This goal will be accomplished through rounding on inpatient services, seeing patients in consultation, and working up patients in outpatient clinic.

Objectives: At the end of the selective, the student should be able to:

1. Take a complete functional history, perform a thorough neuromusculoskeletal examination, and develop a complete rehabilitation problem list and plan of action.

2. Conduct an appropriate interview and examination of a patient with disability.

3. Develop an understanding of assistive devices, modalities, adaptive equipment, and therapies, which includes the indications, contraindications, and role of each.

4. Describe the levels of Rehabilitative Care.

5. Explain the natural history of some common rehabilitation complaints including evaluation, prognosis, treatment and preventable sequelae; including, for example, low back pain, stroke, spinal cord injury, traumatic brain injury, cerebral palsy, spina bifida.
6. Localize a peripheral nervous system lesion to root or peripheral nerve.

Location:

01 Thomas Jefferson University Hospital
   Maximum 1

04 Bryn Mawr Rehabilitation Hospital
   Maximum 1

28 AI DuPont Hospital for Children
   Maximum 2

44 Moss Rehabilitation Hospital
   Maximum 2

45 Magee Rehabilitation Hospital
   Maximum 2

**REHAB. 401 Clinical Clerkship in Rehabilitation Medicine**

(Staff)

By departmental arrangement only

Credits 6. 10th through 21st Teaching Blocks.

Enrollment: Maximum 4 per Teaching Block

This is a full-time practical experience in evaluation, diagnosis, and management of physically disabled patients, including those with complicated medical problems.

The goal of this rotation is enable those who complete the elective to describe the scope of the practice of Physical Medicine and Rehabilitation (PMR) through providing a wide exposure to PMR. Coequal is the goal of full utilization of all the health team members needed to accomplish the functional goals of the patient. In addition, the medical student will learn to effectively interact with severely disabled people in an upbeat hope-engendering manner and understand the wide ranging effects of life altering functional disability.

Under the direct supervision of the attending staff and house staff within the Department of Rehabilitation Medicine, the student actively participates in daily work rounds and teaching rounds, as well as all departmental teaching conferences.

The rotation is structured as follows:

Two weeks at Magee Rehabilitation Hospital under the direction of Dr. Christopher Formal. While at Magee, students have the ability to rotate on two inpatient services (usually a combination of spinal cord injury, stroke or traumatic brain injury,) and see outpatients.

Two weeks at Thomas Jefferson University Hospital, with one week of inpatient rehabilitation on our comprehensive acute rehabilitation
unit, where students see a mix of patients with diagnoses requiring medically complex rehabilitation, including those with strokes, amputations, spinal cord injuries and cancer. The second week is spent in the outpatient clinics. Two days are spent in a general PMR clinic, while another two days are at the Rothman Institute which emphasizes acute musculoskeletal problems. The remaining day in the outpatient week is spent with outpatient physical, occupational, and speech therapists to allow students to see examples of the therapies they may have seen prescribed.

If a student has already taken Rehab 352, please contact the department to customize the rotation for you to avoid repetitive experiences.

REHAB. 425 Research Elective in Rehabilitation Medicine
10th through 21st teaching blocks
By departmental arrangement only
Surgery

Chairman
Charles J. Yeo, MD, Samuel D. Gross Professor of Surgery and Chairman of the Department

Vice Chairman
Herbert E. Cohn, MD, Anthony E. Narducci Professor of Surgery and Vice Chairman of the Department

Division Directors
Paul DiMuzio, MD, Associate Professor of Surgery and the William M. Measey Professor of Surgery and Director of the Division of Vascular Surgery

Murray J. Cohen, MD, Associate Professor of Surgery and Director of the Division of Trauma

James T. Diehl, MD, Professor of Surgery and Director of the Division of Cardiothoracic Surgery

Scott D. Goldstein, MD, Associate Professor of Surgery and Director of the Division of Colon and Rectal Surgery

Cataldo Doria, MD, Nicoletti Family Professor of Surgery and Director of the Division of Transplantation

Ernest L. Rosato, MD, Professor of Surgery, Director of the Division of General Surgery

Jonathan Brody, PhD, Associate Professor, and Director of the Division of Surgical Research Education

Karen Chojnacki, MD, Associate Professor of Surgery and Director of Graduate Medical Education

Gerald Isenberg, MD, Professor of Surgery and Director of Undergraduate Medical Education

James Fox, MD, Professor of Surgery and Director of the Division of Plastic Surgery

Gordon Schwartz, MD, Professor of Surgery and Director of the Division of Breast Surgery

Niels Martin, MD, Assistant Professor of Surgery and Associate Director of Graduate Medical Education

Stacey Milan, MD, Assistant Professor of Surgery and Associate Director of Undergraduate Education
Education Coordinators
Donna Guinto, Coordinator for Graduate Education for the Department of Surgery
Sherry Weitz, Coordinator for Undergraduate Education for the Department of Surgery

Clinical Curriculum

SURG. 350 Surgery Clinical Clerkship
(Dr. Isenberg and Faculty)
12 week rotation with includes 6 weeks of General Surgery, 3 weeks of one Surgery Specialty and 3 weeks of a second Surgery Specialty (Anesthesiology, Neurosurgery, Ophthalmology, Orthopedic Surgery, Otolaryngology, and Urology) or non-surgical specialty (Rehab Medicine, Radiation Oncology, Geriatrics, Dermatology)

For a full description, please see the Educational Program section of this catalog.

SURG. 351 Final Written Examination in Surgery
Credits 2.

SURG. 425 Research
Credits 6. All Teaching Blocks.
Enrollment: by arrangement.

SURG. 450 Clinical Clerkship (Subinternship)
(Dr. Isenberg and Faculty)
Credits 6. 10th through 21st Teaching Blocks.
Enrollment: Prior arrangement with coordinator necessary

Arrangements are made to enroll in the clerkship at one of the participating institutions through the Department of Surgery. Students must have this clerkship approved by their adviser. During the clerkship, students participate in preoperative and postoperative care of surgical patients, as well as participating in the operative procedures themselves. The students are considered an integral part of the surgical team at a more advanced level than the core surgical clerks (Surgery 350). Clinical x-ray and pathology conferences, ward rounds, and teaching seminars form the basis for surgical instruction outside the operating room. Assumption of graduated individual responsibility is encouraged. As subinterns, students are responsible to their resident team as well as attendings. Night and weekend call is required every fourth night and is arranged with the coordinator.
Location:

01 Thomas Jefferson University Hospital  
  Dr. Isenberg—by arrangement  
007 Lankenau Hospital  
  Dr. Walker—by arrangement  
10 Methodist Hospital  
  Dr. Koniaris—by arrangement  
15 Christiana Care Health Services—Christiana Hospital  
  Dr. Kalina—by arrangement  
28 The duPont Hospital for Children  
  Dr. Katz—by arrangement  
37 Aria Health – Torresdale Campus  
  Dr. Renza-Stingone – by arrangement  
43 York Hospital  
  Dr. Mpinga – by arrangement

SURG. 452 **Clinical Clerkship** (General Surgery Elective)  
  (Dr. Isenberg and Faculty)  
  Credits 6. 10th through 21st Teaching Blocks.  
  Enrollment: Prior arrangement with coordinator necessary

Arrangements for this clerkship are made through the Department of Surgery and with the approval of the student’s adviser. Description of this clerkship is as for SURG. 450 except, as an elective, students are responsible to their chosen attending(s). Night and weekend calls are to be arranged between the student and attending(s). Locations are as for SURG. 450 for Jefferson affiliates. For nonaffiliates, the location suffix -99 should be used. See the Department of Surgery for approval of -99 locations.

SURG. 453 **Thoracic and Cardiovascular Surgery**  
  (Drs. Diehl, Bogar, Evans, Cowan, and Cavarocchi)  
  Credits 6. 10th through 21st Teaching Blocks.  
  Enrollment: Prior arrangement with coordinator necessary

The student participates as an integral part of the thoracic and cardiac surgical team at the level of subintern. The student is responsible for the pre- and postoperative evaluation and care of the thoracic and cardiac surgical patients and also actively participates in the operation. The student has the responsibility of working closely.

Location:

01 Thomas Jefferson University Hospital  
  Drs. Diehl and Bogar (Cardiac) Drs. Evans and Cowan (Thoracic) – Dr. Cavarocchi (CCU)  
  Maximum 2
The student participates as a member of the surgical transplantation team in a program of clinical renal, pancreatic and hepatic transplantation at Thomas Jefferson University Hospital. The student studies transplantation immunology utilizing clinical laboratory and library projects. Chronic renal failure and the roles of transplantation and dialysis are explored. Chronic liver failure and liver transplantation are examined in detail. Donor and recipient procedures are integral to the learning experience. Students work closely with the Surgical Faculty.

**SURG. 455 Plastic Surgery Clerkship** (Dr. Fox)
Credits 6. 10th through 21st Teaching Blocks.
Enrollment: Prior arrangement with coordinator necessary

This clerkship provides exposure to the principles of plastic surgery, including emphasis on the factors influencing wound healing. The student is expected to participate in patient care, including preoperative evaluation, operative management, and postoperative care. Concentrated clinical exposure includes patients undergoing elective cosmetic and reconstructive procedures as well as those with emergency problems.

*Location:*
01 Thomas Jefferson University Hospital
Drs. Fox, Copit and Greawey
maximum 2 by arrangement
15 Christiana Care Health Services
Dr. Kalina—maximum 1 by arrangement

**SURG. 458 Diseases of the Breast** (Drs. Schwartz and Lee)
Credits 6. 10th through 21st Teaching Blocks.
Enrollment: Prior arrangement with coordinator necessary

This clerkship is conducted as a preceptorship, allowing the student an experience in inpatient and outpatient care of problems related to the breast. It provides an opportunity to gain an understanding of the clinical anatomy and physiology of the breast and the diagnosis and pathophysiology of the common disorders that affect the breast, as well as their treatment. Operative experience and the surgical manage-
ment of benign and malignant lesions of the breast are stressed. Exposure to ancillary techniques of diagnosis, such as mammography and ultrasound, is provided. Each student will be offered an opportunity, depending on his or her interests, to initiate a clinical research project that may be continued following the conclusion of the clerkship.

**SURG. 459 Colon and Rectal Surgery**  
(Drs. Goldstein and Isenberg)  
Credits 6. 10th through 21st Teaching Blocks.  
Enrollment: Prior arrangement with coordinator necessary

Students are exposed to the general surgical subspecialty of colon and rectal surgery. This includes both office- and hospital-based practice, from minor complaints to major and complicated surgical procedures: e.g., carcinoma of the colon and rectum, radiation enteritis, ulcerative colitis, regional enteritis, and prolapse. The office-based portion of this elective is especially helpful for students heading for careers in family medicine and primary care, in addition to those students anticipating surgical training or medical subspecialty training in gastroenterology.

*Location:*  
01 Thomas Jefferson University Hospital  
Drs. Goldstein, Isenberg, and Maxwell  
Maximum 2 by arrangement

**SURG. 460 Clinical Research in Breast Diseases**  
(Drs. Schwartz and Lee)  
Credits 6. All Teaching Blocks.  
Enrollment: By arrangement

To gain an appreciation for the relationship of basic and clinical research to direct patient care, this elective permits the student to initiate independent investigation or participate in ongoing clinical research programs in breast disease. Principal areas of study currently include techniques for the early detection of breast cancer, alternative therapies, the use of induction chemotherapy to enhance long-term survival in patients with locally advanced breast cancer, and the treatment of non-invasive cancer by excision and surveillance. Other projects related to clinical breast disease may be initiated, depending on student interest. Students who choose this elective would find it helpful to be computer literate (PC preferable) with experience in word processing, database management, and/or spreadsheet programs.

Maximum 1 by arrangement
SURG. 475  Pediatric Surgery  (Dr. D. Katz)
Credits 6.  10th through 21st Teaching Blocks.
Enrollment: Prior arrangement with coordinator necessary

The goal of this rotation is to gain familiarity in dealing with infants and children having surgical problems, both as inpatients and outpatients, in and out of the operating room. Students will become knowledgeable about the more common pediatric surgical disease entities and learn to deal with sick children and their families. The student will become an integral member of the team, working with a senior surgical resident, a mid-level Jefferson pediatrics resident, and, at times, junior surgical residents from Christiana Care Health Services and other institutions. The service is very closely supervised by the attending pediatric surgeons. There are attending rounds daily as well as participation in the Surgical Morbidity and Mortality Conference, Surgery/GI/Radiology Conference, Tumor Board, Surgical Pathology Conference, and Journal Club. The rotation is ideal for students who are interested in surgery and desire further exposure to diseases in children, for those interested in pediatrics, and even those interested in obstetrics/gynecology.

Location:
28 The A.I. duPont Hospital for Children
By arrangement

SURG. 480  Trauma/Surgical Critical Care Clerkship
(Drs. Cohen, Weinstein, Kaulback, Lindenbaum, Patel, Martin, and Jenoff)
Credits 6.  10th through 21st Teaching Blocks.
Enrollment: Prior arrangement with coordinator necessary.

Clinical clerks are expected to play an active role on the trauma service. This includes full participation in the initial resuscitation of trauma patients, operative management, care of patients through the critical care unit, discharge and office follow-up. All aspects of trauma and critical care of these patients are emphasized. Individual responsibility for patient care is encouraged. Participation in all weekly and monthly trauma and critical care conferences is required. Night and weekend calls are arranged between student and resident.

Maximum 2

SURG. 485  Surgical Intensive Care  (Dr. Cohen)
Credits 6.  10th through 21st Teaching Blocks.
Enrollment: Prior arrangement with coordinator necessary.
Clinical clerks are active in the care of all surgical critical care patients in the SICU. Total patient critical care management will be emphasized. Lectures by senior residents/attendings are offered. Night and weekend calls arranged between student and intern.

Location:
01 Thomas Jefferson University Hospital
   Dr. Cohen
   Maximum 2 by arrangement
15 Christiana Care Health Services—Christiana Hospital
   Maximum 1 by arrangement
38 Albert Einstein Medical Center
   Dr. Somers
   Maximum 1 by arrangement

SURG. 490  Peripheral Vascular Surgery
(Dr. DiMuzio)
Credits 6.  10th through 21st Teaching Blocks.
Enrollment: Prior arrangement with coordinator necessary

This course is designed to provide an in-depth exposure to the evaluation and management of peripheral vascular disease. During the rotation, the student functions at a subintern level. The student evaluates patients in the office and participates in management decisions. If the patient is admitted to the hospital, the student performs the admitting history and physical examination and participates in the operative and postoperative care. This course is designed to cover all areas of peripheral vascular surgery, including cerebral vascular disorders, aneurysmal and occlusive disease of the aorta and its major tributaries, as well as lower extremity revascularization. In addition, venous hemodynamics and the pathophysiology of venous insufficiency are covered. The student has the advantage of working closely with vascular surgery attendings as well as the appropriate house staff.

Location:
(1) Thomas Jefferson University Hospital
   Drs. DiMuzio, Eisenberg, and Rao
   Maximum 2 by arrangement
Urology

Chairman
Leonard G. Gomella, MD, The Bernard W. Godwin, Jr. Professor of Urology and Chairman of the Department

Vice Chairs
Patrick J. Shenot, MD, Assistant Professor of Urology and Vice Chairman for Academic Affairs

Perry R. Weiner, DO, Clinical Assistant Professor of Urology and Vice Chair for Clinical Affairs

Residency Program Director
Patrick J. Shenot, MD, Assistant Professor of Urology

Co-directors Under Graduate Medical Education
Leonard A. Frank, MD, Clinical Assistant Professor of Urology

Costas D. Lallas, MD, Assistant Professor of Urology

Education Coordinator
Nicole Eppright

Clinical Curriculum

UROL. 401 Clinical Clerkship in Urology
(Dr. Shenot and Staff)
Credits 6. 10th through 21st Teaching Blocks.
Enrollment: By arrangement

Students receive an in-depth exposure to principles of urologic diagnosis and actively function as a house officer in the operating room, clinical office hours, and with inpatients. Both surgical and nonsurgical approaches to urologic disease are emphasized with a presentation of underlying mechanisms of urologic disease. In this rotation, students are welcome to attend all conferences, journal club, and resident didactic sessions. They are encouraged to participate in case presentations during urology grand rounds. During this rotation, students are offered a broad range of practical and didactic opportunities.

Location:
01 Thomas Jefferson University Hospital
Minimum 1, Maximum 5. We will fill TJUH before offering affiliate sites.
03 Bryn Mawr Hospital
Maximum 1
07 Wilmington VA Hospital
Maximum 1
IDPT. 410  Surgical Subspecialties  

For a full description, please see the Educational Program section of this catalog.

UROL. 352  Urology Selective  
(Dr. Lallas and Staff)  
Credits 3.5.  10th through 21st Teaching Blocks. 
Enrollment: Open.

This course is a 3-week rotation in Urology during the 12-week Surgical Clinical Clerkship. The 3rd year JMC students will shadow residents and attendings to learn the basics of inpatient, outpatient, and perioperative urologic care. The urology group at Jefferson is divided into three services. Students will spend one week on each service, which includes: oncology, endourology and neurourology and female urology. The students will attend inpatient rounds, predetermined service assignment either in the operating room or clinic and required lectures on basic urologic topics. Students will become proficient in diagnostic entities (urinary incontinence, prostate cancer, urinary tract infection, and nephrolithiasis), physical diagnosis components (digital rectal examination, testicular exam, abdominal exam) and procedures (bladder catheter insertion, microscopic evaluation of urinary sediment, interpretation of abdominal/pelvic CAT scans, GU ultrasonography).

Location:

01 Thomas Jefferson University Hospital  
Minimum 1, Maximum 4

03 Bryn Mawr Hospital  
Maximum 1

07 Wilmington VA Hospital  
Maximum 1

UROL. 425  Research in Urology  
(Dr. Lallas and Staff)  
Credits 6.  10th through 21st Teaching Blocks. 
Enrollment: By arrangement

This elective rotation will provide the student with a concentrated research experience within this specialty discipline. The specific research project and tasks will be agreed upon by the student and faculty research mentor, and approved by the course director listed above. Assigned research mentor will vary by project proposal. For this approval, whether at TJUH or another institution, the student must submit in writing to the course director a description of the proposed project, a list of goals for the month, and the name of the faculty mentor prior
to scheduling this elective. Evaluation for the course will be given by mentor.

Location:
01 Thomas Jefferson University Hospital
Minimum 1, Maximum 5

Congratulations, JMC Graduates!
The Degree of Doctor of Medicine

Graduates, Class of 2012

At a public commencement at the Kimmel Performing Arts Center on the 20th day of May 2012, degrees were conferred on the following students by Dr. Robert L. Barchi, President.

Lilith Ablabutyan
Medicine-Preliminary — Loma Linda University, CA
Ophthalmology — University of Missouri-Kansas City, MO

Ibukunoluwa C. Akinboyo
Pediatrics — Johns Hopkins University Program, MD

Snigdha Alur
Obstetrics/Gynecology — University of Rochester/Strong Memorial Hospital, NY

Carinne Wright Anderson
Surgery — Christiana Care, DE

Jonathan P. Andrews
Medicine-Preliminary — Drexel University College of Medicine/Hahnemann University Hospital, PA

Zafia Anklesaria
Internal Medicine — University of California-San Francisco, CA

Schweta R. Arakali
Internal Medicine — UMDNJ-Robert Wood Johnson Hospital-Piscataway, NJ

Jennifer Jane Aronchick
Obstetrics/Gynecology — New York University School of Medicine, NY

Armonde Alek Baghdanian
Medicine-Preliminary — Albert Einstein Medical Center, PA
Radiology-Diagnostic — Boston University Medical Center, MA

Arthur H. Baghdanian B.S., University of California-Los Angeles
Medicine-Preliminary — Albert Einstein Medical Center, PA
Radiology-Diagnostic — Boston University Medical Center, MA

Robert Francis Bahnsen Jr.
Psychiatry — Duke University Medical Center, NC

Stephen Aaron Balfour
Transitional — Albert Einstein Medical Center, PA
Radiology-Diagnostic — Temple University Hospital, PA
KRISTIN MAUREEN BATEMAN
Internal Medicine — Tulane University School of Medicine, LA

JONATHAN DAVID BENNETT
Surgery — Virginia Commonwealth University Health System, VA

DANIEL CHRISTOPHER BOLAND
Emergency Medicine — Drexel University College of Medicine/Hahnemann University Hospital, PA

MICHAEL PATRICK BONK
Medicine-Primary — Hospital of the University of Pennsylvania, PA

LAURA MICHELLE BORMAN
Emergency Medicine — St. Luke’s-Roosevelt Hospital, NY

NICOLE LYNN BOURNIVAL
Internal Medicine — Yale-New Haven Hospital, CT

SARAH EILEEN BRIGHTHAUPT
Transitional — St. Elizabeth-Northeastern Ohio Medical University, OH

ROBERT MICHAEL BRODY
Surgery-Preliminary — Beth Israel Deaconess Medical Center, MA

B.S., Villanova University
Surgery — Georgetown University Hospital, DC

JOSHUA THOMAS BUCHER
Emergency Medicine — UMDNJ-Robert Wood Johnson Hospital-Piscataway, NJ

PATRICK SULLIVAN BUCKLEY
Orthopaedics — Thomas Jefferson University Hospital, PA

ALBERT KHAN BUÍ
Internal Medicine — University of California-Davis Medical Center, CA

ABEL MORRIS BUMGARNER
Psychiatry — University of Maryland Medical Center, MD

BARRY JASON BURSTEIN
Internal Medicine — McGill University, CN

AILEEN BUTERA
Otolaryngology — University of Michigan Hospitals-Ann Arbor, MI

CAREN FAYE CAMPBELL
Medicine-Preliminary — Albert Einstein Medical Center, PA
Dermatology — University of Louisville School of Medicine, KY
LAUREN MICHELLE CASHMAN  
Family Medicine — York Hospital, PA

CYNTHIA MARIE CHAN  
Transitional — Albert Einstein Medical Center, PA  
Radiology-Diagnostic — Albert Einstein Medical Center, PA

PHILLIP MICHAEL CHAN  
Emergency Medicine — New York Hospital Medical Center-Queens, NY

SHRUTI CHANDRA  
Emergency Medicine — Thomas Jefferson University Hospital, PA

CALEB WEI-SHIN CHENG  
Pathology — University of Illinois-Chicago, IL

FORSTER CHHEAN  
Internal Medicine — Johns Hopkins University/Bayview Hospital, MD

MICHELLE CHIENS  
Pediatrics — University of California-Los Angeles Medical Center, CA

HETAL HARISH CHOXI  
Family Medicine — University of Michigan Hospitals-Ann Arbor, MI

BRIAN CHRISTOPHER CLARK  
Internal Medicine — University of Maryland Medical Center, MD

MAXWELL I. COOPER  
Emergency Medicine — Thomas Jefferson University Hospital, PA

GREGORY SCOTT CORCORAN  
Emergency Medicine — UMDNJ-Robert Wood Johnson Hospital-Piscataway, NJ

CRYSTAL A. CRAIG  
Obstetrics/Gynecology — Lankenau Hospital, PA

CAROLINE CRUZ  
Psychiatry — University of South Florida-Tampa, FL

NATASHA DARRAS  
Pathology — New York Presbyterian Hospital-Weill Cornell Medical Center, NY

MIRIAM THAIS DAVIS  
Emergency Medicine — University of California-Davis Medical Center, CA

JOHN MICHAEL DELGIORNO  
Pediatrics — St. Christopher’s Hospital, PA
ELaina Frances Dellacava  
Psychiatry — Einstein/Montefiore Medical Center, NY

Matthew Michael Demczko  
Pediatrics — Jefferson Medical College/duPont Children’s Hospital, PA

Amanda Marie Deming  
Obstetrics/Gynecology — University of Florida College of Medicine-Shands Hospital, FL

Ornella Ajet Dervishaj  
Surgery — Brooklyn Hospital Center, NY

Florian Francis Dibra  
Medicine-Preliminary — Thomas Jefferson University Hospital, PA  
Anesthesiology — University of Florida College of Medicine-Shands Hospital, FL

Patrick Martin Doggett  
Family Medicine — Thomas Jefferson University Hospital, PA

Joshua Michael Donaldson  
Internal Medicine — Thomas Jefferson University Hospital, PA

James Flinn Donecker  
Psychiatry — Naval Medical Center, CA

Joshua Michael Donohue  
Internal Medicine — Thomas Jefferson University Hospital, PA

Amanda Marie Doucette  
Medicine-Preliminary — Abington Memorial Hospital, PA  
Anesthesiology — UMDNJ-Robert Wood Johnson Hospital-Piscataway, NJ

Michael Downes  
Psychiatry — University of Arizona Affiliated Hospitals, AZ

Shannon Elizabeth Doyle  
Pediatrics — Jefferson Medical College/duPont Children’s Hospital, PA

Kyle Jeffrey Edwards  
Surgery — University of Utah Affiliated Hospitals, UT

Michele Jenna Farber  
Medicine-Preliminary — Pennsylvania Hospital, PA  
Dermatology — Thomas Jefferson University Hospital, PA

Michael Nathan Fein  
Internal Medicine — McGill University, CN
Samantha E. Feld  
Medicine-Pediatrics — Stony Brook Teaching Hospitals, NY

John Paul Field  
Emergency Medicine — Cooper University Hospital, NJ

Zhi Ven Fong  
Surgery — Massachusetts General Hospital, MA

Rachel Batsheva Furman  
Medicine-Preliminary — University of Utah Affiliated Hospitals, UT  
Anesthesiology — Virginia Mason Medical Center, WA

Michael Patrick Gannon  
Internal Medicine — Tufts Medical Center, MA

Danielle Lauren Gilbert  
Pediatrics — University of Pittsburgh Medical Center, PA

Lyuba Gitman  
Otolaryngology — SUNY Health Science Center-Brooklyn, NY

Amy R. Glick  
Psychiatry — Mt. Sinai Hospital, NY

Gustavo Ernesto Godoy  
Orthopaedics — Ochsner Clinic Foundation, LA

Ashlee Nicole Godshalk Ruggles  
Surgery-Preliminary — Dartmouth-Hitchcock Medical Center, NH  
Urology — Dartmouth-Hitchcock Medical Center, NH

Hillary Brooke Gordon  
Pediatrics — University of Maryland Medical Center, MD

Aaron Papierno Gould  
Medicine-Preliminary — Pennsylvania Hospital, PA  
Radiology-Diagnostic — Barnes-Jewish Hospital, MO

Bianca Josienne Grecu  
Emergency Medicine — University of California-Davis Medical Center, CA

Stuart Elliot Greene  
Emergency Medicine — Thomas Jefferson University Hospital, PA

Thomas D. Griffin  
Transitional — Albert Einstein Medical Center, PA  
Dermatology — Thomas Jefferson University Hospital, PA
AKSHYA GUPTA
Medicine-Preliminary — University at Buffalo School of Medicine, NY
Radiology-Diagnostic — University of Rochester/Strong Memorial Hospital, NY

MOHIT GUPTA
Surgery-Preliminary — University of Florida College of Medicine-Shands Hospital, FL
Urology — University of Florida College of Medicine-Shands Hospital, FL

NINA HAGHI
Pathology — North Shore-Long Island Jewish Health System, NY

IRMINA SULTANA HAQ
Surgery-Preliminary — North Shore-Long Island Jewish Health System, NY

SCOTT AUSTIN HARSHMAN
Surgery-Preliminary — University at Buffalo School of Medicine, NY

MAUREEN VIRGINIA HEARN
Surgery — Dartmouth-Hitchcock Medical Center, NH

MONICA MICHELLE HEGEDUS
Pediatrics — Stony Brook Teaching Hospitals, NY

STACY LEE HENDERSON
Psychiatry — Mt. Sinai Hospital, NY

LEONARD STANLEY HERSHBERGER
Emergency Medicine — Cooper University Hospital, NJ

LINDSAY KATE HESSLER
Surgery — University of Maryland Medical Center, MD

PAUL ARMSTRONG HILL
Transitional — Newton-Wellesley Hospital, MA
Radiology-Diagnostic — Dartmouth-Hitchcock Medical Center, NH

ELISE C. HOGAN
Family Medicine — Christiana Care, DE

DAVID NATHAN HOKE
Emergency Medicine — Cooper University Hospital, NJ

CLAIRE VIOLAINE HOPPENOT
Obstetrics/Gynecology — Northwestern McGaw/Northwestern Memorial Hospital, IL

BRIANNA MARIE HORVATH
Family Medicine — University of California-San Francisco, CA
JOLIE HSU
Pediatrics — Jefferson Medical College/duPont Children’s Hospital, PA

RONALD C. HUANG
Orthopaedics — Thomas Jefferson University Hospital, PA

ANDREW CHI-WEI Ip
Medicine-Primary — Emory University School of Medicine, GA

ILANA ESTHER JERUD
Psychiatry — Mt. Sinai Hospital, NY

RADHIKA MUKESH KADAKIA
Internal Medicine — University of California-Davis Medical Center, CA

LAUREN KRYSTINE KAHL
Pediatrics — Johns Hopkins University Program, MD

GEORGE JOSEPH KALIYADAN
Pediatrics — UMDNJ-Robert Wood Johnson Hospital-Piscataway, NJ

SAMATA KAMIREDDY
Internal Medicine — University of Rochester/Strong Memorial Hospital, NY

STEVEN EDWARD KANE
Medicine-Preliminary — University of Florida College of Medicine-Shands Hospital, FL
Ophthalmology — University of Florida-Gainesville, FL

PAUL JOHN KARAGIANNIS
Emergency Medicine — Cooper University Hospital, NJ

CHARLES SHINSUKE KATO
Transitional — Tripler Army Medical Center, HI
Anesthesiology — Walter Reed National Medical Center, MD

LEAH DUKE KAYE
Pediatrics — Hershey Medical Center/Penn State, PA

THOMAS MICHAEL KENNEDY
Pediatrics — University of Connecticut Health Center, CT

ERIN M. KENNING
Surgery — Hershey Medical Center/Penn State, PA

RAENA AKBARI KHORRAM
Psychiatry — Thomas Jefferson University Hospital, PA

SONYA KHURANA
Surgery-Preliminary — Temple University, PA
Christopher E. Kim
Transitional — Albert Einstein Medical Center, PA
Radiology-Diagnostic — Albert Einstein Medical Center, PA

Steven Todd Kramer
Pathology — Duke University Medical Center, NC

Kerry Elizabeth Krauss
Obstetrics/Gynecology — Lankenau Hospital, PA

Felina Zolotarev Kremer
Transitional — Crozer-Chester Medical Center, PA
Ophthalmology — Albert Einstein College of Medicine, NY

Margaret Anne Lafferty
Pediatrics — Jefferson Medical College/duPont Children’s Hospital, PA

Alexandra Lane
Internal Medicine — Temple University Hospital, PA

Brian Edward Lee
Medicine-Pediatrics — Rhode Island Hospital/Brown University, RI

Daniel Youngchan Lee
Medicine-Preliminary — Lankenau Hospital, PA
Ophthalmology — Case Western Reserve University, OH

Lawrence M. Lee
Surgery-Preliminary — Thomas Jefferson University Hospital, PA
Urology — Thomas Jefferson University Hospital, PA

Melissa Ann Leedle
Family Medicine — University of California-Davis Medical Center, CA

David Mark Leventhal
Emergency Medicine — Christiana Care, DE

Jennifer Sze-Wing Li
Emergency Medicine — Case Western University Hospitals-Case Medical Center, OH

Jing Li
Surgery — Lankenau Hospital, PA

Pei-Wen Lim
Surgery — University of Massachusetts Medical School, MA

Bridget Qinsi Liu
Emergency Medicine — University of Illinois College of Medicine, IL
SARAH RUTH LOMBARDOS  
Surgery — University of Utah Affiliated Hospitals, UT

JAMES ANDREW LONGENBACH  
Transitional — Naval Medical Center, CA

TIMOTHY KEVIN LYNCH  
Transitional — Naval Medical Center, CA

JULIE LYTTON  
Internal Medicine — Einstein/Montefiore Medical Center, NY

ANITA MAMTANI  
Surgery — Beth Israel Deaconess Medical Center, MA

SHANT JOHN MANOUSHAGIAN  
Internal Medicine — Temple University Hospital, PA

ANGELICA MICHELLE MANZUR  
Internal Medicine — Northwestern McGaw/Northwestern Memorial Hospital, IL

LEANNE MARCOTRIGIANO  
Family Medicine — Greater Lawrence Family Health Center, MA

ANDREW CRAIG MARGULES  
Surgery-Preliminary — Thomas Jefferson University Hospital, PA  
Urology — Thomas Jefferson University Hospital, PA

NATALIE FARANO MARGULES  
Internal Medicine — Thomas Jefferson University Hospital, PA

BENJAMIN ADAM MATI  
Family Medicine — Ventura County Medical Center, CA

ISAAC CRANE MATTHIAS  
Internal Medicine — Thomas Jefferson University Hospital, PA

MATTHEW JAMES MCCLAIN  
Anesthesiology — Hershey Medical Center/Penn State, PA

TIMOTHY STEWART MCCLUNG  
Medicine-Pediatrics — Ohio State University Medical Center, OH

KATHRYN ANN McGRATH  
Family Medicine — Thomas Jefferson University Hospital, PA

MEGHAN JEAN McHENRY  
Transitional — Walter Reed National Medical Center, MD  
Physical Medicine & Rehabilitation — Walter Reed National Medical Center, MD
JUSTIN SCOTT MCLEAN
Emergency Medicine — Denver Health Medical Center, CO

RYAN PATRICK McSPADDEN
Otolaryngology — Loyola University Medical Center, IL

AMY K. MEHTA
Anesthesiology — Thomas Jefferson University Hospital, PA

AARON HENRY MENDELSON
Internal Medicine — Hospital of the University of Pennsylvania, PA

JARED SAMUEL MESHEKOW
Surgery-Preliminary — Thomas Jefferson University Hospital, PA
Radiology-Diagnostic — Cooper University Hospital, NJ

KATHRYN PICKERING MILLER
Pediatrics — Jefferson Medical College/duPont Children’s Hospital, PA

MARSHAL NEWTON MILLER
Family Medicine — Thomas Jefferson University Hospital, PA

MICHAEL N. MIRZABEIGI
Surgery-Preliminary — Hospital of the University of Pennsylvania, PA
Plastic Surgery — Hospital of the University of Pennsylvania, PA

JEREMY D. MOLLIGAN
Research — Union Memorial Hospital-Baltimore, MD

ANNE ELIZABETH MORGANTI
Transitional — Harbor-UCLA Medical Center, CA
Ophthalmology — Brown University, RI

RAYMOND JOHN MORRIS
Psychiatry — Hartford Hospital, CT

MATTHEW TIMOTHY MUFFLY
Orthopaedics — Allegheny General Hospital, PA

ADAM CHRISTOPHER MULLAN
Medicine-Preliminary — Christiana Care, DE
Physical Medicine & Rehabilitation — Temple University Hospital, PA

ZEIN KHOOZAM NAKHODA
Surgery-Preliminary — University of Southern California, CA
Urology — University of Southern California, CA

HADLEY WHISSEL NARINS
Surgery-Preliminary — University at Buffalo School of Medicine, NY
Urology — University at Buffalo School of Medicine, NY
LAY QUEEN NG  
Pediatrics — North Shore-Long Island Jewish Health System, NY

KATHERINE HOANG NGUYEN  
Residency Deferred

SARAH HUYEN TRAN NGUYEN  
Pediatrics — Children’s Hospital-Philadelphia, PA

TO DUNG KHONG NGUYEN  
Pediatrics — Loma Linda University, CA

KAMILA ANNA NOWAK  
Medicine-Preliminary — Thomas Jefferson University Hospital, PA  
Radiation Oncology — Thomas Jefferson University Hospital, PA

GIOVANA OLIVERA  
Internal Medicine — UMDNJ-Robert Wood Johnson Hospital-Piscataway, NJ

EMILY JANE OLSON  
Medicine-Preliminary — Lankenau Hospital, PA  
Anesthesiology — Thomas Jefferson University Hospital, PA

JOSEPH THOMAS O’NEIL  
Orthopaedics — Thomas Jefferson University Hospital, PA

TIMOTHY EUN ORTLIP  
Otolaryngology — University of Maryland Medical Center, MD

NATHAN M. PAJOR  
Pediatrics — Northwestern McGaw/Northwestern Memorial Hospital, IL

CHANTEL YEJI PARK  
Internal Medicine — Thomas Jefferson University Hospital, PA

SULAY PANKAJ PATEL  
Internal Medicine — Emory University School of Medicine, GA

KAROLINA PAZIANA  
Emergency Medicine — Johns Hopkins University Program, MD

DEENA HELEN PEROTTI  
Anesthesiology — Cedars-Sinai Medical Center, CA

MADALYN GRACE MARIE PETERS  
Surgery — Hospital of the University of Pennsylvania, PA

BRIDGET KATHERINE PETERSON  
Family Medicine — Thomas Jefferson University Hospital, PA
XUAN-BINH D. PHAM  
Surgery — Harbor-UCLA Medical Center, CA

ERIN ELIZABETH PHILLIPS  
Pediatrics-Community Health — Children’s National Medical Center, DC

ANJELI PRABHU  
Internal Medicine — University of Colorado School of Medicine-Denver, CO

DANIEL THOMAS PUCHERIL  
Surgery-Preliminary — Henry Ford Health Science Center, MI  
Urology — Henry Ford Health Science Center, MI

AKEF SHAMS RAHMAN  
Emergency Medicine — Pitt County Memorial Hospital/Brody School of Medicine, NC

SHAYNA KONDARAMVALAPPIL RAVINDRAN  
Internal Medicine — Rush University Medical Center, IL

BLAKE MASTIN READ  
Surgery — Stanford University Program, CA

AUDREY ELIZABETH RICE  
Surgery — University Hospital-Cincinnati, OH

LANA MICHELLE RIVERS  
Medicine-Preliminary — Christiana Care, DE  
Radiology-Diagnostic — University of North Carolina Hospitals, NC

TARA MARGARET ROBINSON  
Internal Medicine — Johns Hopkins University Program, MD

HANNAH ROGGENKAMP  
Psychiatry — UCLA Semel Institute for Neuroscience, CA

MASSIMILIANO ROMANELLI-GOBBI  
Otolaryngology — University of Utah Affiliated Hospitals, UT

HAYLEY HARNEET ROSE  
Emergency Medicine — Carilion Clinic-Virginia Tech Carilion School of Medicine, VA

VICTORIA SUMMER ROSE  
Family Medicine — Thomas Jefferson University Hospital, PA

CAROLYN MICHELLE ROSS  
Obstetrics/Gynecology-Preliminary — New York Presbyterian Hospital-Weill Cornell Medical Center, NY
HILLARY ANNE ROTH  
Pediatrics — Lehigh Valley Hospital, PA

JACOB JULIUS RUITER-LIGETI  
Obstetrics/Gynecology — McGill University, CN

STEVEN HUGHES RYBICKI  
Medicine-Primary — University of Virginia, VA

KRISTEN MARIE RYCZAK  
Family Medicine — Crozer-Chester Medical Center, PA

PETER ALAN RYG  
Medicine-Preliminary — Washington Hospital Center, DC  
Ophthalmology — Yale University-New Haven, CT

NEHA SACHDEV  
Family Medicine — Northwestern McGaw/Northwestern Memorial Hospital, IL

JOSEPH SAID  
Orthopaedics — Stony Brook Teaching Hospitals, NY

RICHARD JAMES SALWAY  
Emergency Medicine — University of Southern California, CA

SARAH LENOIR SAMMONS  
Internal Medicine — University of Maryland Medical Center, MD

ERIN VICTORIA SANTA  
Medicine-Preliminary — Lankenau Hospital, PA  
Dermatology — Thomas Jefferson University Hospital, PA

BASIL W. SCHAHEEN  
Surgery — University of Virginia, VA

TRISHA ELEANOR SCHIMEK  
Family Medicine — University of Wisconsin School of Medicine and Public Health, WI

SCOTT G. SCHMIDT JR  
Emergency Medicine — Christiana Care, DE

KRISTINE LOUISE SCHULTZ  
Emergency Medicine — Christiana Care, DE

AMIT A. SHAH  
Pediatrics — Children’s Hospital-Philadelphia, PA
Sagar Kamlesh Shah
Family Medicine — University of Wisconsin School of Medicine and Public Health, WI

Julie Landis Shaner
Orthopaedics — Thomas Jefferson University Hospital, PA

Michael David Share
Internal Medicine — University of California-Los Angeles Medical Center, CA

Smriti Sharma
Pediatrics — North Shore-Long Island Jewish Health System, NY

Tiffany W. Shiau
Medicine-Preliminary — Lankenau Hospital, PA
Dermatology — State University of New York-Buffalo, NY

Luke Anhow Shieh
Pediatrics-Primary — University of Pittsburgh Medical Center, PA

Ryan Shienbaum
Anesthesiology — Jackson Memorial Hospital, FL

Bing Shue
Vascular Surgery — University of Massachusetts Medical School, MA

Samantha Blair Siegel
Internal Medicine — California Pacific Medical Center, CA

Samuel Max Siegel
Pediatrics — Kaiser Permanente-Oakland, CA

Sophia Y. Siu
Medicine-Preliminary — Lankenau Hospital, PA
Ophthalmology — Temple University, PA

Amanda Rose Smolock
Radiology-Diagnostic — University of Wisconsin Hospitals and Clinics, WI

Ketki Soin
Transitional — Albert Einstein Medical Center, PA
Ophthalmology — University of Illinois-Chicago, IL

Timothy Edward Sommerville
Internal Medicine — Wright Patterson Air Force Base, OH

Rachel Inhae Song
Medicine-Preliminary — Lenox Hill Hospital, NY
Ophthalmology — Boston University, MA
MEGHAN NOEL STARNER  
Psychiatry — Thomas Jefferson University Hospital, PA

ROBERT JAMES STEWART  
Orthopaedics — University of Chicago Medical Center, IL

SCOTT BRIAN SULLIVAN  
Emergency Medicine — Madigan Army Medical Center, WA

EMILY PATRICIA SUTTON  
Internal Medicine — Thomas Jefferson University Hospital, PA

AMANDA CASEL SWANK  
Psychiatry — Einstein/Montefiore Medical Center, NY

NADIA TERZAGHI  
Family Medicine — Reading Hospital Medical Center, PA

ROSY THACHIL  
Internal Medicine — Drexel University College of Medicine/Hahnemann University Hospital, PA

KANANI ELAINE TITCHEN  
Pediatrics — Jefferson Medical College/duPont Children’s Hospital, PA

DAVID LEE TOMKINS  
Family Medicine — Drexel University College of Medicine/Hahnemann University Hospital, PA

ROMAN TRIMBA  
Orthopaedics — Wright State University Boonshoft School of Medicine, OH

MOHAN SANJAY TRIPATHI  
Orthopaedics — UMDNJ-Robert Wood Johnson Hospital-Piscataway, NJ

JOYCE TSAI  
Medicine-Preliminary — Albert Einstein Medical Center, PA  
Neurology — Einstein/Montefiore Medical Center, NY

KEVIN JOSEPH TSAI  
Surgery-Preliminary — University of Rochester/Strong Memorial Hospital, NY  
Urology — University of Rochester/Strong Memorial Hospital, NY

JUSTIN GERARD TUNIS  
Family Medicine — Geisinger Health System, PA

NNEAMAKA ANITA UGBODE  
Internal Medicine — Christiana Care, DE
MITHAQ VAHEDI
Emergency Medicine — Beaumont Health System, MI

MICHAEL A. VALENTINO
Internal Medicine — Thomas Jefferson University Hospital, PA

CHAD MICHAEL VANDERBILT
Medicine-Preliminary — Exempla St. Joseph Hospital, CO

RICHARD LORD VINCENT
Otolaryngology — University of Maryland Medical Center, MD

SCOTT VIZZI
Orthopaedics — St. Louis University School of Medicine, MO

BRYNN N. WAJDA
Transitional — Lehigh Valley Hospital, PA
Ophthalmology — Wills Eye Institute, PA

PATRICK JOSEPH WARD III
Orthopaedics — University of Pittsburgh Medical Center, PA

DANIELLE ELLIOTT WEBER
Medicine-Pediatrics — University Hospital-Cincinnati, OH

JOY MARIE WELTY
Surgery-Preliminary — Hershey Medical Center/Penn State, PA
Urology — Hershey Medical Center/Penn State, PA

KATHERINE ELIZABETH WHALEN
Medicine-Preliminary — Geisinger Medical Center, PA
Ophthalmology — Geisinger Medical Center, PA

MICHAEL GEOFFREY WHITE
Surgery — University of Chicago Medical Center, IL

SUMMER ANGELA WILLIAMS
Medicine-Preliminary — Olive View-UCLA Medical Center, CA
Ophthalmology — Georgetown University, DC

RUBEN WINKLER-RHOADES
Internal Medicine — Thomas Jefferson University Hospital, PA

ANTON WINTNER
Surgery-Preliminary — Massachusetts General Hospital, MA
Urology — Massachusetts General Hospital, MA

DANIEL KENSINGER WITMER
Orthopaedics — University of Connecticut Health Center, CT
ANDRZEJ PAWEL WOJCIESZYNSKI
Radiation Oncology — University of Wisconsin Hospital and Clinics, WI

JOSHUA KEYN MUN WONG
Surgery — University of Rochester/Strong Memorial Hospital, NY

JOEL RICHARD WUSSOW
Emergency Medicine — Earl K. Long Medical Center, LA

ISAMU EDWARD YOSHIOKA
Emergency Medicine — Lehigh Valley Hospital, PA

AARON SZE-LONG YUNG
Internal Medicine — Cedars-Sinai Medical Center, CA

JENNIFER LYN ZATORSKI
Family Medicine — Lancaster General Hospital, PA

JILLIAN HOPE ZAVODNICK
Internal Medicine — Thomas Jefferson University Hospital, PA

SIYI ZHANG
Pediatrics — University of California-Los Angeles Medical Center, CA

JIAMING JACKSON ZHU
Internal Medicine — University of Southern California, CA

JESSICA ERIN ZOLTANI
Psychiatry — Hospital of the University of Pennsylvania, PA
Graduates, Class of 2011

At a public commencement at the Kimmel Performing Arts Center on the 2nd day of June 2011, degrees were conferred on the following students by Dr. Robert L. Barchi, President.

JUSTIN VARGHESE ABRAHAM
Medicine-Preliminary — Hershey Medical Center/Penn State, PA
Neurology — Thomas Jefferson University Hospital, PA

REUBEN EZRA ABRAHAM
Internal Medicine — Einstein/Beth Israel Medical Center, NY

OPHELIA ABENA ANSA AĐIPA
Pediatrics — Children’s National Medical Center, DC

SAMIRA ALI
Pediatrics — Jefferson Medical College/duPont Children’s Hospital, PA

LAUREN MARIE ALLEN
Pathology — Duke University Medical Center, NC

ANJOLI ANAND
Emergency Medicine — Maimonides Medical Center, NY

TONY I. ANENE-MAIDOH
Neurological Surgery — Virginia Commonwealth University Health System, VA

ASHLEY ELIZABETH ANTTILA
Pediatrics — Jefferson Medical College/duPont Children’s Hospital PA

BLAIR KRISTIN ARMSTRONG
Transitional — Albert Einstein Medical Center, PA
Ophthalmology — Wills Eye Hospital, PA

NATHAN MILLARD AVERY
Surgery — Virginia Mason Medical Center, WA

OLATILEWA OMOYOBOMI AWE
Research

ALEXANDER REDMOND BADJAVAS
Medicine-Preliminary — University of Maryland Medical Center, MD
Dermatology — Jackson Memorial Hospital, FL

ADNAN BASHIR
Medicine-Preliminary — Thomas Jefferson University Hospital, PA
Anesthesiology — University of Pittsburgh Medical Center, PA

CAMERON MURRAY BASS
Internal Medicine — University of Washington Affiliated Hospitals, WA
ALEXIS LAUREN BEATTIE
Psychiatry — Einstein/Montefiore Medical Center, NY

ROBERT HENRY BECKER
Internal Medicine — Albert Einstein Medical Center, PA

KATHRYN ELIZABETH BELDOWSKI
Family Medicine — Thomas Jefferson University Hospital, PA

LORI BETH BENNETT-PENN
Psychiatry — New York University School of Medicine, NY

AMIT KETAN BHANDUTIA
Orthopaedics — Allegheny General Hospital, PA

PADAM BHATIA
Psychiatry — Long Island Jewish Medical Center, NY

JORDAN PATRICK BLOOM
Surgery — Massachusetts General Hospital, MA

BRIAN MICHAEL BRADY
Internal Medicine — Temple University Hospital, PA

MERRITT WEAVER BROWN III
Medicine-Preliminary — Thomas Jefferson University Hospital, PA
Neurology — B. I. Deaconess Medical Center, MA

KARL CRAIG BRUCKMAN
Oral and Maxillofacial Surgery — Thomas Jefferson University Hospital, PA

SARAH ELIZABETH BUCKINGHAM
Medicine-Preliminary — Yale-New Haven Hospital, CT
Neurology — Yale-New Haven Hospital, CT

JAKE MICHAEL BURNBAUM
Anesthesiology — University of Washington Affiliated Hospitals, WA

JOSEPH AARON BUTASH
Emergency Medicine — Drexel University COM/Hahnemann University Hospital, PA

CLAIRE MARIE CAMPBELL
Internal Medicine — California Pacific Medical Center, CA

ERIN REBECCA CARNISH
Internal Medicine — Thomas Jefferson University Hospital, PA

BRENDA JAMES CARRY
Internal Medicine — Temple University Hospital, PA
CRYSTAL CHANG
Transitional — Albert Einstein Medical Center, PA
Radiology-Diagnostic — Albert Einstein Medical Center, PA

JONATHAN CHAO
Internal Medicine — Thomas Jefferson University Hospital, PA

SUDESHNA CHATTERJEE
Obstetrics/Gynecology — Yale-New Haven Hospital, CT

NAVEEP SINGH CHEHL
Internal Medicine — Rush University Medical Center, IL

NEERAJ CHHABRA
Emergency Medicine — Cook County-Stroger Hospital, IL

RACHEL LEAH CHORON
Surgery — UMDNJ-Robert Wood Johnson-Camden, NJ

FIONA MARIE CHORY
Surgery — Christiana Care, DE

ANDREW AN DUC CHUNG
Internal Medicine — Mayo School of Graduate Medical Education, AZ

BOW YOUNG CHUNG
Internal Medicine — University of Chicago Medical Center, IL

PAUL HWAN CHUNG
Surgery-Preliminary — University of Texas-Southwestern, TX
Urology — University of Texas-Southwestern, TX

HEATHER IRINA COHN
Transitional — Lemuel Shattuck Hospital, MA
Dermatology — Case Western University Hospitals-Case Medical Center, OH

B. JAMES CONNOLLY
Emergency Medicine — Drexel University COM/Hahnemann University Hospital, PA

KAYCIE LAHNA CORBURN
Internal Medicine/Emergency Medicine — SUNY Health Science Center-Brooklyn, NY

PAUL SAMUEL COROTTO
Internal Medicine — University of Pittsburgh Medical Center Medical Education, PA

PHILLIP ROBERT DAGOSTINO
Neurological Surgery — Wake Forest Baptist Medical Center, NC
ELIZABETH MARIE DALY
Family Medicine — Thomas Jefferson University Hospital, PA

CAROL THUYYTIENTH DAO
Family Medicine — St. Luke’s Hospital-Bethlehem, PA

TRISHA SUJAYA DASGUPTA
Transitional — Albert Einstein Medical Center, PA
Dermatology — Drexel University COM/Hahnemann University Hospital, PA

BRENDAN FRANCIS DAY
Internal Medicine — Carolinas Medical Center, NC

CHRISTOPHER A. DEANGELIS
Medicine-Preliminary — Morristown Memorial Hospital, NJ
Anesthesiology — University of Rochester/Strong Memorial Hospital, NY

MICHELE FONG DELeon
Surgery — UMDNJ-Robert Wood Johnson-Piscataway, NJ

MEGAN PATRICIA DELLA SELVA
Psychiatry — University of Maryland Medical Center, MD

CHAITAN DEVULAPALLI
Surgery — Georgetown University Hospital, DC

ISMAR DIZDAREVIC
Orthopaedics — St. Luke’s Hospital-Roosevelt, NY

PHILLIP ANDREW DOBSON
Family Medicine — Bryn Mawr Hospital, PA

CARA ELIZABETH DOHERTY
Obstetrics/Gynecology — New York University School of Medicine, NY

LAUREN NICOLE DOUGLAS
Internal Medicine — Christiana Care, DE

ERIC ISRAEL EHIELI
Medicine-Preliminary — University of Maryland Medical Center, MD
Anesthesiology — Duke University Medical Center, NC

JENNIFER MARIE ELIA
Anesthesiology — University of California-Irvine Medical Center, CA

KAITLAN EMMA ELSTON
Family Medicine — Swedish Medical Center-SeaMar, WA

DANIEL DAVID ESHTIAGHPOUR
Internal Medicine — Harbor-UCLA Medical Center, CA
HADI FATTAH
Internal Medicine — University of Maryland Medical Center, MD

CHRISTINE ELISABETH FELDMEIER
Surgery — Thomas Jefferson University Hospital, PA

EMILY KATHERINE FELLIN
Family Medicine — Excela Health Latrobe Hospital, PA

DOMINIC JOSEPH FEMIANO
Family Medicine — Group Health Cooperative, WA

GABRIEL MARTIN FERREIRA
Transitional — Sound Shore Medical Center, NY
Ophthalmology — Nassau University, NY

MATTHEW CHRISTOPHER FERRONI
Surgery-Preliminary — University of Pittsburgh Medical Center, PA
Urology — University of Pittsburgh Medical Center, PA

CATHERINE STANBERY FORSTER
Pediatrics — Children’s Hospital-Boston, MA

MICHAEL PETER FRANK
Medicine-Preliminary — Albert Einstein Medical Center, PA
Dermatology — Thomas Jefferson University Hospital, PA

ROBERT ANDREW FRANKEL
Internal Medicine — Thomas Jefferson University Hospital, PA

JOSEPH ANTHONY GALLOMBARDO
Anesthesiology — Mt. Sinai Hospital, NY

NISHA KUMUD GANDHI
Internal Medicine — Thomas Jefferson University Hospital, PA

ALLISON SYDNEY GANNON
Medicine-Preliminary — Abington Memorial Hospital, PA
Physical Medicine & Rehabilitation — Stanford University Programs, CA

AMY SCHREIBER GEE
Family Medicine — Thomas Jefferson University Hospital, PA

AHMARA VIVIAN GIBBONS
Medicine-Preliminary — Lankenau Hospital, PA
Ophthalmology — University of Pittsburgh Medical Center, PA

GEORGIA ROSE GIEBEL
Internal Medicine — Mt. Sinai Hospital, NY
CHARLES ADAM GLASS  
Transitional — Albert Einstein Medical Center, PA  
Ophthalmology — Brown University, RI

RAMON CHRIS VILLANUEVA GO  
Anesthesiology — George Washington University, DC

COREY T. GOLDBERG  
Emergency Medicine — University of Florida College of Medicine-Jacksonville, FL

STEPHEN F. GOLDBERG  
Medicine-Preliminary — Abington Memorial Hospital, PA  
Anesthesiology — Thomas Jefferson University Hospital, PA

LAUREN ELIZABETH GOLDLUST  
Transitional — Crozer-Chester Medical Center, PA  
Radiology-Diagnostic — Thomas Jefferson University Hospital, PA

CAROLINE GAGEL GOODCHILD  
Obstetrics/Gynecology — Thomas Jefferson University Hospital, PA

ANUSHA KIERTY GOPALRATNAM  
Pediatrics — Westchester Medical Center, NY  
Pediatric Neurology — Johns Hopkins University, MD

BELLA GOYAL  
Pathology — Barnes-Jewish Hospital, MO

ALISON THERESE GRANT  
Family Medicine — Crozer-Chester Medical Center, PA

BRADLEY ROBERT GRAUSTEIN  
Anesthesiology — Maine Medical Center, ME

MAXWELL ANDREW GREENE  
Medicine-Preliminary — Pennsylvania Hospital, PA  
Neurology — Hospital of the University of Pennsylvania, PA

RATIKA GUPTA  
Internal Medicine — Thomas Jefferson University Hospital, PA

JESSICA WOODRUFF HAMILTON  
Obstetrics/Gynecology — Kaiser-Permanente Medical Center- Oakland, CA

PATRICIA LEIGH HANSEN  
Psychiatry — Thomas Jefferson University Hospital, PA

EMILY JEANNE HARBERT  
Pediatrics — Jefferson Medical College/duPont Children’s Hospital, PA
PATRICK AUSTRIA HARTENDORP
Surgery — Stony Brook Teaching Hospitals, NY

ABIDA HASAN
Obstetrics/Gynecology — University of Chicago Medical Center, IL

JOSEPH ELLI HASSAB
Emergency Medicine — Geisinger Health System, PA

STEPHANIE KATE HAWLEY
Emergency Medicine — Christiana Care, DE

IAN PATRICK HAYDEN
Transitional — Albert Einstein Medical Center, PA
Radiology-Diagnostic — Thomas Jefferson University Hospital, PA

DANIEL MARTIN HAYWARD
Transitional — Reading Hospital Medical Center, PA
Anesthesiology — Johns Hopkins Hospital, MD

JANAE KATHLEEN HEATH
Internal Medicine — Massachusetts General Hospital, MA

JENNIFER ERIKA HECKMAN
Surgery-Preliminary — University of Wisconsin Hospital and Clinics, WI
Urology — University of Wisconsin Hospital and Clinic, WI

MICHAEL DAVID HELLMAN
Orthopaedics — Rush University Medical Center, IL

KENNETH EDMOND HEMBA
Family Medicine — Thomas Jefferson University Hospital, PA

SARAH ELLEN HEROLD
Psychiatry — Harvard Longwood, MA

IDIL HERSI
Medicine-Preliminary — SUNY Health Science Center-Brooklyn, NY
Radiology-Diagnostic — Drexel University COM/Hahnemann University Hospital, PA

HAO HUY HO
Surgery-Preliminary — University of California-San Francisco-East Bay, CA

MICAH T. HOFFMAN
Psychiatry — UCLA Semel Institute for Neuroscience, CA

AMANDA LYNN HOLLOWAY
Psychiatry — George Washington University, DC
CHAD DOUGLAS HUMMEL  
Transitional — Christiana Care, DE  
Ophthalmology — University of Florida-Jacksonville, FL

AMBER ELAINE JOHNSON  
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