

Jefferson

Thomas Jefferson University

HOME OF SIDNEY KIMMEL MEDICAL COLLEGE

ACADEMIC CATALOG

2020 - 2021

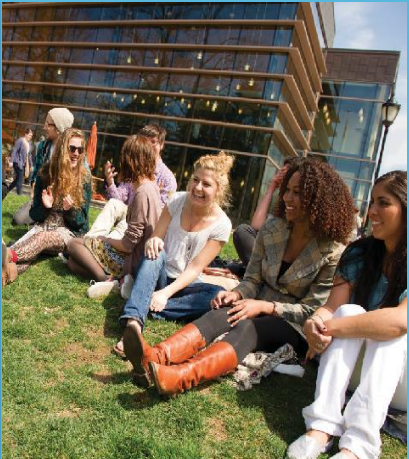
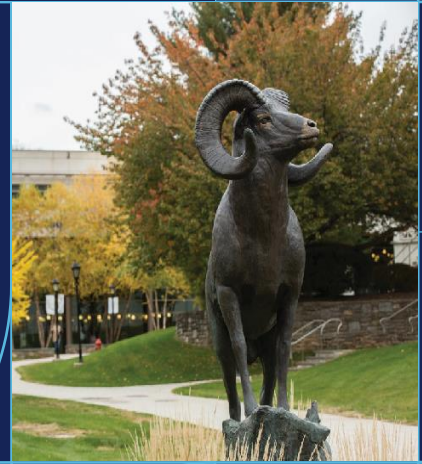


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Welcome to Thomas Jefferson University Academic Catalog 2020-2021

This document provides information about the academic programs, degree offerings and requirements at all campuses of Thomas Jefferson University. The programs, policies, procedures, requirements, tuition and fees described in this catalog are subject to change without notice, at the discretion of the University. Students are ultimately responsible for their own progress toward graduation; they are expected to use the academic catalog as a reference handbook and to familiarize themselves with the principal policies and procedures contained therein.

University Structure & Leadership

Stephen K. Klasko, MD, MBA, is President of Thomas Jefferson University and CEO of Jefferson Health. Under his leadership since 2013, Dr. Klasko has steered our university to become one of the fastest growing academic health institutions in the nation based on his vision of re-imagining health care and higher education. In 2017, Dr. Klasko led the merger of Thomas Jefferson University with Philadelphia University to create the pre-eminent professional university that includes top-20 programs in fashion and design, coupled with the first design thinking curriculum in a medical school, and with the nation's leading research on empathy. To learn more about Dr. Klasko and his vision, please visit <https://leadership.jefferson.edu/about/>

Mark Tykocinski, MD is our University Provost and serves in the dual role of Anthony F. and Gertrude M. DePalma Dean of the Sidney Kimmel Medical College at Jefferson. Dr. Tykocinski oversees more than 160 academic programs within the ten colleges, three schools, and two institutes that grant degrees at Jefferson.

University Mission, Vision & Values

We are a university with preeminence in transdisciplinary, experiential professional education, research and discovery, delivering exceptional value for 21st century students with excellence in architecture, business, design, fashion, engineering, health, science, and textiles infused with the liberal arts.

Commitment to Diversity & Equity

Thomas Jefferson University does not discriminate on any condition of ethnicity or ancestry, or on the basis of creed, race, color, sex, age, religion, national origin, marital status, sexual orientation or disability in its admissions, education programs, activities or employment practices. This policy is in accordance with state and federal laws, including Title IX of the Education Amendments of 1972, Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990.

We are reimagining diversity and inclusion to promote and cultivate an inclusive environment that celebrates the differences and similarities of our patients, families, students, workforce and the communities we serve to achieve an equitable culture.

Title IX at Thomas Jefferson University

Title IX of the U.S. Education Amendments of 1972 (“Title IX”) is a federal civil rights law that prohibits discrimination on the basis of sex in education programs and activities. Thomas Jefferson University does not discriminate on the basis of sex in the education programs or activities that it operates, including admissions and employment.

Under Title IX, discrimination on the basis of sex can also include sexual harassment which is defined as conduct on the basis of sex that satisfies one or more of the following:

1. An employee of the College conditioning the provision of education benefits on participation in unwelcome sexual conduct (i.e., quid pro quo); or
2. Unwelcome conduct that a reasonable person would determine is so severe, pervasive, and objectively offensive that it effectively denies a person equal access to the institution’s education program or activity; or
3. Sexual assault (as defined in the Clery Act), dating violence, domestic violence, or stalking as defined in the Violence Against Women Act (VAWA).

Any person may report sex discrimination, including sexual harassment (whether or not the person reporting is the person alleged to be the victim of conduct that could constitute sex discrimination or sexual harassment), in person, by mail, by telephone, or by electronic mail, using the contact information listed for the Title IX Coordinator, or by any other means that results in the Title IX Coordinator receiving the person’s verbal or written report. Such a report may be made at any time (including during non-business hours) by using the telephone number, electronic mail address, or by mail to the office address listed for the Title IX Coordinator. The following person has been designated to handle inquiries regarding sex and gender-based non-discrimination policies: Katie Colgan Vodzak, J.D., Title IX Coordinator; 4201 Henry Avenue, Archer Hall 200, Philadelphia, PA, 19144; 215-951-2520; titleix@jefferson.edu

Thomas Jefferson University’s Sex and Gender-Based Misconduct Policy can be accessed via the website (www.jefferson.edu/titleix) and provides information on the University’s grievance procedures and process, including how to report or file a complaint of sex discrimination, how to report or file a formal complaint of sexual harassment, and how the University will respond.

Inquiries about the application of Title IX to the University may be referred the Title IX Coordinator, to the Assistant Secretary, or both. The Assistant Secretary’s contact information is U.S. Department of Education, Office of Postsecondary Education, 400 Maryland Avenue, S.W., Washington, DC 20202, Main Telephone: 202-453-6914.

University Accreditations

Thomas Jefferson University (TJU) maintains full accreditation from the regional accrediting agency, Middle States Commission on Higher Education, and approval and licensure from all applicable federal, state, and national agencies.

Middle States Commission on Higher Education (MSCHE) 3624 Market Street, 2nd Floor West Philadelphia, PA 19104 Telephone: (267) 284-5000; E-mail: info@msche.org Spanish: Espanolinfo@msche.org	www.msche.org
US Department of Education	https://feedback.studentaid.ed.gov
Commonwealth of Pennsylvania Department of Education 333 Market Street Harrisburg, PA 17126-0333	www.education.pa.gov
Pennsylvania State Authorization Reciprocity Agreement (SARA Distance Education State Portal) Gina Wetten Higher Education Associate II Department of Education Division of Higher and Career Education 333 Market Street Harrisburg, PA 17126 Telephone: (717) 265-7723 Email: giwetten@pa.gov	www.nc-sara.org
State of New Jersey Office of the Secretary of Higher Education Trenton, NJ 08625-0542 Telephone: (609) 292-4310 Email: oshe@oshe.nj.gov Note: Physician Assistant Program Only	
National Collegiate Athletic Association (NCAA) Indianapolis, IN	www.NCAA.org
Central Atlantic Collegiate Conference (CACCC) P.O. Box 3575 New Haven, CT 06525 Telephone: 203.298.4806	www.caccathletics.org/
Association for Assessment and Accreditation of Laboratory Animal Care 5205 Chairman's Court, Suite 300 Frederick, MD 21703 301.696.9626	www.aalac.org/
Association for the Accreditation of Human Research Protection Programs (AAHRPPP) Human Research	www.aahrppp.org

College and programmatic accreditations are identified within each college section of this catalog and on the Consumer Information website
<https://www.jefferson.edu/about/consumer-information-disclosures.html>

A Brief History of the University

Unifying two renowned legacies of innovation, education, research and professional excellence, Jefferson (Philadelphia University + Thomas Jefferson University) has more than three combined centuries of history. Driven by this newly united and robust past, Jefferson delivers unique and high-impact professional education to our students in the areas of architecture, business, design, engineering, fashion, health, humanities, medicine, science and textiles.

Philadelphia University

Philadelphia University's roots trace back to the 1876 Centennial Exposition, when local textile manufacturers noticed that Philadelphia's textile industry trailed its rivals' capacity, technology and ability. In 1880, they formed the Philadelphia Association of Manufacturers of Textile Fabrics, with Theodore C. Search as its president. Search joined the board of directors of the Philadelphia Museum and School of Industrial Art (now the Philadelphia Museum of Art and the University of the Arts), thinking it the perfect partner for his plans for a school, and began fundraising in 1882. In early 1884, Search taught the first classes at the Philadelphia Textile School, which officially opened on November 5, 1884. In 1942, the Philadelphia Textile School was granted the right to award baccalaureate degrees and changed its name to the Philadelphia Textile Institute (PTI). In 1949, PTI moved to its present site in the East Falls section of Philadelphia, and in 1961, changed its name to Philadelphia College of Textiles and Science. The College's student population doubled between 1954 and 1964, and doubled again by 1978, with the addition of programs in the arts, sciences and business administration. In 1976, Philadelphia College of Textiles and Science offered its first graduate degree, the Master of Business Administration, and to better reflect the institution's breadth and depth, it applied for and was granted university status by the Commonwealth of Pennsylvania in 1999. It changed its name to Philadelphia University on July 13, 1999.

Thomas Jefferson University

Founded in 1824 as Jefferson Medical College, Thomas Jefferson University is a story that includes intrigue, innovation and boldness, with the lead played by Dr. George McClellan. A prominent Philadelphia physician, Dr. McClellan believed in teaching medical students by having them observe experienced doctors treating patients and participate in supervised, hands-on care. His belief was the spur that created Jefferson Medical College and reshaped the way medicine would be taught nationally. In 1877, Thomas Jefferson University Hospital was established and Jefferson Medical College became the second medical school in the country with a separate teaching hospital. Joining Jefferson Medical College in 1891 was the Jefferson Hospital Training College for Nurses and in 1967 the College of Allied Health Sciences. The University was officially established in 1969, the same year the College of Graduate Studies was opened (now known as the College of Biomedical Sciences). In 1991, the NCI-designated Sidney Kimmel Cancer Center was established, thanks to a groundbreaking gift from the Sidney Kimmel Foundation, and in 2006, the University had renamed and added the Schools of Nursing and Health Professions. Two years later, the Schools of Pharmacy and Population Health were formed. In 2014, the Sidney Kimmel Foundation bestowed a \$110 million gift to Jefferson - the largest gift in its history - and Jefferson Medical College became Sidney Kimmel Medical College at Thomas Jefferson University

The University Today

The new Jefferson was established on July 1, 2017, as a result of the merger of these two renowned universities. Through a shared and unique approach to education, Jefferson is nationally and internationally recognized for many historical “firsts” including the first surgical use of anesthesia in Philadelphia; the blending of quail feathers and wool to create the Army’s ubiquitous olive drab as an alternative to dark blue and light-colored khaki military uniforms; the first successful open-heart operation using a heart-lung machine; and the first bifurcated aortal graft using knit fibers needed for artificial blood vessels. Today, we are a professional university that defies convention and dedicates itself to collaborative, transdisciplinary and inter-professional approaches to learning that offers a vibrant and expandable platform for education. Through this unique model, we are preparing our students for current and yet to-be-imagined *careers setting tomorrow’s standards by breaking today’s*.

Campus Locations

Our campuses are incubators, tradition breakers and beautiful places to learn. We cross the city and the suburbs. From our vibrant Center City campus to our East Falls grounds and beyond, each location offers a unique learning environment to experience all that is Jefferson.

Center City

Philadelphia, PA: Multiple Academic Programs

Located in the heart of Philadelphia our main campus is home to the Sidney Kimmel Medical College, one of the largest private medical colleges in the nation. The campus occupies 13 acres of academic, research, administrative, and recreational buildings from 8th to 11th Streets and between Market to Locust Streets. Our 14 affiliated hospitals along with its clinical partners annually treats nearly 126,000 inpatients and 1.3 million outpatients.

Jefferson Center City active student learning sites include **the Dr. Robert and Dorothy Rector Clinical Skills and Simulation Center**, which boasts over 60,000 sq. ft. of learning and teaching space. The Center has over 130 standardized and simulated patients, 28 exam rooms and 8 control rooms with digital recording systems and videoconferencing. An additional 3,000 sq. ft. is used for pharmacy simulation. **The Scott Memorial Library** has one of the region’s best collections of life sciences publications – with more than 220,000 books and bound print journals, and over 6,000 electronic journal subscriptions.

In addition to academic resources, our students can join in on one of the many activities offered by the University, sample the local cuisine, explore the historical district where our country started or relax in one of the many scenic locations around the city. Jefferson’s Center City Campus offers three residential living options, a multi-purpose fitness & recreation center (cardio, sauna, group exercise, racquet courts, swimming pool) and easy access to public transportation.

East Falls

Philadelphia, PA: Multiple Academic Programs

The 100 acre, 50+ building campus is located close to beautiful countryside, urban life, concert venues, galleries and museums, great restaurants and theaters. The tree-lined East Falls Campus is located on the edge of Philadelphia's Fairmount Park in the beautiful residential area of East Falls, just 15 minutes from historic Center City Philadelphia.

The Gallagher Athletic, Recreation and Convocation Center is home to three regulation-size basketball courts, a state-of-the-art fitness center, aerobics studio, a racquetball court and an elevated jogging track, as well as a 251-space underground parking garage. In addition, athletic facilities on campus include a baseball field, softball field, tennis courts, and soccer and lacrosse fields. ***The Kanbar Campus Center***, a 72,000-square-foot social hub for the campus community makes a dramatic impact on the academic and social environment for all members of the University community. Most undergraduate students live in on-campus housing with accommodations for over 1,600 students and include co-ed and single-sex residence halls, townhouses and two- or three-bedroom apartments.

Bucks County

Treose, PA: Evening & Saturday Courses

Located in the Bucks County Technology Park, which is easily accessible to residents of Lower Bucks County and Northeast Philadelphia, this campus location has been designed to serve the educational and career needs of adult students. Courses are offered in the evening and on Saturdays to accommodate the schedules of adults who balance a full calendar of professional and personal responsibilities. Academic advising, registration, and computer labs are all available at this location. To schedule an advising appointment, email scps@jefferson.edu or call 215.951.2900.

Dixon Campus

Horsham PA: College of Nursing

Thanks to a generous gift from community volunteer and philanthropist Edith R. Dixon, Thomas Jefferson University College of Nursing's Abington-Dixon campus will be relocated to Horsham, PA and be known as the Dixon Campus in time for the fall 2020 semester.

At 42,000 square feet, nearly one third of the space will be dedicated to a state-of-the-art simulation center, where both undergraduate and graduate students will engage in complex clinical scenarios that parallel, anticipate and amplify real-life situations. The new campus will also include a 200-person tiered lecture hall and three 80-seat classrooms that will support the latest innovations in academic technology. A dedicated library, collaborative learning and study spaces, a student lounge and a central concourse will support faculty-student and student-student engagement at the highest level. Students will also have access to a trail leading to a park, a gym conveniently located in the building next door, a cafeteria, ample parking and public transportation.

Montgomery County

Lower Gwynedd, PA, Jefferson Institute for Bioprocessing

This high-tech, 25,000 ft² facility opened in June 2019 and houses the Bioprocessing Education and Training programs. The facility contains three 32-seat active learning classrooms and ~12,000 ft² of laboratory space dedicated to the training and education of life scientists and engineers utilizing single-use pilot-plant scale bioprocess manufacturing equipment.

Online

World-class education at your fingertips

Jefferson Online is a student-centered institution that prepares graduates for successful careers in an evolving global marketplace. To learn more visit us at <https://online.jefferson.edu/>

Voorhees

Voorhees, NJ: Physician Assistant Program

The College of Health Professions opened this training facility in September, 2019 and houses a 60 seat classroom, a physical diagnoses laboratory, and a Simulation Center (Auscultation Simulators, iStan Adult Patient Simulator, Primary Care Rooms, Emergency Room Bays, and Inpatient Hospital Rooms). “This new location offers cutting edge technology and a beautiful space for our faculty to cultivate the next generation of healthcare providers.”

Jefferson’s College Locations

Academic Unit	Abbreviation	Campus & Program Location(s)
College of Architecture & Built Environment	CABE	East Falls, Online
Kanbar College of Design, Engineering & Commerce	KANBAR	East Falls, Springhouse, Online
College of Health Professions	JCHP	Center City, East Falls, Online
College of Humanities & Sciences	JCHS	East Falls
College of Life Sciences	JCLS	Center City, East Falls, Onli
Sidney Kimmel Medical College	SKMC	Center City
College of Nursing	JCN	Center City, Horsham
College of Pharmacy	JCP	Center City, Online
College of Rehabilitation Sciences	JCRS	Center City, East Falls, Online
School of Continuing & Professional Studies	SCPS	Center City, East Falls, Bucks County, Online
Jefferson Institute for Bioprocessing	JIB	Springhouse
Institute for Emerging Health Professions	IEHP	Center City, Online

Academic Programs at Thomas Jefferson University

Undergraduate Degree Programs

ACADEMIC PROGRAM	DEGR EE	CAMPUS	COLLEGE	PROGRAM INFO PG.
Accounting	BS	East Falls	KANBAR	80
Animation & Digital Media	BS	East Falls	KANBAR	92
Architectural Studies	BS	East Falls	CABE	36
Architecture	BArch	East Falls	CABE	38
Biochemistry	BS	East Falls	JCLS	218
Biology	BS	East Falls	JCLS	220
Biopharmaceutical Process Development	BS	Springhouse Innovation Park	JCHP/JIB	169
Biopsychology	BS	East Falls	JCHS	208
Biotechnology	BS	Springhouse Innovation Park	JCHP/JIB	167
Cardiac Sonography (Echocardiography)	BS	Center City	JCHP	157
Chemistry	BS	East Falls	JCLS	221
Communication	BS	East Falls	JCHS	210
Computed Tomography (CT)	BS	Center City/Online	JCHP	154
Construction Management	BS	East Falls	CABE	40
Cytotechnology & Cell Sciences	BS	Center City	JCHP	171
Engineering	BSE	East Falls	KANBAR	94
Exercise Science	BS	East Falls	JCRS	301
Fashion Design	BS	East Falls	KANBAR	96
Fashion Merchandising and Management	BS	East Falls	KANBAR	82
Finance	BS	East Falls	KANBAR	84
General Sonography (Ultrasound)	BS	Center City	JCHP	156
Health Sciences	BS	East Falls	JCHP	138
Health Sciences: Pre Nursing	BS	East Falls/Center City	JCHP	140
Health Sciences: Pre-Pharmacy	BS	East Falls/Center City	JCHP	141
Health Sciences: Pre- Medical; Imaging & Radiation Sciences	BS	East Falls/Center City	JCHP	142
Health Sciences: Pre-Physician Assistant	BS	East Falls	JCPH	143
Industrial Design	BS	East Falls	KANBAR	97
International Business	BS	East Falls	KANBAR	85
Interior Design	BS	East Falls	CABE	42
Invasive Cardiovascular Technology	BS	Center City	JCHP	155
Landscape Architecture	BLA	East Falls	CABE	45
Law and Society	BS	East Falls	JCHS	212
Magnetic Resonance Imaging	BS	Center City	JCHP	154
Management	BS	East Falls	KANBAR	86
Marketing	BS	East Falls	KANBAR	87
Mechanical Engineering	BSE	East Falls	KANBAR	99
Medical Imaging & Radiation Sciences	BS	Center City	JCHP	151
Medical Laboratory Sciences	BS	Center City	JCHP	176
Nuclear Medicine	BS	Center City	JCHP	153
Nursing	BSN	Center City, Montgomery County	JCN	256
Pre Medical Studies	BS	East Falls	JCLS	223
Psychology	BS	East Falls	JCHS	213
Radiography	BS	Center City	JCHS	156
Radiation Therapy	BS	Center City	JCHP	152
Textile Design	BS	East Falls	KANBAR	101
Textile Product Science	BS	East Falls	KANBAR	102
Vascular Sonography	BS	Center City	JCHP	160
Visual Communication	BS	East Falls	KANBAR	103

Graduate Degree Programs

ACADEMIC PROGRAM	DEGREE	CAMPUS	COLLEGE	PROGRAM INFO PG.
Applied Health Economics and Outcomes Research	MS	Online	JCPH	281
Architecture	MArch	East Falls	CABE	46
Architecture	MS	East Falls	CABE	48
Athletic Training	MS	East Falls	JCRS	302
Biochemistry & Molecular Pharmacology	PhD	Center City	JCLS	234
Biologic Process Engineering	PhD	Springhouse Innovation Park	KANBAR/JIB	116
Biomedical Sciences	MS	Center City	JCLS	225
Biopharmaceutical Process Engineering	MS	Springhouse Innovation Park	KANBAR/JIB	118
Biotechnology	MS	Center City	Center City	168
Cell Biology & Regenerative Medicine	PhD	Center City	JCLS	235
Cell & Developmental Biology	MS	Center City	JCLS	226
Clinical Research	MS	Center City	JCLS	227
Community and Trauma Counseling	MS	East Falls	JCHP	126
Community and Trauma Counseling: Art Therapy	CTC +	East Falls	JCHP	127
Community and Trauma Counseling: Child Trauma and Play Therapy	CTC +	East Falls	JCHP	128
Community and Trauma Counseling: Trauma, Addiction and Recovery	CTC +	East Falls	JCHP	129
Construction Management	MS	East Falls & Online & Hybrid	CABE	49
Couple & Family Therapy	MFT	Center City	JCHP	130
Cytotechnology & Cell Sciences	MS	Center City	JCHP	173
Disaster Medicine and Management	MS	East Falls & Online	JCHP	136
Engineering, Textile Concentration	MS	East Falls	KANBAR	104
Fashion Design Management	MS	East Falls	KANBAR	105
Forensic Biology	MS	Center City	JCLS	228
Forensic Toxicology	MS	Center City	JCLS	229
Genetics, Genomics & Cancer Biology	PhD	Center City	JCLS	237
Geospatial Technology for Geodesign	MS	East Falls	CABE	51
Global Fashion Enterprise	MS	East Falls	KANBAR	88
Health Communication Design	MS	Hybrid- East Falls/Online	KANBAR	106
Health Policy	MS	Online	JCPH	282
Healthcare Quality and Safety	MS	Online	JCPH	284
Health Science in Population Health	DHSc	Online	JCHP	296
Historic Preservation	MS	East Falls	CABE	52
Human Genetics & Genetic Counseling	MS	Center City	JCLS	230
Human Genetics, Genomics & Cancer Biology	PhD	Center City	JCLS	234
Immunology & Microbial Pathogenesis	PhD	Center City	JCLS	239
Industrial Design	MS	East Falls	KANBAR	108
Innovation MBA	MBA	East Falls & Center City & Online	KANBAR	89
Integrative Physiology	PhD	Center City	JCLS	240
Interior Architecture	MS	East Falls	CABE	54
Medical Laboratory Sciences	MS	Center City	JCHP	178
Medical Imaging & Radiation Sciences	MS	Center City	JCHP	158
Medical Physics	MS	Center City	JCHP	161
Medicine	MD	Center City	SKMC	250
Microbiology & Immunology	MS	Center City	JCLS	232
Midwifery	MS	Online	JCHP	187
Midwifery	DM	Online	JCHP	188
Neuroscience	PhD	Center City	JCLS	241
Nursing	MSN	Center City	JCN	259
<ul style="list-style-type: none"> • Adult-Gerontology, Acute Care NP • Community Systems Administrator • Adult-Gerontology, Primary Care NP • Community Systems Admin Family-Individual Across Lifespan • Community Systems Admin Informatics Indirect Care • Community Systems Admin Nursing Informatics • Family Individual Across Lifespan NP • Pediatric Primary Care NP Direct Care • Women's Health-Gender related NP Direct Care • Neonatal NP 				

• Informatics				
Nursing	DNP	Center City & Online	JCN	262
Nurse Anesthesia	DNP	Center City	JCN	264
Occupational Therapy	MSOT		JCRS	303
Occupational Therapy	OTD	Center City	JCRS	304
Occupational Therapy	PPOTD	Center City	JCRS	308
Operational Excellence	MS	Center City	JCPH	287
Pharmacology	MS	Center City	JCLS	233
Pharmaceutical Sciences	MS	Center City	JCP	274
Pharmacy	PharmD	Center City	JCP	270
Physician Assistant Studies	MS	Center City	JCHP	189
Physician Assistant Studies	MS	East Falls & Voorhees	JCHP	190
Physical Therapy	DPT	Center City	JCRS	309
Population Health	MS	Online	JCPH	288
Population Health Pharmacy	MS	Online	JCP	272
Population Health Intelligence	MS	Online	JCPH	290
Population Health Science	PhD	Center City	JCPH	293
Public Health	MS	Center City	JCPH	291
Real Estate Development	MS	Hybrid-East Falls/Online	CABE	55
Surface Imaging	MS	East Falls	KANBAR	109
Sustainable Design	MS	East Falls	CABE	57
Taxation	MS	East Falls	KANBAR	90
Textile Design	MS	East Falls	KANBAR	110
Textile Engineering & Science	PhD	East Falls	KANBAR	112
Textile Technology	MS	East Falls	KANBAR	111
User Experience & Interactive Design	MS	East Falls	KANBAR	113

Certificate Programs				
ACADEMIC PROGRAM	CERTIFICATION	CAMPUS	COLLEGE	DETAILS
Applied Health Economics and Outcomes Research	Graduate Certificate	Online	JCPH	281
Biopharmaceutical Process Development	Graduate Certificate	Springhouse Innovation Park & Online options	KABE/JIB	119
Biopharmaceutical Process Operations	Graduate Certificate	Springhouse Innovation Park & Online options	KABE/JIB	120
Business & Organizational Continuity	Graduate Certificate	Online	JCHP	137
Childhood Trauma & Play Therapy	Graduate Certificate	Off Campus	JCHP	131
Clinical Chemistry	Graduate Certificate	Center City	JCHP	182
Clinical Hematology	Graduate Certificate	Center City	JCHP	183
Clinical Microbiology	Graduate Certificate	Center City	JCHP	185
Clinical Research	Graduate Certificate	Center City	JCLS	227
Clinical Research & Trials: Implications	Graduate Certificate	Center City	JCLS	242
Clinical Research: Operations	Graduate Certificate	Center City	JCLS	243
Community & Trauma Counseling	Advanced-Practice Cert	East Falls	JCHP	132
Community & Trauma Counseling: Art Therapy	Advanced-Practice Cert	East Falls	JCHP	133
Community & Trauma Counseling: Trauma, Addiction and Recovery	Advanced-Practice Cert	East Falls	JCHP	134
Community Systems Administration	Advanced-Practice Cert	Center City	JCN	266
Computed Tomography (CT)	Undergrad Certificate	Center City	JCHP	162
Construction Management	Graduate Certificate	East Falls & Online	CABE	58
Design of Living buildings	Graduate Certificate	East Falls	CABE	59
Design of Resilient Communities	Graduate Certificate	East Falls & Online	CABE	60
Disaster Medicine & Management	Graduate Certificate	Online	JCHP	136
Emerging Leaders in Autism Practice & Research	Advanced-Practice Cert	Online	JCRS	310
Geographic Information Systems	Graduate Certificate	East Falls	CABE	61
Geospatial Technology for Geodesign	Graduate Certificate	East Falls	CABE	62
Green Building Operation	Graduate Certificate	Online	CABE	63
Hand & Upper Limb Rehabilitation	Advanced-Practice Cert	Center City	JCRS	311
Headache Diagnosis and Management	Advanced-Practice Cert	Hybrid-Center City/Online	JCN	265
Healthcare Quality & Safety	Graduate Certificate	Online	JCPH	284
Healthcare Quality & Safety	Advanced-Practice Cert	Online	JCPH	286
Healthcare Quality & Safety Education	Advanced-Practice Cert	Online	JCPH	286
Health Coaching in Context	Advanced-Practice Cert	Online	JHRS	312
Health Communication Design	Graduate Certificate	Hybrid- East Falls/Online	KANBAR	106
Health Policy	Graduate Certificate	Online	JCPH	282
Health Systems Science	Advanced-Practice Cert	Online	JCPH	286
Health Systems Science Education	Advanced-Practice Cert	Online	JCPH	286
Historic Preservation	Graduate Certificate	East Falls	CABE	64
Human Clinical Investigation: Theory	Graduate Certificate	Center City	JCLS	244
Immunohematology	Graduate Certificate	Center City	JCHP	184
Infectious Disease Control	Graduate Certificate	Center City	JCLS	245
Molecular Biology	Graduate Certificate	Center City	JCHP	186
Neuroscience: Advanced Concepts for Evidence Based Practice	Advanced-Practice Cert	Online	JCRS	313
Nurse Practitioner <ul style="list-style-type: none"> Community Systems Admin Nursing Informatics Nurse Practitioner 	Advanced-Practice Cert	Center City/Online	JCN	266
Nursing Informatics	Advanced-Practice Cert	Center City/ Montgomery County	JCN	266
Occupational Therapy: <ul style="list-style-type: none"> Children & Their Families Health Community Participation Rehab & Disability Studies Teaching in Digital Age 	Advanced-Practice Cert	Center City	JCRS	308
Operational Excellence	Graduate Certificate	Online	JCPH	287
Patient-Centered Research	Graduate Certificate	Center City	JCLS	246
Population Health	Graduate Certificate	Online	JCPH	288
Population Health	Advanced Practice Cert	Online	JCPH	289

Population Health Education	Advanced Practice Cert	Online	JCPH	285
Population Health Intelligence	Graduate Certificate	Online	JCPH	290
Population Health Pharmacy	Graduate Certificate	Online	JCP	273
PET/CT (Positron Emission Tomography)	Undergraduate Certificate	Center City	JCHP	162
Public Health	Graduate Certificate	Center City	JCPH	291
Real Estate Development	Graduate Certificate	East Falls	CABE	65
Sustainability Leadership	Graduate Certificate	East Falls & Online	CABE	66
Teaching in the Digital Age	Advanced-Practice Cert	Online	JCRS	314
Using Design in Healthcare Delivery	Advanced-Practice Cert	Online	JCRS	315

Accelerated & Dual Programs

ACADEMIC PROGRAM	DEGREES	CAMPUS	DETAILS
Architecture & Historic Preservation	BArch/MS	East Falls	67
Architecture Studies & Historic Preservation	BS/MS	East Falls	68
Architecture & Interior Architecture	BS/MS	East Falls	69
Architecture & Real Estate	BArch/MS	Hybrid-East Falls/Online	70
Biotechnology	BS/MS	Center City	170
Cell Biology & Regenerative Medicine	MD/ PhD	Center City	235
Cytotechnology & Cell Sciences	BS/MS	Center City	175
Construction Management & Real Estate Development	MS/MS	East Falls	74
Construction Management & Sustainable Design	MS/MS	East Falls	75
Exercise & Physical Therapy	BS/MS	East Falls/Center City	300
Health Sciences & Athletic Training	BS/MS	East Falls	145
Health Sciences & Community and Trauma Counseling	BS/MS	East Falls	135
Health Sciences & Medical Laboratory Sciences & Biotechnology JUST ADDED	BS/MS	East Falls/Center City	164
Health Sciences & Occupational Therapy	BS/OTD	East Falls	149
Health Sciences & Physician Assistant	BS/MS	East Falls	147
Interior Design & Architecture	BS/MArch	East Falls	71
Interior Design & Sustainable Design	BS/MS	East Falls	72
Landscape Architecture & Geodesign	BLA/MS	East Falls	73
Medical Laboratory Sciences	BS/MS	Center City	179
Medicine & Research	MD/ PhD	Center City	249
Medicine & Public Health	MD/MPH	Center City	249
Occupational Therapy	BS/MS	Center City	303
Pharmaceutical Sciences & Public Health	PharmD/MPH	Center City	276
Psychology & Community Trauma Counseling	BS/MS	East Falls	207
Psychology & Occupational Therapy	BS/MS	East Falls	207
Textile Design	BS/MS	East Falls	113

School of Continuing & Professional Studies Programs

ACADEMIC PROGRAM	DEGREES	CAMPUS	PROGRAM DETAILS
Accounting	BS	Online	325
Behavioral & Health Services	BS	Bucks County, East Falls & Online	326
Building & Construction Studies	BS	Bucks County & East Falls	327
Business Management	BS	Bucks County, East Falls & Online	328
Health & Human Services	AS	Restricted Enrollment Dist 119C	322
Health & Human Services-Radiologic Tech	AS	Einstein Healthcare- Restricted	323
Health Sciences	BS	Center City & Bucks County	329
Health Sciences	BS	Bucks County & East Falls & Center City	330
Health Services Management	BS	Center City-Jefferson Employees	331
Health Services Management	BS	Bucks County ,East Falls, Online	332
Healthcare Information Systems	<i>Undergraduate Certificate</i>	Center City	319
Human Resource Management	BS	Bucks County, East Falls, Online	334
Information Technology	BS	Bucks County, East Falls, Online	335
Leadership in Emergency Services	BS	Bucks County & East Falls	337
Medical Coding & Data Quality	<i>Undergraduate Certificate</i>	Center City-Jeff Employees Only	320
Medical Practice Management	<i>Undergraduate Certificate</i>	Center City	321
Occupational Therapy Assistant Studies	AS	Bucks County	324
Organizational Leadership	BS	Bucks County, East Falls, Online	338
Organizational Leadership	MS	Online	339
Strategic Leadership	<i>DMgt</i>	East Falls	340

Emerging Health Professions Programs

ACADEMIC PROGRAM	DEGREES	CAMPUS	PROGRAM DETAILS
Cannabis Medicine	<i>Graduate Certificate</i>	Online	193
Certified Medical Assistant	<i>Undergraduate Certificate</i>	Off Campus	194
Connected Care: Telehealth & Digital Health Innovation	<i>Graduate Certificate</i>	Online	195
Integrative Nutrition	<i>Advanced Practice Certificate</i>	Online	196
Mind-Body Medicine	<i>Advanced Practice Certificate</i>	Online	197
Perfusion & Extracorporeal Technology	<i>Graduate Certificate</i>	Center City (some online)	198
Telehealth Facilitator	<i>Undergraduate Certificate/CME</i>	Online	199

Academic Calendars

University Calendar	The University operates within a calendar year that begins on July 01 and ends on June 30.
Academic Program Calendar	Academic Programs calendars are individualized to meet the needs of their programmatic requirements.
2020/2021 Academic Calendars	https://www.jefferson.edu/university/academic-affairs/tju/academic-services/registrar/calendars/academic-calendars/2020-2021.html

Schedule changes

The University reserves the right to make changes to the academic calendars as circumstances may require. Changing sections, replacing courses with another course, auditing a course, independent study, course-by-appointment, or changing a course from graded to credit/non-credit must be made by the “last day to add” deadline. See current Academic Calendar.

Absence & Observance of Religious Holidays

Jefferson is a nonsectarian educational institution and respects the diversity and religious needs of its affiliates. The University respects the rights of faculty, staff and students to observe religious holidays. While academic and personnel calendars do not incorporate religious holidays, the policy is intended to apply equitably to all religious groups and to provide opportunities to all to meet their religious obligations. Non-attendance of class on religious holidays by those observing the holiday will be excused without penalty. No adverse or prejudicial effects will result because a student availed herself or himself of these provisions. The University respects students’ rights to observe religious holidays. Students planning to be absent from a class due to religious observance shall notify the faculty during the first week of classes, if possible. Absence from classes or examinations for religious reasons does not relieve students from responsibility for any part of the course work required during the period of absence. Professors shall work with students to ensure they have a reasonable opportunity to make up missed classes and assignments.

Admissions

Students who apply to the University should be seeking a sound and challenging collegiate education, and should have demonstrated an ability to be successful in such a program by prior academic performance and preparation.

- Each student is reviewed individually and evaluated based on educational background, including course preparation and grades earned.
- Academic Programs have specific policies, which govern their admission criteria.

Admissions Application

- Find the information you need to apply to Jefferson by visiting the Admissions website at <https://www.jefferson.edu/admissions.html>

Academic Degree Options

Undergraduate	More than 80 programs all with a focus on collaboration and critical thought that challenges the way forward and opens up endless opportunities for the future.
Transfer	<p>Many (not all) programs allow students to continue/complete their undergraduate degree by transferring credits taken at other accredited universities toward a degree at Jefferson.</p> <p>Some of our programs are designed specifically for transfer students only and do not accept students into the freshman class; Nursing is one example of a Transfer Program.</p>
Graduate	Education beyond the undergraduate degree with over 70 programs at the master's and doctoral degree levels.
Accelerated	<p>1. Accelerated degree programs allow for a pathway toward completion of two degrees (undergraduate/graduate) in less time than would take in completing each degree separately. Students must maintain program-specific requirements upon admission and throughout program to remain eligible for this pathway.</p> <p>2. SCPS (School of Continuing & Professional Studies) offers accelerated degree completion programs for professionals who have earned between 30-87 credits. Jefferson's Online accelerated programs do not require transfer credits for admission.</p>
Dual	A pathway to two degrees at the same level. The two degrees may be completed concurrently or consecutively.
Certificate (Transcriptable)	<p>A credential issued by the University in recognition of the completion of a curriculum other than one leading to a degree. Courses are offered at the undergraduate or graduate level and all courses within the certificate should be able to be applied to completion of a degree (grade and time-frame dependent).</p> <p>Undergraduate-Open to students who have earned their High School Diploma Graduate-open to students who have earned their Graduate Degree Post-Professional- open to students who have completed their professional degree in field</p>

Admissions Classifications

Applicant	Student is preparing application materials for admissions to a specific academic program. See program application requirements on Admissions website.
Acceptance	Students who have met all admissions requirements with satisfactory performance as judged by the Admissions Committee are granted full acceptance. Acceptance into an Academic Program does not mean or guarantee acceptance into another academic program at the same or different level.
Probationary Acceptance	Students with academic performance and/or test scores below the normally acceptable levels but show potential to be successful in a graduate program may be granted probationary acceptance and students will be monitored closely by the program director to ensure fit for the academic rigor of the program.
Conditional Acceptance	Conditional acceptance may be granted to students who are missing some of their application materials but who otherwise meet admissions criteria. Conditional acceptance is limited to one semester, during which time the missing application materials must be submitted.
Non-Degree seeking	Courses taken under non-degree status may be applied to a degree program, but only after all admissions requirements are met and full acceptance is granted.
Readmission	See your program-specific policy on requirements of readmission in college handbook, university policies and consult with your Program Director.
International Applicants	We invite students from other countries to come study and research alongside some of the top faculty, students and researchers in the U.S. East Falls Application http://www.eastfalls.jefferson.edu/international/ Center City Application https://www.jefferson.edu/university/international_affairs.html

University Right to Withdraw Offer of Admission

1. Students planning to join Jefferson must notify the Office of Admissions should there be any substantial changes to their academic or disciplinary records between acceptance and matriculation. The University reserves the right to withdraw an offer of admission in the event that
2. A significant drop in academic performance
3. Failure to graduate from an accredited degree program
4. Misrepresentation of information in the application process
5. Behavior prior to enrolling that indicates a serious lack of judgement or integrity

Course/Program Format

Jefferson offers several delivery options for students based upon the program they are entering.

On Campus	courses/program taken onsite (face-to-face) at one of our seven locations throughout the region
Online	courses/program taken either entirely online or with periodic on-campus “retreats”
Hybrid	courses/program are a combination of onsite (face-to-face) and online formats
Accelerated	courses at various lengths outside of the standard 15-week semester
Short Courses	Faculty-led short courses/programs taken domestically or abroad.

Tuition & Fees

Tuition and fee rates are contingent on the academic programs and current student status. Please select the applicable tuition and fees information below that corresponds to the tuition and fees in your academic program.

Students should consult their academic department to determine whether the academic year for their program includes additional (e.g. summer) terms. Students may be responsible for additional tuition and fees.

Tuition Rate Information

PROGRAM	WEBSITE
Undergraduate Programs	https://www.jefferson.edu/content/dam/academic/tuition-financial-aid/fy21/fy21-undergraduate.pdf
Graduate Programs & Institute of Emerging Health Professions Programs	https://www.jefferson.edu/content/dam/academic/tuition-financial-aid/fy21/fy21-graduate-iehp.pdf
East Falls Campus Room Rates	https://www.jefferson.edu/content/dam/academic/tuition-financial-aid/fy21/2021-Room-Rates.pdf
East Falls Campus Meal Plan Rates	https://www.jefferson.edu/content/dam/academic/tuition-financial-aid/fy21/2021-Meal-Plan-Rates.pdf
Online Degrees	https://online.jefferson.edu/admissions/tuition-financial-aid/

- **Invoices** are submitted in July and December for the next semester's charges and electronic statements may be accessed via BannerWeb using the TouchNet link.
- Students may add an **Authorized Payer** who will also be notified when a new statement is available.
- The University does not mail billing statements.
- **Refund Policy** at <https://www.jefferson.edu/university/academic-affairs/schools/student-affairs/student-handbooks/university-policies/tuition-refund-policy.html>
- An individual's registration at Jefferson constitutes the student's agreement to make timely payment of all amounts due. Jefferson uses electronic means (email and the Internet) as a primary method of communication and providing billing, payment and enrollment services. By accepting Jefferson's offer of admission and enrolling in classes, each student accepts responsibility for paying all debts to the University, including tuition and fees, for which s/he is liable.

Credits and Status

Undergraduate Programs	<ul style="list-style-type: none"> • For tuition and financial aid purposes, full-time refers to a student taking between 12-21 credits. • Part-time for financial aid purposes, refers to a student taking between 6-11.5 credits. • Taking credits above or below this range will have financial and financial aid impact. • Students are advised to consult with their Program Director/Department Chair and Financial Aid office to discuss the implications of taking credits above or below the specified range.
Graduate Programs	<ul style="list-style-type: none"> • For tuition and financial aid purposes, full-time status varies depending on the academic program with the majority at 9 credits. There are limited exceptions under which specified programs maintain alternative half-time and full-time credit status. • Students are advised to consult with the Registrar's Office to discuss the appropriate credit minimum necessary for half time enrollment. Half time enrollment is one of the requirements to be eligible for financial aid. • Students are advised to consult with the Financial Aid office to discuss the financial implications of taking full and part-time credits per semester.

Financial-Aid

We believe the cost of pursuing an education should never get in the way of turning your dreams into reality. We offer a variety of options and payment plans to make our University accessible to the students who will one day go on to disrupt industries, create new ones and shape a world that's ready for anything.

Please visit the Financial-aid office that pertains to your academic program to address question related to the following topics:

- | | | |
|-----------------------------|--------------------------|--|
| ○ Undergraduate Student Aid | ○ Financial Aid Programs | ○ Code of Conduct |
| ○ Graduate Student Aid | ○ Application Process | ○ IRS Data Retrieval Tool |
| ○ Veterans Benefits | ○ FAFSA Codes | ○ Entrance/Exit Counseling |
| ○ International Student Aid | ○ Aid Filing Deadlines | ○ How to Read your Financial Aid Package |

	Financial Aid Center City	Financial Aid East Falls
Location	Curtis Building, Suite 115	White Corners, First Floor
Phone	215-955-2867	215-951-2940
Email	Financial.Aid@jefferson.edu	financialaid@jefferson.edu
Website	https://www.jefferson.edu/university/academic-affairs/tju/academic-services/financial_aid.html	https://www.eastfalls.jefferson.edu/financialaid
	Student Accounts Center City	Student Accounts East Falls
Location	1101 Market Street, 29th Floor	Archer Hall, First Floor
Phone	(215) 503-7669	215-951-5988
Email	Tuition.Office@jefferson.edu	TJU_EF_StudentAccts@jefferson.edu
Website	https://www.jefferson.edu/university/finance/student_alumni.html	

Statement of Financial Responsibility

An individual's registration as a Jefferson student constitutes his or her agreement to make timely payment of all amounts due. Jefferson uses electronic means (email and the Internet) as a primary method of communication and providing billing, payment and enrollment services. Signatures or acknowledgments provided by the student electronically to Jefferson via Jefferson systems and/or @students.PhilaU.edu, @mail.Philau.edu or @PhilaU.edu email is valid and legally binding. Additionally, by accepting Jefferson's offer of admission and enrolling in classes, each student accepts responsibility for paying all debts to the University, including tuition and fees, for which s/he is liable. Details of the University's billing policies are outlined in www.eastfalls.jefferson.edu/studentaccounts/billing.

Tuition Refund Policy

Policy Link: <https://www.jefferson.edu/university/academic-affairs/schools/student-affairs/student-handbooks/university-policies/tuition-refund-policy.html>

The following tuition refund schedule applies to:

1. A student who is enrolled in a standard 15 week semester, 12 week, accelerated or summer session of a minimum of 5 weeks who is charged tuition separately for each term in which they are enrolled during the academic year; and
2. Who withdraws from the University; or
3. Is dismissed from the University for academic reasons*;
4. Who is granted a Leave of Absence from the University will be eligible for a refund of tuition according to the following schedule:

Percent of Refund of Semester of Term Paid Tuition	Number of Days Enrolled
100%	0-7 calendar days
75%	8-14 calendar days
50%	15-21 calendar days
25%	22-28 calendar days
0%	20+ calendar days

The following tuition refund schedule applies to:

1. A student who is enrolled
 - a. Continuously for at least 11 months who is charged two tuition payments to cover the entire period of enrollment for that academic year; or
 - b. In a term that includes both Pre-Fall and Fall terms in the Term Paid Tuition; or
 - c. In a term that includes both Spring and Summer in the Term Paid Tuition; and
2. Who withdraws from the University; or
3. Is Dismissed from the University for academic reasons*;
4. Who is granted a Leave of Absence from the University who will be eligible for a refund of tuition according to the following schedule:

Percent of Refund of Annual Paid Tuition	Percent of Number of term calendar days enrolled divided by the total number of calendar days of the academic year enrollment period
100%	Less than 10%
90%	10 - 19 %
80%	20 - 29%
70%	30 - 39%
60%	40 - 49%
50%	50 - 59%
40%	60 - 69%
30%	70 - 79%
20%	80 - 89%
0%	90% or more

Title IV Federal Financial Aid Refund Policy

Please note, the above policy is for tuition refund purposes only. Additionally, students who are federal financial aid recipients (e.g., Federal Direct Subsidized and Unsubsidized Stafford Loan, Perkins Loan, Direct PLUS, Pell Grants, FSEOG Grants, Other Title IV aid) who withdraw, or otherwise cease to be enrolled before the end of a term will be subject to the federal Title IV Refund Policy. Title IV financial aid funds are awarded under the assumption that a student will attend for the entire period in which they are enrolled. When a student withdraws from all courses, stops attending, or enrolls for a less than half time status, the eligibility for the full amount of Title IV aid may be forfeited. Therefore, a student may be eligible for a tuition refund under the University’s Tuition Refund Policy and may also be subject to the Federal Title IV Refund Policy, which may require the return of applicable federal financial aid funds.

The University is required to recalculate federal financial aid eligibility for students who complete less than 60% of an enrollment period (based on the number of calendar days). Once the term has been 60% completed, the student is considered to have earned 100% of the Title IV funds.

To view the Federal Title IV refund policy formula and process, see

Center City	https://www.jefferson.edu/university/academic-affairs/tju/academic-services/financial_aid/policies/title-iv-refund-policy.html
East Falls	https://www.philau.edu/financialaid/undergraduate/returnoftitleivfunds.html

Refund Policies & Notices

Federal Financial Aid Policy	The University uses federal regulations to determine the refund of federal financial aid funds to the federal government. A copy of this federal refund calculation is available on the Financial Aid webpage or at the University's Financial Aid Office
Room & Board	Any student who withdraws or changes room and board status after the semester begins is obligated for a full semester's room charge. Changes to the board plan may be made during the first two weeks of the semester with no penalty. After that time, students will be billed in full for the board plan.
Effective Date of Withdraw	The effective date for calculating refunds will be the effective date indicated on the Notification of Student Leave of Absence/Withdrawal form. Failure to complete this withdrawal form results in an unofficial withdrawal. Refunds, transcripts and recommendations will be withheld by the University until this official form is received. It is also the student's responsibility to drop his/her classes through BannerWeb when s/he completes this form.
Student Dismissal	Students dismissed from the University or from the residence halls will receive the following refunds: Tuition based on the tuition refund policy above; Students are obligated for the full semester's room and board charges.
Health Insurance	<p>All full-time undergraduate students are required to have health insurance coverage through their family policy, an individual policy, or through the University-sponsored health and accident plan. Fulltime undergraduate students are billed automatically for the coverage and may waive the University sponsored health and accident plan by completing the online waiver that documents private insurance coverage by accessing the "Health Insurance Waiver" link via BannerWeb under the Billing Information section.</p> <p>Insurance claims for medical withdrawals will be processed through the Dewar's tuition insurance policy. Claim forms are available in the Student Accounts office. If the student waived this coverage, no refund is available for a medical withdrawal.</p>
Withdraw and Leave of Absence Procedures	<p>A student who wants to initiate leave of absence or withdrawal must complete either the Withdrawal form or the Leave of Absence form. These forms are available from the Registrar's Office or online at www.eastfalls.jefferson.edu/Registrar/forms. A student is considered in attendance until one of these forms is completed and returned to the Registrar's Office and the student has been withdrawn from all of his/her classes.</p> <p>Students cannot drop all of their classes on BannerWeb. Students should contact the Registrar's Office to confirm all courses have been withdrawn and that their Withdrawal/Leave of Absence has been processed. Students are responsible for all charges until the date that the Withdrawal/Leave of Absence is process in the Registrar's Office. Students are encouraged to follow up with the Student Accounts and Financial Aid offices to discuss the financial implication</p>

Undergraduate Academic Programs *Goals, Outcomes, Components*

Our Curricula Seeks

- To advance students' knowledge and abilities.
- To broaden students' ways of thinking.
- To enhance students' awareness of the ideas, practices and values of their own and other cultures.
- To prepare students to synthesize general and specialized knowledge and apply it to a full personal and professional life.

Assessing Student learning

Jefferson is committed to providing excellent and innovative educational opportunities for all students. In order to maintain this quality and assure that students are learning all that they should, the University takes its responsibility for assessment seriously. The assessment of student learning occurs at all levels of the curriculum and is a central aspect of measuring institutional effectiveness. Learning outcomes are stated in the syllabus for each course and program, and student learning is assessed on a continuous basis at the course and program levels to ensure the continuous improvement of the curricula, programs and teaching, in order to increase student attainment. Students may be required to provide faculty with representative examples or copies of their work at various points in their curriculum in order for faculty to evaluate achievement of programmatic learning outcomes. All curricula at Jefferson combine theory and application, and offer integrative and active learning experiences for students. Assessment helps faculty understand how well students are achieving these outcomes, and reflects the commitment to the importance of learning through active engagement. Assessment helps to ensure that the University's programs meet the institutional learning outcomes.

Learning Outcomes

All Jefferson graduates will:

1. Possess a breadth and depth of professional skills informed by the liberal arts and sciences.
2. Apply multidisciplinary and collaborative approaches as a means of succeeding in dynamic, complex career environments.
3. Integrate theory and practice to inform research and guide creative decisions in their professional fields.
4. Interpret and value diversity in both local and global communities
5. Be prepared to be ethically responsible citizens in the personal, professional and civic spheres.
6. Be prepared to bring innovation to their fields and anticipate future directions in their professions by adapting to social, environmental and economic change.

Academic Programs: *Undergraduate Degree Components*

Concentration

A concentration allows for an in-depth exploration of a focused area within the scope of the student's major discipline. Concentrations are available for study by majors within the appropriate area only. Options for concentrations are specified by the academic program. Similarly, the number of credits required to complete the concentration as well as the sequence and selection of required and elective courses are determined by the program.

Creativity Core

The mission of Jefferson's Creativity Core Curriculum is to cultivate a confident and flexible student mindset through learning opportunities that explore individual and collaborative aptitude and equip students to yield novel and valuable results. The Creativity Core Curriculum has three components incorporated into the undergraduate student curriculum on the East Falls campus:

- **A Creativity Intensive Course**
Every major has a required course specific to the major that is designated as creativity intensive (CI). This course will help students to define creativity and creative practices in the context of a chosen discipline.
- **Creative Making Workshops**
Students will complete two Creative Making Workshops during their time at Jefferson. Creative Making Workshops are distinct experiences of 3-5 hours in length that provide students with the opportunity, materials, guidance and time to experiment in a risk-free environment in absence of expectations and deadlines. Workshop experiences require no prior topic knowledge, and student participation will result in the development of a unique artifact—whether tangible, digital, performative or conceptual. Topics for these workshops draw inspiration from a wide range of disciplines.
- **The Hallmarks Program Touchstone Course**
The final course in the Hallmarks Core, "Philosophies of the Good Life," highlights the role that creativity plays in meaningful and successful lives. This course challenges students to use strategies like design thinking and reflective writing to imagine possible life and career paths, and to combine the wisdom of diverse cultures and thinkers into a personal vision of "the good life."

Designated Electives

Designated electives allow students to select a course from a pre-approved set of courses. Designated electives enable both freedom of choice with some degree of programmatic guidance.

Free Electives

Free electives allow students to tailor their degree program to meet their personal interests and educational goals. Students who participate in an internship may apply these credits toward partial-completion of free elective requirements.

General Education

Study in the liberal arts and sciences encourages students to be integrative thinkers who build connections across disciplinary boundaries and within a wide range of knowledge. Through exposure to complex, real-world issues and studies in history, humanities and the social sciences, mathematics and the natural and physical sciences, students become graduates who

are well-read, well-spoken, worldly, flexible and adaptable—individuals who never stop learning and making connections in everything they do.

Hallmarks for General Education

Students who attend our East Falls undergraduate programs, begin their general education in the Hallmarks Core curriculum overseen by the College of Humanities and Sciences. This unique program, which began in 2014, forms the backbone of the undergraduate major and brings classmates together to share a common educational experience and to learn from one another's diverse perspectives.

Honors Institute

Students in the Philadelphia University Honors Institute at Jefferson are required to complete nine designated Honors courses: five in the Hallmarks Core and four in the major; and one experience in each of the four Honors Cornerstones: Contribute, Act, Adapt, Question. Honors course offerings are listed each semester in the University's course schedule. Enrolled students must take the course for a letter grade. The pass/fail or CR/NC option is not available for Honors courses.

Enrollment in Honors courses is designated on the University transcript and remains part of the student's permanent academic record. Honors students' academic records are reviewed annually to assure that participants are making satisfactory academic progress by maintaining a cumulative GPA of 3.25 or higher in order to remain in the Honors Institute. Students successfully completing all Honors requirements with a GPA of 3.25 or higher receive special recognition at graduation, the Honors Stole, Medallion and Certificate. This minimum GPA applies to all current and incoming students.

For more information, see the Philadelphia University Honors Institute website, <https://www.eastfalls.jefferson.edu/honorsprogram/>

Internship

An internship is a form of experiential learning that integrates knowledge and theory learned in the classroom with practical application and skills development in a professional setting. Internships provide students with the opportunity to gain valuable applied experience and make connections in professional fields they are considering for career paths. All academic internships must meet the NACE criteria for an experience to be considered an internship (visit www.eastfalls.jefferson.edu/careerservices/Internships for details.)

Academic internships are offered during the fall, spring and 12-week summer term, and are taken for credit as an elective with a course syllabus focused on professional skill-building and written assignments. The undergraduate internship course, INTRN-493, exists in .5, 3 or 6 credit options. Students may only enroll in an internship course during the semester of the internship experience; credit is not issued retroactively or for future experiences. Students may earn up to 6 credits of internships (fulfilling free elective credit in their curriculum).

While the primary emphasis of the course is on the internship work experience, course assignments are incorporated to prompt reflection on the internship. This reflection is an integral component of experiential learning and students' overall career and professional development. The Career Services Center and designated Faculty Internship Adviser (FIA) from the student's major provide support and guidance during the semester of participation. Career Services staff is also available to assist students with internship search strategy prior to the internship.

At the conclusion of the internship semester, students are evaluated by their employer and FIA, receiving a grade derived from successful performance as determined by the employer, the quality of academic assignments submitted to faculty, and completion of minimum required hours. All internships, regardless of credit registration, require a minimum of 12 weeks in length. The .5- and 3-credit internship courses require a minimum of 144 hours per semester on site, and the 6-credit internship course requires a minimum of 288 hours per semester on site. All required hours and coursework must be completed within the semester dates for which the student is enrolled in the internship course.

Internship course registration may only occur once an offer has been received and accepted from the employer. Several steps are required in order to register, and the Registrar’s Office ultimately enrolls each student in the internship course once all required paperwork is completed and submitted. The deadline to register for academic internships is the last day to add class for the semester of intended participation as established each semester by the Registrar’s Office. (Refer to the academic calendar for specific dates.) Students are strongly encouraged to apply early and to contact Career Services for assistance, which provides the best success in finding an appropriate experience in time to meet registration deadlines. To learn more about the registration process, visit www.eastfalls.jefferson.edu/careerservices/Internships/InternshipsForCredit.

Participation Requirements include:

- Completion of 60 credits by the start of the internship experience (90 credits for Architecture majors)
- 2.5 cumulative GPA in the semester preceding the internship
- **Transfer Students** must complete at least 15 credits earned at Jefferson prior to participation
- **International Students** must be eligible for Curricular Practical Training (CPT)

Minor

A minor is a set of courses that provides enhanced study in a particular subject area. A student may choose a minor with the assistance of an academic advisor upon completion of 60 semester hours. Options for minors are determined by the academic program and consist of a minimum of 12 credits in the subject area.

Undergraduate Minors

○ Accounting	○ Genetics	○ Multimedia and Visualization
○ Animation and Digital Media	○ Geospatial Information Systems	○ Pre-MBA
○ Architectural History/Theory	○ Historic Preservation	○ Photography
○ Biodiversity	○ Influencers of Childhood Development	○ Psychology
○ Business	○ International Business	○ Public Health
○ Building Technology	○ Interior Design	○ Real Estate Development
○ Communication	○ Landscape Design	○ Social Science
○ Construction Management	○ Landscape Planning	○ Spanish
○ Engineering	○ Law and Society	○ Sustainable Design
○ Entrepreneurship	○ Management	○ Textile Materials Technology
○ Environmental Studies & Sustainability	○ Marketing	○ Visual Studies
○ Fashion Merchandising & Management	○ Mechanical Engineering	○ Web Design & Development
○ Finance	○ Medical Spanish	○ Visual Communication

See Minor & Concentration requirements on pages 338-350

Guidelines for minors:

- A student may not combine a major and minor in the same or similar functional area (e.g., Finance major and Finance minor; Management major and Human Resource Management minor).
- A student may not use the same course for credit in both the major and minor areas. Any substitute elective from within the discipline must be approved. Please see appropriate form available at University Registrar's website: www.eastfalls.jefferson.edu/registrar.
- A student may only use the same course for credit in the free elective and minor areas if his/her major does **not** require a minor. If a student's major requires a minor, that student cannot use the same course for the free elective and minor areas.
- Certain courses in the minor may have prerequisite courses that need to be completed.
- Courses taken to fulfill requirements in the Hallmarks Core cannot also be applied towards the minor. To have a Hallmarks Core course count towards the minor, students must take an additional course in that requirement category to fulfill the Hallmarks Core requirement (for example, students would need to take a second course in the American Diversity [ADIV] category if they wanted ADIV-202 to count towards the minor).

Professional Studies

Strongly integrated with general education, the course of study in each professional major broadly prepares students to engage with the professional world and inquire about its political, economic and social contexts through the perspective of their practices. Professional studies provide the knowledge and skills to be successful in a profession and to become lifelong learners who are able to adapt to the changing conditions and demands of their careers.

Service Learning

SERVE-101, a one-credit course, provides an opportunity for students to contribute to and learn from Philadelphia, its neighborhoods and people. These experiences allow students to explore their interests and expand their knowledge through hands-on projects with a community outside of the University. Learning Outcomes for Service Learning Students who have completed SERVE-101 will

- Develop a sense of responsibility and commitment toward public service and citizenship through critical reflection and action.
- Improve their understanding of societal problems, which affect members of the Philadelphia area community and beyond.
- Relate community service experiences and issues to assigned journal questions and readings.
- Develop a commitment to full participation in the life of their communities.
- Consider civic obligations as a professional to improve quality of life in communities

Specialization

A specialization allows for a thematic grouping of courses within the scope of the student's major discipline. Specializations are available for study by majors within the appropriate area only. Options for specializations are specified by the academic program. The number of credits, sequence and selection of courses required to complete the concentration are determined by the program.

Physical Education

Physical education course options offer a variety of activities, including traditional instruction. PE options are PE-00 Varsity Athlete and/or PE-02 Recreation & Wellness.

PE-00: Varsity Athlete- Students who have participated on one of the University's 16 intercollegiate sports teams for one season will satisfy the requirement for this course and receive .05 credit. Students must register for this course in the semester they expect to receive the course credit. Students must register for two separate semesters of PE-00 and complete an intercollegiate season in each semester to receive full physical education credit. Note: There will be no retroactive credit or arrangement for students other than those in his/her graduating (last) semester. For any concerns contact the Associate Director of Athletics

PE-02: Recreation and Wellness -Students participate in recreation and wellness activities offered through the Department of Athletics. Opportunities include participation in intramural sports, recreational courses in team and individual sports, and wellness courses such as yoga, stress management and tailored exercise programs.

- All activities must be validated by a representative from the Department of Athletics to earn credit.
- Students must register for the course at the beginning of the semester to receive course credit.
- All Students who register for two separate semesters of PE-02 and would receive .5 credits per 15 hours of pre-approved classes/events/participation for each semester
- If a student is currently enrolled in the graduating semester of his/her senior year and needs a PE credit to make their total required credits for graduation, s/he must directly speak and have approval from the Director of Fitness and Wellness to move forward with any exceptions.
- If a student is in the graduating semester of his/her senior year and wants to take a .5 PE credit to make their total required credits for graduation, s/he will be expected to enroll for the class in his/her final semester.

COLLEGES & SCHOOLS





**COLLEGE OF ARCHITECTURE
& THE BUILT ENVIRONMENT**

Dean: Barbara Klinkhammer, RA (DEU), Dipl.-Ing
| 215- 951-2896 | Jefferson.edu/CABE

About Us

The College of Architecture & the Built Environment is committed to educating the next generation of design and construction professionals to create an equitable and sustainable future. Our curricula emphasize specialized knowledge unique to each discipline, paired with interdisciplinary collaboration that prepare students for practice in the global market. With its thriving design and construction industries, Philadelphia serves as our urban lab, furnishing students with professional experiences in a vibrant metropolitan area. Our college partners with major corporations, local communities and nonprofit organizations, supplying a broad range of real-world projects and networking opportunities. Our dynamic approach to education and emphasis on social equity, sustainability and design excellence equip our graduates with a competitive edge, poised to become innovative leaders in sustainable practice.

History

The College of Architecture & the Built Environment evolved from a single interior design course in 1980 to its current status with enrollment of over 800 Architecture, Interior Design, Landscape Architecture, Historic Preservation, Construction Management, Sustainable Design, Geodesign, Real Estate Development and Interior Architecture majors in 5 undergraduate programs, 8 graduate programs and 2 online graduate programs. In 1982 the Bachelor of Science in Interior Design officially began, and in 1991 the professional Bachelor of Architecture program was launched with eighty first-year students. The programs continued to grow and in 2004 the School of Architecture and Design was sub-divided, forming the School of Architecture and the School of Design and Media.

The Bachelor of Landscape Architecture joined the portfolio of design-oriented programs in the School of Architecture in 2005, while the long-standing, pre-professional Bachelor of Science Architectural Studies afforded study of related disciplines in concentrations such as Architectural Design Technology and Historic Preservation. Construction Management is the most recent undergraduate addition to the School of Architecture, launching in fall 2011.

In 2007 the School of Architecture established its first graduate program in Sustainable Design, followed by graduate programs in Construction Management (2009), Interior Architecture (2011), Geodesign (2013), Architecture (2014), Real Estate Development (2017) and Historic Preservation (2019). These programs are housed in the SEED Center, a LEED-rated building converted from an existing athletic gymnasium.

As part of a university restructuring in 2011, the School of Architecture became the College of Architecture & the Built Environment and celebrated the 35th anniversary of the BS Interior Design program and the 25th anniversary of the Bachelor of Architecture program in 2016.

Accreditation

National Architectural Accrediting Board (NAAB) Architecture (BArch); Architecture (MArch)	www.naab.org
Accreditation Board for Engineering and Technology (ABET) Construction Management (BS); Construction Management (MS)	www.abet.org
Council for Interior Design Accreditation Interior (BS); Interior Design (MS)	www.accredit-id.org
The American Society of Landscape Architects Landscape Architecture (BS)	www.asla.org

Academic Programs

<u>Undergraduate</u>	<i>Degree</i>
Architectural Studies	<i>BS</i>
Architecture	<i>BArch</i>
Construction Management	<i>BS</i>
Interior Design	<i>BS</i>
Landscape Architecture	<i>BLA</i>
<u>Graduate</u>	
Architecture	<i>MArch</i>
Architecture	<i>MS</i>
Construction Management	<i>MS</i>
Geospatial Technology for Geodesign	<i>MS</i>
Historic Preservation	<i>MS</i>
Interior Architecture	<i>MS</i>
Real Estate Development	<i>MS</i>
Sustainable Design	<i>MS</i>
<u>Certificate</u>	
Construction Management	<i>Graduate Certificate</i>
Design of Living Buildings	<i>Graduate Certificate</i>
Design of Resilient Communities	<i>Graduate Certificate</i>
Geographic Information Systems	<i>Graduate Certificate</i>
Geospatial Technology for Geodesign	<i>Graduate Certificate</i>
Green Building Operations	<i>Graduate Certificate</i>
Historic Preservation	<i>Graduate Certificate</i>
Real Estate Development	<i>Graduate Certificate</i>
Sustainable Leadership	<i>Graduate Certificate</i>
<u>Accelerated/Dual Degree</u>	
BArch Architecture & MS Historic Preservation	<i>5+1</i>
BS Architectural Studies & MS Historic Preservation	<i>4+1</i>
BArch Architecture & MS Interior Architecture	<i>5+1</i>
BS Interior & MS Architecture	<i>4+2</i>
BArch Architecture & MS Real Estate	<i>5+1</i>
BS Interior & MS Sustainable Design	<i>4+1</i>
BLA Landscape Architecture & MS Geospatial Technology for Geodesign	<i>4+1</i>
MS Construction & MS Real Estate Development	<i>1+1</i>
MS Construction Mgt. & MS Sustainable Design	<i>1+1</i>

Architectural Studies

Bachelor of Science (BS)

Program Director	David Kratzer, AIA, NCARB
Campus	East Falls
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/architecture-and-the-built-environment/programs/architectural-studies.html

Program Description

The four-year Bachelor of Science in Architectural Studies (BS) program allows students to focus on a field allied to the profession of architecture. After common first-year studios that lay the foundation for visual thinking, students will select two minors based upon their areas of academic and professional interest. The College of Architecture and the Built Environment offers an array of minors that allow Architectural Studies students to customize their education and earn a degree with a pre-professional design emphasis with a liberal arts focus. Opportunities exist for collaborative studios, fieldwork, study abroad options, professional internships and elective offerings.

Learning Goals/Outcomes

- Demonstrate expertise & professional level competency in technical & graphic methods
- Experience collaboration solving design problems
- Apply knowledge of the history & theory of historic and modern periods, styles, and places in the context of architectural fields
- Demonstrate knowledge of basic building systems and materials with emphasis on issues of sustainability in the context of a range of architecture related fields
- Demonstrate and apply discipline specific knowledge of content areas that are studied as part of student selected minors
- Choose minors that allow students to gain professional credentials through the accelerated dual degree options offered by the College of Architecture & the Built Environment

Curriculum: 4 years, 124-127 credits

<u>Year 1</u>			<u>Year 3</u>		
FYS 100	Pathways Seminar	1	Minor 1	Course for Minor 1	3
WRIT 101	Written Communication	3	Minor 1	Course for Minor 1	3
AMST 114	Topics in American Studies	3	AHST 305	History 3: Early Modern	3
SCI 108 or SCI 110	Sustainability & Eco-innovation or Landscape Ecology	3	Minor 2	Course for Minor 2	3
PHYC 101	Physics	3	Minor 2	Course for Minor 2	3
MATH 103	Quantitative Reasoning	3	AHST 306	History 4: Mod/Contemporary	3
MATH 1xx	Quantitative Reasoning II OR Free Elective	3-4	ADIV 1XX	American Diversity	3
ARFD 101	Design 1: Interdisciplinary Foundation	4	GCIT 2XX	Global Citizenship or Global Language	3
ARFD 103	Visualization 1: Drawing	3	CGIS 300	Contemporary Global Issues	3
ARCH 102	Design 2: Arch. Foundation Studies	4		Free Elective	6
ARFD 108	Vis 2: Technics & Graphic Rep	3			
	<u>Year 2</u>			<u>Year 4</u>	
ARCH 1313	Design 3: Arch. Foundation Studies	4	Minor 1	Course for Minor 1	3
ARCH 208	Visualization 3: Digital Modeling	3	Minor 1	Course for Minor 1	3
ARCH 205	Tech I: Materials & Methods	3	Minor 2	Course for Minor 2	3
	Free Elec (Dsn 4: recommended)	3-4	Minor 2	Course for Minor 2	3
ARCH 212	Tech 2: Passive Sys. Build Environ.	3	ARST 4XX	Architectural Studies Capstone	3
ARCH 206	History 2: Renaissance/Baroque	3	ISEM 3XX	Integrative Seminar	3
ARCH 303	Structures 1	3	GDIV 2XX	Global Diversity or Global Language	3
ETHC 1XX	Ethics	3	PHIL 499	Philosophies of the Good Life	3
WRIT 201/2	Writing Sem: Multimedia Comm.	3-4		Free Elective	6

Architecture

Bachelor of Architecture (BArch)

Program Director	David Kratzer, AIA, NCARB
Campus	East Falls
Accreditation	NAAB
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/architecture-and-the-built-environment/programs/architecture.html

Program Description

The Bachelor of Architecture is a five-year professional degree program accredited by the National Architectural Accrediting Board (NAAB). Students receive an industry-centered, liberal arts-infused education, blending academic scholarship with hands-on, professional learning. The program encourages interdisciplinary collaboration, and most of our faculty members are practicing industry professionals. As architectural practices evolve rapidly to meet new environmental, economic and societal challenges, our curriculum's unique focus on market-driven innovation and sustainability gives students a competitive advantage in the industry. The program builds on an interdisciplinary foundation of design and visualization studies and grows into more advanced courses that support design projects of increasing complexity and scope. In the fifth year, students choose from a range of research design studios that explore critical issues such as sustainable design, future smart cities, informal settlements and responsive architecture.

The Bachelor of Architecture is a STEM (Science, Technology, Engineering & Mathematics) designated program.

Learning Goals/Outcomes

- Integrate knowledge of liberal arts and sciences with the design of the built environment.
- Appreciate the value of collaboration, including multidisciplinary collaboration, in solving design problems.
- Synthesize theory, function, technology and aesthetics in an integrated and creative way.
- Understand and respect the people, places and contexts that bear upon the built environment around the world.
- Examine the characteristics of professionalism in architectural practice.
- Practice design as integrated process that respects existing contexts and/or inevitable transformations in the field.

Curriculum: 5 year, 164-165 credits

<u>Year 1</u>			<u>Year 3</u>		
FYS 100	Pathways Seminar	1	ARCH 311	Design 5 for Architecture	6
WRIT 101	Written Communication	3	ARCH 313	Tech 3: Dynamic Environ System	3
ARFD 103	Visualization I: I Drawing	3	ARCH 304	Structures 2	3
AMST 114	Debating U.S. Issues	3	AHST 305	Early Mod Arch & Interiors III	3
SCI 108 OR 110	Sust. & Eco-innov or Landscape Ecol	3	ARCH 312	Design 6 for Architecture	6
PHYC 101	General Physics	3	ARCH 326	Vis 2: Advanced Modeling	3
MATH 103	Quantitative Reasoning	3	AHST 306	Mod/Contemp. Arch & Interior	3
MATH 1XX	Quantitative Reasoning II	3-4	ARCH 314	Tech 4: Adv. Build Analysis	3
ARFD 101	Dsn 1: Interdisciplinary Found	4	ADIV 1XX	American Diversity	3
ARFD 103	Visualization I: Drawing	3	GCIT 2XX	Global Citizenship	3
ARCH 102	Design 2: Arch Found Studies	4			
	Visualization Designated Ele	3			
<u>Year 2</u>			<u>Year 4</u>		
ARCH 213	Design 3: Arch Foundation	4		Nexus DSN Exp. (DSN 7 Options)	6
ARDS 210	Tech I: Material & Methods	3	ARCH 412	Design 8 for Architecture	6
AHST 205	History I: Built Environment	3	ARCH 416	Tech 5: Docu & Detailing	3
ARDS 209	Vis 3: Digital Modeling	3	ARCH 4XX	Design Theory Seminar	3
ARCH 214	Design 4: Arch Foundation	4	CGIS 300	Contemporary Global Issues	3
ARCH 212	Technology 2: Passive Systems Build Enclosure	3	ISEM 3XX	Integrative Seminar	3
AHST 206	History 2: Ren/Baroque	3	GDIV 1XX	Global Diversity (or language)	3
ARCH 303	Structures I	3		Free Electives	6
			<u>Year 5</u>		
			ARCH 507	Design 9 for Architecture	6
			ARCH 503	Professional Management	3
			ARCH 508	Design 10 for Architecture	6
			PHIL 499	Philosophies of the Good Life	3
				Free Electives	12

Construction Management

Bachelor of Science (BS)

Program Director
Campus
Website

Gulbin Ozcan-Deniz, PhD, LEED AP BD+C
East Falls
<https://www.jefferson.edu/academics/colleges-schools-institutes/architecture-and-the-built-environment/programs/construction-management.html.html>

Mission

The Bachelor of Science in Construction Management is a STEM (Science, Technology, Engineering, and Math) program with the mission to provide students with a broad practice-oriented understanding of construction technology, business, architecture, and engineering, and with specific emphasis on the management of the construction process from project inception to closeout. The program is designed to equip students and graduates with the knowledge and the technical, administrative, and communication skills, necessary to succeed in the construction industry.

Program Description

Construction managers play an integral role in the development, construction and maintenance of commercial, residential, institutional and industrial buildings, as well as civil and transportation infrastructure. Degree programs in construction management have become the preferred higher education option for students interested in leadership positions within this multifaceted and competitive field.

The curriculum combines traditional business management and construction-specific coursework with a comprehensive liberal arts and sciences program of studies to acquaint students with the full business model of construction management. Graduates of the Construction Management program will have the knowledge, as well as the technical, administrative and communication skills, necessary to succeed in all sectors of the construction industry.

The teaching faculty brings a wide variety of rich industry experience to the program. Many are current practitioners who bring their daily professional challenges to the classroom, enriching the student experience.

The proximity to Philadelphia's active urban economy presents opportunity for a wide variety of jobsite experiences and exposure to innovative, state-of-the-art practices. Housed in the University's highly regarded College of Architecture and the Built Environment, the program allows students to learn collaboratively with students in the Architecture, Interior Design, Architectural Studies, Geodesign and Landscape Architecture programs.

Graduates will have the skills necessary to manage the construction process from project conception to closeout with respect to scope, schedule, budget, quality, risk and safety, and the environment. The Construction Management Core Curriculum stresses the following topics:

- Construction Project Management from pre-design through commissioning
- Project life-cycle and sustainability
- Health and safety, accident prevention, and regulatory compliance
- Law, contract document administration and dispute prevention and resolution
- Materials, labor, and methods of construction
- Finance and accounting principles
- Planning and scheduling
- Cost management including plan reading, quantity takeoffs and estimating
- Project Delivery methods
- Leadership and managing people

- Business and communication skills

The program produces graduates familiar with industry-specific management practices who have developed an ethical, global and sustainable problem-solving approach. Thus, our graduates will be prepared to meet the challenges of a variety of career options which include: construction project management, construction field management, construction project estimating, scheduling, project supply chain management, real estate management, specialty contract services management, capital projects management, installation management, facilities management, and construction material and equipment sales.

Upper-level courses offer students the opportunity to collaborate and innovate across these disciplines, incorporating the business management skills as well as the liberal arts core to explore innovative approaches to hands-on project management challenges.

Program Educational Objectives

- Collaborate across disciplines of construction project stakeholders and appreciate the benefit of that collaboration.
- Communicate effectively with a variety of audiences, such as owners, design professionals and code officials, using appropriate media
- Find and evaluate relevant cost, schedule, quality and safety data based on sound analysis.
- Create sound and innovative approaches to challenges faced by construction project teams
- Identify and evaluate the ethical choices faced by construction management professionals and formulate value-based responses.

The Bachelor of Science in Construction Management program at Thomas Jefferson University is accredited by the Applied and Natural Science Accreditation Commission (ANSAC) of ABET.

Curriculum: 4 years, 122-124 credits

<u>Year 1</u>			<u>Year 3</u>		
FYS 100	Pathways Seminar	1	ADIV 2XX	American Diversity	3
WRIT 101	Writing I: Written Communication	3	CGIS 300	Contemporary Global Issues	3
AMST 114	Topics in American Studies	3	GCIT 2XX	Global Citizenship or World Lang.	
SCI 108	Sustainability & Eco-Innovations	3	ISEM-3XX	Integrative Seminar	3
PHYS 101	General Physics/Lab	4	CMGT 300	Construction Acct. & Cost Control	3
MATH 1XX	Quantitative Reasoning I	3	CMGT 302	Construction Contract Admin	3
MATH 1XX	Quant Reasoning II or Elective	3	CMGT 304	Principles of Economics	4
CMGT 101	Construction Graphics	3	CMGT 306	Construction Site Operations	3
CMGT 102	Intro to Construction Industry	3	CMGT 310	Construction Surveying	3
CMGT 104	Intro to Estimating & Scheduling	3	ECON 205/6	Principles of Economics	3
ACCT 101	Financial Accounting	3	BLAW 301	Business Law	3
<u>Year 2</u>			<u>Year 4</u>		
ETHIC 1XX	Ethics	3	PHIL 499	Philosophies of the Good Life	3
WRIT-201	Multimedia Communication	3	CMGT 450	Construction Project Mgt. Seminar	3
GCIT 1XX	Global Diversity or Language	3	CMGT 499	Construction Mgt. Capstone	3
CMGT 200	Planning and Scheduling	3		Construct Mgt. Ele. 1 (designated)	
CMGT 202	Construction Estimating & Budget	3		Construct Mgt. Ele. 2 (designated)	
CMGT 204	Behavior of Materials	3	FINC 301	Financial Management	3
CMGT 206	Building Systems	3		Business Electives	6
CMGT 208	Materials & Methods of Construct	3		Free Electives	3
CMGT-200	Planning and Scheduling	3			
ABA 201	Applied Business Analytics I	3			

Interior Design

Bachelor of Science (BS)

Program Director	Lauren K. Baumbach, RA, AIA, IIDA, NCIDQ, IDEC
Campus	East Falls
Accreditation	CIDA
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/architecture-and-the-built-environment/programs/interior-design.html

Program Description

The interior design program is a four-year undergraduate degree program that leads to a Bachelor of Science in Interior Design. The interior design program provides an extensive education to meet the demands and challenges of this exciting and creative profession. In preparation for a rapidly evolving, technology- and information-driven society, interior design requires an in-depth understanding of the aesthetic, cultural, technical, environmental, global and socio-economic issues pertaining to the built environment.

The program strives to instill in our graduates the highest standards of professionalism and professional practice, integrity, competence and excellence in design. A multidisciplinary faculty, a close-knit campus community and prime location in Philadelphia provide a stimulating setting for the informed and inventive academic development of every student.

The emphasis of the program is to provide a holistic and comprehensive education in interior design with a balance among the theoretical, conceptual, creative and technical aspects of the discipline. This education is delivered through the core interior design curriculum, which is informed and enriched by the liberal arts and science curriculum and free electives.

At the program's core are design studios in which students explore the creative process through a series of varied and progressively more complex projects, covering the range of practice from residential to commercial and institutional design. The functional knowledge necessary for design is introduced through formally structured courses focusing on such varied topics as space planning, ergonomics, universal design, sustainable design, computer visualization, detailing, design, color theory, furniture design, materials and textiles. Students also study the history and theory of architectural interiors from pre-history to contemporary works and understand and analyze their cultural relevance. The interior design studios foster an interdisciplinary environment centered on creative experimentation, where material from other courses is synthesized through the act of design. Each year, the student will build upon earlier courses and integrate functional and cultural issues into the design studio. In the fourth year, the Capstone Experience is the culmination of all previous studies, integrating design research, programming, history, theory, human behavior, technology, innovative design solutions, construction detailing, furniture and materials—all important aspects of creating meaningful interior environments.

Mission

In preparing graduates for successful careers in an evolving global marketplace, the interior design program's mission is to prepare students to be independent thinkers, innovative problem-solvers, collaborators and leaders with high standards of professionalism, integrity and excellence in design. With an emphasis on creativity, balanced with the knowledge and skills required for meaningful contributions to professional design practice, the program strives to instill in students an awareness and understanding of the global, cultural, social, aesthetic, technological, environmental and ethical responsibilities involved in the design of interior environments.

The program is grounded in the belief that the interior designer mediates between human experience and the built environment, and that our graduates should enter the global marketplace as articulate, creative, inspired and socially aware design professionals.

Students may follow secondary specializations such as business, construction management, historic preservation, sustainable design and photography. The interior design program also offers valuable opportunities for internships in design firms, memberships in professional organizations, a junior semester studying abroad in the cities of Copenhagen or Rome, and discipline-based community service. The program is grounded in the belief that interior designers should enter the global marketplace as articulate, creative, inspired designers and socially aware professionals. The program seeks to instill in students an awareness and sensitivity to the social, technological, aesthetic, cultural and ethical responsibilities involved in the design of living and working environments.

Learning Goals/Outcomes

- Examine global and local issues and the implications of a diverse cultural and socio-economic society and the impact of these on the design of the built environment.
- Evaluate the diverse values, behavioral norms, physical, psychological and spatial needs of different demographic/user groups in the context of designing interior environments.
- Design interior spaces using an ecologically sensitive approach that supports environmental sustainability and human well-being.
- Research, problem solve, and apply principles of design in order to generate innovative and creative solutions in the design of interior environments.
- Apply historical and theoretical knowledge of interiors, architecture, art and the decorative arts to the design and analysis of interior environments.
- Engage in multimodal communication methods and work collaboratively with a multi-disciplinary approach.
- Comply with ethical and professional standards of practice and the laws, codes, standards and guidelines that impact the health, safety and welfare of building occupants.
- Proficiently select and apply color, furniture, fixtures, equipment, finish materials and lighting in the design of interior spaces.
- Demonstrate knowledge of interior construction and building systems in order to coordinate the design of a complete interior and work productively with co-professionals in the making of the built environment.

Accreditation

Thomas Jefferson University's Interior Design Program leading to the Bachelor of Science in Interior Design is accredited by the Council for Interior Design Accreditation (CIDA). To learn more about CIDA visit: www.accredit-id.org. The CIDA-accredited program prepares students for entry-level interior design practice, for advanced study, and to apply for membership in professional interior design organizations.

The BS in Interior Design granted by Thomas Jefferson University meets the educational requirement for eligibility to sit for the National Council for Interior Design Qualification Examination (NCIDQ Exam). To learn more about NCIDQ Exam eligibility and NCIDQ Certification visit: <https://www.cidq.org/eligibility-requirements>.

Curriculum: 4 years, 137.5-139.5 credits

<u>Year 1</u>			<u>Year 3</u>		
FYS 100	Pathways Seminar	1	CGIS 300	Contemp. Global Issues	3
WRIT 101	Written Communication	3	ISEM 360	Environments for Well-Being	3
AMST 114	Topics American Studies	3	GCIT 2XX	Global Citizenship/World Lang	3
SCI 106 OR	Biology for Design or	3	INTD 304	Integrated Community Service	3
SCI 108	Sustainability & Eco-Innov.				
PHYC 121	General Physics	3	INTD 301	Design 5 for Interior Design	6
MATH 1XX	Quantitative Reasoning I		INTD 305	Interior Building Systems	3
WRIT 201	Multimedia Communication	3	AHIST 305	Hist 3: Early Modern 1750-1940	3
ARFD 101	Dsn 1: Interdisciplinary Found. Studies	4	INTD 302	Design 6 for Interior Design	6
ARFD 103	Vis 1: Drawing	2	INTD 310	Textiles & Materials Inter & Arch	6
INTD 102	Design 2: Interior Design	4	INTD 309	Vis 4: Construction Documents	3
ARFD 103	Vis 2: Technics & Graphic Representation	3	AHST 306	History 4: Modern to Contemporary	3
<u>Year 2</u>			<u>Year 4</u>		
ADIV-1XX	American Diversity	3	ETHIC 1XX	Ethics	3
GDIV 1xx	Global Diversity	3	PHIL 499	Phil of Good Life	3
INTD 201	Design 3 for Interior Design	4	INTD 401	Design 7 for Interior Design	6
ARDS 209	Vis 3: Digital Modeling	3	INTD 487	Capstone Research & Program	3
AHIST 205	History 1: Built Environment, Ancient/Medieval	3	INTD 488	Capstone Project for INTD	6
ARDS 210	Technology 1: Materials & Methods	3	INTD 412	Prof. Practice & Contract Design	2
INTD 202	Design 4 for Interior Design	4		Design Elective	3
INTD 206	Interior Building Technology	3		Free Electives	9
AHIST 206	History 2: Renaissance/ Baroque	3			
	Free Elective	3			

Landscape Architecture

Bachelor of Landscape Architecture (BLA)

Program Director	Kimberlee Douglas, RLA, ASLA, LEED G.A.
Campus	East Falls
Accreditation	LAAB
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/architecture-and-the-built-environment/programs/landscape-architecture.html

Program Description

The Landscape Architecture program provides students with educational opportunities to explore sustainable solutions to multifaceted ecological problems. Students learn to innovate, collaborate, and create outdoor environments that reconnect society with nature, encourage healthy lifestyles and tackle climate change and natural disasters Using “hands on” experiential learning, courses increase students’ design creativity, knowledge and skills to become engaged citizens and professionals capable of solving the today’s pressing problems. Students learn to work independently and in teams and to collaborate across disciplines on projects with community members, governmental agencies and environmental groups.

Learning Goals/Outcomes

- Apply knowledge of liberal arts & science to design solutions
- Collaborate in intra- and interdisciplinary teams, particularly through our experiential learning based design studios
- Exhibit critical understanding of history/theory as applied to the design process
- Analyze the relationship between the design of places and their socio-cultural, environmental and economic contexts through service learning projects.
- Relate government regulations, professional practice and ethical responsibilities to the design process
- Analyze, interpret, and apply cutting-edge research in all stages of the design process

Curriculum: 4 years, 137-139 credits

<u>Year 1</u>			<u>Year 3</u>		
FYS 100	Pathways Seminar	1	ISEM 360	Human Behavior & Physical Environ	3
WRIT 101	Written Communication	3	CGIS 300	Contemporary Global Issues	3
AMST 114	Topics in American Studies	3	LARC 304	L A Design 5: Community Design	6
BIOL 101	Topics in Biology (Botany)	3	LARC 305	Plant Community Ecology	3
SCI 110	Landscape Ecology	3	LARC 206	Landscape Architecture History I	3
MATH 1XX	Quantitative Reasoning	3-4	LARC 409	LA Tech: Materials & Methods	3
WRIT 201	Multimedia Communication	3	LARC 400	L A Design 6: Urban Restoration Mgt.	3
ARFD 101	Foundation Design 1	4	LARC 412	Urban Hydrology	3
LARC 102	L A Foundation Design 2	4	LARC 212	Local Flora	3
ARFD 103	Visualization 1: Drawing	3			
ARFD 108	Vis 2: Technics and Graphic Rep	3			
<u>Year 2</u>			<u>Year 4</u>		
ETHIC 1XX	Ethics	3	PHIL 499	Phil of Good Life	3
GDIV 2XX	Global Diversity or Lang 101	3	LARC 401	L A Design 7: Urban Design II	6
ADIV 1XX	American Diversity	3	LARC 516	L A Tech: Construction Documents	4
GCIT 2XX	Global Citizenship or Lang 201	3	LARC 307	Landscape Architecture History II	3
LARC 201	L A Design 3: Site Design	4	LARC 312	Sustainable Planting Design	3
LARC 207	L A Tech Grading	3	LARC 506	Prof Practice for L A	3
ARDS 208	Visualization 3: Digital Modeling	3	LARC 599	Landscape Arch Design 8: Capstone	6
LARC 300	L A .4: Urban Design I	6		Free Electives	9
LARC 303	L A Tech Advanced Grading	3			
LARCH 310	GIS for Landscape Analysis	3			

Architecture

Master of Architecture (MArch)

Program Director	David Kratzer, AIA, NCARB
Campus	East Falls
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/architecture-and-the-built-environment/programs/architecture-march.html

Program Description

The Master of Architecture Program is a first-professional graduate degree program designed to prepare students for professional architectural practice and licensure through the development of critical and creative thinking, sustainable design and technology skills, innovative delivery methods, knowledge of project management, and collaborative experiences in an interdisciplinary environment.

Throughout the program, students employ traditional drawing and fabrication tools and techniques as well as use current digital technologies in representation, fabrication and architectural production. Four elective courses provide exposure to many comprehensive design disciplines within the college, which allows each student to customize their experience.

Balancing current sustainable design practices along with architectural history and theory, the program culminates with an individual final Master's Research and Design Project that balances architectural history and theory along with current sustainable design practices and technological developments.

The Master of Architecture Program is designed for students with undergraduate degrees in any field of study, and offers advanced standing for students with undergraduate degrees in pre-professional architecture or related design programs. The Program is accredited by the National Architectural Accrediting Board (NAAB) and is STEM (Science, Technology, Engineering & Mathematics) designated.

The 49 to 100 credit curriculum can be completed in two to three academic years. Advanced placement is determined by the program director and is based on previous education and experience. Elective courses are from curricula in

other College of Architecture and the Built Environment graduate programs, as well as cross-listed NAAB Accredited Bachelor of Architecture courses.

Learning Goals/Outcomes

- Address social and cultural issues through informed design solutions that prioritize equity, sustainability and resilience.
- Research, analyze, and compare design propositions in a global environment
- Function collaboratively to connect with disciplines beyond the expertise of architects
- Demonstrate the ability to apply design history and theory, sustainable practices, and technology in design projects.
- Demonstrate familiarity of diverse needs, values, traditions, abilities, and spatial patterns of different cultures and individuals
- Integrate professional practice with issues of public health, safety, and welfare regulations
- Demonstrate an understanding of the structural, environmental, and other building systems that support a healthy and sustainable environment.
- Demonstrate familiarity with current research and best practices.

Curriculum: 3.5 year, 49-100 credits (depending on advanced standing)

<u>Pre-Year 1</u>			<u>Year 3</u>		
ARCH 601	Intro to Design	3	ARCH 615	Design 5	6
ARCH 602	Intro to Visualization	3	ARCH 630	Arch Research Methods	3
			ARCH 644	Technology 5	3
				Elective	3
<u>Year 1</u>			ARCH 616	Design 6 Thesis Project	6
ARCH 611	Design 1	6	ARCH 661	Professional Management	3
ARCH 621	Visualization 1	3		Electives	6
ARCH 631	History 1	3			
ARCH 641	Tech 1	3			
ARCH 612	Design 2	6			
ARCH 632	History 2	3			
ARCH 651	Structures 1	3			
ARCH 642	Technology 2	3			
<u>Year 2</u>					
SDN 601	Principals & Methods of Sustainable Design	3			
ARCH 613	DSN 3 Sustainable Design Studio	4			
ARCH 633	History 3	3			
ARCH 652	Structures 2	3			
ARCH 643	Technology 3	3			
ARCH 614	Design 4	6			
ARCH 624	Visualization 2	3			
ARCH 634	History 4	3			
ARCH 644	Technology 4	3			
	Elective	3			

Architecture

Master of Science (MS)

Program Director
Campus
Website

David Kratzer, AIA, NCARB
East Falls
<https://www.jefferson.edu/academics/colleges-schools-institutes/architecture-and-the-built-environment/programs/architecture-march.html>

Program Description

The Master of Science in Architecture is a post-professional research-based degree designed to provide students who have already earned an accredited undergraduate degree in architecture or related design or built environment discipline with an opportunity to specialize in an area of study that is critical to the profession today. The program prepares students for specialist and consulting positions in the broad field of the built environment, including Architecture, Engineering and Construction.

The MS in Architecture offers students the platform to shape a customized education that furthers their architectural experience by developing advanced knowledge and expertise in areas of personal interest and specialization. Led by CABE faculty advisors, students shape a design oriented Master's research project. This project can be self-directed or students can work directly with faculty in their specific research areas. Students assemble a suite of electives with faculty from across the College and University to build a graduate level research collaborative foundation for the Master's Project.

Learning Goals/Outcomes

- Critically analyze and synthesize established theories and building science related to architecture and buildings
- Collaborate with professionals and academic experts in fields beyond architecture and the built environment.
- Demonstrate expertise in a chosen area of research.
- Demonstrate professional presentation and communication skills.
- Review and critically analyze original research in architecture and related disciplines.
- Conduct cutting-edge, applied research that culminates in a final project that contributes to the fields of architecture and the built environment.

The Master of Architecture is a STEM (Science, Technology, Engineering and Math) designated program

Curriculum: 31-34 credits (depending on track selected)

<u>Pre-Year 1</u>			
Either course based upon evaluation or waived for students with Architecture degrees			
ARCH 601	Intro to Design	3	
ARCH 602	Intro to Visualization	3	
<u>Year 1</u>			
SDN 601	Principles and Methods of Sustainable Design	3	
SDN 622	Sustainable DSN Studio OR	4	
OR	Architectural Design 3		
ARCH 613			
ARCH 630	Arch Research Methods	3	
	Focused Elective	3	
	Focused Elective	3	
	Focused Elective	3	
<u>Year 2</u>			
ARCH 902	Graduate Thesis Project I	3	
ARCH 902	Graduate Research Project 2	6	
	Focused Elective	3	

Construction Management

Master of Science (MS)

Program Director
Campus
Website

Gulbin Ozcan-Deniz, PhD, LEED AP BD+C
East Falls & Online
<https://www.jefferson.edu/academics/colleges-schools-institutes/architecture-and-the-built-environment/programs/construction-management-ms.html>

Program Description

The MS in Construction Management is a STEM (Science, Technology, Engineering & Mathematics) program, designed to provide students with the knowledge and skills to plan and manage each phase of the construction process as applied to complex commercial, infrastructure, and residential building projects. The mission of the program is to offer a comprehensive construction and management education consistent with the mission of the University and the College of Architecture and the Built Environment to improve the quality and sustainability of the construction industry and thus the built environment.

Graduates will have the skills necessary to manage the construction process from project conception to closeout with respect to scope, schedule, budget, quality, risk and safety, and the environment. The Construction Management Core Curriculum stresses the following topics:

- Leadership, communication, problem solving, and business management skills
- Project Management from feasibility to commissioning and closeout
- Project life-cycle and sustainability
- Construction law, contract administration and regulatory compliance
- Types and behavior of construction materials and structures
- Project delivery methods
- The means and methods of construction
- Finance and accounting principles and procedures for construction
- Planning, scheduling, and methods of integrated project control
- Estimating, budgeting, purchasing, and cost control
- Safety, health, environmental and quality management of the construction process

Learning Goals/Outcomes

- Evaluate relevant cost, schedule, quality, and safety data; formulate and defend management decisions based on sound analysis
- Lead and/or effectively contribute to the success of complex project management teams of stakeholders such as owners, design professionals, code officials, colleagues and subordinates
- Formulate policies and procedures that anticipate challenges faced by construction project management teams
- Identify and evaluate the ethical choices faced by construction management professionals and formulate policies that promote ethical choices
- Foster and contribute in collaboration across all disciplines of construction project stakeholders and appreciate the benefit of collaboration.

Areas of study include: project planning, estimating, scheduling, risk management, construction information modeling techniques and documentation, legal and contractual issues, project finance and cost control, and health and safety. Moreover, a key component of the program is the integration of techniques, materials and methods of sustainable building into the construction process. Future construction managers will be trained in the principles of sustainability and Leadership in Energy and Environmental Design (LEED) standards. By definition, construction management is a cross-disciplinary practice that synthesizes aspects from the fields of business,

architecture, engineering and construction. This degree program provides a balance among various skill sets with emphasis upon practical application, thereby ensuring that a graduate has the necessary knowledge base to be simultaneously successful on a construction site and in an office setting.

Curriculum: 2 year, 36 credits

Year 1			Year 2		
CMGT 600	Construction Estimating & Scheduling	3	CMGT 612	Advanced Construction Project Management	3
CMGT 602	Construction Information Modeling	3		Elective (CMGT 698 or any SDN)	3
CMGT 603	Construction Law: Roles & Responsibilities	3		Elective (CMGT 618, MRE 601 or any IMBA)	3
CMGT 604	Project Finance & Cost Control	3	CMGT 901	Master's Project	3
CMGT 606	Construction Risk Management	3		General Electives	6
SDN 601	Sustainable Design Methodologies	3			

Geospatial Technology For Geodesign

Master of Science (MS)

Program Director James L. Querry, Jr., MRP, RLA, ASLA
Campus East Falls
Website <https://www.jefferson.edu/academics/colleges-schools-institutes/architecture-and-the-built-environment/programs/geospatial-technology-ms.html.html>

Program Description

Jefferson’s MS in Geospatial Technology for Geodesign leverages GIS and advanced geospatial technologies in identifying and finding innovative solutions to urban design and urban planning problems. Emphasizing GIS-based tools, 3D parametric design and modeling, sustainable design approaches, collaboration and innovation within an integrated process, this STEM-designated graduate program is intended to empower students to find resilient solutions to 21st century urban challenges resulting from population growth, decreasing resources, natural disasters, and climate change. Geodesign is sustainability in practice, and our graduates are leaders in this innovative field.

Geospatial Technology for Geodesign students are directly involved in collaborative applied research projects with industry partners, state and federal agencies, and community partnerships. They

work with advanced technologies including parametric 3D modeling, spatial data collection using emerging technologies such as LiDAR, UAVs (drones), UAV-based photogrammetry, advanced geospatial mobile applications, and BIM while they help develop and test new tools that inform future industry software. Graduates possess highly sought-after GIS skills and are prepared for dynamic careers in interdisciplinary firms, state and federal agencies, NGOs, academia and more.

Learning Goals/Outcomes

- Articulate, critically analyze and synthesize design and planning theories and philosophies related to the built environment.
- Review and critically analyze original research in geodesign as related to the allied design disciplines
- Apply and synthesize geodesign-related research
- Conduct cutting-edge, applied geodesign research that makes a contribution to the body of knowledge
- Demonstrate expertise within the interdisciplinary field of geodesign
- Demonstrate professional presentation and communication skills
- Demonstrate the integration of knowledge, analysis and research through final small group research-based planning/design projects

Curriculum: 2 year, 36 credits

Year 1			Year 2		
GEOD 600	3D Modeling for Geodesign	3	GEOD 602	Geodesign Studio I	6
GEOD 615	Advanced GIS for Landscape Analysis	3	GEOD 607	Geodesign Explorations	3
GEOD 625	Internet GIS Technology	3	GEOD 605	Geodesign Research Studio	6
GEOD 616	Information Modeling	3		Elective	3
GEOD 617	Advanced GIS for Urban Planning & Development	3			
GEOD 601	Sustainable Design Methodologies	3			

Historic Preservation

Master of Science (MS)

Program Director	Suzanne Singletary, PhD
Campus	East Falls
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/architecture-and-the-built-environment/programs/historic-preservation-ms.html.html

Program Description

Jefferson's MS in Historic Preservation not only prepares graduates to preserve historic buildings and sites, but also to re-envision and re-purpose the past to serve present and future needs. The curriculum foregrounds adaptive reuse of historic structures as well as in-depth analysis through historical research and graphic documentation. Students develop skills fundamental to assess the condition and evolution of buildings and promote the ways historic structures order the urban fabric, contribute to healthy communities, and facilitate "place-making" as a catalyst for community revitalization. Students apply new and rapidly evolving digital technologies for managing, documenting and interpreting culturally significant structures and places.

Philadelphia, the first UNESCO World Heritage City in the US, a living laboratory of architectural styles and periods, offering a wealth of real-world projects and internships. Study Away Options—Spring semester studying preservation of Modernism at Bauhaus, Anhalt University, Dessau, Germany and research at Terragni Archives, Como Italy.

Customize study by selecting one of two tracks:

- Research and Documentation
- Preservation Design

Learning Goals/Outcomes

- Develop preservation protocols tailored to unique character of early and mid-century modern architecture
- Implement physical documentation and forensic analysis in the assessment of individual structures and sites as intrinsic to the current practice of architecture and preservation.
- Acquire competency in the application of analogue and digital techniques and software, particularly freehand sketching, constructed hand drawn drawings, model building, and CAD, 3-D modeling, LIDAR, Photogrammetry, and GIS.
- Assess and implement sustainable methods in the retrofitting of historic structures.
- Execute a holistic approach to preservation planning, as applied to the adaptive reuse of historic buildings and their role in urban regeneration via real world, community based projects
- Evaluate preservation strategies, policies and methods as part of broad historic and social contexts
- Research, analyze, and compare preservation methodologies within a global context
- Apply economic and legal aspects of preservation to projects at multiple scales from micro to macro
- Support preservation as a model of embodied energy and as a sustainable solution to our environmental crisis via the adaptive reuse of historic structures
- Master archival research skills and digital technologies as applied to preservation.

Curriculum: 2 year, 49-52 credits

<u>Pre-Year 1 (based upon evaluation)</u>					
ARCH 602	Introduction to Visualization	3			
	<u>Year 1</u>			<u>Year 2</u>	
MPH 602	Uncovering Past: Tools, Methods & Strategies	3	MPH 622	Collaborative Preservation Project, Adaptive Reuse & Urban Regeneration	4
MPH 626	Building Conservation & Assessment	3	MPH 6XX	Thesis Preparation	3
MPH 624	Architectural Forensics & Documentation	3	ARCH 671	Vernacular Architecture	3
MPH 621	Issues in Contemporary Preservation	3		3 Electives (Designated)	9
MPH 603	Restoration & Rehabilitation of Modernist Buildings	4	MPH 6XX	Preservation Thesis	5
ARCH 671	American Architecture	3			
GEOD 610	Introduction to GIS	3			
MPH 6XX	Preservation Economics	3			

Interior Architecture

Master of Science (MS)

Program Director	Lauren K. Baumbach, RA, AIA, IIDA, NCIDQ, IDEC
Campus	East Falls
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/architecture-and-the-built-environment/programs/interior-architecture-ms.html

Program Description

The MS in Interior Architecture program provides a balance between theory and application, and immerses students in the use of current technologies and sustainable practices. The curriculum ensures that students will be fully prepared to join the profession immediately upon graduation and assume roles in design, production, management or principal positions during their careers. In addition, it incorporates an international perspective and prepares graduates to contribute to projects across international boundaries and to work anywhere in the world. Graduates of the MSIA program will be qualified to sit for the National Council for Interior Design Qualification (NCIDQ) certification exam after accruing the required work experience in the field. NCIDQ certification is recommended and recognized throughout the U.S. and Canada.

Learning Goals/Outcomes

- Research, analyze and synthesize appropriate contextual information as a means of informing design
- Engage working collaboratively & with multi-disciplinary approach
- Acquire broad understanding of historical and theoretical body of knowledge of the profession
- Develop global view and explain that design decisions are influenced by variations of culture, construction technology, economics, and environmental factors
- Explain and apply ethical and accepted standards of professional practice in the discipline
- Produce innovative designs in response to current cultural, socio-economic & technological conditions & forecasted trends.

Curriculum: 2 year, 49-69 credits

<u>Year 1</u> (students with unrelated degree)		<u>Year 3</u>	
IARCP 501	Design I for I.A.	4	
IARCP 503	Graphic Representation	3	
IARCP 505	History of Design I for I.A.	3	
IARCP 502	Design II for I.A.	4	
IARCP 504	Visual Communication I	3	
IARCP 508	Presentation Techniques	3	
<u>Year 2</u>			
IARC 601	Design III for I.A.	4	
IARC 603	History of Design II for I.A.	3	
IARC 607	Technology I for I.A.	3	
IARC 610	Textiles and Materials	3	
IARC 602	Design IV for I.A.	4	
IARC 608	Visual Communication II for I.A.	3	
SDN 601	Technology II for I.A.	3	
	Sustainable DSN Methodologies	3	
<u>Summer (Optional)</u>			
	Electives	6	
			IARC 702 Design V for I.A. 4
			IARC 707 Technology III for I.A. 3
			IARC 708 Prof. Practice and Ethics 3
			IARC 709 Research and Programming 3
			IARC 710 Master's Project 4
			Electives 6

Real Estate Development

Master of Science (MS)

Program Director
Campus
Website

Troy Hannigan
East Falls
<https://www.jefferson.edu/academics/colleges-schools-institutes/architecture-and-the-built-environment/programs/real-estate-development-ms.html>

Program Description

Prepare students to be leaders in real estate profession and address the significant built environment challenges of the 21st century: sustainability, gentrification, poverty, the decline of brick and mortar retail and the shifts in demographics. Students will learn to address economic, social, and ecological issues when developing commercial, industrial, institutional, or mixed use and residential real estate development projects. Philadelphia is the backdrop for much of the curriculum but national and international examples are also investigated.

By combining environmental and economic sustainability, social consciousness, design excellence, financial feasibility and economic viability, students see first-hand how real estate development invigorates communities and shapes healthy places to live, work, and play. Using the city of Philadelphia as a living laboratory, students learn to approach projects at various scales, ranging from a single building to an entire district or neighborhood,

A faculty of industry experts and practitioners provide real-world insight into the legal aspects of land-use, city and regional planning, construction science and management. Much of the course work is collaborative, including case study analysis, on-site visits, and real-world problem solving. The Jefferson experience helps students build a network of professional contacts and resources.

Learning Goals/Outcomes

- Learn to creatively invigorate urban communities—architecturally, environmentally and fiscally
- Track demographic, sociological, technological & economic trends that impact t supply & demand for particular projects within specific markets and areas
- Apply “green” planning principles, as outlined by Urban Land Institute and United States Environmental Protection Agency, to development projects
- Assess fundamental legal principles and ethical practices applicable to real estate development
- Apply financial and investment tools in a wide array of property types and development scenarios
- Examine opportunities & challenges of public-private partnerships, the techniques employed to encourage growth, and market and fiscal feasibility of cross-sector collaborations
- Focus on projects of various scales—from single building and neighborhood revitalization, to commercial, institutional and healthcare development
- Analyze demographic, technological and economic trends using current GIS technologies
- Measure efficacy of sustainable interventions, such as Smart Growth, New Urbanism, Brownfield Redevelopment and Adaptive Reuse as a springboard to urban revitalization
- Complete a comprehensive Capstone Project under the mentorship of faculty who are in the real estate industry

Curriculum: 1 ½ - 2 year, 37 credits

MRE 601	Sustainable Real Estate Develop Process	3	MRE 638	Sustainable Affordable Housing	3
MRE 615	Real Estate Finance and Investment	3		Elective	3
MRE 620	Case Study Studio: Urban Revitalization	3	GEOD 625	Internet GIS Tech for Design and Development	3
MRE 625	Real Estate Law and Ethical Practices	3	MCM 600	Construction Estimating and Scheduling	3
MRE 630	Market Analysis and Valuation	3	SDN 601	Principles and Methods of Sustainable Design	3
MRE 635	Public Private Partnerships	3	MRE 640	Capstone Project	4

Sustainable Design

Master of Science (MS)

Program Director Rob Fleming, AIA, LEED AP
Campus East Falls & Online options
Website <https://www.jefferson.edu/academics/colleges-schools-institutes/architecture-and-the-built-environment/programs/sustainable-design-ms/degree-options.html>

Program Description

The MS in Sustainable Design prepare students for the built environment industry by teaching specific skill sets necessary to conceptualize measure and construct a sustainable environment. This is balanced by broader, theoretical avenues of study that emphasize systems thinking, which place the technical knowledge gained in the program into context. The program culminates with a two-semester thesis project that is meant to provide a component of depth in a specific built environment discipline or a particular subset of sustainability.

The MS in Sustainable Design is a STEM (Science, Technology, Engineering and Mathematics) designated program.

Learning Goals/Outcomes

- Apply skill sets necessary to accomplish effective sustainable design project as response to environmental, social & economic force
- Provide leadership, team building and organizational skills for diverse groups through the integrated process
- Work effectively within groups of varied disciplines
- Synthesize theories of sustainability into comprehensive research and design projects
- Develop diversity initiatives integral to sustainability problem-solving process as a reflection of emerging global marketplace
- Apply ethical values to integrated design process and to selection of systems and materials for a built project
- Bring innovation to fields & anticipate future directions in professions by adapting to social, environmental & economic changes

Curriculum: 2 year, 33 credits

<u>2-Year On Campus Program</u>			<u>2-Year Online Program</u>		
<u>Year 1</u>			<u>Year 1</u>		
SDN 601	Principles and Methods for Sustainable Design	3	SDN 601	Principles and Methods for Sustainable Design	3
SDN 602	Adaptive Design	3	SDN 602	Adaptive Design	3
	Elective	3	SDN 621	Ecological Design Studio	4
SDN 604	Green Materials and Life-Cycle Assessment	3	SDN 623	Exploring Landscapes	2
SDN 621	Ecological Design Studio	4		Elective	3
SDN 623	Exploring Landscapes	2			
<u>Year 2</u>			<u>Year 2</u>		
SDN 622	Sustainable Design Studio	4	SDN 624	Sustainable Design Studio	2
SDN 624	Sustainable Design Studio	2	SEN 604	Green Materials and Life-Cycle Assessment	3
SDN 900	Thesis 1 in Sustainable Design	3	SDN 622	Sustainable Design Studio	4
SDN 901	Thesis 2 in Sustainable Design	6	SDN 628	Capstone in Sustainable Design	6
				Elective	3

Construction Management

Graduate Certificate

Program Director	Gulbin Ozcan-Deniz, PhD , LEED AP BD+C
Campus	East Falls & Online
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/architecture-and-the-built-environment/programs/construction-management-ms.html

Program Description

The twelve-credit Graduate Certificate in Construction Management will train students to assume leadership roles within this increasingly multifaceted and cross-disciplinary industry. Construction Managers must demonstrate mastery of a broad spectrum of skill sets and knowledge bases to plan and supervise the construction process as applied to commercial, residential and infrastructural building projects. The mission of the Graduate Certificate in Construction Management is to provide students with a broad-based, practice-oriented understanding of construction technology, sustainable principles and business practices.

The target audience for this certificate program comprises two distinct groups. One group includes graduates of professional programs, including Architecture, Interior Architecture, Landscape Architecture, and Business Administration, seeking to build knowledge and credentials in the field of construction management; and the second group includes professionals already working in the construction industry who would like to update their knowledge of new and emerging techniques and concepts. Students will be able to take classes either online or on campus on a part-time basis to coordinate with work schedules.

The Construction Management Graduate Certificate is a STEM (Science, Technology, Engineering and Mathematics) designated program.

Curriculum: 12 credits

Core Curriculum		
CMGT 600	Construction Estimating & Scheduling	3
CMGT 603	Construction Law: Roles & Responsibilities	3
CMGT 604	Project Finance & Cost Control	3
CMGT 606	Construction Risk Management	3

Learning Goals/Outcomes

- Evaluate relevant cost, schedule, quality, and safety data; formulate and defend management decisions based on sound analysis
- Lead and/or effectively contribute to the success of complex project management teams of stakeholders such as owners, design professionals, code officials, colleagues and subordinates
- Formulate policies and procedures that anticipate challenges faced by construction project management teams
- Identify and evaluate the ethical choices faced by construction management professionals and formulate policies that promote ethical choices
- Foster and contribute in collaboration across all disciplines of construction project stakeholders and appreciate the benefit of collaboration.

Design of Living Buildings

Graduate Certificate

Program Director	Rob Fleming, AIA, LEED AP
Campus	East Falls
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/architecture-and-the-built-environment/programs/sustainable-design-ms/degree-options/graduate-certificates/design-of-living-buildings.html

Program Description

The Living Building Challenge is a green building certification program and sustainable design framework that visualizes the ideal for the built environment. This graduate certificate focuses on the design and certification of living buildings with a focus on the regenerative design of spaces and places that feature a strong connection to “light, air, food, nature and community.” As a student in this program, you will begin with an overall understanding of the sustainable design movement while also studying the “basics” of the Living Building Challenge. You will move on to study the various technical aspects of meeting the Challenge, with an emphasis on simulation, calculation, and validation. The Living Building Design Studio features interaction with industry professionals who have had direct experience in designing and certifying Living Building Challenge projects and ends with the design of a living building.

The Design of Living Buildings Graduate Certificate is a STEM (Science, Technology, Engineering and Mathematics) designated program.

Learning Goals/Outcomes

- Gain understanding of the sustainable design movement while also studying the “basics” of the Living Building Challenge
- Study the various technical aspects of meeting the Challenge, with an emphasis on simulation, calculation, and validation
- Integrate and apply methodology in the design of a living building.
- Apply critical skills including the LEED® rating system, Passive House design, energy and daylight modeling and life cycle assessment.
- Credits earned through certificate courses are transferable into the MS in Sustainable Design program.

Curriculum: 12 credits

<u>Core Curriculum</u>		
SDN 601	Principles and Methodologies of Sustainable Design	3
SDN 602	Adaptive Design	3
SDN 622	Sustainable Design Studio	4
SDN 624	Sustainable Systems for Studio	2

Design of Resilient Communities

Graduate Certificate

Program Director	Rob Fleming, AIA, LEED AP
Campus	East Falls & Online options
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/architecture-and-the-built-environment/programs/sustainable-design-ms/degree-options/graduate-certificates/design-of-resilient-communities.html

Program Description

Resilient Design practices are at the forefront of design thinking because they acknowledge that our efforts to stem the tide of climate change have not been enough. The harsh reality is that design in the 21st century will be focused on adaption to climate change.

The Design of Resilient Communities Graduate Certificate is a STEM (Science, Technology, Engineering and Mathematics) designated program.

Learning Goals/Outcomes

- Resilient design is an area of study that builds special skills, knowledge and approaches to guide organizations to continue to flourish within a challenging environmental, social and economic challenges.
- The Certificates offer a wide array of critical skills including the LEED® rating system, Passive House design, energy and daylight modeling and life cycle assessment.
- Credits earned through certificate courses are transferable into the MS in Sustainable Design program.

Curriculum: 12 credits

<u>Core Curriculum</u>		
SDN 601	Principles and Methodologies for Sustainable Design	3
SDN 602	Adaptive Design	3
SDN 623	Exploring Landscapes	2
SDN 621	Ecological Design Studio	4

Geographic Information Systems

Graduate Certificate

Program Director
Campus
Website

James L. Querry, Jr., MRP, RLA, ASLA
East Falls
<https://www.jefferson.edu/academics/colleges-schools-institutes/architecture-and-the-built-environment/programs/graduate-certificates/geographic-information-systems.html>

Program Description

The mission of the Graduate Certificate in Geographic Information Systems (GIS) is to provide students with a broad-based, practice-oriented proficiency in advanced geospatial technology and spatial analytics.

The Geographic Information Systems Graduate Certificate is a STEM (Science, Technology, Engineering and Mathematics) designated program.

Learning Goals/Outcomes

Prepare students to assume technology leadership roles in the use of Advanced GIS and Spatial Analytics, primarily within the allied design professions including Landscape Architecture, Architecture, Planning and Engineering, but also extending to more traditional spatial analysis roles. GIS professionals must demonstrate mastery of a broad spectrum of advanced geospatial skill sets and knowledge bases to plan and lead in the use of geospatial technology for projects related to the built environment.

Curriculum: 12 credits

<u>Core Curriculum</u>		
GEOD 610	Introduction to GIS	3
GEOD 615	Advanced GIS for Landscape Analysis	3
GEOD 617	Advanced GIS for Urban Planning and Development	3
<u>Select One</u>		
GEOD 625	Internet GIS Tech for Design and Development	3
GEOD 600	3D Modeling for Geodesign	

Geospatial Technology For Geodesign

Graduate Certificate

Program Director	James L. Querry, Jr., MRP, RLA, ASLA
Campus	East Falls
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/architecture-and-the-built-environment/programs/graduate-certificates/geospatial-technology-for-geodesign.html

Program Description

The mission of the Graduate Certificate in Geospatial Technology for Geodesign is to enable students with a broad range of practice-oriented proficiencies in these cutting-edge technologies for design.

The Geospatial Technology for Geodesign Graduate Certificate is a STEM (Science, Technology, Engineering and Mathematics) designated program.

Learning Goals/Outcomes

Prepare students to assume leadership technology roles in the use of 3D parametric modeling and advanced GIS applied to the allied design professions including Landscape Architecture, Architecture, Planning and Engineering.

Curriculum: 12 credits

<u>Core Curriculum</u>			<u>Select One</u>		
GEOD 610	Introduction to GIS	3	GEOD 615	Internet GIS Tech for Design and Development	3
GEOD 600	3D Modeling for Geodesign	3	GEOD 617	Advanced GIS for Urban Planning and Development	3
GEOD 616	Information Modeling	3	GEOD 625	Internet GIS Tech for Design and Development	3

Green Building Operations

Graduate Certificate

Program Director	Rob Fleming, AIA, LEED AP
Campus	East Falls
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/architecture-and-the-built-environment/programs/sustainable-design-ms/degree-options/graduate-certificates/green-building-operations.html

Program Description

The Graduate Certificate in Green Building Operations is designed to educate students about the design and management of mainstream green buildings. With this extremely flexible graduate certificate, you will acquire the specific skills and knowledge that perfectly compliment your career goals.

The Green Building Operations Graduate Certificate is a STEM (Science, Technology, Engineering and Mathematics) designated program.

Learning Goals/Outcomes

- The Certificates offer a wide array of critical skills including the LEED® rating system, Passive House design, energy and daylight modeling and life cycle assessment.
- Credits earned through certificate courses are transferable into the MS in Sustainable Design program.

Curriculum: 12 credits

<u>Core Curriculum</u>		
SDN 601	Principles and Methodologies for Sustainable Design	3
The MSSD faculty will advise you to help select the best courses for your career		
	3 Course Options:	9
	<ul style="list-style-type: none"> • Adaptive Design • Sustainable Systems • Life Cycle and Green Materials • BIM for Sustainable Design • Environments for Well-Being (on-campus only) 	

Historic Preservation

Graduate Certificate

Program Director Suzanne Singletary, PhD
Campus East Falls
Website <https://www.jefferson.edu/academics/colleges-schools-institutes/architecture-and-the-built-environment/programs/historic-preservation-ms.html.html>

Program Description

The twelve-credit Graduate Certificate in Historic Preservation will prepare students to assume leadership roles within this multifaceted, cross-disciplinary profession. Curricular emphasis upon adaptive reuse of historic structures and the application of preservation methodologies to urban revitalization will appeal to working professionals from a broad spectrum of disciplines.

Preservation methodologies applied to projects at multiple scales, ranging from the micro level of individual structures to the macro level of preservation planning, will equip students with the skills, knowledge and experience to address pressing environmental and community-based challenges. In “real world” projects, students implement preservation principles and methods relative to both pre-modern and modern buildings and technologies.

The following are suggested courses for the Graduate Certificate in Historic Preservation, although course substitutions are possible at the discretion of the Program Director.

Learning Goals/Outcomes

- Implement physical documentation and forensic analysis in the assessment of individual structures and sites as intrinsic to the current practice of architecture and preservation.
- Acquire competency in the application of analogue and digital techniques and software, particularly freehand sketching, constructed hand drawn drawings, model building, and CAD, 3-D modeling, LIDAR, Photogrammetry, and GIS.
- Assess and implement sustainable methods in the retrofitting of historic structures.
- Execute a holistic approach to preservation planning, as applied to the adaptive reuse of historic buildings and their role in urban regeneration via real world, community based projects
- Evaluate preservation strategies, policies and methods as part of broad historic and social contexts

Curriculum: 12 credits

MPH 602	Uncovering the Past: Tools Methods & Strategies	3
MPH 621	Issues in Contemporary Preservation	3
MPH 624	Architectural Documentation & Forensics	3
	Select One	3
MPH 626	Building Conservation & Assessment	
ARCH 672	American Architecture	

Real Estate Development

Graduate Certificate

Program Director
Campus
Website

Troy Hannigan
East Falls
<https://www.jefferson.edu/academics/colleges-schools-institutes/architecture-and-the-built-environment/programs/real-estate-development-ms.html>

Program Description

For graduates of professional programs, including Architecture, Interior Architecture, Landscape Architecture, Construction Management, Sustainable Design, Business Administration, etc. seeking to build their knowledge-base and credentials in the field of real estate development, a customized portfolio of four courses is available, leading to a 12-credit hour Graduate Certificate in Real Estate Development.

Professionals working in the Real Estate Development industry who would like to update their knowledge of new and emerging techniques and concepts will also benefit from the 12-credit hour Graduate Certificate program. Classes are offered in the evening to coordinate with work schedules. Students have the option of designing their own curriculum or they can follow the suggested model below.

Learning Goals/Outcomes

- Apply “green” planning principles, as outlined by Urban Land Institute and United States Environmental Protection Agency, to development projects
- Assess fundamental legal principles and ethical practices applicable to real estate development
- Apply financial and investment tools in a wide array of property types and development scenarios
- Examine opportunities & challenges of public-private partnerships, the techniques employed to encourage growth, and market and fiscal feasibility of cross-sector collaborations
- Focus on projects of various scales—from single building and neighborhood revitalization, to commercial, institutional and healthcare development

Curriculum: 12 credits

MRE 601	Sustainable Real Estate Develop Process	3
MRE 615	Real Estate Finance and Investment	3
MRE 620	Case Study Studio: Urban Revitalization	3
MRE 638	Sustainable Affordable Housing	3

Sustainability Leadership

Graduate Certificate

Program Director	Rob Fleming, AIA, LEED AP
Campus	East Falls & Online options
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/architecture-and-the-built-environment/programs/sustainable-design-ms/degree-options.html

Program Description

The Sustainability Leadership Certificate at Thomas Jefferson University prepares forward-thinking professionals to design and deliver sustainability initiatives in their current or future organizations. With our curriculum's project-based approach, you will build vital skills in problem scoping, systems modeling, solution framing and change management and immediately apply them to the sustainability challenges facing your own organization or an assigned client.

As you progress through the program, your project advances with you, moving through stages from identifying and prioritizing key environmental challenges to developing and pitching an implementation plan for addressing them. Our faculty are prominent sustainability professionals ready to share their conceptual knowledge and practical experience as you master the strategies and tools needed to produce positive change in your field.

The Sustainability Leadership Graduate Certificate is a STEM (Science, Technology, Engineering and Mathematics) designated program.

Learning Goals/Outcomes

- Build vital skills in problem scoping, systems modeling, solution framing and change management.
- Identify and prioritize key environmental challenges
- Develop implementation plans for addressing environmental challenges.
- Credits earned through certificate courses are transferable into the MS in Sustainable Design program.

Curriculum: 1 Year, 12 credits (on campus)

SDN 601	Principles of Sustainable Design	3
SDN 625	Environmental Impact Analysis	3
SDN 626	Models & Metrics for Sustainable Organizations	3
SEN 627	Sustainability Advocacy & Change Management	3

Architecture & Historic Preservation

Bachelor of Architecture (BArch) & Master of Science (MS) Historic Preservation

Program Directors	David Kratzer and Suzanne Singletary
Campus	East Falls
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/architecture-and-the-built-environment/programs/accelerated-dual-degrees.html

Program Description

The MS Historic Preservation prepares graduates to assume leadership roles within this multifaceted, cross-disciplinary profession. The “Preservation Design” track focuses upon the adaptive reuse of historic structures and the application of preservation methodologies to urban revitalization, sustainable practices that are increasingly essential skills for architects. This interdisciplinary and transdisciplinary combination fosters nimble, flexible problem solving on multiple levels. Working in team and/or studio centered processes, students engage in real world, experiential and collaborative learning. The Accelerated Dual Degree programs prepare students for the complexities of contemporary practice and afford our graduates a competitive edge in today’s market.

The combined Bachelor of Architecture and MS Historic Preservation 5+1 Accelerated Dual Degree Option allows an undergraduate Architecture major to complete foundational coursework in Historic Preservation while completing the baccalaureate degree.

Curriculum: 6.5 years

- By sub-matriculating, a student may complete four graduate courses required by the MS Historic Preservation program, for a maximum of twelve graduate course credits, thereby achieving advanced standing in the 49-credit MS Historic Preservation program and enabling a student to complete the master’s degree with an additional 37 credits, depending upon transcript evaluation.
- Upon graduation from the Bachelor of Architecture program, a student may fulfill requirements for the MS Historic Preservation in one year of full-time study

Contact Suzanne Singletary or David Kratzer for more information.

Architectural Studies & Historic Preservation

Bachelor of Science (BS) Architectural Studies &
Master of Science (MS) Historic Preservation

Program Directors	David Kratzer and Suzanne Singletary
Campus	East Falls
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/architecture-and-the-built-environment/programs/accelerated-dual-degrees.html

Program Description

The MS Historic Preservation foregrounds preservation methodologies applied to projects at multiple scales, ranging from the micro level of individual structures to the macro level of preservation planning. Graduates are equipped with the skills, knowledge and experience to address pressing environmental and community-based challenges. By sub-matriculating in the master's program, Architectural Studies majors may complete foundational coursework required in the "Documentation and Research" track, completing a maximum of 24 credits towards the MS Historic Preservation degree, thereby achieving advanced standing in the master's program while completing the baccalaureate degree. Upon graduation from the BS Architectural Studies, a student may fulfill remaining requirements for the MS Historic Preservation in one year of full-time study.

Curriculum: 5 years

- Students may elect to pursue a 24-credit concentration in Historic Preservation, consisting of four graduate and four undergraduate courses in the discipline.
- Students enrolled in the pre-professional BS Architectural Studies program may achieve professional credentials by enrolling in this 4+1 Accelerated Dual Degree option

Contact Suzanne Singletary or David Kratzer for more information.

Architecture & Interior Architecture

Bachelor of Architecture (BArch) & Master of Science (MS) Interior Architecture

Program Directors	David Kratzer, AIA, NCARB and Lauren Baumbach
Campus	East Falls
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/architecture-and-the-built-environment/programs/accelerated-dual-degrees.html

Program Description

- The combined Bachelor of Architecture and the Master of Interior Architecture 5+2 Accelerated Degree is an innovative educational model that allows students to achieve two accredited professional degrees.
- The program's transdisciplinary nature encourages students to think broadly and envision innovative solutions to design-related problems. The 5+2 BArch/MSIA Accelerated Dual Degree creates a pathway for students who wish to pursue a graduate degree in Interior Architecture while completing the undergraduate, professional program in Architecture.

Curriculum: 6 years

- The 5+1 Accelerated Degree enables an undergraduate Architecture major to complete three graduate courses required by the Master of Interior Architecture program, for a maximum of eleven graduate course credits, while completing the undergraduate Bachelor of Architecture degree.
- By overlapping the two programs, a student achieves advanced standing in the three year, 69-credit Master of Interior Architecture program while an undergraduate and can complete the MSIA degree with an additional 20 credits.
- Upon graduation from the BArch program, a student may fulfill requirements for MSIA in one year of full-time study, comprising fall and spring semesters, for a total reduction of two years of graduate coursework and tuition.

Contact Lauren Baumbach or David Kratzer for more information.

Architecture & Real Estate Development

Accelerated Bachelor of Architecture (BArch) & Master of Science (MS) Real Estate Development

Program Director	David Kratzer, AIA, NCARB and Troy Hannigan
Campus	East Falls
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/architecture-and-the-built-environment/programs/accelerated-dual-degrees.html

Program Description, Learning Goals & Outcomes

The MS in Real Estate Development is an ideal choice for architects who not only demonstrate entrepreneurial initiative, but also demand design excellence and are cognizant of the economic, social and, significantly, environmental impact of architectural interventions into the built environment. While working toward the Bachelor of Architecture degree, students complete four graduate courses required by the 37-credit MS Real Estate Development program and can complete the remaining 25 credits in one year of full-time study. The MS in Real Estate Development trains architects to take the next step in the complex process of bringing a design project from concept to fruition.

Professional accountability and ethical practices regarding the environmental impact of architecture are values that connect these two programs, making the combination of these two fields an advantageous choice for students. Faculty includes architects who have been successful as developers through innovation and the invention of specific strategies to overcome financial shortcomings and policy roadblocks.

The Accelerated Bachelor of Architecture and MS in Real Estate Development is a STEM (Science, Technology, Engineering and Mathematics) designated program.

Curriculum: 6 years

- The 5+1 Accelerated Degree Option enables an undergraduate Architecture major to complete four graduate courses required by the Master of Science in Real Estate Development program, for a maximum of twelve graduate course credits, while completing the undergraduate Bachelor of Architecture degree.
- By sub-matriculating, a student achieves advanced standing in the 37 credit MS Real Estate Development program and can complete the MS degree with 25 credits.
- Upon graduation from the Bachelor of Architecture program, a student may fulfill requirements for the MS Real Estate Development in one year of full-time study.

Contact David Kratzer for more information.

Interior Design & Architecture

Accelerated Bachelor of Science (BS)
Interior Design & Master of Architecture (MArch)

Program Directors	David Kratzer, AIA, NCARB and Lauren Baumbach
Campus	East Falls
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/architecture-and-the-built-environment/programs/accelerated-dual-degrees.html

Program Description

The BS Interior Design and MArch 4+2 Accelerated Dual Degree supports engaged, collaborative, active learning infused with “real world” issues. The design studios and core courses participate in collaborative projects with students working in other majors across the College as well as throughout the University. There is a strong potential for interdisciplinary research and design opportunities that engage community groups in public interest projects with the participation of industry partners. The combined BS Interior Design and the Master of Architecture 4+2 Accelerated Degree Option is intended for students who wish to pursue a graduate degree in Architecture while completing the undergraduate, professional program in Interior Design.

Curriculum: 6 years

- The 4+2 Accelerated Degree Option enables an undergraduate Interior Design major to complete four graduate courses required by the Master of Architecture program, for a maximum of twelve graduate course credits, while completing the undergraduate BS Interior Design degree.
- By sub-matriculating, a student achieves advanced standing in the three and a half year, 100-credit Master of Architecture program and can complete the MArch degree with 52 credits.
- Upon graduation from the BS Interior Design program, a student may fulfill requirements for the MArch in two years of full-time study, comprising fall and spring semesters, for a total reduction of a year and half of graduate coursework and tuition.

Contact Lauren Baumbach or David Kratzer for more information.

Interior Design & Sustainable Design

Accelerated Bachelor of Science (BS) Interior Design & Master of Science (MS) Sustainable Design

Program Directors	Laura Baumbach Rob Fleming
Campus	East Falls
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/architecture-and-the-built-environment/programs/accelerated-dual-degrees.html

Program Description, Learning Goals & Outcomes

Our award-winning undergraduate Interior Design Program has been teaching the principals of sustainable design for over 15 years and our graduate Sustainable Design Program was one of the first of its kind in the U.S. The Interior Design and Sustainable Design departments have teamed up to create an accelerated option for obtaining the two degrees in just five years, in lieu of the standard six years. Students who complete these two programs are uniquely qualified to serve as leaders in the design industry and the rapidly evolving global economy, which needs designers with expertise in the design of sustainable interior environments.

Curriculum: 5 year

- With guided course selection at the undergraduate level, students can obtain advanced standing in the graduate program, which allows them to complete the MS in Sustainable Design degree in just one year allowing students to save on tuition.

Contact Lauren Baumbach or Rob Fleming for more information.

Landscape Architecture & Geospatial Technological for Geodesign

Accelerated Bachelor of Landscape Architecture (BLA) & Master of Science (MS) Geospatial Technology for Geodesign

Program Directors	Kimberlee Douglas & Jim Querry
Campus	East Falls
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/architecture-and-the-built-environment/programs/accelerated-dual-degrees.html

Program Description, Learning Goals & Outcomes

The 4+1 Bachelor of Landscape Architecture and MS in Geospatial Technology for Geodesign is intended for landscape architecture students interested in leveraging advanced geospatial technologies and sustainable design practices in the pursuit of innovative solutions to urban design and urban planning problems. In a hands-on, team-based, learning environment, students gain skills necessary to address complex “real-world” design problems with geospatial visualization and analysis tools. Students pursuing the combined Bachelor of Architecture and MS Geospatial Technology for Geodesign reduce the total graduate credits from 36 to 27 credits in an additional year of full-time study.

Curriculum: 5 years

<u>Year 3 (along with required courses)</u>			<u>Year 4 (along with required courses)</u>		
LARCH 515	Advanced GIS for Landscape Analysis	3	GEOD 625	Internet GIS Technology for Design and Development	3
	Graduate course for Undergraduate (Free Elective)	3	SND 601	Sustainable Design Methodologies	3
	<u>Year 5</u>			<u>Year 5- Spring</u>	
GEOD 600	3D Modeling for Geodesign	3	GEO 605	Applied Geodesign Research Studio	6
GEOD 602	Geodesign Studio I	6	GEO 607	Explorations in Geodesign	3
GEOD 617	Advanced GIS for Urban Planning and Development	3	GEOD 616	Information Modeling	3

Construction Management & Real Estate Development

Dual Master of Science (MS) Construction & Real Estate Development

Program Directors	Troy Hanningan & Gubin Ozcan-Denis
Campus	East Falls
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/architecture-and-the-built-environment/programs/accelerated-dual-degrees.html

Program Description, Learning Goals & Outcomes

This Accelerated Dual Degree is intended for students who wish to pursue a distinct graduate degree in both Construction Management and Real Estate Development. Rather than complete each curriculum separately and obtaining the degrees independently, this option affords students the opportunity to explore the synergies between these disciplines by intersecting coursework from each program. Once accepted into the 1+1 Accelerated Dual Degree Option, a student enrolls in either the M.S. Construction Management or in the M.S. Real Estate Development and sub-matriculates in the other program. The 1+1 Accelerated Dual Degrees capitalize upon coursework shared by both programs and upon the flexibility of elective courses

Layering an additional area of expertise to their primary area of study affords students the credentials and competencies to tackle a broad panorama of projects and to address pressing environmental and community-based challenges. Interdisciplinary and transdisciplinary educational models foster nimble, flexible problem solving on multiple levels. Working in team and/or laboratory centered processes, students engage in problem-based, experiential and collaborative learning. Such acumen not only prepares students for the complexities of the construction and real estate development industries, but also trains future leaders in these professions.

The Dual MS Construction Management and MS Real Estate Development is a STEM (Science, Technology, Engineering and Mathematics) designated program.

Curriculum: 2 years

- Both degrees can be accomplished in two-years of full-time study, comprising a total reduction of twelve credits or one semester of graduate coursework and tuition.
- Students may complete both programs in 61 credits, instead of the 73 credits required if the programs were pursued separately.

Contact Suzanne Singletary or Gulbin Ozcan-Deniz for more information.

Construction Management & Sustainable Design

Dual Master of Science (MS) Construction & Sustainable Design

Program Directors	Rob Fleming & Gulbin Ozcan-Deniz
Campus Website	East Falls https://www.jefferson.edu/academics/colleges-schools-institutes/architecture-and-the-built-environment/programs/accelerated-dual-degrees.html

Program Description

This unique full-time, accelerated dual degree option is intended for students with a passion for both sustainable design and construction practices. Rather than completing both graduate curricula separately and obtaining the degrees independently, this option allows students to better capitalize on the synergies between the two disciplines and increase their competitive edge while reducing tuition cost and time. This 1+1 degree option provides a means for students to fully explore both disciplines in as little as two years, resulting in the award of both degrees.

The 1+1 Accelerated dual degree option allows students to customize their education, breaking outmoded disciplinary silos and expanding professional opportunities for our graduates. The combination of Construction Management and Sustainable Design, two complementary disciplines, leverages the intersections between these areas of expertise, providing graduates with the knowledge and skills to combine ecological concerns with building science.

Curriculum: 2 years

- Both degrees can be accomplished in two-years of full-time study, comprising a total reduction of twelve credits or one semester of graduate coursework and tuition.
- Students may complete both programs in 61 credits, instead of the 70 credits required if the programs were pursued separately.

Contact Rob Fleming or Gulbin Ozcan-Deniz for more information.



**KANBAR COLLEGE OF DESIGN,
ENGINEERING & COMMERCE**

Dean: Ron Kander, PhD | 215- 951-2740 | Jefferson.edu/Kanbar

About Us

Kanbar College offers an innovative and transdisciplinary approach to teaching and learning that provides students with the skills and knowledge to think creatively, brainstorm out-of-the-box ideas and work collaboratively to discover innovative solutions to complex problems.

Through the integrated DEC core curriculum, students gain the added value of expertise in related fields as well as deep discipline-specific knowledge. The program retains the core learning of each major while forging new collaborations between designers, engineers and entrepreneurs. By learning in a transdisciplinary environment, students go on to be better, more effective leaders in their professions.

When the critical-thinking and creativity skills of the designer combine with the analysis and problem-solving skills of the engineer and the planning and project-management skills of the business professional, they synthesize to form a suite of expertise that makes our students uniquely qualified to address today's real-world problems.

By bringing together design, engineering and business disciplines, Kanbar College pushes students to think beyond the boundaries of existing academic fields and focus on innovation through teamwork, collaboration and connections with industry partners while it emphasizes critical thinking and real-world problem-solving skills.

This pioneering curriculum prepares students to adapt to changes in their professions, collaborate with colleagues in other fields, and excel in jobs that exist today as well as ones that will emerge tomorrow. Students gain the knowledge and skills necessary to succeed in the 21st century workplace through real-world experience working on industry-sponsored projects.

Kanbar DEC Curriculum

The Kanbar College-wide curriculum includes five courses; four core courses— Integrative Design Process, Business Models, Systems Thinking and Ethnographic Research – that culminate in an integrated senior capstone project. Each course fosters collaboration among designers, engineers, and business majors to give students a breadth of expertise that goes beyond the boundaries of a traditional degree. It's an approach that aggressively addresses changes in the 21st-century work world, where a sophisticated interdisciplinary understanding makes young professionals more effective in their own field of expertise and enhances their ability to lead and succeed.

- **Integrative Design Processes** introduces students to dealing with ambiguity through finding problems, prototyping and iterating solutions while working in diverse teams of students.
- **Business Models** introduces students to the concept of how a value proposition is delivered to customers through infrastructure to create financial, social and environmental value.
- **Systems Thinking** is a holistic problem solving approach, students choose between one of two courses: *Sustainability & Eco-Innovation, or Biology for Design*, to explore inter-connections of natural and social systems.
- **Ethnographic Research Methods**, the last course students take before their integrated capstone, brings together students' DEC core studies with the liberal arts and discipline expertise through a focus on understanding people and behavior.

Accreditations

Accrediting Council for Business Schools and Programs (ACBSP) BS Programs; all Business academic programs (excluding SCPS programs) MS Programs: innovation MBA, Global Fashion Enterprise, Taxation	www.acbsp.org
Accreditation Board for Engineering and Technology (ABET) Engineering (BSE.); Mechanical Engineering (BSE)	www.abet.org
National Association of Schools of Art and Design, Commission on Accreditation (NASAD) Industrial Design	www.nasad.arts-accredit.org
Accreditation Board for Engineering and Technology (ABET) Engineering (BSE); Mechanical Engineering (BSE)	www.abet.org
National Association of Schools of Art and Design, Commission on Accreditation (NASAD) Industrial Design (BS); Industrial Design (MS)	www.nasad.arts-accredit.org

School of Business

Phillip Russel, PhD
Academic Dean

<https://www.jefferson.edu/academics/colleges-schools-institutes/kanbar-college-of-design-engineering-commerce/school-of-design-engineering.html>

Whether you are an entering freshman or a seasoned MBA student, the School of Business will provide you with the cutting-edge skills and knowledge that will allow you succeed at every stage of your career - from excelling in your first job, to discovering new professions and opportunities as technologies and business models evolve.

From Day One you will dive deeply into your major or concentration, while working with students from other disciplines, simulating what you will experience in the workplace. You will interact with students across majors, challenging each other to use creativity as well as analytics to conceive of new, valuable, market-driven products and services. As you earn your degree, you'll benefit from unique advantages such as study abroad, internships with regional business, and collaboration on real projects with industry leaders to build valuable connections that can last a lifetime.

Nexus Projects

Nexus learning and teaching model focuses on the active learning and real-world problem solving through collaboration between students and faculty across disciplines and with external partners. Recent Nexus Projects have included:

- Nathan Sports Industry Project
- OmniWind Energy Systems - Weight Challenge
- Top Ram Business Plan Competition
- Federal Mogul Industry Challenge

Academic Programs

Undergraduate

Accounting	BS
Fashion Merchandising & Management	BS
Finance	BS
International Business	BS
Management	BS
Marketing	BS

Graduate

Global Fashion Enterprise	MS
Innovation Master's of Business Administration	MBA
Taxation	MS

<h1>Accounting</h1>	
Bachelor of Science (BS)	
Area Coordinator	Raymond Poteau, MBA, CPA
Campus	East Falls
Accreditation	ACBSP
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/kanbar-college-of-design-engineering-commerce/school-of-business/academic-programs/accounting.html

Program Description

The accounting major at Thomas Jefferson University prepares students to become professionals with a broad understanding of public accounting and financial management of corporate and nonprofit organizations. Students have the opportunity to network with accounting industry professionals, participate in industry-sponsored projects, complete an exciting semester abroad, or help to run our Student Managed Investment Fund. They can also earn their iMBA degree in one additional year of study while preparing for the Certified Public Accountant (CPA) exam. Accountants serve a variety of roles in every company. Our graduates have gone to work at the Federal Reserve Bank, Ernst & Young and KPMG, just to name a few.

Learning Goals/Outcomes

- Demonstrate expertise and professional level competency in technical and graphic methods used in practice
- Experience collaboration, including multidisciplinary collaboration, in solving design problems
- Demonstrate knowledge of history and theory of historic and modern periods, styles, and places and apply knowledge in the context of architectural fields
- Demonstrate knowledge of basic building systems and materials with emphasis on issues of sustainability, and apply knowledge in the context of a range of architecture related fields
- Demonstrate and apply discipline specific knowledge of content areas that are studied as part of student selected minors

Curriculum: 4 year, 121-122 credits

<u>Year 1</u>			<u>Year 3</u>		
FYS 100	Pathways Seminar	1	GDIV 2xx	Global Diversity	3
WRIT 101	Writing Seminar 1: Written Com	3	GCIT 2xxx	Global Citizenship	3
AMST 114	Topics in American Studies	3	CGIS 300	Contemporary Global Issues	3
WRIT 201	Writing Seminar 11: Multimedia Communications	3	DECM 300	Ethnographic Research Methods	3
MATH 1xx	Mathematics Selection	3	ACCT 303	Accounting Theory & Practice	3
DECP 101	Integrative Design Process	3	ACCT 309	Federal Taxes	3
ECON 205	Macroeconomics	3	ACCT 316	Cost Accounting	3
ACCT 101	Financial Accounting	3	BLAW 301	Business Law	3
ACC T 102	Managerial Accounting	3	ABA 3xx	Data Mining & Predictive Analytics	3
MKTG 102	Principles of Marketing	3		Free Elective	3
MGMT 301	Principles of Management	3			
ECON 206	Microeconomics	3			
<u>Year 2</u>			<u>Year 4</u>		
ETHIC 2xx	Ethics	3	PHIL 499	Philosophies of the Good Life	3
ADIV 2xx	American Diversity	3	ABA 4xx	Operations & Data Analytics	3
WRIT 202	Writing Seminar II: Multimedia Communication	3	MGMT 498N	Business Capstone: Strategy Simulation	3
ACCT 203	Intermediate Accounting I	3	MGMT 499N	Business Capstone: CSR	3
ACCT 204	Intermediate Accounting II	3	ACCT 409	Auditing	3
DECS xxx	Science (Select one DECSYS)	3	ACCT 412	Advanced Accounting	3
DECF200	Business Models	3		Free Electives or Internship	12
ABA 201	Introduction to Business Analytics	3			
ABA 202	Statistical Data Analytics	3			
FINC 301	Financial Management	3			

Fashion Merchandising & Management

Bachelor of Science (BS)

Program Director	Nioka Wyatt, MBA
Campus	East Falls
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/kanbar-college-of-design-engineering-commerce/school-of-business/academic-programs/fashion-merchandising-management.html

Program Description

Advancements in technology and globalization of the marketplace make the fashion industry an ever-changing, challenging place to work. This trillion -dollar industry needs bright, talented executives to guide the rapid pace of today's technological revolution. Skilled managers are required to deal with an increasingly complex variety of products and manufacturing techniques and tasks, such as planning product lines months before they will appear in the stores. Once developed, new products must be sourced globally and then delivered to the consumer within a very short period.

The fashion merchandising and management curriculum combines the fundamentals of business, including accounting, economics, marketing, finance and management, with textile and fashion courses taught by industry savvy professionals. Students learn

the process of product development, Omni channel engagement, sourcing and manufacturing from fiber to final product, and become familiar with application of computers throughout information retrieval, integrated apparel manufacturing, design and merchandising. Students are also involved in the process of selection, procurement and distribution of products in a retail setting where they learn the significance of product execution through visual presentation.

Learning Goals/Outcomes

In addition to the goals and outcomes outlined by the School of Business Administration, graduates from the fashion merchandising and management program will be able to:

- Identify the interrelationship between the supply and value chain
- Explain retail strategies and company structure in global environments

Curriculum: 4 years, 121-123 credits

<u>Year 1</u>			<u>Year 3</u>		
FYS 100	Pathways Seminar	1	ADIV 2XX	American Diversity	3
WRIT 101	Writing Seminar 1: Written Communication	3	GCIT 2XX	Global Citizenship	3
AMST 114	Topics in American Studies	3	CGIS 300	Contemporary Global Issues	3
WRIT 201	Writing Seminar II: Multimedia Communication	3	DECM 300	Ethnographic Research Methods	3
MATH 1xx	Mathematics	3-4	BLAW 301	Business Law	3
DECP 101	Integrative Design Process	3	FINC 301	Financial Management	3
ECON 205	Macroeconomics	3	ABA 3xx	Data Mining & Predictive Analytics	3
ACCT 101	Financial Accounting	3	DSGNFND 423	Design Concepts for Fashion	3
ACCT 102	Managerial Accounting	3	CAD 201	Introduction to Digital Imaging Specialization	3
MKTG 102	Principles of Marketing	3			
FASHMGT 101	Global Fashion Insight	3			
<u>Year 2</u>			<u>Year 4</u>		
ETHIC 2XX	Ethics	3	PHIL 499	Philosophies of the Good Life	3
GDIV 1xx	Global Diversity	3	MGMT 498	Business Capstone: Strategy Simulation	3
DECS 2XX	Science (Select one DECSYS)	3-4	MGMT 499	Business Capstone: CSR	3
DECF 200	Business Models	3	ABA 4xx	Operations & Data Analytics	3
ABA 201	Intro to Business Analytics	3	TEXT 411	Textile/ Apparel Industry Issues Specializations	3
ECON 202	Microeconomics	3		Free Electives/ Internship	6
MGMT 301	Principles of Management	3			12
ABA 202	Statistical Data Analytics	3			
MKTG 217	Retail Strategy and Structure	3			
TEXT 101	Survey of Textile Industry	3			
Specializations: Students select one based on Career Pathway					
<p>(a)Buying & Merchandising Merchandise Buying/Operations Product Development & Innovation -Visual Merchandising</p>			<p>(c)Value Chain & Innovation Prototyping Integrated Technology Value Chain Innovation</p>		
<p>(b)Global Brand Strategy Contemporary Brand Mgt. Apparel Merchandising Mgt. Business Licensing</p>					

Finance

Bachelor of Science (BS)

Program Director Tim Mooney, PhD
Campus East Falls
Website <https://www.jefferson.edu/academics/colleges-schools-institutes/kanbar-college-of-design-engineering-commerce/school-of-business/academic-programs/finance.html>

Program Description

The finance major at Thomas Jefferson University prepares students to become professionals with a comprehensive understanding of global financial markets and financial institutions. Our graduates are prepared with skills to tackle complex financial problems, and have the professionalism to work effectively in any environment. Students have the opportunity to network with industry professionals, participate in international competitions, manage an investment portfolio through our Student Managed Investment Fund, study abroad for a semester, and earn their iMBA degree in one additional year while preparing for the Chartered Financial Analyst Level I (CFA) exam.

Learning Goals/Outcomes

In addition to the goals and outcomes outlined by the School of Business Administration, graduates from the finance program will be able to:

- Demonstrate knowledge of domestic and global capital markets and financial institutions
- Explain how managers make value-maximizing decisions in a corporation

Curriculum: 4 years, 121-122 credits

<u>Year 1</u>			<u>Year 3</u>		
FYS 100	Pathways Seminar	1	ADIV 2XX	American Diversity	3
WRIT 101	Writing Seminar I: Written Com	3	GCIT 2XX	Global Citizenship	3
AMST 114	Topics in American Studies	3	CGIS 300	Contemp. Global Issues	3
MATH xxx	Mathematics	3-4	DECM 300	Ethnographic Research	3
DECP 101	Integrative Design Process	3	FIN 318	International Finance and Development	3
WRIT 201	Writing Sem II: Multimedia Comm.	3	FIN 303	Intermediate Fin Mgt.	3
ECON 205	Macroeconomics	3	FIN 322	Capital Mkts. & Institutions	3
ACCT 101	Financial Accounting	3	FIN 321	Investment Portfolio Mgt.	3
ACCT 102	Managerial Accounting	3	BLAW 301	Business Law	3
MKTG 102	Principles of Marketing	3	ABA 3xx	Data Mining & Predictive Analytics	3
MGMT 301	Principles of Management	3			
<u>Year 2</u>			<u>Year 4</u>		
ETHC 2XX	Ethics	3	MGMT 498N	Business Capstone: Strategy Simulation	3
GDIV 2xx	Global Diversity	3	MGMT 499N	Business Capstone: CSR	3
DECFRM 200	Business Models	3	PHIL 499	Phil of the Good Life	3
DECS 2XX	Science (Select one DECSYS)	3	FIN 411	Personal Financial Planning & Risk Management	3
	Free Electives	6	FIN 412	Financial Modeling	3
ECON 206	Microeconomics	3		Free Ele or Internship	12
ABA 201	Introduction to Business Analytics	3	ABA 4xx	Op & Data Analytics	3
ABA 202	Statistical Data Analytics	3			
FINC 301	Financial Management	3			

International Business

Bachelor of Science (BS)

Area Coordinator	Lloyd Russow, PhD
Campus	East Falls
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/kanbar-college-of-design-engineering-commerce/school-of-business/academic-programs/international-business.html

Program Description

Prepares students to become professionals with a distinct ability to understand and excel in the global marketplace. Students in this program have the opportunity to become bilingual through advanced study of another language, travel abroad extensively to experience cultural immersion in places like London and Shanghai, and broaden disciplinary experience by taking a minor from another business discipline. Students can earn their iMBA degree in one additional year. International business skills are increasingly valuable in our globalized world. Our students have gone to work at multinational companies including Aramark, Merrill Lynch and Citibank, just to name a few.

Learning Goals/Outcomes

In addition to the goals and outcomes outlined by the School of Business Administration, graduates from the international business program will be able to utilize financial, economic, management and marketing trends and tools to make global strategic decisions.

Curriculum: 4 years, 121-122 credits

<u>Year 1</u>			<u>Year 3</u>		
FYS 100	Pathways Seminar	1	GCIT 2XX	Global Citizenship	3
WRIT 101	Writing Seminar 1: Written Communication	3	CGIS 300	Contemporary Global Issues	3
AMST 114	Topics in American Studies	3	DECM 300	Ethnographic Research Methods	3
WRIT 201	Writing Seminar II: Multimedia Communication	3	MKTG 324	International Marketing	3
MATH 1xx	Mathematics	3-4	FINC 318	International Finance	3
DECP 101	Integrative Design Process	3	ECON 401	International Economics	3
ECON 205	Macroeconomics	3	LANG xxx	Language	6
ACCT 101	Financial Accounting	3	BLAW 301	Business Law	3
ACCT 102	Managerial Accounting	3	ABA 3xx	Data Mining & Predictive Analytics	3
MKTG 102	Principles of Marketing	3			
MGMT 301	Principles of Management	3			
	<u>Year 2</u>	3			
ETHIC 2XX	Ethics	3	ABA 4xx	Operations & Data Analytics	3
ADIV 1XX	American Diversity	3	MGMT 498N	Bus Capstone: Strategy Simulation	3
GDIV 1xx	Global Diversity	3	MGMT 499N	Business Capstone: CSR	3
WRIT 2xx	Multimedia Communication	3	PHIL 499	Philosophies of the Good Life	3
DECS 2XX	Systems: Select one DECS	3		Business Minor	12
DECF 200	Business Models	3		Free Electives	6
FINC 301	Financial Management	3			
MGMT 307	International Management	3			
ECON 202	Microeconomics	3			
ABA 201	Intro to Business Analytics	3			
ABA 202	Statistical Data Analytics	3			

Management

Bachelor of Science (BS)

Dean	Philip Russel, PhD
Campus	East Falls
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/kanbar-college-of-design-engineering-commerce/school-of-business/academic-programs/management.html

Program Description

The management major provides a broad-based approach to the study of business. Through hands-on projects with a variety of companies, students learn to manage and lead individuals, teams, and organizations. Management majors gain expertise in leadership, teamwork, professional communication, human resources, and problem solving. They can apply their skills in existing companies or in their own entrepreneurial ventures. The major is flexible enough to accommodate a variety of options, including a minor from another disciplinary area, an internship, and study abroad.

Our alumni excel in a variety of fields, including retail, banking and finance, insurance, global

manufacturing, public agencies, healthcare, and other manufacturing and service industries. Some graduates manage family businesses or start their own businesses.

Students also have the opportunity to earn their iMBA degree in one additional year.

Learning Goals/Outcomes

In addition to the goals and outcomes outlined by the School of Business Administration, graduates from the management program will be able to:

Apply their skills in leadership, teamwork, communication, and human resources to solve problems and inspire innovation in a wide array of companies and organizations.

Curriculum: 4 years, 121, 122 credits

<u>Year 1</u>			<u>Year 3</u>		
FYS 100	Pathways Seminar	1	GDIV 2xx	Global Diversity	3
WRIT 101	Writing Sem 1: Written Comm.	3	GCIT 2XX	Global Citizenship	3
AMST 114	Topics in American Studies	3	CGIS 300	Contemporary Global Issues	3
WRIT 201	Writing Sem II: Multimedia Comm.	3	DECM 300	Ethnographic Research	3
MATH xxx	Mathematics	3-4		Free Electives	6
DECP 101	Integrative Design Process	3	MGMT 320	Human Resources	3
ECON 205	Macroeconomics	3	MGMT XXX	Management Elective	3
ACCT 101	Financial Accounting	3	BLAW 301	Business Law	3
ACCT 102	Managerial Accounting	3	ABA 3xx	Data Mining & Predictive Analytics	3
MKTG 302	Principles of Marketing	3			
MGMT 301	Principles of Management	3			
<u>Year 2</u>			<u>Year 4</u>		
ETHIC 2XX	Ethics	3	PHIL 499	Philosophies of the Good Life	3
ADIV 1XX	American Diversity	3	ABA 4xx	Operations & Data Analytics	3
DECF 200	Business Models	3	MGMT 498N	Bus. Capstone: Strategy Simulation	3
DECS 2XX	Science (Select one DECSYS)	3	MGMT 499N	Business Capstone: CSR	3
MGMT 310	People and Teams in Organizations	3	MGMT 412	Current Management Topics	3
MGMT 315	Comm, Negotiations & Creative Economy	3		Management Elective	3
ECON 202	Microeconomics	3		Free Electives	12
ABA 201	Introduction to Business Analytics	3			
ABA 202	Statistical Data Analytics	3			
FINC 301	Financial Management	3			

Marketing

Bachelor of Science (BS)

Area Coordinator	Chae Mi Lim, PhD
Campus	East Falls
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/kanbar-college-of-design-engineering-commerce/school-of-business/academic-programs/marketing.html

Program Description

The marketing major at Thomas Jefferson University prepares students to become professionals with a strong marketing foundation and real-world experiences. Students are prepared with skills to create value through strategic marketing plans and innovations and solve complex business problems in a collaborative team environment. Students have the opportunity to network with industry professionals, study abroad, and earn their iMBA degree in one additional year. Our graduates land jobs in advertising, brand management, digital marketing, marketing research, customer relationship management, and many other areas.

Learning Goals/Outcomes

In addition to the goals and outcomes outlined by the School of Business Administration, graduates from the marketing program will be able to:

- Demonstrate knowledge of concepts used in the strategic marketing process, with emphasis on SWOT analysis and environmental scanning
- Apply select elements of the marketing mix to marketing strategy for a product or service business

Curriculum: 4 years, 121-122 credits

<u>Year 1</u>			<u>Year 3</u>		
FYS 100	Pathways Seminar	1	GDIV 2XX	Global Diversity	3
WRIT 101	Writing Seminar 1: Written Communication	3	GCIT 2XX	Global Citizenship	3
AMST 114	Topics in American Studies	3	CGIS 300	Contemporary Global Issues	3
MATH 1XX	Mathematics	3-4	DECM 300	Ethnographic Research Methods	3
DECP 101	Integrative Design Process	3	ABA 3XX	Data Mining & Predictive Analytics	3
ACCT 101	Financial Accounting	3	BLAW 301	Business Law	3
ACCT 102	Managerial Accounting	3	MKTG 305	Contemporary Brand Management	3
MKTG 102	Principles of Marketing	3	MKTG 315	Marketing in a Digital Environment	3
ECON 205	Macroeconomics	3		Free Electives	6
MGMT 301	Principles of Management	3			
ECON 206	Microeconomics	3			
<u>Year 2</u>			<u>Year 4</u>		
ETHC 2XX	Ethics	3	PHIL 499	Philosophies of the Good Life	3
ADIV 2XX	American Diversity	3	ABA 4XX	Operations & Data Analytics	3
WRIT 201/202	Writing Seminar II: Multimedia Communication	3-4	MGMT 498N	Business Capstone: Strategy Simulation	3
DECS 2XX	Science (Select one DECS)	3	MGMT 499N	Business Capstone: CSR	3
DECF 200	Business Models	3	MKTG 391	Marketing Research	3
ABA 201	Intro to Business Analytics	3	MKTG 412	Marketing Strategy Seminar	3
ABA 202	Statistical Data Analytics	3		Free Electives or Internship	12
FINC 301	Financial Management	3			
MKTG 207	Consumer in the Marketplace	3			
MKTG 310	Integrated Marketing Communication	3			

Global Fashion Enterprise

Master of Science (MS)

Program Director	Shubha Bennur, PhD
Campus	East Falls
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/kanbar-college-of-design-engineering-commerce/school-of-business/academic-programs/ms-global-fashion-enterprise.html

Program Description

Expands the career horizons of forward-thinking professionals with diverse backgrounds in fashion design, merchandising, management, and other industries who want a competitive edge, valuable connections, and real-world experience in the evolving fashion industry. Students benefit from a focus on global fashion development and an appreciation of apparel ecosystems throughout the value chain. Graduates of the MSGFE program possess the skills, knowledge and industry networks to bring value-added innovation to the fashion industry and to manage a thriving global fashion enterprise successfully.

Learning Goals/Outcomes

- Evaluate & utilize global fashion value chain innovations and best practices in solving industry problems and tapping opportunities
- Identify multicultural influences on the conduct of business throughout the global apparel value chain, including ethical issues
- Evaluate and leverage technologies and metrics in driving fashion industry performance
- Integrate material and product analysis and lifecycle assessments throughout the fashion value chain
- Compile new fashion designs/ideas/technologies into business models and actionable plans.

Curriculum: 2 year, 31-43 credits

<u>Curriculum</u>					
IMBF 504	Financial and Managerial Accounting	1.5	GFE 732	Global Fashion Seminar	1
IMBF 505	Financial Management	1.5	GFE 734	Fashion Supply Chain Mgt	3
IMBG 508	Statistical Analysis for Business Decisions	1.5	TXT 759	Product Evaluation	3
GFEF 501	Prototyping	3	TXF 510	Digital Imaging for Fashion	3
IMBF 510	Operations Management	1.5	GFE 791	Fashion Internship	3
GFE 600	Fashion Immersion	3	GFE 793	Global Fashion Networking	3
GFE 611	Product Development/Entrepreneurship	3	GFE 721	Global Fashion Project 1	3
GFE 612	Technology in Fashion	3	GFE 722	Global Fashion Project 2	3
GFE 621	Fashion Global Marketing and Sourcing	3	GFE 723	Global Fashion Project 3	3
GFE 725	Brand Driven Design & Innovation	3			

Innovation MBA

Master of Business (MBA)

Program Directors D. K. Malhotra, PhD & Caitlin Hagan, MBA
Campus East Falls, Center City, and Online options
Website <https://www.jefferson.edu/academics/colleges-schools-institutes/kanbar-college-of-design-engineering-commerce/school-of-business/academic-programs/innovation-mba.html>

Program Description

The iMBA's integrated curriculum helps students become dynamic problem-solvers and entrepreneurial thinkers, learning to navigate new, more valuable realities for their businesses and careers. Regardless of delivery method, our faculty of world-renowned academicians and industry experts brings invaluable real-world experience to the classroom, and Thomas Jefferson University's signature learning strategies inspire market-driven innovation through teamwork, collaboration, and industry connections. Jefferson iMBA graduates are exceptionally well prepared to be leaders in the exciting, challenging global marketplace.

Learning Goals/Outcomes

- Ethical Responsibility - students will implement ethical decisions
- Financial Skills - students will analyze financial ratios and statements
- Writing Skills - students will write effective business documents
- Leadership Skills - students will exhibit leadership and independent thinking skills, and work effectively in teams
- Integrative Learning - students will blend knowledge and skill sets from different disciplinary areas to develop effective business strategies

Concentrations

- Accounting (CPA Prep)
- Analytics
- Finance (CFA Prep)
- Leadership
- Marketing
- Fashion Business

Curriculum: 2 year, 36-46 credits

	<ul style="list-style-type: none"> • Business Foundation (0-9 Credits) • Innovation Core (9 credits) • Business Core (18 credits) • Concentrations (9-10 credits) 		
IMBA 503	Foundations of Economic Analysis	3	
IMBA 504	Intro to Financial & Manag. Accounting	1.5	IMBA 627 Competitive Technical Intelligence 3
IMBA 505	Financial Management	1.5	IMBA 628 Accounting for Mgt Decisions 3
IMBA 508	Statistical Analysis for Business Decisions	1.5	IMBA 629 Financial Policy and Planning 3
IMBA 510	Operations Management	1.5	IMBA 630 Operations from a Systems Perspective 3
IMBA 731	Design Thinking in Business	3	IMBA 642 Strategic Insight and Implementation 3
			IMBA 792 or IMBA 700 International Bus Trip OR International Econ & Finance Concentration Courses 3 9-10
IMBA 602	Managing Innovative People & Teams	3	
IMBA 604	Business Model Innovation	3	

Taxation

Master of Science (MS)

Program Director
Campus
Website

John Grigsby, LL.M., CFE, CFP, CPA, FHFMA
East Falls
<https://www.jefferson.edu/academics/colleges-schools-institutes/kanbar-college-of-design-engineering-commerce/school-of-business/academic-programs/ms-taxation.html>

Program Description

Geared to practicing accountants in fields of public, corporate and governmental accounting, and to lawyers, financial managers and planners who need extensive information and formal study in taxation. The program is practitioner-focused and is strongly linked to business practice. Outstanding faculty members bring the highest level of expertise into the classroom. Students select courses from an innovative and state-of-the-art curriculum. Computer applications are integrated in the total curriculum where appropriate. All courses are taught based on the most up-to-date tax laws, and the implications of proposed changes in tax legislation are discussed. Students may take courses toward the degree or as Continuing Professional Education (CPE) credits to meet bi-annual state CPE requirements to maintain CPA license or to enhance their expertise in a specific topic.

Learning Goals/Outcomes

- Evaluate and apply fundamental accounting and tax principles, concepts and laws to a variety of business and non-business situations
- Demonstrate an understanding of professional responsibilities and ethical decision making in accounting and tax settings
- Master the ability to communicate in a clear, concise and effective manner in both written and oral form
- Demonstrate the ability to efficiently and effectively research and resolve complex tax issues by analyzing tax codes, regulations, rulings and interpretations
- Blend knowledge and skill sets from different disciplinary areas to develop effective business, tax and financial strategies.

Curriculum: 1-2 years, 30 credits

<u>Core Curriculum</u>				
TAX 660	Individual Taxation and Planning	3	TAX 765 Taxation of Flow-Through Entities	3
TAX 662	Corporation Taxation and Planning	3	TAX 794 State and Local Taxation and Planning	3
TAX 664	Tax Research and Professional Responsibilities	3	TAX 795 Estate Planning and Taxation	3
			Elective Courses in Taxation	12

School of Design & Engineering

Michael J. Leonard,
Academic Dean

<https://www.jefferson.edu/academics/colleges-schools-institutes/kanbar-college-of-design-engineering-commerce/school-of-design-engineering.html>

The School emphasizes in-depth exploration of individual design and engineering disciplines, while encouraging interdisciplinary communication and collaboration. Classes stress conceptual thinking, design excellence, intellectual curiosity and creative expression, combining a focused concentration on one particular field with a broad-based educational foundation that fosters critical thinking skills in a global context. This multi-tiered approach provides graduates with the knowledge and skills to navigate professional challenges successfully and to reap the rewards of leadership and success in their careers. The faculty of practicing professionals, state-of-the-art facilities, study abroad opportunities and collaborative approach to learning all contribute to creating a unique, intellectually stimulating environment that enables students to creatively meet the challenges of our fast-changing global marketplace.

Fashion and Textile Futures Center

Jefferson's premier center for fashion and textile programs immerses students in experiences that mirror industry: the Future Center provides forward-looking, market-sensitive, dynamic and highly collaborative environment. If you aspire to change the world through fashion and textiles, to rethink centuries of normal and wow employers with your ideas, you're going to love it here.

Academic Programs

Undergraduate

Animation & Digital Media	BS
Engineering	BSE
Fashion Design	BS
Industrial Design	BS
Mechanical Engineering	BSE
Textile Design	BS
Textile Product Science	BS
Visual Communication	BS

Graduate

Biologic Process Engineering	PhD
Biopharmaceutical Process Engineering	MS
Engineering (Textile Concentration)	MS
Fashion Design Management	MS
Health Communication Design	MS
Industrial Design	MS
Surface Imaging	MS
Textile Design	MS
Textile Engineering & Science	PhD
Textile Technology	MS
User Experience & Interaction Design	MS

Certificate

Biopharmaceutical Process Development	Graduate Certificate
Biopharmaceutical Process Operations	Graduate Certificate
Health Communication Design	Graduate Certificate

Accelerated Program

Textile Design	Accelerated BS/MS
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Animation & Digital Media

Bachelor of Science (BS)

Program Director	Jason Kirk
Campus	East Falls
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/kanbar-college-of-design-engineering-commerce/school-of-design-engineering/academic-programs/animation-digital-media.html

Program Description

The accounting major at Thomas Jefferson University prepares students to become professionals with a broad understanding of public accounting and financial management of corporate and nonprofit organizations. Students have the opportunity to network with accounting industry professionals, participate in industry-sponsored projects, complete an exciting semester abroad, or help to run our Student Managed Investment Fund. They can also earn their iMBA degree in one additional year of study while preparing for the Certified Public Accountant (CPA) exam. Accountants serve a variety of roles in every company. Our graduates have gone to work at the Federal Reserve Bank, Ernst & Young and KPMG, just to name a few.

Learning Goals/Outcomes

- Demonstrate expertise and professional level competency in technical and graphic methods used in practice
- Experience collaboration, including multidisciplinary collaboration, in solving design problems
- Demonstrate knowledge of history and theory of historic and modern periods, styles, and places and apply knowledge in the context of architectural fields
- Demonstrate knowledge of basic building systems and materials with emphasis on issues of sustainability, and apply knowledge in the context of a range of architecture related fields
- Demonstrate and apply discipline specific knowledge of content areas that are studied as part of student selected minors

Curriculum: 4 year, 121-125 credits

<u>Year 1</u>			<u>Year 3</u>		
FYS 100	Pathways Seminar	1	ADIV 1XXX	American Diversity	3
WRIT 101	Written Communication	3	GCIT 2xxx	Global Citizenship	3
DBTU 114	Debating U.S. Issues	3	CGIS 300	Contemporary Global Issues	3
MATH xxx	Math Selection I	3-4	DECM 300	Methods: Ethnographic	3
MATH xxx	Math Selection II	3-4	ANIM 301Z	Motion Graphics I	4
DCEP 101	Integrative Design Process	3	ANIM 312	Motion Graphics II	3
VSDS 101	Design Essentials	3	ANIM 318	3D Animation II	3
DRAW 101	Drawing Essentials	3	ANIM 303	History of Animated Cinema	3
ANIM 201	Intro Animation	3	ANIM 310	Digital Audio Production	3
GRPS 102	Design II Intro Visual Comm	3		Animation Elective	3
GRDS 110	Digital Imaging	3			
<u>Year 2</u>			<u>Year 4</u>		
GDIV 1XXX	Global Diversity	3	ANIM 407Z	Adv Topics in 3D Animation	4
WRIT 201	Multimedia Communications	3	DIGD 370	Portfolio Development	1
ETHC 1XXX	Ethics	3	ANIM 497Z	Animation Capstone I	4
GRPH 201	Design III: Intro Typography	3	ANIM 499Z	Animation Capstone II	4
ANIM 308N	3D Animation	3		Animation Electives	4
ANIM 202	Storytelling & Storyboarding	3		Free Electives	6
ANIM 307	3D Modeling	3	BLAW 301	Business Law I	3
DIGD 318	Media Production	3			
DRAW 206	Figure Drawing	3			
DEC2XX	Systems (select one DECSYS)	3			
DECF 200	Framework: Business Modeling	3			

Engineering

Bachelor of Science in Engineering (BSE)

Program Director	Muthu Govindaraj, PhD
Campus	East Falls
Accreditation	ABET
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/architecture-and-the-built-environment/programs/construction-management.html.html

Program Description

The BSE in Engineering (STEM) program at Jefferson is accredited by the Engineering Accreditation Commission of ABET. The program will prepare you with a breadth of engineering skills and knowledge while developing specific expertise and analytical skills in an area of technical concentration, including Industrial and Systems Engineering & Textile Engineering. Through applied coursework culminating with a two-semester senior design project, you will gain hands-on, real world experience allowing you to obtain professional licensure, succeed in industry, pursue graduate studies, or start a business in your specialized concentration or in general engineering practice.

Learning Goals/Outcomes

- Apply knowledge of mathematics, science, and engineering
- Design and conduct experiments, and analyze and interpret data
- Design a system, component, or process to meet desired needs within constraints: economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
- Function on multidisciplinary teams
- Identify, formulate, and solve engineering problems
- Understanding of professional and ethical responsibility
- Communicate effectively
- Broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
- Recognition of the need for, and an ability to engage in life-long learning
- Knowledge of contemporary issues
- Use the techniques, skills, and modern engineering tools necessary for engineering practice

Curriculum: 4 years, 128 credits

<u>Year 1</u>			<u>Year 3</u>		
FYS 100	Pathways Seminar	1	ADIV 1XX	American Diversity	3
WRIT 101	Written Communication I	3	DBTG 300	Debating Global Issues	3
DBTU 114	Debating U.S. Issues	3	JSINT 378	Ethno Research Methods	3
MATH 111	Calculus I	4	ENGR 322	Fund. Electrical Engineering I	3
			OR 304	or Operations Research I	
PHYS 201L	Physics I/ Lab	4	ENGR 308	Integrated Engr Product Devel	3
CHEM 103	Chemistry I/Lab	4	ENGR 498	Fluid Mechanics	3
MATH 112	Calculus II	4	ENGR 314	Numerical Methods for Engrs	3
ARTS 101	Integrative Design Process	3	MENGR 407	Thermodynamics & Heat Tr I	3
ENGR 101	Introduction to Engineering	3		Engr. Concentration Courses	6
ENGR 104	Introduction to Computing	3			
ENGR 102	Engineering Drawing	3			
<u>Year 2</u>			<u>Year 4</u>		
GDIV 1XX	Global Diversity or Citizenship	3	HALLMK 499	Capstone Folio Workshop	3
WRIT 201	Multimedia Communication	3	ETHIC 1XX	Ethics	3
	Systems: Scientific	3	ENGR 303	Engineering Economics	3
	Understanding				
DECF 200	Framework: Business Models	3	ENGR 304	Operation Research I or	3
			OR 322	Fund Electrical Engineering I	
PHYS 203L	Physics II/ Lab	4	MENGR 405	Introduction to Mechatronics	3
MATH 213	Calculus III	4	ENGR 498	Senior Design Project I	3
ENGR 215	Engineering Statics	3	ENGR 499	Senior Design Project II	4
MATH 225	Differential Equations	3		Engr. Concentration Courses	6
ENGR 218	Engineering Dynamics	3			
ENGR 305	Engineering Statistics I	3			
ENGR 301	Mechanics of Materials	3			

Fashion Design

Bachelor of Science (BS)

Dean
Campus
Website

Michael J. Leonard
East Falls
<https://www.jefferson.edu/academics/colleges-schools-institutes/kanbar-college-of-design-engineering-commerce/school-of-design-engineering/academic-programs/fashion-design.html>

Program Description

The fashion design program at Thomas Jefferson University is globally recognized for its team-oriented designers who understand the interrelationship of design, production and commerce while creatively answering the ever-changing needs of the fashion marketplace. As an integral part of the College of Design, Engineering and Commerce, fashion designers work on industry-related and interdisciplinary projects to develop sophisticated and unique solutions to challenging problems.

Learning Goals/Outcomes

- Apply conceptual and critical thinking skills to demonstrate the theoretical foundation of the profession
- Perform a broad base of technical skills and technology required of the profession
- Utilize quantitative reasoning and verbal, written and visual skills effectively
- Demonstrate understanding of business practice and ethics
- Possess skills to make contributions to the global fashion industry
- Examine global & cultural issues as they affect the world.

Curriculum: 4 years, 125-127 credits

<u>Year 1</u>			<u>Year 3</u>		
FYS 100	Pathways Seminar	1	ETHIC 1XX	Ethics	3
WRIT 101	Written Communication	3	ADIV 1XX	American Diversity	3
DBTU 114	Debating U.S. Issues	3	GCIT 2XX	Global Citizenship	3
MATH1XX	Mathematics	4	DBTG 300	Debating Global Issues	3
VDES 101	Design Essentials	3	DECM 300	Ethnographic Research	3
DRAW 101	Drawing Essentials	3	FASD 311	Pattern Development II	3
FASD 252	Fashion Design Research	3	FASD 316	Fashion Design	3
DRAW 206	Figure Drawing	3	FASD 322	Fash Design Problem Solving	3
TEXT 101	Survey of the Textile Industry	3	FASD 335	Junior Studio	3
ARTH 102	History of Western Art II	3	FASD 315 or FASD 317 or FASD 317	Technical Design OR Advanced Cad Fashion Illustration I	3
DECP 101	Process: Integrative Design Process	3			
<u>Year 2</u>			<u>Year 4</u>		
WRIT 201	Multimedia Communication	3	HALLMK 499	Capstone Folio Workshop	3
GDIV 1XX	Global Diversity	3	TEXT 311	Apparel Fabric Performance	3
DECS 2XX	Scientific Understanding	3	FASD 415	Collection Development I	3
ARTH 314	History of Costumes & Textiles	3	FASD 416	Collection Development II	3
DECF 200	Framework: Business Models	3	CAD 401	Apparel CAD/CAM	3
FASD 211	Garment Structures		DIGD 370	Portfolio Layout/Development	3
FASR 207	Fashion Figure Drawing	3	FASD 300	<u>Designated FD Elective</u>	3
			FASD 315		
			FASD 317		
			FASR 317		
			FASR 319		
CAD 204	CAD for Fashion Design	3		Free Electives	9
FASD 213	Pattern Development I	3			
FASD 205	History 20 th Century Designers	1			
DECS 2XX	Systems: DECS course	3			

Industrial Design

Bachelor of Science (BS)

Program Director	Tod Corlett
Campus	East Falls
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/kanbar-college-of-design-engineering-commerce/school-of-design-engineering/academic-programs/industrial-design.html

Program Description

Equips students to create attractive, meaningful and practical products and systems that serve the needs of the end-user and support the objectives of other stakeholders. The program prepares students to respond thoughtfully and creatively to challenges and opportunities presented by technological advances, social development and cultural change. The strengths of the program are derived from its interdisciplinary structure, collaboration with industry and engagement of the design community. Insights and unique collaborative project opportunities offer themselves to design students on a campus that hosts programs in related professions. Studio life is characterized by the simulation of work dynamics found in design consultancies, corporate design departments, and entrepreneurial ventures.

Learning Goals/Outcomes

- Interpret changes in society and technology and ideas in the humanities and the arts through discussion, verbal, visual and written communication
- Develop personal knowledge and methods needed to engage the discourse about design in different geographic and cultural contexts
- Develop creative solutions to complex problems, relying on ideation techniques, open-ended explorations, systematic information gathering, analysis and creative resolution
- Understand the priorities of other professions and stakeholders and collaborate with these in a productive, empathic manner
- Seek to influence their own and other professions to adopt better practices and continually strive to improve the human condition
- Approach their work with independence and the ability to continually assess and develop their methods so they can lead efforts to achieve better results

Curriculum: 4 years, 133-134 credits

<u>Year 1</u>			<u>Year 3</u>		
FYS 100	Pathways Seminar	1	ADIV 2XX	American Diversity	3
WRIT 101	Written Communication	3	GCIT 2XX	Global Citizenship	3
DBTU 114	Topics American Studies	3	DBIT 300	Debating Global Issues	3
MATH xxx	Mathematics	3-4		Free Elective	3
	Physical Ed or Service Learn	1	DECM 300	Ethnographic Research Methods	3
INDD 101	Design I for Industrial Design	4		Science (Select one DECS)	3-4
INDD 102	Design I for Industrial Design	4	INDD 301	Design V for Industrial Design	4
INDD 106	Materials & Process Fabrication	3	INDD 302	Design VI for Industrial Design	5
CAD 206	CAD 1 for Industrial Design	3	INDD 210	Ergonomic Studies	3
DRAW 101	Visual Studies: Drawing	3	INDD 304	Design History & Theory	3
ARTH 102	History of Western Art II	3			
<u>Year 2</u>			<u>Year 4</u>		
ETHC 2XX	Ethics	3	HALMK 399	Capstone Folio Workshop	3
GDIV 1xx	Global Diversity	3		Concentration Courses	9
PHYS 101	Physics I	4		Free Electives	6
WRIT 201	Multimedia Communication	3	INDD 401	Design VII for Industrial Design	5
INDD 201	Design III for Industrial Design	4	INDD 402	Design VIII for Industrial Design	5
INDD 202	Design IV for Industrial Design	4	ARTH 101	History of Western Art 1	3
INDD 207	Materials and Processes for Manufacturing	3			
DRAW 301	Drawing for Design Development	3			
INDD 324	History of Design and Communication	3			
DECP 101	Integrative Design Process				

Mechanical Engineering

Bachelor of Science (BS)

Program Director	Muthu Govindaraj, PhD
Campus	East Falls
Accreditation	ABET
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/kanbar-college-of-design-engineering-commerce/school-of-design-engineering/academic-programs/mechanical-engineering.html

Program Description

Produces graduates with a breadth of engineering skill and knowledge while facilitating technical depth in paradigmatic mechanical engineering areas: Design and Manufacturing, Energy and Thermal-Fluid Science, Mechanics, and Mechatronics. Students graduate qualified to pursue Professional Engineering (PE) licensure.

Learning Goals/Outcomes

- Apply knowledge of mathematics, science, and engineering
- Design and conduct experiments, as well as to analyze and interpret data
- Design a system, component, or process to meet needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
- Function on multidisciplinary teams
- Identify, formulate, solve engineering problems
- Understand professional & ethical responsibility
- Communicate effectively
- Understand impact of engineering solutions in global, economic, environmental, and societal context
- Recognition of the need for, and an ability to engage in life-long learning j) a knowledge of contemporary issues
- Use techniques, skills, and modern engineering tools necessary for engineering practice
- Use the techniques, skills, and modern engineering tools necessary for engineering practice

Curriculum: 4 years, 128 credits

<u>Year 1</u>			<u>Year 3</u>		
FYS 100	Pathways Seminar	1	GDIV/ GCIT 2XX	Global Diversity or Citizenship	3
WRIT 101	Written Communication	3	ENGR 302	Design for Manufacturability	3
DBTU 114	Debating U.S. Issues	3	ENGR 305	Engineering Statistics	3
MATH 111	Calculus I	4	ENGR 322	Fund Electrical Engineering I	3
PHYS 101/L	Physics I/Lab	4	ENGR 308	Integrated Engr Develop	3
CHEM 103/L	Chemistry I/Lab	4	ENGR 311	Fluid Mechanics	3
MATH 112	Calculus II	4	ENGR 314	Numerical Methods Engineers	3
ARTS 101	Integrative Design Process	3	MENG 407	Thermo & Heat Transfer II	3
DECP 101	Integrative Design Process	3	ENGR 210	Intro to Material Science	3
ENGR 101	Introduction to Engineering	3	MENGR 301	Machine Design	3
ENGR 104	Intro to Computing	3	MENG 399	ME Design Seminar	0.5
ENGR 102	Engineering Drawing	3			
<u>Year 2</u>			<u>Year 4</u>		
GDIV 1xx	Global Diversity	3	HALLMK 499	Capstone Folio Workshop	3
WRIT 201	Multimedia Communication	3	ETHIC 2XX	Ethics	3
DECS 2XX	Science (DECSYS)	3	ENGR 303	Engineering Economics	3
DECF 200	Framework: Bus Models	3	MENG 405	Introduction to Mechatronics	3
ENGR 301	Mechanics of Materials	3	MENG 427	System Dynamics and Control	3
PHYS 201/L	Physics II/Lab	4	DECM 300	Ethnographic Research	3
MATH 213	Calculus III	4	MENG 428	Thermo Heat Transfer I	3
ENGR 215	Engineering Statics	3	ENGR 498	Senior Design Project I	3
MATH 225	Differential Equations	3	ENGR 4XX	Senior Design Project II	3
ENGR 218	Engineering Dynamics	3	DBTG 300	Debating Global Issues	3

Textile Design

Bachelor of Science (BS)

Program Director	Marcia Weiss
Campus	East Falls
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/kanbar-college-of-design-engineering-commerce/school-of-design-engineering/academic-programs/textile-design.html

Program Description

With expanding international markets, the billion-dollar textile industry cuts across a multiplicity of products and commerce—fashion, home furnishings, medical, performance, retail and technical. This provides a world of opportunity for talented textile designers. Our program puts students on the fast track to an exciting career in this field. Textile majors' range from those who are design- and trend oriented to those focused on textile science, engineering and product development, enabling specialization in the area most suited to individual interests and strengths. Each year, Textile Design students win awards in prestigious, international design competitions sponsored by textile associations and industry corporations.

Learning Goals/Outcomes

- Apply conceptual and critical thinking skills that illustrate an understanding of the theoretical foundations of textile design
- Demonstrate creative talents required of the textile design industry
- Apply a base of liberal arts knowledge to examine textile design issues through acquiring, developing and conveying design ideas and information
- Demonstrate an understanding of textile design business practices, including ethics and law
- Develop design industry marketability through successful completion of the program
- Identify international perspectives to function in a global marketplace.

Curriculum: 4 years, 129-133 credits

<u>Year 1</u>			<u>Year 3</u>		
FYS 100	Pathways Seminar	1	ADIV 2XX	American Diversity	3
WRIT 101	Written Communication	3	GCIT 2XX	Global Citizenship	3
AMST 114	Topics in American Studies	3	CGIS 300	Contemporary Global Issues	3
MATH 1XX	Mathematics	3-4	CHEM 101	General Chemistry	3
TEXT 105	Textile Studio 1: Ideation	3	DECM 300	Ethnographic Research	3
DECP 101	Integrative Design Process	3	PRNT 305	Textile Printing Technology	3
VDES 101	Design Essentials	3		Textile DSN Designated Ele	3
DRAW 101	Drawing Essentials	3	TEXT 3XX	Textile Design Management	3
TEXT 101	Survey of the Textile Industry	3	TEXC 202/L	Color, Dyeing & Finishing /Lab	4
DRAW 303	Drawing: Materials and Methods	3	TEXT 306	Text Studio 4: Performance	3
KNIT 201	Knitting Technology I	3			
<u>Year 2</u>			<u>Year 4</u>		
ETHC 2XX	Ethics	3	HALL 499	Capstone Folio Workshop	3
GDIV 2XX	Global Diversity	3	TEXT 307	Textile Materials	4
WRIT 201	Multimedia Communication	3	TEXT 4XX	Textile Design Capstone 1	3
DECS 2XX	Systems	3	TEXT 411	Textile & Apparel Issues	1
DECF 200	Framework: Business Models	3		Textile Designated Elective	6
WEAV 201	Weave Technology I	3		Free Electives or Minor	12
TEXT 205	Textile Design Studio 2: Fashion	3	TEXT 4XX	Textile Design Capstone 2	3
ARTH 101/2	History of Western Art 1 or 2	3			
TEXT 206	Textile Design Studio 3: Interiors	3			
ARTH 314	History of Textiles and Costumes	3			

Textile Product Science

Bachelor of Science (BS)

Program Director Marcia Weiss
Campus East Falls
Website <https://www.jefferson.edu/academics/colleges-schools-institutes/kanbar-college-of-design-engineering-commerce/school-of-design-engineering/academic-programs/textile-product-science.html>

Program Description

The program focuses on the innovative global textile industry, including fiber-engineered products for medical, geotextiles, architecture, fiber-reinforced composites, and traditional apparel and home applications. In this program students have the opportunity to select one of 5 career-focused concentrations and complete graduate level courses to transition into select Jefferson graduate programs.

Learning Goals/Outcomes

Prepares students to work in a global industry that includes fiber-engineered products for medical, geotextiles, architecture, fiber-reinforced composites, traditional apparel, and home-furnishing applications.

Concentrations

- Sports & High Performance Materials
- Product Safety & Materials Evaluation
- Commerce
- Textile Conservation & Forensics
- Sustainability

Curriculum: 4 years, 130-133 credits

<u>Year 1</u>			<u>Year 3</u>		
FYS 100	Pathways Seminar	1	ADIV 2XX	American Diversity	3
WRIT 101	Written Communication	3	GCIT 2XX	Global Citizenship	3
DBTU 114	Debating U.S. Issues	3	DBIT300	Debating Global Issues	3
CHEM 101	Gen Chemistry or	3-4	DECM 300	Ethnographic Research Methods	3
OR 103	Chemistry I Lecture/Lab				
PHYS 101 OR	Gen Physics or	3-4	KNIT 205 OR	Weave Tech. II or	4
PHYS 201	Physics I/Lab		WEAV 301	Knit Tech. II	
MATH xxx	Mathematics	3-4	TEXT202/L	Color, Dyeing & Finishing /Lab	4
ENGR 104	Intro Computing	3		Concentration Courses	6
DECP 101	Process: Integrative Design	3	TEXT 321	Nonwovens	3
TEXT 104	Fiber and Yarn Studies	3			
KNIT 201 OR	Knit Technology or	4			
WEAV 201	Weave Technology I				
CAD 201 OR	Intro Digital Imaging or	3			
ENGR 102	Engineering Drawing				
<u>Year 2</u>			<u>Year 4</u>		
ETHIC 1XX	Ethics	3	HALMKT 499	Capstone Folio Workshop	3
GDIV 1XX	Global Diversity	3		Concentration Courses	9
WRIT 201	Multimedia Communication	3		Free Electives	12
DECS 2XX	Science (Select one DECSYS)	3	TEXT 478N	Capstone in TMT	6
DECF 200	Framework: Business Models	3			
WEAV 201	Weave Technology I or	4			
OR KNIT 201	Knit Technology I				
KNIT 205 OR	Weave Tech II or Knit Tech II	4			
WEAV 301					
TEXT 307	Textile Materials	4			
	Concentration Courses	6			

Visual Communication

Bachelor of Science (BS)

Program Director	Beth Shirrel
Campus	East Falls
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/kanbar-college-of-design-engineering-commerce/school-of-design-engineering/academic-programs/visual-communication-design.html

Program Description

By fostering curiosity, faculty empower students to develop individual points of view and equip them to investigate and tackle the complex challenges of our profession and the world. We provide students with opportunities to explore a range of techniques and applications, to collaborate with peers and faculty from other programs, to work on industry projects, and to engage with the professional design community.

Learning Goals/Outcomes

- Identify communication design problems to support appropriate solutions for intended audiences and context
- Conduct research & analysis to shape solutions
- Generate/prototype solutions to discover possibilities
- Evaluate outcomes to measure effectiveness
- Collaborate productively in teams (interdisciplinary)
- Adapt to continually changing professional challenges
- Demonstrate visual literacy through means such as composition, hierarchy, typography & creation of meaningful images
- Display proficiency in tools & technology

Curriculum: 4 years, 121 credits

<u>Year 1</u>			<u>Year 3</u>		
FYS 100	Pathways Seminar	1	ADIV 2xx	American Diversity	3
WRIT 101	Written Communication	3	GCIT 2XX	Global Citizenship	3
DBTU114	Debating U.S. Issues	3	DBOT 300	Debating Global Issues	3
MATH 1xx	Math I	3-4	DECM 300	Ethnographic Research Methods	3
PHYS 101	General Physics	3	GRAPH 301	DSN 5 for	4
ARTS 101	Integrative Design Process	3	GRAPH 302	DSN 6 for Graphic Design	4
VSDES 101	Design Essentials	3	DIGM 206	Foundation Web DSN & Strategy	3
DRAW 101	Drawing Essentials	3	ANIM 303	History of Animated Cinema	3
GRAPH 102	Intro to Graphic Design	3	GRAPH 308	Design Theory and Criticism	3
ARTH 101	History of Western Art I	3	MKTG 104	Marketing Foundations	1.5
			MGMT 104	Management Foundations	1.5
<u>Year 2</u>			<u>Year 4</u>		
ETHIC 2XX	Ethics	3	HALL 499	Capstone Folio Workshop	3
GDIV 1xx	Global Diversity	3	GRPH 401	DSN 7 for Graphic Design	6
WRIT 201	Multimedia Communication	3	GRPH 499	DSN 8 Capstone Graphic Design	6
	Science (one from DECSYS)	3		Graphic Design Electives	6
DECS 200	Framework: Business Models	3	MKTG 310	Integrated Marketing Comm.	3
GRAPH 201	DSN 3 for Graphic Design	3		Free Elective	6
GRAPH 202	DSN 4 for Graphic Design	3			
POTO 204	Intro Photo Graphic Design	3			
ARTH 102	History of Western Art II	3			
GRAPH 208	History of Graphic Design	3			

Engineering, Textile Concentration

Master of Science (MS)

Program Director	Brian George, PhD
Campus	East Falls
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/kanbar-college-of-design-engineering-commerce/school-of-design-engineering/academic-programs/ms-in-engineering.html

Program Description

This program is intended to develop the graduate student's knowledge in the advanced fields of textile science and engineering. Students with undergraduate education in the fields of textile engineering, textile chemistry and textile sciences, and those with undergraduate experience in engineering or materials technology are welcome to pursue this program. The wide range of textile engineering courses will prepare the student to make significant contributions in either advanced textile manufacturing technology or textiles material science. The carefully integrated educational offerings at the University enable the student to be exposed to a wide range of professional education possibilities. A capstone experience is provided during the final semester.

Learning Goals/Outcomes

- Demonstrate knowledge & proficiency in technical aspects of textile engineering
- Analyze and criticize established textile theories and synthesize new theories. • Understand and evaluate engineering theory
- Apply their acquired skills toward the development of a unique research project
- Demonstrate a competent knowledge and proficiency in the field of textile engineering
- Perform written and oral technical communications at a competent level

Curriculum: 2 Years, 36 credits

- For students matriculating in the MS Textile Engineering program with no undergraduate background in textiles, a group of foundation courses may be required. The foundation courses will be determined at the time of admission by the program director.
- Students select 9 courses from TXE Options
- TXE 941 (Required)

<u>Core Curriculum</u>			
TXE 601	Fiber and Yarn Studies	3	
TXE 613	Characterization of Fibrous Materials	3	
TXE 621	Mechanics of Materials	3	
TXE 622	Mechanics of Textiles	3	
TXE 624	Advanced Textile Composites	3	
TXE 625	Biomaterials Technology	3	
TXE 713	Coloration and Finishing Studies	3	
TXE 721	Analytical Methods	3	
TXE 751	Advanced Woven Structures	3	
TXE 752	Advanced Knitted Structures	3	
TXE 753	Advanced Nonwoven Structures	3	
TXE 754	Industrial and Specialty Fabrics	3	
TXE 755	Advanced Yarn Studies	3	
TXE 759	Product Evaluation	3	
TXE 762	Textile & Apparel Op Management	3	
TXE 783	Adv. Chemistry of Fibrous Materials	3	
TXE 790	Quality Management	3	
TXE 791	Internship	3	
TXE 797	Selected Topics	3	
TXE 798	Independent Study	3	
TXE 941	Research Thesis	9	

Fashion Design Management

Master of Science (MS)

Program Director	Michael J. Leonard
Campus	East Falls
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/kanbar-college-of-design-engineering-commerce/school-of-design-engineering/academic-programs/ms-fashion-design-management.html

Program Description

International MS in Fashion Design Management program, developed in partnership with Politecnico di Milano, is uniquely focused on developing design and fashion leaders of tomorrow. By moving beyond the hand-crafted approach to fashion, you will have the opportunity to focus on design as a strategic function, integrated along the cycle of research and design, product development, branding and distribution.

Learning Goals/Outcomes

- Identify and synthesize research methodologies for the formulation of conceptual and tangible outcomes
- Implement strategic planning across the design development process
- Demonstrate how design interfaces with the wider fashion enterprise
- Manage the design portfolio
- Identify ethical theories and implement them in the international apparel markets
- Summarize and implement timelines used in the design process
- Integrate quantitative data and design development.

Curriculum: 1 ½ years, 32 credits

<u>Year 1</u>			<u>Year 2</u>		
FDM 601	Design Process Timeline: Planning and Management	3	FDM 604	Design Research and Trending	3
FDM 617	Fashion Design within Brand Parameters	4	FDM 605	Workshop/ Intensive Industry Project	2
FDM 610	Social Media Metrics and Content Development	3	FDM 603	Fashion Design Studio / Prototyping	4
FDM 623	Textile Design and Fabric/Trim Approval Processes	3	FDM 602	Elective (Designated)	3
FDM 621	Building Brand Identity - Communication and Branding	3			
FDM 707	Strategic Design and Merchandising Process	4			

Health Communication Design

Master of Science (MS)
& Graduate Certificate

Program Director	Maribeth Kradel-Weitzel
Campus	Hybrid-East Falls/Online
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/kanbar-college-of-design-engineering-commerce/school-of-design-engineering/academic-programs/ms-in-health-communication-design.html

Program Description

This is your opportunity to be part of the inaugural class! Complete a single certificate, or, in only one year, complete two certificates plus a capstone project to earn the full MS in Health Communication Design.

- Health Communication Design is for visionary individuals driven by a passion to address critical and complex health communication design issues for people, communities, healthcare providers and policymakers.
- Employs a process informed by user-centered research, empathy, and a transdisciplinary, collaborative, multi-modal approach.

Learning Goals/Outcomes

- Address critical and complex health communication design issues for people, communities, healthcare providers and policymakers.
- Equips students with theory and practice-based design skills to create health-related change that improves the human condition.
- Employs a process informed by user-centered research, empathy, and a transdisciplinary, collaborative, multi-modal approach.

Curriculum: 12 credit Certificate, 30-credit Master Degree

<u>Certificate Option 1</u>			<u>Certificate Option 2</u>		
Design and Communication for Disease Prevention, Management and Cure: Ethics and Accessibility Focus (offered in fall semesters)			Design and Communication for Life Stages and Identity: Sustainable Systems Focus (offered in spring semesters)		
Project Core	Studio style course where students put design and communication theory into practice to work on projects relevant to the certificate theme and individual student's career goals.	4	Project Core	Studio style course where students put design and communication theory into practice to work on projects relevant to the certificate theme and individual student's career goals.	4
Topic Core	To support the Project Core with active research and discussion of related contemporary issues in design and health.	3	Topic Core	To support the Project Core with active research and discussion of related contemporary issues in design and health.	3
Skills Modules (2)	Shorter courses run a portion of semester & provide students with opportunity to dive deeper into skill-based topics. Example topic include: design thinking, health communication defined, negotiation, organizational change management and capstone research.	2	Skills Modules (2)	Shorter courses run a portion of semester & provide students with opportunity to dive deeper into skill-based topics. Example topic include: design thinking, health communication defined, negotiation, organizational change management and capstone research.	2
	Elective	3		Elective	3
			Capstone	Optional experience to earn MS Degree Conduct deeply immersive research and experimentation to deliver a solution that provides unique value to the field of Health Communication Design.	6

Industrial Design

Master of Science (MS)

Program Director Tod Corlett
Campus East Falls
Website <https://www.jefferson.edu/academics/colleges-schools-institutes/kanbar-college-of-design-engineering-commerce/school-of-design-engineering/academic-programs/ms-industrial-design.html>

Program Description

MS in Industrial Design is a professional program based on interdisciplinary project work. In this program, you will learn to design effectively at the collaborative and chaotic “front end” of the product-development process. You will work with product users, researchers, businesspeople, engineers and manufacturers to create products and systems that are better at serving their users, societies and the world at large.

Learning Goals/Outcomes

- Informing design through creative research into user needs
- Working closely with business, engineering and other disciplines to design platforms and systems- not just isolated objects
- Designing intelligent products for the "internet of things," integrating hardware, software and electronic interactivity
- Understanding and designing for global societies
- Prepare graduates for entrepreneurial work in the field, or for a position in a corporate design department or design-consulting firm.

Curriculum: 2 year, 42credits

<u>Foundation Courses (Based on prior training)</u>			<u>Year 2</u>		
IDE 510	Ergonomic Studies	3	MSID 803	Master’s Project I: Research and Design	4
IDE 507	Design I for Industrial Design	4	MSID 704	Prototyping Interactive Systems	3
CADE 500	CAD I for Industrial Design	3		Elective	3
IDF 514	Drawing Essentials	3	MSID 804	Master’s Project II: Development and Evaluation	5
IDF 500	Drawing Design Development	3	MSID 701	Design Business and Entrepreneurship	3
IDF 505	Materials and Processes for Manufacturing	3	MSID 798	Independent Study or	3
IDF 508	Materials and Processes for Fabrication	3	OR		
	<u>Year 1</u>		MSID 791	Internship	
MSID 500	Skills and Methods for Industrial Design	3			
MSID 703	User Centered Studio	4			
MIID 700	Research and Design Process	3			
	Elective	3			
MSID 705	Collaborative Studio	5			
MSID 797	Current Issues Seminar	3			
MSID 798	Independent Study, Internship or elective	3			

Surface Imaging

Master of Science (MS)

Program Director	Hitoshi Uniie
Campus	East Falls
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/kanbar-college-of-design-engineering-commerce/school-of-design-engineering/academic-programs/ms-surface-imaging.html

Program Description

The Surface Imaging program offers a unique graduate design education by viewing anything and everything as the canvas through the utilization of a variety of printing technologies. By applying painting, drawing, photography and printmaking to advanced design studios and printing practices, you will produce complex and unique surface image projects. You will be able to bring your creativity to life through fabrication printing, including additive material deposition and subtraction printing technologies (enhanced 3D surface and laser printing)—allowing you to produce anything you can imagine. Product development and management skills are enhanced with thorough knowledge and experience in advanced printing technology, applied engineering and an understanding of innovative business systems.

Learning Goals/Outcomes

- Gain professional experience through research based real-world projects with industry partners that stress critical thinking and problem solving skills through teamwork and collaboration.
- Work on interdisciplinary projects using advanced technology and design solutions.
- Be prepared to be a leader in the growing imaging industry which includes graphic, architectural, interior, textile, fashion apparel and home industries, as well as all facets in the global imaging industry.

Curriculum: 2 year, 33 credits

<u>Year 1 Summer</u>			<u>Year 2 Summer</u>		
IMBF 504	Financial & Managerial Acct.	1.5	MSSI 800	Surface Imaging Master Project	9
IMBF 505	Financial Management	1.5	<u>Designated Elective Options</u>		
MMSI 500	Surface Imaging Design Found	3	IMBA 759	Entrepreneurship	
Fall					
MSSI 601	Surface Imaging Design I	3	MSSI 702	Transdisciplinary Project II	
MSSI 602	Intro Material Science for SI	3	MSSI 791	Internship for Surface Imaging	
MSSI 607	Printing Technology for SI	3	MSSI 798	Independent Study for SI	
Spring					
MSSI 700	Transdisciplinary Project I	3	Study Abroad Short Course		
MSSI 701	Surface Imaging Design II	3	Elective Studio		
	Designated Elective	3			

Textile Design

Master of Science (MS)

Program Director	Marcia Weiss
Campus	East Falls
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/kanbar-college-of-design-engineering-commerce/school-of-design-engineering/academic-programs/ms-textile-design.html

Program Description

Provides both integration and balance between creative design and technology to prepare students for successful careers within the textile design industry. The program opens up the opportunity for successful and creative professional development for students who hold previous studio arts degrees as well as those coming from alternative backgrounds. The program structure has a unique balance of a strong technology base across all aspects of textiles upon which students build their design skills in a single concentration of knit, weave or print. Collaborative experiences with other majors plus a range of additional projects assigned by industry professionals and companies serve to expand the students' experiences.

Learning Goals/Outcomes

- Develop an appreciation of the multifaceted nature of textile design and the technical knowledge, skills, design and development processes and business structures required for a professional career in textiles
- Practice sustained visual research through original visual observation and trend information
- Apply visual research and technical skills into a collection of knitted, woven or printed textiles
- Produce a final body of textile design work—a fabric collection for exhibition and portfolio—exhibiting individual concept and development
- Produce an account of their final semester collection in thesis format for inclusion in the Gutman Library collection.

Curriculum: 2 year, 36 credits

<u>Core Curriculum</u>			<u>Year 2</u>		
ART 102 OR	History of Western Art II OR	3	TXF 511	Knitting I	3
TXF 503	History of Textiles & Costumes				
CHEM 101	General Chemistry	3	TXF 542	Color, Dyeing and Finishing	3
DRAW 101	Drawing	3	TXF 517	Weaving I	3
TXF 501	Foundation Fiber and Yarn Studies	3	TXF 512 & TXF513 OR	Knit Design Studio I AND Knit Design Studio II OR	3
TXF 506 OR	Design Foundations II OR	3	TXF 514 & TXF 515 OR	Print Design Studio I AND Print Design Studio II OR	3
VSDS 101	Design Essentials				
TXF 510	Introduction to Digital Imaging	3	TXF 518 & TXF 519	Weave Design Studio I AND Weave Design Studio II	3

Textile Technology

Master of Science (MS)

Program Director	Brian George
Campus	East Falls
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/kanbar-college-of-design-engineering-commerce/school-of-design-engineering/academic-programs/ms-textile-technology.html

Program Description

The MS in Textile Technology at Jefferson offers an integrated and collaborative curriculum that blends theoretical knowledge with experiential laboratory experiences. In many courses students turn innovative ideas into original products. It is expected that graduates of the program will pursue careers in production, product evaluation, research and development, or management in the textile and apparel related fields.

Learning Goals/Outcomes

- Teaches cutting-edge technical textile processes to students interested in learning more about the science and technical based aspects of textiles.
- Courses focus on development, production, and characterization of fibers, yarns, fabrics, and textile based products.
- The program combines theoretical knowledge gained in the classroom with hands-on experience with weaving, knitting, nonwovens, and composites production equipment in the innovative Fashion and Textiles Futures Center, as well as materials evaluation equipment in the Grundy Lab on the East Falls campus.

Curriculum: 60.5-63 credits

<u>Core Curriculum</u>			
TEXT 603	Integrated Engineering Product Development - Advanced Studies	3	TEXT 754 Industrial Textiles 3
TEXT 601	Fibers & Yarns	3	TEXT 755 Advanced Yarn Studies 3
TEXT 602	Textile Sustainability	3	TEXT 759 Product Evaluation 3
TEXT 613	Characterization of Fibrous Materials	3	TEXT 762 Textile & Apparel Operations Management 3
TEXT 624	Textile Composites	3	TEXT 783 Adv Chemistry of Fibrous Materials 3
TEXT 625	Biomaterials Technology	3	TEXT 790 Quality Management 3
TEXT 713	Coloration & Finishing Studies	3	TEXT 791 Internship .5-3
TEXT 751	Advanced Woven Structures	3	TEXT 797 Selected Topics 3
TEXT 752	Advanced Knitted Structures	3	TEXT 798 Independent Study 3
TEXT 753	Advanced Nonwovens Structures	3	TEXT 941 Thesis 6

Textile Engineering & Sciences

Doctor of Philosophy

Program Director Brian George, PhD
Campus East Falls
Website <https://www.jefferson.edu/academics/colleges-schools-institutes/kanbar-college-of-design-engineering-commerce/school-of-design-engineering/academic-programs/ms-textile-design.html>

Program Description

Emphasizes not only depth in fundamental textile engineering and sciences/mechanical engineering disciplines, but also an interdisciplinary approach to understanding technologies in which textile engineers and scientists can and should take a leading role. It is this combined emphasis on fundamentals, the ability to think and work outside one's area of expertise and the ability to frame complex problems that best defines this doctoral program. Students will propose a textile engineering and sciences problem of substance and then develop a solution. Students must demonstrate the ability to apply scientific principles to meet engineering needs with due regard to social and economic factors, and they must do so within a reasonable time constraint.

Learning Goals/Outcomes

- Demonstrate knowledge of and proficiency in applying research methodology to textile engineering
- Demonstrate knowledge and proficiency in technical aspects of textile engineering
- Analyze and critique established textile and engineering theories and synthesize new theories based on research
- Apply their acquired skills toward the development of a unique research project
- Perform written and oral technical communications at a competent level.

Curriculum: 3 years, 72 credits (36 from previous Master's Degree)

<u>Year 1</u>			<u>Year 2</u>		
Three engineering courses at Temple University	9		TES 903	Dissertation Research I	9
TES 901	Preliminary Examination Prep	3	TES 904	Dissertation Research II	3
TES 902	Thesis I	6	TES 906	Thesis II	6

- In a collaborative agreement with nearby Temple University, these graduate-level courses may be taken at the College of Engineering at Temple, or at another university after consultation between the student, the dissertation chair, and the director of the program.
- The student's doctoral committee may require additional courses to enhance the student's research.
- Students will then be required to pass a two-part qualifying examination in the field of textile engineering. The first part is a written examination, and the second part is an oral examination
- A major and a minor topic will be chosen by the candidate and the doctoral committee

User Experience & Interaction Design

Master of Science (MS)

Program Director	Neil Harner
Campus	East Falls
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/kanbar-college-of-design-engineering-commerce/school-of-design-engineering/academic-programs/ms-user-experience-interaction-design.html

Program Description

User Experience and Interaction Design prepares students to be professionals who will change standards by which society communicates and interacts. When one looks at websites, mobile communications devices, graphic user interfaces, or integrated systems, one sees the importance of interaction in communicating a rich media experience. For businesses, success depends on a well-designed, engaging, dynamic and robust user experience. The MS in User Experience and Interaction Design program provides students the necessary skillsets and promotes the critical thinking that is vital to this evolving field.

Learning Goals/Outcomes

- Use principles of design, such as visual organization, information hierarchy, typography, narrative and aesthetics to solve problems
- Plan and design usable sites by collecting data through various methods
- Analyze and evaluate data, plan and execute intuitive interfaces, user experiences and rich interactive designs
- Use equipment, technology and resources that represent current trends in the field
- Analyze and design functional prototypes
- Apply user experience design principle
- Evaluate and respond to user needs and develop solutions to usability problems
- Apply fundamental concepts of Internet and digital marketing including social media and email marketing
- Create and analyze system architecture such as Content Management Systems, web development, user interactions and database development
- Use computer languages, compilers, interpreters and assembler products to produce code and output to meet specifications
- Illustrate an understanding of digital technologies in the creation, production and use of visual communication
- Utilize and synthesize digital tools including software, photography, time-based and interactive media to create effective visual designs

Curriculum: 1 ½ - 2 years, 37 credits

<u>Standard Plan (Fall Start)</u>				
<u>Year 1</u>		<u>Year 2</u>		
IDD 510	Essentials of Interactive Design	6	IDD 941N UXD Thesis Project Preparation	1
INDD 700	Research & Design Process Methods	3	IDD 635 Interactive Narrative/ Drama	3
IDD 621N	Digital Experience Design	3	IDD 632 Database Management/ Scripting	3
IDD 637	Mobile Communication Design	3	IDD 798 UXD Internship or Independ Study	3
MSID 701	Design Business and Entrepreneurship	3		
IDD 631N	Digital Innovation Design	3		

<u>Accelerated Plan (Professionals & Undergraduate Pathway)</u>				
<u>Year 1</u>		<u>Year 2</u>		
INDD 700	Research and Design Process Methods	3	IDD 942 UXD Thesis Project	6
IDD 621N	Digital Experience Design	3		
IDD 632	Database Management/ Scripting	3		
IDD 637	Mobile Communication Design	3		
MSID 701	Design Business and Entrepreneurship	3		
IDD 635	Interactive Narrative/ Drama	3		
IDD 941	UXD Thesis Project Preparation	1		
IDD 631N	Digital Innovation Design	3		
IDD 798	UXD Internship or Independ Study	3		

Jefferson Institute for Bioprocessing

Parviz Shamlou, PhD
Executive Director

<https://www.jefferson.edu/academics/colleges-schools-institutes/kanbar-college-of-design-engineering-commerce/research-and-innovation/institute-for-bioprocessing.html>

About Us

The Jefferson Institute for Bioprocessing (JIB) is the first - and only - specialized education and training institute for biopharmaceutical processing in North America that combines commercial single-use processing equipment with the internationally recognized National Institute for Bioprocessing Research and Training (NIBRT) curriculum.

The focus of JIB is hands-on training of industry professionals through workshops and certificates and hands-on education of new bioprocessing engineers at the undergraduate and graduate levels.

We understand the critical need to rapidly develop and advance the skills and knowledge of scientists, engineers and technicians in bioprocessing and biomanufacturing. We provide a broad-range of trainings in commercial single-use processing equipment with the internationally recognized NIBRT curriculum. In addition, we offer customized trainings that meet the needs of our clients.

Our Facilities

The Jefferson Institute for Bioprocessing (JIB) is a 25,000 sq. ft. state-of-the art facility designed for the training of industry professionals, as well as the education of the next generation of scientists and engineers interested in pursuing rewarding careers in biomanufacturing

Undergraduate

Biopharmaceutical Process Development	<i>BS (See Curriculum in JCHP, Pg. 163)</i>
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Graduate

Biologic Process Engineering	<i>PhD</i>
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Biopharmaceutical Process Engineering	<i>MS</i>
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Certificate

Biopharmaceutical Process Development	<i>Graduate Certificate</i>
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Biopharmaceutical Process Operations	<i>Graduate Certificate</i>
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Biologics Process Engineering

Doctor of Philosophy (PhD)

Program Director	Cameron Bardliving, PhD
Campus	Lower Gwynedd
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/kanbar-college-of-design-engineering-commerce/research-and-innovation/institute-for-bioprocessing/academic-offerings/phd-in-biologics-process-engineering.html

Program Description

This primary goal of the program is to meet the career aspirations of qualified students and professionals who wish to develop their practical and foundational skills in the new and emerging areas of biopharmaceutical and biological engineering and bioprocessing. The Ph.D. program will produce well-trained and well-educated individuals who can meet the rising technical and regulatory demands for manufacturing of safe and efficacious medicine including legacy biologics such as vaccines, proteins and monoclonal antibodies, as well as advanced, next-generation biologics such as gene therapy, tissue engineering and regenerative medicine.

Learning Goals/Outcomes

- Create independent research leading to new knowledge in a specialized area relevant to processing and commercialization of biologics.
- Support advanced skills through design of new equipment and technologies, setting up and conducting novel experiments, gathering and analysis of qualitative and quantitative data.
- Defend results and data through effective written and oral communication and presentation.
- Synthesize interactive, multidisciplinary, collaborative experiences through reflection on learning, work and instruction.
- Evaluate decisions based on ethical principles in research, development and professional activities.

Curriculum: 3 Years, 54 credits

For students matriculating in the PhD in Biologics Process Engineering program with no graduate background in Bioprocessing, a group of foundation courses may be required. The foundation courses will be determined at the time of admission by the program director.

<u>Year 1</u>			<u>Year 3</u>		
ENGR 801	Doctoral Research I	6	ENGR 810	Doctoral Research III	4
ENGR 802	Doctoral Research I	6	ENGR 811	Technical Comm Biopharma Research II	2
ENGR 803	Doctoral Research I	6	ENGR 812	Doctoral Research III	4
	<u>Year 2</u>		ENGR 813	Technical Comm Biopharma Research II	2
ENGR 804	Doctoral Research II	4	ENGR 814	Doctoral Research III	4
ENGR 805	Technical Comm Biopharma Research I	2	ENGR 815	Technical Comm Biopharma Research II	2
ENGR 806	Doctoral Research II	4			
ENGR 807	Technical Comm Biopharma Research I	2			
ENGR 808	Doctoral Research II	4			
ENGR 809	Technical Comm Biopharma Research I	2			

Biopharmaceutical Process Engineering

Masters of Science (MS)

Program Director	Geoff Toner, MS
Campus	Lower Gwynedd
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/kanbar-college-of-design-engineering-commerce/school-of-design-engineering/academic-programs/ms-biopharmaceutical-process-engineering.html

Program Description

Biopharmaceutical Process Engineering is a rapidly growing industry focused on the development of robust processes to manufacture high value biologics and advanced therapeutics for patients with debilitating and life limiting diseases such as cancer, rheumatoid arthritis, Alzheimer's and Parkinson's. The 12 month, 36 credit program is ideal for employment focused graduates with first degrees in Life Sciences or Engineering. Training and education in biopharmaceutical processing are exceptionally labor intensive. At the Jefferson Institute for Bioprocessing (JIB) our students spend less time in traditional classroom settings and more time in JIB's pilot-scale facility fully equipped with the most advanced technologies and processes used by industry.

The program emphasizes active learning, makes extensive use of team-based projects, and strongly emphasizes professional development through communication and teamwork.

Learning Goals/Outcomes

- Prepare graduates for a wide range of positions in industry and academia.
- Provide scientific and engineering based knowledge necessary for employment in the field.
- Impact Bioprocessing community through scholarship and advances in research.

Curriculum: 12 Months, 36 credits

- A foundational Bioprocess Engineering for Scientists course will be required for students with a background in life sciences and a foundational Basic Life Sciences for Engineers course will be required for students with a background in engineering.
- 30 credit core curriculum, 6 credit concentration
- Concentrations: Replacement Protein Therapies, Analytical Techniques and Regulatory Principles, Advanced Vaccine Manufacture, Biopharmaceutical Commercialization
- Capstone Project

Biopharmaceutical Process Development

Graduate Certificate

Executive Director Campus Campus Partner Website	Parviz Ayazi-Shamlou, PhD Spring House, PA National Institute for Bioprocessing Research & Training (NIBRT) https://www.jefferson.edu/academics/colleges-schools-institutes/kanbar-college-of-design-engineering-commerce/research-and-innovation/institute-for-bioprocessing/academic-offerings/certificate-in-biopharmaceutical-process-development.html
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Program Description

12-credit Graduate Certificate in Biopharmaceutical Process Development (BPD Certificate). One of the core deliverables and a key goal of this vision is the creation of an education ecosystem in biopharmaceutical process engineering through programs that integrates sciences, engineering, economics, leadership, business and entrepreneurship.

Learning Goals/Outcomes

- Prepare students who have already earned a Bachelor's Degree in Engineering or Life Sciences for a variety of technical jobs in biomanufacturing.

Curriculum: 12 credits

Gateway Course -which will differ depending on students' prior education	2
Introductory course in bioprocessing	2
Intro Upstream Unit Operations	4
Intro Downstream Unit Operations	4

Biopharmaceutical Process Operations

Graduate Certificate

Executive Director Campus Campus Partner Website	Parviz Ayazi-Shamlou, PhD Spring House, PA National Institute for Bioprocessing Research & Training (NIBRT) https://www.jefferson.edu/academics/colleges-schools-institutes/kanbar-college-of-design-engineering-commerce/research-and-innovation/institute-for-bioprocessing/academic-offerings/certificate-in-biopharmaceutical-process-development.html
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Program Description

9-credit Digital Graduate Certification in Biopharmaceutical Process Operations. The required coursework will prepare students for a variety of advanced careers in operations in the biomanufacturing industry, including supply chain management, regulatory affairs and finance.

Learning Goals/Outcomes

- Prepare students who have already earned a Bachelor's Degree in Engineering or Life Sciences for a variety of technical jobs in the biomanufacturing operations sector.

Curriculum: 9-10 credits

Gateway Course -Bioprocess Engineering Fundamentals for Scientists -or- Basic Life Sciences for Engineers	3
Applied Math and Statistical Methods in Biomanufacturing	1.5
QbD, Process Selection and Optimization	1.5
Process Characterization and Validation	1.5
Business and Entrepreneurship in Life Sciences	1.5

COLLEGE OF HEALTH PROFESSIONS



Dean: Michael Dryer, PA-C, DrPH | 215- 503-4943 | Jefferson.edu/JCHP

About Us

The Jefferson College of Health Professions (JCHP) is committed to educating healthcare professionals of the highest quality and ethical standards for contemporary practice in the global community. The College, representing inter-professional programs across the health professions, offers natural opportunities for students to develop professional behaviors within a community of learners. JCHP offers degrees ranging from a bachelor of science through clinical doctorate across several academic departments:

- Counseling and Behavioral Health
- Disaster Medicine & Management
- Health Sciences Programs
- Medical Laboratory Sciences & Biotechnology
- Midwifery & Women's Health
- Physician Assistant Studies
- Medical Imaging & Radiation Sciences

JCHP also offers academic certificate programs and continuing education opportunities through the Institute of Emerging Health Professions.

We seek to be responsive to the changing needs of the healthcare system.

- Curriculum is based on a set of core competencies that are essential to effective practice.
- Programs continually make innovative curricular changes to prepare students to function as outstanding health professionals in the dynamic environment of health care.
- Faculty develop learning and training experiences to ensure that students have the knowledge, skills and experience to be an evidence-based practitioner.
- As an integral part of a major academic health center, students have many inter-professional opportunities focused on working together, understanding one another's contributions, and effectively communicating in order to provide the best possible care for patients.

Accreditations

Accreditation Commission for Midwifery Education (ACME) Midwifery (DM)	www.midwife.org/default.aspx
Accreditation Review Commission on Education for the Physician Assistant (ARC-PA) Physician Assistant (MS); Physician Assistant Studies (MS)	http://www.arc-pa.org
Commission on Accreditation of Medical Physics Education Programs (CAMPEP) Medical Physics (MS)	www.campep.org
Committee on Education of the American Association of Marital and Family Therapy (COAMFTE) Couple and Family Therapy (MS)	www.coamfte.org
Commission on Accreditation of Allied Health Education Programs (CAAHEP) Cardiovascular Technology; Cardiovascular Sonography; Cytotechnology (BS); Cytotechnology (MS); General Sonography (BS); Invasive Cardiovascular Technology (BS); Perfusion (Certificate) ; Vascular Technology; Vascular Sonography (BS)	www.caahep.org
Joint Review Committee on Cardiovascular Technology (JRC-CVT) Cytotechnology (BS); Cytotechnology (MS); Perfusion; Invasive Cardiovascular Tech	www.jrccvt.org
Joint Review Committee on Education in Radiologic Technology (JRCERT) Cardiac Sonography; General Sonography; Ultrasound & Vascular Technology (BS); Vascular Sonography (BS)	www.jrcert.org
Joint Review Committee on Educational Programs in Nuclear Medicine Technology (JRCNMT) Magnetic Resonance Imaging (BS); Medical Dosimetry (BS); Nuclear Medicine Technology Programs; Radiation Therapy (BS); Radiography (BS)	www.jrcnmt.org
National Accrediting Agency for Clinical Laboratory Sciences (NAACLS) Medical Laboratory Sciences Programs	www.naacls.org

Academic Programs by Departments

Counseling and Behavioral Health

Graduate

Community & Trauma Counseling	MS
Community & Trauma Counseling: Art Therapy	CTC +
Community & Trauma Counseling: Child Trauma and Play Therapy	CTC +
Community & Trauma Counseling: Trauma, Addiction, & Recovery	CTC +
Couple & Family Therapy	MFT

Certificate

Childhood & Trauma Studies	Graduate Certificate
Community & Trauma Counseling	Adv-Practice Certificate
Art Therapy Specialization	Adv-Practice Certificate
Trauma, Addiction & Recovery	Adv-Practice Certificate

Accelerated/Dual Degree

BS Health Sciences & MS Community & Trauma Counseling	3+2
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Disaster Medicine & Management

Graduate

Disaster Medicine & Management	MS
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Certificate

Business & Organizational Continuity	Graduate Certificate
Disaster Medicine & Management	Graduate Certificate

Health Sciences

Undergraduate

Health Sciences	BS
Health Sciences: Pre-Nursing	Pre-Professional
Health Sciences: Pre-Pharmacy	Pre-Professional
Health Sciences: Pre-Medical Imaging & Radiation Sciences	Pre-Professional
Health Sciences: Pre-Physician Assistant Studies	Pre-Professional

Accelerated/Dual Degree

BS Health Sciences & MS Athletic Training	3+2
BS Health Sciences & MS Community and Trauma Counseling	3+2
BS Health Sciences & MS Medical Lab Sciences and Biotechnology	3+2
BS Health Sciences & MS Physician Assistant Studies	3+2
BS Health Science & MS Occupational Therapy	Closed to new students
BS Health Sciences & OTD Occupational Therapy	3+3

Medical Imaging & Radiation Sciences

Undergraduate

Cardiac Sonography (Echocardiography)	BS
Computed Tomography (CT)	BS
General Sonography (Ultrasound)	BS
Invasive Cardiovascular Technology	BS
Magnetic Resonance Imaging	BS
Medical Dosimetry	BS
Nuclear Medicine	BS
Radiation Therapy	BS
Radiography	BS
Vascular Sonography	BS

Graduate

Medical Imaging & Radiation Sciences	MS (<i>Executive style</i>)
Medical Physics	MS

Certificate

Computed Tomography	Undergraduate Certificate
Positron Emission Tomography & Computed Tomography	PET/CT Certificate

Medical Laboratory Sciences & Biotechnology

Undergraduate

Biotechnology	BS
Cytotechnology & Cell Sciences	BS
Medical Lab Sciences	BS

Graduate

Biotechnology	MS
Cytotechnology & Cell Sciences	MS
Medical Lab Sciences	MS

Certificate

Clinical Chemistry	Graduate Certificate
Clinical Hematology	Graduate Certificate
Clinical Microbiology	Graduate Certificate
Immunohematology	Graduate Certificate
Molecular Biology	Graduate Certificate

Accelerated/Dual Degree

Biotechnology	BS/MS
Cytotechnology & Cell Sciences	BS/MS
Medicine & Cell Biology & Regenerative Medicine	MD/PhD (see SKMS Pg. 246)

Midwifery

Graduate

Midwifery	MS
Midwifery	DM

Physician Assistant

Graduate

Physician Assistant Studies - Center City	MS
Physician Assistant Studies - East Falls	MS
Physician Assistant Studies -New Jersey	MS

Accelerated/Dual Degree

BS Health Sciences & MS Physician Assistant Studies	Professional Phase
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Community & Trauma Counseling

Master of Science (MS)

Program Director Kirby L. Wycoff, PsyD, EdM, MPH, NCSP
Campus East Falls
Website <https://www.jefferson.edu/university/health-professions/departments/counseling-behavioral-health/programs/community-trauma-counseling.html>

Program Description

The Master of Science in Community and Trauma Counseling Program provides graduates with the knowledge and skills for trauma-informed practice as community mental health counselors across a breadth of settings including agency and institutional settings, professional private practice, and other environments influenced by traumatic events and extreme stress.

Curriculum: 2 year, 60 credits

<u>Year 1 Pre-Fall</u>			<u>Year 2 Pre-Fall</u>		
CTC 605	Foundations Trauma Counseling	3	CTC 652	Childhood Trauma and Effects	3
			CTC 614	Foundations of Addictive Behavior	3
<u>Year 1 Fall</u>			<u>Year 1 Fall</u>		
CTC 601	Orientation to the Counseling Profession	3	CTC 653	Advanced Clinical Interventions in Trauma Treatment I	3
CTC 607	Advanced Counseling Theory and Practice	3	CTC 791	Internship I	3
CTC 604	Psychopathology	3			
CTC 602	Practicum I-Theory and Practice of Counseling	3	<u>Year 2 Spring</u>		
<u>Year 1 Spring</u>			<u>Year 2 Spring</u>		
CTC 651	Neurobiology of Trauma	3	CTC 611	Career Development	3
CTC 603	Human Growth and Development	3	CTC 655	Advanced Clinical Interventions in Trauma Treatment II	3
CTC 606	Social and Cultural Diversity	3	CTC 792	Internship II	3
CTC 701	Practicum II	3			
<u>Year 1 Summer</u>					
CTC 609	Assessment in Counseling	3			
CTC 608	Group Work Community & Trauma Counseling	1.5			
CTC 616	Experimental Group Process	1.5			
CTC 613	Attachment, Relationship & Family Therapy	3			
CTC 610	Counseling Research & Evaluation	3			

Community & Trauma Counseling + Art Therapy Specialization

CTC + Art Therapy

Coordinator Rachel Brandoff
Campus East Falls
Website <https://www.jefferson.edu/university/health-professions/departments/counseling-behavioral-health/programs/community-trauma-counseling/ms-art-therapy.html>

Curriculum: 2 years, 69 credits

<u>Year 1 Pre-Fall</u>			<u>Year 2 Fall</u>		
CTC 510	Ethics, Standards & Prof Orientation in AT	3	CTC 611	Career Development	3
CTC 512	History & Theory Art Therapy	3	CTC 609	Counseling Assessment	3
CTC 520	Studio & Techniques Art Therapy	3	CTC 610	Counseling Research and Evaluation	3
<u>Year 1 Fall</u>			CTC 613	Attachment, Relationships, and Family Therapy	3
CTC 601	Orientation Counseling Profession	3	CTC 791	Internship I in Art Therapy	3
CTC 602	Practicum I	3			
CTC 604	Psychopathology	3			
CTC 605	Foundations Trauma Counseling	3			
<u>Year 1 Spring</u>			<u>Year 2 Spring</u>		
CTC 603	Human Growth and Development	3	CTC xxx	Community Disaster & Trauma	3
CTC 701	Practicum II	3	CTC 653	Advanced Clinical Interventions in Trauma Treatment I	3
CTC 607	Advanced Counseling Theory and Practice	3	CTC 619	Art Therapy & Counseling Assessment	3
CTC 651	Neurobiology of Trauma	3	CTC 792	Internship II	3
<u>Year 1 Summer</u>					
CTC 606	Social and Cultural Diversity	3			
CTC 620	Group Work in Art Therapy & Counseling	3			
CTC 614	Foundations of Addictive Behaviors	3			
CTC 652	Childhood Trauma and Effects	3			
CTC 790	Summer Internship (optional)	0			

Community & Trauma Counseling + Child Trauma and Play Therapy

CTC + Child Trauma and Play Therapy

Coordinator Campus Website	Katherine Wenocur East Falls https://www.jefferson.edu/university/health-professions/departments/counseling-behavioral-health/programs/community-trauma-counseling/ms-art-therapy.html
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Curriculum: 2 years, 66 credits

<u>Year 1 Pre-Fall</u>			<u>Year 2 Pre-Fall</u>		
CTC 605	Foundations Trauma Counseling	3	CTC 614	Foundations Addictive Behavior	3
			CTC 652	Childhood Trauma & Effects	3
<u>Year 1 Fall</u>			<u>Year 2 Fall</u>		
CTC 601	Orientation Counseling Profession	3	CTC 653	Advanced Clinical Interventions in Trauma Treatment	3
CTC 602	Practicum I	3	CTC 791	Internship I	3
CTC 604	Psychopathology	3	CTC 660	Foundations Child Center Play	3
CTC 607	Advanced Counseling Theory and Practice	3	CTC 661	Historically Significant Approaches: Directive Play Therapy	3
<u>Year 1 Spring</u>			<u>Year 2 Spring</u>		
CTC 603	Human Growth and Development	3	CTC 662	Integrative Seminar: Intersectionality and Play Therapy Career Development	3
CTC 701	Practicum II	3	CTC 611	Internship II	3
CTC 606	Social and Cultural Diversity	3	CTC 792	Capstone II	3
CTC 651	Neurobiology of Trauma	3			
	Capstone	3			
<u>Year 1 Summer</u>					
CTC 608	Group Work in Community & Trauma Counseling	1.5			
CTC 616	Experimental Group Process	1.5			
CTC 609	Counseling Assessment	3			
CTC 613	Attachment, Relationship, Family Therapy	3			
CTC 610	Counseling Research & Evaluation	3			
CTC 790	Summer Internship (optional)	0			

Community & Trauma Counseling+ Trauma, Addictions and Recovery

CTC + Trauma, Addictions and Recovery

Coordinator	Katherine Sperandio
Campus	East Falls
Website	https://www.jefferson.edu/university/health-professions/departments/counseling-behavioral-health/programs/community-trauma-counseling/ms-art-therapy.html

Curriculum: 2 years, 66 credits

<u>Year 1 Pre-Fall</u>			<u>Year 2 Pre-Fall</u>		
CTC 605	Foundations Trauma Counseling	3	CTC 614	Foundations Addictive Behavior	3
<u>Year 1 Fall</u>			CTC 652	Childhood Trauma & Effects	3
CTC 601	Orientation Counseling Profession	3	<u>Year 2 Fall</u>		
CTC 602	Practicum I	3	CTC 653	Advanced Clinical Interventions in Trauma Treatment I	3
CTC 604	Psychopathology	3	CTC 791	Internship I	3
CTC 607	Advanced Counseling Theory and Practice	3	CTC 670	Screening, Assessment and Treatment for Addiction	3
<u>Year 1 Spring</u>			CTC 671	Ethical Treatment and Interventions for Addiction	3
CTC 603	Human Growth and Development	3	<u>Year 2 Spring</u>		
CTC 701	Practicum II	3	CTC 672	Neurobiology and Psychopharmacology of Addiction Career Development	3
CTC 606	Social and Cultural Diversity	3	CTC 611	Internship II	3
CTC 651	Neurobiology of Trauma	3	CTC 792	Capstone II	3
Capstone					
<u>Year 1 Summer</u>					
CTC 608	Group Work in Community & Trauma Counseling	1.5			
CTC 616	Experimental Group Process	1.5			
CTC 609	Counseling Assessment	3			
CTC 613	Attachment, Relationship, Family Therapy	3			
CTC 610	Counseling Research & Evaluation	3			
CTC 790	Summer Internship (optional)	0			

Couple & Family Therapy

Master of Family Therapy (MFT)

Program Director	Erica J. Wilkins, PhD, LMFT
Campus	Center City
Website	https://www.jefferson.edu/university/health-professions/departments/counseling-behavioral-health/programs/family-therapy.html

Program Description

A unique collaborative effort between two highly-respected institutions: Thomas Jefferson University and Council for Relationships. This is a full-time, two-year, 66-credit program, which is modeled on the core curriculum developed by the Commission on Accreditation for Marriage and Family Therapy Education (COAMFTE), focusing on key areas of contemporary practice, including:

- Couple and marital counseling
- Family therapy with children
- Families in transition (divorce and remarriage)
- Family violence
- Medical family therapy
- Sex therapy

Curriculum: 2 years, 66-69 credits

<u>Year 1 Fall</u>			<u>Year 2 Fall</u>		
CFTP 501	Theory & Practice Family Therapy I	3	CFTP 601	Implications for Diversity Practice	3
CFTP 502	Theory & Practice Family Therapy II	3	CFTP 602	Research Couple & Family Therapy	3
CFTP 503	Theory and Practice Couple Therapy	3	CFTP 603	Advanced Sex Therapy II *	3
			OR	OR	
CFTP 505	Life Span Development from a Systemic Perspective	3	CFTP 605	Issues Violence and Abuse Family**	3
CFTP 506	Practicum I	3	CFTP 606	Live Supervision II	3
CFTP 509	Foundations of Systematic Practice	3	CFTP 607	Practicum IV	3
<u>Year 1 Spring</u>			<u>Year 2 Spring</u>		
CFTP 514	Group & Community Based Interventions	3	CFTP 610	Professional, Ethical, & Legal Issues Couple & Family Therapy	3
CFTP 513	Systemic/Relational Assessment & Mental Health Diagnosis and Treatment	3	CFTP 604	Advanced Sex Therapy*	3
			OR	OR	
CFTP 507	Practicum II	3	CFTP 611	Medical Family Therapy **	3
CFTP 511	Introduction to Sex Therapy: Concepts in Human Sexuality	3	CFTP 612	Families in Transition	3
			CFTP 613	Master's Project	3
<u>Year 1 Summer</u>			<u>Year 2 Summer</u>		
CFTP 512	Live Supervision I	3	CFTP 608	Practicum V	3
CFTP 508	Practicum III	3	CFTP 608	Practicum V (if needed)***	3

* Sex Therapy Track Course

** Couple & Family Therapy Track Course

***may be required to complete Practicum V through the summer (June through August)

Child Trauma & Play Therapy

Advanced Studies Graduate Certificate

Campus Website	Hybrid: on campus and online https://www.jefferson.edu/university/health-professions/departments/counseling-behavioral-health/programs/community-trauma-counseling/advanced-studies-in-child-trauma-and-play-therapy.html
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Program Description

The Certificate of Advanced Studies in Child Trauma and Play Therapy trains exceptionally skilled child and adolescent therapists who are uniquely equipped with trauma competencies and knowledge, coupled with play therapy techniques and applications to support the health and emotional wellbeing of children and families. The Certificate consists of four classes (for credit or continuing education) designed for professionals who have already earned a graduate degree in counseling or a related mental health discipline or for students currently enrolled in a clinical mental health graduate program. The Certificate prepares graduates to become a Registered Play Therapist™ (RPT).

Curriculum: 12 credits

	<u>Pre-Fall</u>	
CTC652	Childhood Trauma & Effects	3
	<u>Fall</u>	
CTC 660	Foundations of Child Centered Play	3
CT 661	Historically Significant Approaches: Directive Play Therapy	3
	<u>Spring</u>	
CTC 662	Integrative Seminar: Intersectionality and Play Therapy	3

Community & Trauma Counseling

Advanced Studies Graduate Certificate

Campus	East Falls
Website	https://www.jefferson.edu/university/health-professions/departments/counseling-behavioral-health/programs/community-trauma-counseling/advanced-studies-certificate.html

Program Description

This certificate is designed for professionals who have already earned a graduate degree in counseling or a related mental health discipline.

Curriculum: 12 credits

<u>Core Curriculum</u>		
CTC 605	Foundations of Trauma Counseling*	3
CTC 651	Neurobiology of Trauma	3
CTC 653	Advanced Clinical Interventions in Trauma Treatment*	3
	<u>Select 1</u>	3
CTC 652	Childhood Trauma and Effects	
CTC 655	Advanced Clinical Interventions in Trauma Treatment II	

* Denotes required course

Community & Trauma Counseling Art Therapy

Advanced Studies Graduate Certificate

Campus Website	East Falls https://www.jefferson.edu/university/health-professions/departments/counseling-behavioral-health/programs/community-trauma-counseling/advanced-studies-art-therapy-certificate.html
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Program Description

The Professional Certificate of Advanced Studies in Art Therapy gives clinicians the skills and knowledge they need to competently, confidently, and ethically incorporate art therapy into their practice.

Curriculum: 15-30 credits

- **Certificate Program** - 15 credit program for clinicians seeking to gain and incorporate art therapy skills into practice)
- **Professional Certificate Program and Internship Supervision** - 30 credit program for clinicians seeking credentialing as board certified Art Therapists

<u>Summer</u>			<u>Fall</u>		
CTC 512	Ethics, Standards and Professional Orientation in Art Therapy	3	CTC 653	Advanced Clinical Interventions in Trauma Treatment I	3
CTC 510	Ethics, Standards and Professional Orientation Art Therapy	3	CTC 791	Art Therapy Internship I (Professional Certificate Only)	3
CTC 520	Studio and Techniques of Art Therapy	3	<u>Spring</u>		
CTC 620	Advanced Group, Couples and Family Art Therapy Process	3	CTC 603	Human Growth and Development	3
	<u>Pre-Fall</u>		CTC 619	Art Therapy Assessment (Professional Certificate Only)	3
CTC 652	Childhood Trauma and Effects	3	CTC 792	Art Therapy Internship II (Professional Certificate Only)	3
			CTC 653	Advanced Interventions in Trauma Counseling (Professional Certificate Only)	3

Community & Trauma Counseling: Trauma, Addiction and Recovery

Advanced Studies Graduate Certificate

Campus	East Falls
Website	https://www.jefferson.edu/university/health-professions/departments/counseling-behavioral-health/programs/community-trauma-counseling/advanced-studies-in-trauma-addiction-and-recovery.html

Program Description

The Certificate of Advanced Studies in Trauma, Addiction and Recovery provides professionals with an advanced understanding of the potential impact of trauma on physical, social, cognitive, and emotional development and further provides training in identifying, diagnosing and treating co-occurring substance use and mental health disorders. The Certificate consists of four classes (for credit or continuing education) designed for professionals who master's level clinical mental health professionals, physicians, nurses, OTs, PAs or for students currently enrolled in one of the aforementioned graduate programs. The Certificate prepares graduates to become a Certified Advanced Alcohol and Drug Counselor (CAADC).

Curriculum: 12 credits

	Pre-Fall	
CTC614	Foundations of Addictive Behavior	3
	Fall	
CTC 670	Screening, Assessment and Treatment for Planning for Addiction	3
CTC 671	Ethical Treatment and Intervention for Addiction	3
	Spring	
CTC 672	Neurobiology and Psychopharmacology of Addiction	3

Health Sciences & Community & Trauma Counseling

Bachelor of Science (BS) Health Sciences & Master of Science (MS) Community & Trauma Counseling

Program Director (Undergrad) Wendy Krupnick, PhD, MBA
 Graduate Director Kirby Wycoff, , PsyD, EdM, MPH, NCSP
 Campus East Falls
 Website <https://www.jefferson.edu/university/health-professions/departments/counseling-behavioral-health/programs/community-trauma-counseling/bs-ms-combined-degrees.html>

Program Description

- Designed for students interested in becoming professional counselors who want to make a difference in the lives of trauma survivors.
- Accelerated dual degree program allows students to seamlessly complete undergraduate and graduate degrees in less time than would be required to complete both separately.
- See each program for Learning Outcomes.

Learning Goals/Outcomes (Health Sciences)

- Apply scientific and psychological concepts to make informed clinical decisions.
- Explain factors that can influence health and well-being.
- Apply principles of professionalism, respect, and ethical behavior (in class and in the field).
- Demonstrate an understanding of a range of health professions' scopes of practice and responsibilities to make informed career decisions.

Curriculum: 5 years, 165 credits (120 BS; 45 MS)

<u>Year 1</u>			<u>Year 3</u>		
FYS 100	Pathways Seminar	1	CGIS 300	Contemporary Global Issues	3
WRIT 101	Writing Seminar I	3	ISEM 3XX	Integrative Seminar	3
AMST 114	Topics American Studies	3	PHIL 499	Philosophies of the Good Life	3
WRIT 201	Writing Seminar II	3	STAT 202	Statistics for Behavioral Sciences	3
MATH 1XX	Pre-Calculus	3	HSCI 330	Med Terminology and Documentation	3
BIOL 112	Core Concepts Biology	4		Science Electives	6-8
	Lecture/Lab				
BIOL 104	Bio II Lecture and Lab	4	HSCI XXX	Writing Intensive Elective	3
HSCI 100	Intro Health Professions	1	PSYC 2XX	Psychology Electives	6-8
PSYC 101	Introduction to Psych.	3	HSCI 3XX	Health Sciences Elective	3
PSYC 103	Physiological Psychology	3		Free Elective	3
PSYC 213	Developmental Psych.	3		<u>Year 4</u>	
	Free Elective	3	CTC 601	Orientation to Counseling Profession	3
	<u>Year 2</u>		CTC 602	Pract I: Theory & Practice Counseling	3
ETHIC 2XX	Ethics	3	CTC 604	Psychopathology	3
GDIV 2XX	Global Diversity	3	CTC 605	Foundations of Trauma Counseling	3
ADIV 2XX	American Diversity	3	CTC 607	Advanced Counseling Theories	3
				<u>BS Awarded (December)</u>	
GCIT 2XX	Global Citizenship	3	CTC 603	Human Growth and Development	3
PSYC 201	Abnormal Psychology	3	CTC 701	Practicum II-Field Exposure	3
PSYC 226	Psychology of Trauma	3	CTC 651	Neurobiology of Trauma	3
PSYC 222	Counseling Psychology	3		<u>Year 5 (refer to CTC MS Program)</u>	
PSYC 220	Clinical Psychology	3			
BIOL 201/L	A&P Lecture/Lab	4			
BIOL 202/L	A&P II Lecture/Lab	4			
HSCI 230	Intro to Health Care	2			

College of Health Professions
Disaster Medicine Programs

Disaster Medicine & Management	
Master of Science (MS)	
Program Director	Jean Bail, EdD, RN, MSN, CEN, MEP, EMT-P
Campus	East Falls & Online options
Website	https://www.jefferson.edu/university/health-professions/departments/programs/disaster-medicine-management/ms.html

Program Description

Jefferson's Master in Disaster Medicine and Management program, delivered as a partnership between Jefferson and the Department of Emergency Medicine of the Albert Einstein Health Network, prepares students to manage and develop the increasingly complex disaster management and preparedness requirements of the 21st century.

Certificate Curriculum: 1 year, 9 credits

DMM 610	Foundations in Emergency Management	3
DMM 640	Logistic Management for Disasters	3
	Elective	3

MS Curriculum: 1-3 year, 36 credits

Core Curriculum					
DMM 610	Foundations in Emergency Management	3	DMM 640	Logistic Management Disasters	3
DMM 631	Organizational Management and Communications in Disasters	3	DMM 651	Applied Research Methods and Statistics	3
DMM 635	Psychological Aspects of Disasters	3	DMM 755	Capstone Experience in Disaster Medicine and Management	3
DMM 639	Principles Disaster Exercises and Drills	3		Electives (Designated)	12
DMM 643	Public Health Implications of Disasters	3	In addition to the eight required courses, students are required to complete 100 hours of experiential learning.		
Students select from the following electives:					
DMM-612 Foundations of Homeland Security & Defense (3)					
DMM-613 International and Humanitarian Disaster Management (3)					
DMM-615 Hazardous Materials & Industrial Safety (3)					
DMM-617 Disaster Mapping (3)					
DMM-619 Natural Disasters (3)					
DMM-623 Weapons of Mass Destruction (3)					
DMM-624 Organizational Risk and Crisis Management (3)					
DMM-625 Business and Crisis Continuity (3)					
DMM-626 Organizational Recovery and Planning (3)					
DMM-627 Principles of Terrorism (3)					
DMM-648 Emergency Preparedness with Special Needs Populations (3)					
DMM-649 Health care Emergency Management (3)					
DMM-653 Clinical Disaster Medicine (3)					
DMM-791 Internship in Disaster Medicine and Management (3)					
DMM-797 Special Topics in Disaster Medicine and Management (1-3)					

Business & Organizational Continuity

Graduate Certificate

Program Director	Jean Bail, EdD, RN, MSN, CEN, MEP, EMT-P
Campus	Online
Website	https://www.jefferson.edu/university/health-professions/departments/programs/disaster-medicine-management/business-organizational-continuity-certificate.html

Program Description

Designed for working professionals and students in the MS in Disaster Medicine and Management program, this three-course certificate program provides students with an awareness of businesses' vulnerability to major disruptions due to data loss and natural disasters, as well as how to promote an effective recovery.

Curriculum: 9 credits

Core Curriculum		
DMM 625	Business and Planning for Crisis Continuity	3
DMM 624	Organizational Risk and Crisis Management	3
DMM 626	Organizational Recovery and Planning	3

Health Sciences

Bachelor of Science (BS)

Program Director	Wendy Krupnick, PhD, MBA
Campus	Kirby Wycoff
Website	East Falls https://www.jefferson.edu/university/health-professions/departments/programs/health-sciences-programs/health-sciences.html

Program Description

The Health Sciences program provides a strong foundation in the health, psychology and science disciplines combined with unique practical and clinical experiences. Together, these prepare students for a range of professional opportunities, from direct entry into a health career to further education in graduate or health professions programs. Students earn credit while building clinical experience through patient contact and volunteer hours integrated into health sciences coursework. Customizable free electives allow students to develop an area of specialization, pursue a minor concentration, or complete credit-bearing internships in an emergency room, physician's office, rehabilitation facility, or other area matched to future career interests. Students also have opportunities to study away or participate in medical mission trips.

Learning Goals/Outcomes

- Apply scientific and psychological concepts to make informed clinical decisions.
- Explain factors that can influence health and well-being.
- Apply principles of professionalism, respect, and ethical behavior (in class and in the field).
- Demonstrate an understanding of a range of health professions' scopes of practice and responsibilities to make informed career decisions.

Curriculum: 4 years, minimum 120 credits

<u>Year 1</u>			<u>Year 3</u>		
FYS 100	Pathways Seminar	1	PSYC 213	Developmental Psychology	3
WRIT 101	Writing I: Written Communication	3	CGIS 300	Contemporary Global Issues	3
AMST 114	Topics in American Studies	3	ISBM 3XX	Integrative Seminar	3
MATH 102	Pre-Calculus (or higher)	3	HSCI OR BIOL	Writing Intensive Elective	3-4
SCI Elec	BIOL-CHEM-PHYC-SCI Elective/Lab	4	GCIT 2XX	Global Citizenship	3
SCI Elec	BIOL-CHEM-PHYC-SCI Elective/Lab	4	HSCI 225	Applied Stats for Health Sciences	3
BIOL 103 OR 112	Biology I Lecture/Lab or Core Concepts in Biology/Lab	4	HSCI 3XX	Health Sciences Elective	3
BIOL 104 OR SCI Elec	Biology II Lecture/Lab or BIOL-CHEM-PHYC-SCI Elective/Lab	4	HSCI 3XX	Health Sciences Elective	3
WRIT 201	Multimedia Communication	3	SCI Elec	BIOL-CHEM-PHYC-SCI Elective/Lab	4
				Free Elective	3
	<u>Year 2</u>			<u>Year 4</u>	
HSCI 230	Introduction to Healthcare	2	PHIL 499	Philosophies of the Good Life	3
PSYC 101	Introduction to Psychology	3	HSCI 330	Medical Terminology and Documentation	3
GDIV 2XX	Global Diversity	3	PSYC 2XX	Psychology Elective	3
ADIV 2XX	American Diversity	3	PSYC 2XX	Psychology Elective	3
ETHC 2XX	Ethics	3		Free Elective (consider 4-course minor)	3
PSYC 201	Abnormal Psychology	3		Free Elective (consider 4-course minor)	3
HSCI 3XX	Health Sciences Elective	3		Free Elective (consider 4-course minor)	3
BIO 201	Anatomy & Physiology I Lecture/Lab	4		Free Elective (consider 4-course minor)	3
BIOL 202	Anatomy & Physiology II Lecture/Lab	4		Free Elective	3
				Free Elective	3

Health Sciences: Pre Nursing

Bachelor of Science (BSN)

Program Director	Wendy Krupnick, PhD, MBA
Campus	East Falls
Website	https://www.jefferson.edu/university/health-professions/departments/programs/health-sciences-programs/pre-nursing.html

Program Description

With a strong foundation in sciences psychology and arts & humanities, the nursing preparation sequence fulfills all necessary prerequisites for upper-division courses in the Jefferson College of Nursing BSN program. Students are prepared for roles as compassionate clinical leaders upon graduation.

Learning Goals/Outcomes

Upon completing a BSN program at Jefferson College of Nursing, you will be prepared to excel on the national licensure examination, and will have access to registered nursing positions in all healthcare environments, including Magnet-designated hospitals. Extensive simulation and immersion experiences will prepare you to be a clinical leader in your profession from day one. Graduates are also prepared to continue in graduate or doctoral level nursing programs to pursue advanced nursing careers.

Foundation Courses for Nursing (Prerequisite Curriculum): 60-62 Credits

<u>Year 1</u>			<u>Year 2</u>		
FYS 100	First Year Seminar	1	HSCI 225	Applied Statistics in Health Sciences	3
WRIT 101	Writing Seminar I	3	PSYC 213	Developmental Psychology	3
MATH 102	Pre-Calculus	3	HSCI 311	Introduction to the Nursing Profession	2
CHEM 103	Chemistry I/Lab	4	GDIV or ADIV 2XX	Select 1	3
BIOL 112	Core Concepts of Biology/Lab	4	HSCI 304	Nutrition and Health	3
PSYC 101	Introduction to Psychology	3	BIOL 201	A&P I/Lab	4
AMST 114	Topics in American Studies	3	BIOL 202	Anatomy & Physiology II/Lab	4
WRIT 201	Writing Seminar II or World Lit	3	BIOL 221	Microbiology/Lab	4
HSCI 100	Intro to Health Profession	1	ETHC 2XX	Ethics	3
HSCI 230	Intro to Healthcare	2	HSCI 3xx	Free Elective	2-3
PSYC 201	Abnormal Psychology	3			

Upper-Division Nursing Sequence

- refer to the Jefferson College of Nursing (JCN) for upper-division nursing curriculum

Health Sciences: Pre-Pharmacy

Bachelor of Science (BS)

Program Director	Wendy Krupnick, PhD, MBA
Campus	East Falls
Website	https://www.jefferson.edu/university/health-professions/departments/programs/health-sciences-programs/pre-pharmacy.html

Program Description

You will have the opportunity to take courses with other pre-medical, health sciences and future pharmacy students, and experience undergraduate and leadership experiences.

All Pharmacy applicants must apply to the graduate program through an online centralized application service, PharmCAS, and be invited to interview. East Falls students who meet the progression criteria through the Health Sciences BS Pre-Pharmacy program are guaranteed an interview for the competitive professional pharmacy program at Jefferson College of Pharmacy.

Two-Year Track: Foundation and Prerequisite Coursework

<u>Year 1</u>			<u>Year 2</u>		
FYS 100	Pathways Seminar	1	GCIT 2XX	Global Citizenship	3
WRIT 101	Writing Seminar I	3	ETHC 2XX	Ethics	3
AMST 114	Topics in America Studies	3	Elective	WRIT 201 (recommended)	3
CHEM 103	General Chemistry I/Lab	4	BIOL 201	Anatomy & Physiology I/Lab	4
BIOL 103	Biology I/Lab	4	CHEM 201	Organic Chemistry I/Lab	4
MATH 103	Applied Calculus	3	PHYC 111	Physics I	4
PSYC 101	Introduction to Psychology	3	BIOL 221	Microbiology/Lab	4
GDIV 2XX	Global Diversity	3	BIOL 202	Anatomy & Physiology II/Lab	4
ADIV 2XX	American Diversity	3	CHEM 202	Organic Chemistry II/Lab	4
CHEM 104	General Chemistry II/Lab	4	PHYC 112	Physics II	4
BIOL 104	Biology II/Lab	4			

- All courses minimum “C” grade

Health Sciences: Pre-Medical Imaging & Radiation Sciences

Bachelor of Science (BS)

Program Director Wendy Krupnick, PhD, MBA
Campus East Falls
Website <https://www.jefferson.edu/university/health-professions/departments/programs/health-sciences-programs/pre-medical-imaging-radiation-sciences.html>

Program Description

As a student in this program, you will complete foundation and pre-professional coursework with other pre-medical and health students on Jefferson's East Falls Campus. During the second year, students will begin the process of working with faculty to select concentrations in the radiologic sciences. Students who maintain progression criteria are guaranteed to matriculate into the professional phase, delivered on the Center City campus. Jefferson's academic advisors and faculty work closely with our students on course selection and academic performance to ensure that each student is on pace to transition into the professional phase of the program.

Learning Goals/Outcomes

In our stimulating and supportive environment, you will build a strong foundation in sciences and humanities, preparing you for success in upper-division courses in Medical Imaging and Radiation Sciences.

Years 1 & 2: 61-62 credits

<u>Year 1</u>			<u>Year 2</u>		
FYS 100	Pathways Seminar	1	ADIV/GDIV/GCIT	Diversity/Citizenship	3
AMST 114	Topics in Am Studies	3	ADIV/GDIV/GCIT	Diversity/Citizenship	3
WRIT 101	Written Communication	3	HSCI 225	Applied Stats for Health Sciences	3
WRIT 2XX	Multimedia Communication	3-4	HSCI 3XX	Health Sciences Elective	3
MATH 102	Pre-Calc/ Intro Calc	3-4	HSCI 330	Medical Terminology	3
BIOL 112	Core Concepts in Biology/Lab	4	BIOL 201	*Anatomy & Physiology I/Lab	4
HSCI 100	Intro to Health Professions	1	BIOL 202	*Anatomy & Physiology II/Lab	4
HSCI 230	Intro to Health Care	2	PHYC 111	*Physics I	4
CHEM 103	*Chemistry I/Lab	4	PHYC 112	* Physics II	4
CHEM 104	Chemistry II/Lab (optional; or elective)	3-4			
PSYC 101	Introduction to Psychology	3	*Science prerequisites		

- All courses minimum "C" grade; 3.0 science GPA

Years 3 & 4:

Select two concentrations from the options below (refer to Medical Imaging & Radiation Sciences section for upper-division curriculum information)

Nuclear Medicine
Magnetic Resonance Imaging

Radiography
General Sonography

Cardiac Sonography
Vascular Sonography

Health Sciences: Pre-Physician Assistant

Bachelor of Science (BS)

Program Director	Wendy Krupnick, PhD, MBA
Campus	East Falls
Website	https://www.jefferson.edu/university/health-professions/departments/physician-assistant-studies/degrees-programs/undergraduate.html

Program Description

The Pre-Physician Assistant pathway in Health Sciences is designed for highly qualified students who are not accepted into the accelerated BS/MS in Physician Assistant Studies program. Students can complete the four-year BS in Health Sciences degree following the curriculum in the Pre-PA pathway and, after completing either Year 3 or Year 4, apply for admission into the graduate Physician Assistant (PA) program at Jefferson East Falls or New Jersey campuses. Students from Jefferson who meet progression criteria are guaranteed an admissions interview for the highly competitive graduate program. All PA prerequisite courses are completed during the undergraduate program. Since this pathway is not completed in an accelerated format, it provides students with more opportunities to incorporate experiences like study away, intercollegiate athletics, and leadership roles in student life into their undergraduate education program.

Progression Criteria

Progression criteria for interview consideration includes the following: minimum cumulative and science GPA of 3.25; certification as EMT or CNA; minimum 200 hours of direct patient contact, completed CASPA online application (requires personal essay, letters of recommendation).

Curriculum: 4 years, minimum 120 credits

<u>Year 1</u>			<u>Year 3</u>		
FYS 100	Pathways Seminar	1	PSYC 213	Developmental Psychology	3
WRIT 101	Writing I: Written Communication	3	ISEM 3XX	Integrative Seminar	3
HSCI 100	Intro. to Health Professions	1	BIOL 221	Microbiology (Writing Intensive)	4
AMST 114	Topics in American Studies	3	GCIT 2XX	Global Citizenship	3
MATH 102	Pre-Calculus (or higher)	3	HSCI 225	Applied Stat for Health Sciences	3
CHEM 103	Chemistry I/Lab	4	HSCI 320	Clinical Interactions	3
CHEM 104	Chemistry II/Lab	4	HSCI 3XX	Health Sciences Elective	3
BIOL 103	Biology I Lecture/Lab	4	SCI Elec	BIOL 207 Genetics Lecture /Lab (recom)	4
BIOL 104	Biology II Lecture/Lab	4	Free Ele	CHEM 201 Organic Chemistry I (recom)	4
WRIT 201	Multimedia Communication	3	Free Ele	CHEM 202 Organic Chemistry I (recom)	4
<u>Year 2</u>			<u>Year 4</u>		
HSCI 230	Introduction to Healthcare	2	CGIS 300	Contemporary Global Issues	3
PSYC 101	Introduction to Psychology	3	PHIL 499	Philosophies of the Good Life	3
GDIV 2XX	Global Diversity	3	PSYC 2XX	Psychology Elective	3
ADIV 2XX	American Diversity	3	PSYC 2XX	Psychology Elective	3
ETHC 2XX	Ethics	3	HSCI 330	Medical Terminology	3
PSYC 201	Abnormal Psychology	3	Free Ele	consider 4-course minor	3
HSCI 3XX	Health Sciences Elective	3	Free Ele	consider 4-course minor	3
HSCI 3XX	Health Sciences Elective	3	Free Ele	consider 4-course minor	3
BIOL 201	Anatomy & Physiology I Lecture/Lab	4	Free Ele	consider 4-course minor	3
BIOL 202	Anatomy & Physiology II Lecture/Lab	4	Free Ele	Free Elective	0-3

Health Sciences & Athletic Training

Accelerated Bachelor of Science (BS) Health Sciences & Master of Science (MS) Athletic Training

Program Director	Wendy Krupnick, PhD, MBA
Campus	East Falls
Website	https://www.jefferson.edu/university/rehabilitation-sciences/departments/athletic-training/degrees-programs/bs-ms-combined.html

Program Description Learning Goals & Outcomes

As a student in this accelerated dual degree program, you can earn both your bachelor's and master's degrees in five years. Students begin their pre-professional education in the Health Sciences where they complete college studies, health sciences, and prerequisite coursework with other health and pre-medical students on Jefferson's East Falls Campus. Students who maintain progression criteria are guaranteed to matriculate into the Athletic Training professional program.

Jefferson's academic advisors and faculty work closely with our students on course selection and academic performance to ensure that each student is on pace to transition into the professional phase of the program. The MS in Athletic Training program is designed to help meet the growing demand for professional Certified Athletic Trainers (ATC). It prepares highly motivated students with an interest in the medical field to sit for the National Athletic Trainers Association Board of Certification (BOC) examination upon graduation.

Curriculum: 5 Years, 156 credits

<u>Year 1</u>			<u>Year 4</u>		
FYS 100	Pathways Seminar	1	ATP 601	Current Concepts Emergency Care	1
WRIT 101	Writing Seminar I	3	ATP 602	Scientific Inquiry & Writing	1
AMST 114	Topics in American Studies	3	ATP 605	Fundamentals of Athletic Training	4
WRIT 2XX	Writing Seminar II	3-4	ATP 610	Basics of Rehabilitation	3
MATH 102	Pre-Calculus	3	ATP 620	Practicum Athletic Training I	3
BIOL 112	Core Concepts in Biology/Lab	4	ATP 615	Functional Human Anatomy	3
CHEM 101	Intro to Chemistry	3	HSCI 610	Emergency Medical Technician	3
PHYC 101	Physics	3	ATP 625	Prevention, Eval & Treatment Ath Inj I (U.Extremity)	4
HSCI 100	Intro to Health Professions	1	ATP 630	Therapeutic Modalities	3
PSYC 101	Introduction to Psychology	3	ATP 635	Human Physiology	3
PSYC 213	Developmental Psychology	3	ATP 645	Motor Control and Human Movement	3
ADIV 2XX	American Diversity	3	ATP 640	Practicum Athletic Training II	3
ETHC 2XX	<u>Year 2</u> Ethics	3	ATP 660	<u>Year 5</u> Specialty Practicum in Athletic Training	3
GDIV 2XX	Global Diversity	3	ATP 665	Prevention, Eval & Treatment Ath Inj II (L. Extremity)	4
GCIT 2XX	Global Citizenship	3	ATP 685	Organization & Administration in Athletic Training	2
STAT 220	Stats for Behavioral Sciences	3	ATP 661	Practicum Athletic Training III	3
PSYC 201	Abnormal Psychology	3	ATP 690	Gen Medical Condition & Pharm Athletic Training	3
HSCI 230	Introduction to Health Care	2	ATP 691	Research/Collaborative Project I	1
HSCI 304	Nutrition and Health	3	ATP 670	Prevention, Evaluation and Treatment of Athletic Injuries III (Spine and advanced techniques)	4
HSCI 305	Concepts in Fitness & Wellness	3	ATP 695	Psychological Aspects of Injury and Rehabilitation	3
BIOL 201/L	Anatomy and Phys. I Lecture/Lab	4	ATP 696	Professional Topics in Athletic Training	2
BIOL 202/L	Anatomy and Phys. II Lecture/Lab	4	ATP 662	Practicum in Athletic Training IV	3
	<u>Year 3</u>		ATP 692	Research/Collaborative Project II	1
CGIS 300	Contemporary Global Issues	3			
ISEM 3XX	Integrative Seminar	3			
PHIL 499	Philosophies of the Good Life	3			
HSCI 320	Clinical Interactions	3			
HSCI 306	Exercise Physiology	3			
HSCI 307	Kinesiology	3			
HSCI 330	Med Term & Documentation	3			
PSYC 322	Research Methods	3			
	Free Electives	6			

Health Sciences & Physician Assistant

Accelerated Bachelor of Science (BS) Health Sciences & Master Physician Assistant (PA)

Contact
Campus
Website

Admissions Office
East Falls/Center City
<https://www.jefferson.edu/university/health-professions/departments/physician-assistant-studies/degrees-programs/undergraduate/3-2-pathway.html>

Program Description, Learning Goals & Outcomes

The Health Sciences to Physician Assistant program is designed for students who have determined they want to pursue a physician assistant career early. Students in this five-year accelerated dual degree program are assured a seat in the graduate MS Physician Assistant Studies program, provided they meet progression criteria set for their enrollment term.

Prior to enrolling in the professional phase of the program, students must complete an online application through CASPA (Centralized Application Service for Physician Assistants) by the stated deadline of the year prior to their desired master's enrollment date. All applicants who apply to CASPA, have a CASPA-calculated cumulative GPA and science GPA of 3.25, certification as an EMT or CNA, and at least 200 documented direct patient contact hours will be invited for an admissions interview.

Students matriculating into the professional phase of study in the Physician Assistant program will complete 20-22 graduate PA credits during Year 4 fall. These credits are allocated to the undergraduate BS degree in Health Sciences, with graduation eligibility in December. Year 4 spring and Year 5 courses comprise the MS degree.

The graduate Physician Assistant Program requires a continuous 25 months of study and includes Didactic and Clinical portions. The Didactic year consists of three semesters of medically related classroom and laboratory work, integrating some clinical experiences. Students must successfully complete all Didactic courses before entering the Clinical year. The Clinical year consists of extensive clinical experience through ten 5-week rotations at a variety of medical facilities, including hospitals and medical offices.

Curriculum: 5 years, 217 credits

<u>Year 1</u>			<u>Year 4</u>		
FYS 100	Pathways Seminar	1	PAST 407A	Advanced Human Anatomy A	2
WRIT 101	Writing Seminar I	3	PAST 407B	Advanced Human Anatomy B	3
AMST 114	Topics in American Studies	3	PAST 421	Genetics, Immunology & Microbiology	2
WRIT 2XX	Writing Seminar II	3-4	PAST 413	Medical Physiology & Pathophysiology	3
MATH 1XX	Pre-Calculus/Intro Calculus	3	PAST 417	Medical History & Physical Diagnosis	5
BIOL 103	Biology I/Laboratory	4	PAST 411	Applied Behavioral Sciences	3
BIOL 104	Biology II & Lab	4	PAST 410	Medical & Professional Ethics	2
CHEM 104	Chemistry II/Laboratory	4	PAST 403	Evidence Based Medicine	2
CHEM 104	Chemistry II Lecture & I Lab	4	PAST 530	Clinical Medicine/Lab	8
PSYC 101	Introduction to Psychology	3	PAST 612	Clinical Reasoning	2.5
HSCI 100	Intro to Health Professions	1	PAST 550	Pharmacology & Clinical Therapeutics	4
	<u>Year 2</u>		PAST 610	Emergency Medicine	3
ETHC 2XX	Ethics	3	PAST 615	Diagnostic Medicine	2
GDIV 2XX	Global Diversity	3	PAST 605	Clinical Correlations of Public Health	1
ADIV 2XX	American Diversity	3	PAST 621	Clinical Disciplines Overview	6
GCIT 2XX	Global Citizenship	3	PAST 622	Pharmacotherapeutics Seminar	1
PSYC 201	Abnormal Psychology	3	PAST 603	Advanced Physical Assessment	.5
HSCI 230	Intro to Health Care	2	PAST 623	Advanced Diagnostics Seminar	1
CHEM 214	Bioorganic Chemistry	3	PAST 561	Physiology & Pathophysiology II	1
BIOL 221	Microbiology Lecture & Lab	4	PAST 702	Clinical Rotation 1	6
BIOL 201	Anatomy and Physiology I/L	4		<u>Year 5</u>	
BIOL 202	Anatomy and Physiology II/L	4	PAST 702	Clinical Rotation 2, 3 & 4	18
PSYC 213	Developmental Psychology	3	PAST 702	Clinical Rotation 5	6
	<u>Year 3</u>		PAST 702	Clinical Rotation 6, 7 & 8	18
CGIS 300	Contemporary Global Issues	3	PAST 702	Clinical Rotation 9 & 10	12
ISEM 3XX	Integrative Seminar	3	PAST 772	Master's Comprehensive Experience	2
PHIL 499	Philosophies of the Good Life	3			
HSCI 225	Applied Statistics	3			
HSCI 3XX	Health Sciences Elective	3			
BIOL XXX	Biology Elective	3			
HSCI 320	Clinical Interactions	3			
HSCI 330	Medical Terminology	3			
BIOL 207	Principles Genetics Lecture & Lab	3			
	Free Electives	6			

Health Sciences & Occupational Therapy

Accelerated Bachelor of Science (BS) Health Sciences & Doctorate in Occupational Therapy (OTD)

Contact	Admissions Office
Campus	East Falls/Center City
Website	https://www.jefferson.edu/university/rehabilitation-sciences/departments/occupational-therapy/degrees-programs/bs-otd-programs-east-falls/curriculum.html

Program Description

Occupational therapy is a healthcare profession that helps people to maximize their functional independence after illness or injury, or, develop the social and emotional skills necessary to participate fully in everyday life. Occupational therapists assist children with motor, social and learning needs to be successful in school activities and family life. They help adults to develop strategies to address the physical and emotional changes associated with rehabilitation or long-term health needs. Therapy frequently involves assisting individuals to relearn old skills, develop new ways of doing, or adapt the environment to enable them to live satisfying and independent lives.

The accelerated BS in Health Sciences/Doctorate in Occupational Therapy (OTD) program is designed for students who know early on that they want to become occupational therapists. This dual degree program allows students to seamlessly complete undergraduate and graduate degrees in less time than would be required to complete both degrees separately. Undergraduate courses and extra-curricular experiences provide students with a foundation to develop the knowledge, values and interpersonal skills needed for success as an occupational therapist.

During the first three years of undergraduate coursework, students complete major requirements for the bachelor's degree, including college studies and occupational therapy program prerequisites. Students who meet the graduate occupational therapy program progression criteria can enroll in first year Occupational Therapy graduate coursework during Year 4 of undergraduate studies. At the end of Year 4, students are awarded the BS in Health Sciences, and are eligible to participate in the May commencement ceremony. Upon completion of graduate occupational therapy program requirements in Year 6, the doctoral degree in Occupational Therapy will be awarded.

The accelerated BS/OTD is a cohort program that requires uninterrupted enrollment. Once accepted, students may not accelerate (i.e. take additional courses during summer semesters to shorten program length) or decelerate (i.e. take a reduced course load in a semester and add another year to undergraduate study).

For more information about the MS in Occupational Therapy, refer to the College of Rehabilitation Sciences section of the Catalog.

Curriculum: 6 years, 205 credits (minimum 120 cr. BS)

<u>Hallmark Courses</u>			<u>Health Sciences Core Courses</u>		
FYS 100	Pathways Seminar	3	HSCO 100	Introduction to Health Professions	3
WRIT 101	Writing Seminar I	3	HSCI 230	Introduction to Health Care	3
WRIT 2XX	Multimedia Comm	3	HSCI 330	Medical Terminology	3
BIOL112/L	Concepts of Bio/Lab	4	HSCI 225/ STAT 220	Applied Statistics	3
PHYS 111	Physics I Mechanics & Thermodynamics	3	HSCI 3xx	Health Sci Designated Elective	3
MATH 102 OR 110	Pre-calculus/Intro to Calculus/Calculus I	3-4	HSCI 3xx	Health Sci Designated Elective	3
AMST 114	Topics in Am Studies	3	HSCL/BIOL	Writing Intensive Designated Elective	3-4
GDIV 2XX	Global Diversity	3	<u>Science Courses</u>		
GCIT 2XX	Global Citizenship	3	BIOL 201/L	Anatomy and Physiology I/Lab	4
ETHC 2XX	Ethical Reflection	3	BIOL 202/L	Anatomy and Physiology II/Lab	4
ADIV 2XX	American Diversity	3	Health Sciences Designated Electives		
ISEM 3XX	Integrative Seminar	3	<u>Psychology Courses</u>		
CGIS 300	Contemp Global Issues	3	PSYC 101	Introduction to Psychology	3
HALL 499	Capstone Folio	4	PSYC 201	Abnormal Psychology	3
			PSYC 213	Developmental Psychology	3
			<u>Year 4</u>		
			OT Doctoral Courses towards BS		37
			<u>Year 5 & 6</u>		
			OT Doctoral Courses toward OTD		79

Medical Imaging and Radiation Sciences

Bachelor of Science (BS)

Department Chair	Colleen Dempsey, EdD, RT (R)(ARRT)
Campus	Center City
Website	https://www.jefferson.edu/university/health-professions/departments/radiologic-sciences/degrees-programs/bs-programs/

The Department of Medical Imaging and Radiation Sciences prepares students for careers in medical imaging and radiation oncology. As the field of radiology has become more advanced and complex, the need exists for proficient, multi-skilled professionals. Medical imaging and radiation science professionals operate sophisticated equipment to produce optimal diagnostic images, calculate radiation treatment plans and deliver radiation treatments. They have the knowledge to identify normal and abnormal anatomy and physiology, are responsible for the well-being of patients in their care and are a member of the health care team.

The mission of the Department of Medical Imaging and Radiation Sciences is to provide a comprehensive education preparing students for entry-level practice in medical imaging and radiation sciences as competent, caring members of the health care team, cultivating professionalism and life-long learning.

Two Year Program Concentrations:

Imaging Concentrations

Cardiac Sonography, Computed Tomography¹, General Sonography, Invasive Cardiovascular Technology², Magnetic Resonance Imaging, Nuclear Medicine, Radiography, Vascular Sonography

Radiation Oncology Concentrations

Radiation Therapy, Medical Dosimetry³

Non-Imaging Concentrations

Offered in the School of Continuing and Professional Studies
Health Service Management³ or Healthcare Information Systems³

¹ Second year (ONLY after the first year of Radiography, Radiation Therapy, or Nuclear Medicine)

² Second year (ONLY after the first year of Radiography, Cardiac Sonography, or Vascular Sonography)

³ Second year

One Year Program Concentrations:

Students who have the 50 prerequisite credits and a baccalaureate degree are eligible to apply to the following one-year concentrations:

Cardiac Sonography

General Sonography
 Vascular Sonography
 Magnetic Resonance Imaging
 Medical Dosimetry
 Nuclear Medicine
 Radiation Therapy
 Radiography

Students who have the 50 prerequisite credits and certification in or have graduated from an accredited program* in medical imaging and radiation science may apply to the following one-year concentrations:

Cardiac Sonography
 General Sonography
 Vascular Sonography
 Computed Tomography - requires ARRT (R), (T), (N) or CNMT
 Invasive Cardiovascular Technology - requires ARRT(R) or ARDMS RDCS/RVT
 Magnetic Resonance Imaging
 Medical Dosimetry - requires ARRT (T) or successful completion of a JRCERT-accredited Radiation Therapy Program)
 Nuclear Medicine
 Radiation Therapy
 Radiography

Concentration: Radiation Therapy

<u>Semester 1</u>			<u>Semester 3</u>		
RST 322	Patient Care in Radiation Oncology (hybrid)	2	RST 414	Clinical Radiation Therapy III	10
RST 401	Cross-Sectional Anatomy I	2	RST 429	Radiation Therapy Principles and Procedures III	2
RST 409	Radiation Therapy Principles and Procedures I	3	RST 473	Radiation Therapy Review Seminar	2
RST 412	Clinical Radiation Therapy I	6			
RST 435	Radiation Therapy Physics I	2			
RST 439	Radiation Protection	1			
RST 440	Introduction to Radiobiology	2			
<u>Semester 2</u>					
RST 402	Cross-Sectional Anatomy II	2			
RST 413	Clinical Radiation Therapy II	6			
RST 415	Clinical Radiation Oncology	2			
RST 416	Principles of Radiation Dosimetry	2			
RST 419	Radiation Therapy Principles and Procedures II	3			
RST 436	Radiation Therapy Physics II	3			

Concentration: Medical Dosimetry

<u>Semester 1</u>			<u>Semester 3</u>		
RSD 322	Patient Care in Radiation Oncology	2	RSD 414	Clinical Medical Dosimetry III	8
RSD 401	Cross-Sectional Anatomy I	2			
RSD 412	Clinical Medical Dosimetry I	6			
RSD 430	Case Studies in Dosimetry*	1			
RSD 435	Medical Dosimetry Physics I	3			
RSD 439	Radiation Protection	1			
RSD 440	Introduction to Radiobiology	2			
RSD 480	Survey of Medical Imaging	2			
<u>Semester 2</u>					
RSD 402	Cross-Sectional Anatomy II	2			
RSD 413	Clinical Medical Dosimetry II	6			
RSD 415	Clinical Radiation Oncology	2			
RSD 436	Medical Dosimetry Physics II	3			
RSD 442	Quality Assurance & Instrumentation	2			
RSD 443	Brachytherapy	2			
RSD 444	Special Procedures	2			
			*Students coming from TJU Radiation Therapy program only		

Concentration: Nuclear Medicine

<u>Semester 1</u>			<u>Semester 3</u>		
RSN 321	Patient Care & Services Diagnostic Imaging	2	RSN 457	Nuclear Medicine Procedures III	2
RSN 400	Medical Nuclear Physics	3	RSN 458	Nuclear Medicine Advanced Procedures	2
RSN 410	Medical Radiobiology	2	RSN 472	Clinical Nuclear Medicine III	8
RSN 430	Nuclear Medicine Instrumentation	3	RSN 499	Nuclear Medicine Review Seminar	2
RSN 455	Nuclear Medicine Procedures I	3			
RSN 461	Nuclear Medicine Lab I	1			
RSN 470	Clinical Nuclear Medicine I	6			
<u>Semester 2</u>					
RSN 420	Radiation Protection	3			
RSN 440	Health Sciences Research	1			
RSN 451	Imaging Informatics	1			
RSN 456	Nuclear Medicine Procedures II	3			
RSN 460	Radiochemistry & Radiopharmaceuticals	3			
RSN 462	Nuclear Medicine Lab II	1			
RSN 471	Clinical Nuclear Medicine II	6			

Concentration: Magnetic Resonance Imaging

<u>Semester 1</u>			<u>Semester 3</u>		
RSM 321	Patient Care & Services in Diagnostic Imaging	2	RSM 414	Clinical MRI III	8
RSM 400	MRI Physics & Instrumentation I	3	RSM 473	MRI Review Seminar	2
RSM 401	Cross-Sectional Anatomy I	2	RSM 474	MRI Advanced Scanning Seminar	1
RSM 411	MRI Safety	2			
RSM 412	Clinical MRI I	6			
RSM 431	MRI Procedures I	2			
RSM 433	Procedures Simulation Lab I	1			
<u>Semester 2</u>					
RSM 402	Cross-Sectional Anatomy II	2			
RSM 403	MRI Physics and Instrumentation II	1			
RSM 413	Clinical MRI II	6			
RSM 415	MRI Pathology	1			
RSM 432	MRI Procedures II	2			
RSM 434	Procedures Simulation Lab II	1			
RSM 451	Imaging Informatics	1			
RSM 498	MRI Special Topics	1			

Concentration: Computed Tomography

<u>Semester 1</u>			<u>Semester 3</u>		
RSC 400	CT Physics & Instrumentation	3	RSC 414	Clinical CT III	8
RSC 401	Cross Sectional-Anatomy I	2	RSC 473	CT Review Seminar	2
RSC 412	CT Clinical I	6			
RSC 431	CT Procedures I	3			
RSC 433	CT Procedures Simulation Lab I	1			
<u>Semester 2</u>					
RSC 402	Cross-Sectional Anatomy II	2			
RSC 413	CT Clinical II	6			
RSC 432	CT Procedures II	3			
RSC 434	CT Procedures Simulation Lab II	1			
RSC 451	Imaging Informatics	1			
RSC 498	CT Special Topics	1			

Concentration: Invasive Cardiovascular Technology

<u>Semester 1</u>			<u>Semester 3</u>		
RSI 338	Invasive Procedures I	3	RSI 433	Clinical Invasive III	8
RSI 341	Radiographic Physics & Instrumentation I	2	RSI 483	Invasive Review Seminar	2
RSI 357	Invasive Principles I	3			
RSI 431	Clinical Invasive I	6			
<u>Semester 2</u>					
RSI 313	Radiobiology & Health Physics	2			
RSI 339	Invasive Procedures II	3			
RSI 342	Radiographic Physics & Instrumentation II	2			
RSI 358	Invasive Principles II	3			
RSI 432	Clinical Invasive II	6			

Concentration: Invasive Cardiovascular Technology- Cardiac Sonography Background

<u>Semester 1</u>			<u>Semester 3</u>		
RSI 338	Invasive Procedures I	3	RSI 433	Clinical Invasive III	8
RSI 341	Radiographic Physics & Instrumentation I	2	RSI 483	Invasive Review Seminar	2
RSI 357	Invasive Principles I	3			
RSI 431	Clinical Invasive I	6			
<u>Semester 2</u>					
RSI 313	Radiobiology & Health Physics	2			
RSI 339	Invasive Procedures II	3			
RSI 342	Radiographic Physics & Instrumentation II	2			
RSI 358	Invasive Principles II	3			
RSI 432	Clinical Invasive II	6			

Concentration: Invasive Cardiovascular Technology- Radiography Background

<u>Semester 1</u>			<u>Semester 3</u>		
RSI 302	Noninvasive Testing Principles & Procedures	1	RSI 433	Clinical Invasive III	8
RSI 311	Cardiovascular Physiology	2	RSI 483	Invasive Review Seminar	2
RSI 338	Invasive Procedures I	3			
RSI 357	Invasive Principles I	3			
RSI 431	Clinical Invasive I	6			
<u>Semester 2</u>					
RSI 312	Cardiovascular Pathophysiology	2			
RSI 339	Invasive Procedures II	3			
RSI 358	Invasive Principles II	3			
RSI 432	Clinical Invasive II	6			

Concentration: Invasive Cardiovascular Technology- Vascular Sonography Background

<u>Semester 1</u>			<u>Semester 3</u>		
RSI 302	Noninvasive Testing Principles & Procedures	1	RSI 433	Clinical Invasive III	8
RSI 338	Invasive Procedures I	3	RSI 483	Invasive Review Seminar	2
RSI 341	Radiographic Physics & Instrumentation I	2			
RSI 357	Invasive Principles I	3			
RSI 431	Clinical Invasive I	6			
<u>Semester 2</u>					
RSI 313	Radiobiology & Health Physics	2			
RSI 339	Invasive Procedures II	3			
RSI 342	Radiographic Physics & Instrumentation II	2			
RSI 358	Invasive Principles II	3			
RSI 432	Clinical Invasive II	6			

Concentration: Radiography

<u>Semester 1</u>			<u>Semester 3</u>		
RSR 321	Patient Care & Services in Diagnostic Imaging	2	RSR 333	Advanced Radiographic Procedures	1
RSR 331	Radiographic Procedures I	2	RSR 333L	Advanced Radiographic Procedures Lab	1
RSR 331L	Radiographic Procedures I Lab	1	RSR 373	Clinical Radiography III	8
RSR 341	Radiography Physics and Instrumentation I	2	RSR 412	Radiographic Pathology	2
RSR 353	Radiographic Imaging Principles I	2	RSR 414	Radiography Capstone	1
RSR 361	Image Analysis I	2	RSR 471	Radiography Review Seminar	2
RSR 371	Clinical Radiography I	4			
<u>Semester 2</u>					
RSR 313	Radiobiology and Health Physics	2			
RSR 332	Radiographic Procedures II	2			
RSR 332L	Radiographic Procedures II Lab	1			
RSR 342	Radiography Physics and Instrumentation II	2			
RSR 354	Radiographic Imaging Principles II	2			
RSR 362	Image Analysis II	2			
RSR 372	Clinical Radiography II	6			

Concentration: General Sonography

<u>Semester 1</u>			<u>Semester 3</u>		
RSS 321	Patient Care & Services Diagnostic Imaging	2	RS 408	Sonography Review Seminar	2
RSS 400	Ultrasound Physics I	2	RS 414	Clinical Sonography III	8
RSS 401	Sonography Cross-Sectional Anatomy	2			
RSS 402	Abdominal Sonography I	2			
RSS 404	Pelvic Sonography	3			
RSS 412	Clinical Sonography I	6			
RSS 415	Sonography Procedures I	2			
<u>Semester 2</u>					
RSS 403	Ultrasound Physics II	2			
RSS 405	Obstetrical Sonography	3			
RSS 413	Clinical Sonography II	6			
RSS 416	High Resolution Sonography	2			
RSS 417	Sonography Procedures II	2			
RSS 422	Abdominal Sonography II	2			
RSS 498	Special Topics in General Sonography	2			

Concentration: Cardiac Sonography

<u>Semester 1</u>			<u>Semester 3</u>		
RSCS 302	Noninvasive Testing Principles and Procedures	1	RSCS 413	Clinical Cardiac III	8
RSCS 311	Cardiovascular Physiology	2	RSCS 481	Cardiac Review Seminar	2
RSCS 321	Patient Care & Services Diagnostic Imaging	2			
RSCS 331	Cardiac Procedures I	2			
RSCS 351	Cardiac Principles I	3			
RSCS 400	Ultrasound Physics I	2			
RSCS 411	Clinical Cardiac I	6			
RSCS 491	Special Topics in Cardiac Sonography I	1			
<u>Semester 2</u>					
RSCS 312	Cardiovascular Pathophysiology	2			
RSCS 332	Cardiac Procedures II	2			
RSCS 352	Cardiac Principles II	3			
RSCS 403	Ultrasound Physics II	2			
RSCS 412	Clinical Cardiac II	6			
RSCS 492	Special Topics in Cardiac Sonography II	1			

Concentration: Sonography- Vascular

<u>Semester 1</u>			<u>Semester 3</u>		
RSV 311	Cardiovascular Physiology	2	RSV 423	Clinical Vascular III	8
RSV 321	Patient Care & Services in Diagnostic Imaging	2	RSV 482	Vascular Review Seminar	2
RSV 335	Vascular Procedures I	2			
RSV 353	Vascular Principles I	3			
RSV 400	Ultrasound Physics I	2			
RSV 401	Vascular Anatomy	2			
RSV 421	Clinical Vascular I	6			
<u>Semester 2</u>					
RSV 313	Vascular Pathophysiology	1			
RSV 336	Vascular Procedures II	2			
RSV 354	Vascular Principles II	3			
RSV 403	Ultrasound Physics II	2			
RSV 422	Clinical Vascular II	6			
RSV 493	Special Topics in Vascular Sonography	2			

Medical Imaging & Radiation Sciences

Master of Science (MS)

Program Director	Colleen Dempsey, EdD, RT (R) (ARRT)
Campus	Center City
Website	https://www.jefferson.edu/university/health-professions/departments/radiologic-sciences/degrees-programs/ms-programs/ms-radiologic-imaging-sciences.html

Program Description

The Master of Science in Medical Imaging & Radiation Sciences is the only program of its kind on the East Coast. The field of Medical Imaging and Radiation Sciences is rapidly growing, and the learning curve never ends. This profession requires highly-skilled and flexible practitioners, as well as proficient, qualified directors, administrators and educators.

Tracks

- Computed Tomography (CT)
- Education
- Invasive Cardiovascular Technology (ICVT)
- Management
- PET/CT

Curriculum: 1 year, credits 30-50 based on Track

Education Track: 30 credits

<u>Semester 1</u>			<u>Semester 3</u>		
RS 510	Research I	2	RS 560	Program Accreditation	3
RS 520	Research II	2	RS 620	Advances Current Technology II	2
RS 540	Program Management	3	RS 660	Seminar	2
RS 550	Principles of Instruction	3	RS 692	Capstone Project III	1
RS 690	Capstone Project I	1			
<u>Semester 2</u>					
RS 530	Radiologic & Imaging Sciences	2			
RS 610	Advances Current Technology I	2			
RS 630	Faculty Development	3			
RS 650	Healthcare Law & Ethics	3			
RS 691	Capstone Project II	1			

Management Track 30 credits

<u>Semester 1</u>			<u>Semester 3</u>		
RS 510	Research I	2	RS 590	Accreditation and Quality Management	3
RS 520	Research II	2	RS 620	Advances Current Technology II	2
RS 580	Personnel Management	3	RS 660	Seminar	2
RS 640	Financial Management	3	RS 692	Capstone Project III	1
RS 690	Capstone Project I	1			
<u>Semester 2</u>					
RS 530	Radiologic s	2			
RS 570	US Healthcare System	3			
RS 610	Advances in Current Tech I	2			
RS 650	Healthcare Law & Ethics	3			
RS 691	Capstone Project II	1			

PET/CT: 38 credits

<u>Semester 1</u>			<u>Semester 3</u>		
RS 510	Research I	2	RS 660	Seminar	2
RS 520	Research II	2	RS 692	Capstone Project III	1
RS 690	Capstone Project I	1	RSPC 514	CT Clinical III	4
RSCC 500	CT Physics and Instrumentation	3			
RSPC 501	Cross-Sectional Anatomy I	2			
RSCC 512	CT Clinical I	4			
RSPC 516	PET Principles	1			
RSPC 531	CT Procedures I	3			
RSPC 533	CT Procedures Sim Lab I	1			
<u>Semester 2</u>					
RS 691	Capstone Project II	1			
RSPC 502	Cross-Sectional Anatomy II	2			
RSPC 513	CT Clinical II	4			
RSPC 515	PET Procedures	1			
RSPC 532	CT Procedures II	3			
RSPC 534	CT Procedures Sim Lab II	1			

ICVT FOR CARDIAC SONOGRAPHER: 49 credits

<u>Semester 1</u>			<u>Semester 3</u>		
RS 510	Research I	2	RS 660	Seminar	2
RS 520	Research II	2	RS 692	Capstone Project III	2
RS 690	Capstone Project I	1	RSI 533	Clinical Invasive III	8
RS 531	Clinical Invasive I	6	RSI 583	Invasive Review Seminar	2
RS 538	Invasive Procedures I	3			
RS 541	Radiographic Physics & Instrumentation I	2			
RS 557	Invasive Principles I	3			
<u>Semester 2</u>					
RS 691	Capstone Project II	1			
RSI 513	Radiobiology & Health Physics	2			
RSI 532	Clinical Invasive II	6			
RSI 539	Invasive Procedures II	3			
RSI 542	Radiographic Physics & Instrumentation I	2			
RSI 558	Invasive Principles II	3			

ICVT FOR RADIOGRAPHERS: 48 credits

<u>Semester 1</u>			<u>Semester 3</u>		
RS 510	Research I	2	RS 660	Seminar	2
RS 520	Research II	2	RS 692	Capstone Project III	1
RS 690	Capstone Project I	1	RSI 533	Clinical Invasive III	8
RSI 502	Noninvasive Testing Principles & Procedures	1	RSI 583	Invasive Review Seminar	2
RSI 511	Cardiovascular Physiology	2			
RSI 531	Clinical Invasive I	6			
RSI 538	Invasive Procedures I	3			
RSI 557	Invasive Principles I	3			
<u>Semester 2</u>					
RS 691	Capstone Project II	1			
RS 512	Cardiovascular Pathophysiology	2			
RSI 532	Clinical Invasive II	6			
RS 539	Invasive Procedures II	3			
RS 558	Invasive Principles II	3			

ICVT For Vascular Sonography: 50 credits

<u>Semester 1</u>			<u>Semester 3</u>		
RS 510	Research I	2	RS 660	Seminar	2
RS 520	Research II	2	RS 692	Capstone Project III	1
RS 690	Capstone Project I	1	RSI 533	Clinical Invasive III	8
RSI 502	Noninvasive Testing Principles & Procedures	1	RSI 583	Invasive Review Seminar	2
RSI 531	Clinical Invasive I	6			
RSI 538	Invasive Procedures I	3			
RSI 541	Radiographic Physics & Instrumentation I	2			
RSI 557	Invasive Principles I	3			
<u>Semester 2</u>					
RS 691	Capstone Project II	1			
RSI 513	Radiobiology & Health Physics	2			
RSI 532	Clinical Invasive II	6			
RSI 539	Invasive Procedures II	3			
RSI 542	Radiographic Physics & Instrumentation II	2			
RSI 558	Invasive Principles II	3			
RSI 583	Invasive Review Seminar	2			

Computed Tomography (CT): 44 credits

<u>Semester 1</u>			<u>Semester 3</u>		
RS 510	Research I	2	RS 660	Seminar	2
RS 520	Research II	2	RS 692	Capstone Project III	1
RS 690	Capstone Project I	1	RSC 514	CT Clinical III	8
RSC 500	CT Physics & Instrumentation	3	RSC 773	CT Review Seminar	2
RSC 501	Cross-Sectional Anatomy I	2			
RSC 512	CT Clinical I	4			
RSC 531	CT Procedures I	3			
RSC 533	CT Procedures Simulation Lab I	1			
<u>Semester 2</u>					
RS 691	Capstone Project II	1			
RSC 502	Cross-Sectional Anatomy II	2			
RSC 513	CT Clinical II	6			
RSC 532	CT Procedures II	3			
RSC 534	CT Procedures Simulation Lab II	1			

Medical Physics

Master of Science (MS)

Program Director James Keller, PhD
Campus Center City
Website <https://www.jefferson.edu/university/health-professions/departments/radiologic-sciences/degrees-programs/ms-programs/ms-medical-physics.html>

Program Description

The goal of this program, the only program in the Philadelphia region that offers training on the two largest suppliers of linear accelerators in the United States, is to create Qualified Medical Physicists, who can independently provide clinical professional services in one or more of the subfields of medical physics - therapeutic, diagnostic, nuclear, and medical health.

Curriculum: 2 years, 57 credits

<u>Semester 1</u>			<u>Semester 4</u>		
MEDP 600	Radiation Physics	3	MEDP 603	Medical Imaging Physics	3
MEDP 635	Radiation Therapy Physics I	3	MEDP 612	App Radiation Therapy Physics Lab I	2
MEDP 640	Introduction to Radiobiology	2	MEDP 650	Capstone I	6
MEDP 670	Medical Physics Seminar I	1	MEDP 672	Medical Physics Seminar III	1
			GC 660	Statistical Methods for Data Analysis	3
<u>Semester 2</u>			<u>Semester 5</u>		
RS 650	Healthcare Law and Ethics	3	MEDP 613	App Radiation Therapy Physics Lab II	2
MEDP 610	Radiation Protection	3	MEDP 614	Radiation Therapy Physics Clinical Practicum	3
MEDP 636	Radiation Therapy Physics II	3	MEDP 645	Diagnostic Imaging Physics	3
MEDP 671	Med Physics Seminar II	1	MEDP 651	Capstone II	6
			MEDP 673	Medical Physics Seminar IV	1
<u>Semester 3</u>					
BIOL 201	Anatomy and Physiology I	3			
BIOL 202	Anatomy & Physiology Lab I	1			
BIOL 203	Anatomy and Physiology II	3			
BIOL 204	Anatomy & Physiology Lab II	1			

Computed Tomography (CT)

Undergraduate Certificate

Program Director	Colleen Dempsey, EdD, R.T. (R)(ARRT)
Campus	Center City
Website	https://www.jefferson.edu/university/health-professions/departments/radiologic-sciences/degrees-programs/certificates/ct-certificate.html

Program Description

This part-time, one-year, online or on campus program is designed for certified radiographers, radiation therapists or nuclear medicine technologists to expand their education in computed tomography (CT).

Curriculum: 16 credits, part-time

RSCC 400	CT Physics & Instrumentation	3
RSCC 401	Cross-Sectional Anatomy I	1
RSCC 412	PET/CT Clinical I	1
RSPC 431	CT Procedures I	3
RSCC 402	Cross-Sectional Anatomy II	1
RSCC 413	CT Clinical II	1
RSCC 432	CT Procedures II	3
RSCC 414	CT Clinical III	1
RSCC 473	CT Review Seminar	2

Undergraduate Certificate

Program Director	Colleen Dempsey, EdD, R.T. (R)(ARRT)
Campus	Center City
Website	https://www.jefferson.edu/university/health-professions/departments/radiologic-sciences/degrees-programs/certificates/pet-ct-certificate.html

Program Description

Our PET/CT Certificate Program is the first formal PET/CT curriculum in the nation. This Program is for certified nuclear medicine technologists.

Curriculum: 16 credits

<u>Curriculum</u>		
RSPC 400	CT Physics & Instrumentation	3
RSCC 401	Cross-Sectional Anatomy I	1
RSCC 412	PET/CT Clinical I	1
RSPC 431	CT Procedures I	3
RSPC 451	PET Principles	1
RSPC 402	Cross-Sectional Anatomy II	1
RSPC 413	PET/CT Clinical II	1
RSPC 415	PET Procedures	1
RSCC 432	CT Procedures II	3
RSPC 414	PET/CT Clinical III	1

<h2>Health Sciences & Medical Laboratory Sciences & Biotechnology</h2>	
Accelerated Bachelor of Science (BS) Health Sciences & Master's in Medical Laboratory Sciences (MS)	
Contact Campus	Admissions Office East Falls/Center City

Program Description

As a student in this accelerated dual degree program, you can earn both your bachelor's and master's degrees in five years, less time than would be required to complete both degrees separately. Students begin their pre-professional education in the Health Sciences where they complete college studies, health sciences, and prerequisite coursework with other pre-medical and health students on Jefferson's East Falls Campus. Students who maintain progression criteria are guaranteed to matriculate into the professional program, delivered on the Center City campus. Jefferson's academic advisors and faculty work closely with our students on course selection and academic performance to ensure that each student is on pace to transition into the professional phase of the program.

Our three distinct graduate programs prepare laboratory professionals for careers in the fields of biotechnology, cytotechnology and cell sciences, or medical laboratory sciences. Throughout your chosen program, you will experience cutting-edge training with nationally recognized faculty.

The Department of Medical Laboratory Sciences and Biotechnology offers three different programs:

- Biotechnology
- Cytotechnology and Cell Sciences
- Medical Laboratory Sciences

Accelerated Dual Degree BS/MS (Foundation and Prerequisite Coursework toward B.S.)

Curriculum: 5 years, Minimum 120 cr BS degree; MS degree (students choose from among three specialty areas during the professional phase of the program; each has a different range of courses and credits. Year 4 courses [39-40 credits] are allocated to the undergraduate BS degree. Year 5 courses (30-37 credits) comprise the MS degree.) Refer to Medical Laboratory Sciences and Biotechnology programs for information on each program.

Undergraduate Coursework (Years 1-3)

	<u>Hallmarks</u>				<u>Health Sciences</u>	
FYS 100	Pathways Seminar	1		HSCI 100	Intro to the Health Professions	1
WRIT 101	Writing Seminar I	3		HSCI 230	Intro to Healthcare	2
WRIT 2XX	Multimedia Communication	3		HSCI 225	Applied Statistics	3
MATH 1XX	Pre-Calculus/Intro to Calculus	3-4		HSCI 3XX	Health Sciences Elective	3
AMST 114	Topics in American Studies	3		HSCI 330	Medical Terminology	3
ADIV 2XX	American Diversity	3			<u>Science</u>	
GDIV 2xx	Global Diversity	3		BIOL 103	General Biology I/Lab	4
ETHC 2XX	Ethics	3		BIOL 104	General Biology II/Lab	4
GCIT 2XX	Global Citizenship	3		BIOL 201	Anatomy & Physiology I/Lab	4
CGIS 300	Contemporary Global Issues	3		BIOL 202	Anatomy & Physiology II/Lab	4
ISEM 3XX	Integrative Seminar	3		BIOL 221	Microbiology/Lab	4
PHIL 499	Philosophies of the Good Life	3		CHEM 103	General Chemistry I/Lab	4
	<u>Psychology</u>			CHEM 104	General Chemistry II/Lab	4
PSYC 101	Introduction to Psychology	3		BIOL/CHEM/PHYC	Science Elective	4
PSYC 2XX	Psychology Elective	3		BIOL/CHEM/PHYC	Science Elective	3-4
	Free Elective	3				

- All courses minimum "C" grade

Biotechnology

Bachelor of Science (BS)

Program Director	Scott Gygax, PhD
Campus	Center City
Website	https://www.jefferson.edu/university/health-professions/departments/medical-laboratory-biotechnology/degrees-programs/bs-ms-programs/biotechnology/overview.html

Program Description

Biotechnology is one of the region's most promising, exciting and fastest-growing industries, and evolves through rapidly changing technologies, techniques and applications.

The curriculum prides itself on the team-based projects that pervade the courses and a focus on communication and teamwork skills, consistent with the learning outcomes for the courses, is evident as the students are required to demonstrate both written and oral presentation skills throughout the curriculum.

Bachelor of Science (BS) Curriculum Options

- 2 year
- 1 year
- 1 year-Biopharmaceutical Process Development

Curriculum: BS, 2 year option

- Credits Required for Admission: 55

<u>Year 1 Fall</u>			<u>Year 2 Fall</u>		
BT 303	Molecular Preparatory Tech	3	BT 305	Survey of Biotechnology Applications	3
BT 310	Fund Molecular Techniques	4	BT 412	Biotechnology Practicum I	3
BT 405	Applied Microbial Biotechnology	3	BT 422	Biotechnology Practicum II	3
LS 301	Molecular Biology	3	HCA 300	Health Services Delivery & Organization	3
LS 304	Biochemistry	3	LS 331	Immunology	3
BT 320	Cell and Tissue Culture Tech	4	LS 403	Research Design	3
			LS 404	Experimental Research I (requires approval)	1
<u>Year 1 Spring</u>			<u>Year 2 -Spring</u>		
BT 410	Molecular Diagnostic Tech	4	BT 325	Product Development and Management	3
BT 411	Protein Purification and Characterization	3	BT 403	Human Genetics	3
LS 440	Current Research Biosciences Program Approved Elective	2 1-2	BT 406	Introduction to Bioinformatics	2
			BT 416	Comprehensive Examination	0
			BT 432	Biotechnology Practicum III	3
			BT 442	Biotechnology Practicum IV	3
			LS 430	Laboratory Standards and Practices	3
			LS 405	Experimental Research II (approval)	1-2

Curriculum: BS, 1 year option without concentration

- Credits Required for Admission: 70

<u>Year 1 Fall</u>			<u>Year 1 Summer</u>		
BT 303	Molecular Preparatory Techniques	3	BT 412	Biotechnology Practicum I	2
BT 310	Basic Molecular Techniques	4	BT 416	Comprehensive Examination	0
BT 405	Microbial Genetics	3	BT 422	Biotechnology Practicum II	3
LS 301	Molecular Biology	3	BT 432	Biotechnology Practicum III	3
LS 304	Biochemistry	3	BT 442	Biotechnology Practicum IV	3
LS 331	Immunology	2	LS 430	Lab Standards and Practices	3
<u>Year 2 Spring</u>					
BT 320	Cell and Tissue Culture Techniques	4			
BT 325	Product Development and Management	3			
BT 403	Human Genetics	3			
BT 406	Introduction to Bioinformatics	2			
BT 410	Molecular Diagnostic Techniques	4			
BT 411	Protein Purification and Characterization	3			
LS 440	Current Research in the Biosciences	2			

Curriculum: BS, 1 year option Biopharmaceutical Process Development concentration

- Credits Required for Admission: 70

<u>Year 1 Fall</u>			<u>Held at Jefferson Institute for Bioprocessing (JIB)</u>		
			<u>Year 1 Summer</u>		
BT 303	Molecular Preparatory Techniques	3	BP 401	Basic Engineering for Scientists	2
BT 310	Fundamental Molecular Techniques	4	BP 403	Intro to Biopharmaceutical Processing	2
BT 405	Applied Microbial Biotechnology	3	BP 404	Intro to Downstream Unit Operations	4
LS 301	Molecular Biology	3	BP 405	Intro to Upstream Unit Operations	4
LS 304	Biochemistry	3	BT 412	Biotechnology Practicum I	3
LS 331	Immunology	3	BT 416	Comprehensive Examination	0
<u>Year1 Spring</u>			BT 422	Biotechnology Practicum II	3
BT 320	Cell and Tissue Culture Techniques	4	BT 432	Biotechnology Practicum III	3
BT 325	Product Development and Management	3	BT 442	Biotechnology Practicum IV	3
BT 403	Human Genetics	3			
4T 406	Introduction to Bioinformatics	2			
BT 410	Molecular Diagnostic Techniques	4			
BT 411	Protein Purification & Characterization	3			

Biotechnology

Master of Science (MS)

Program Director Scott Gygax, PhD
 Campus Center City
 Website <https://www.jefferson.edu/university/health-professions/departments/medical-laboratory-biotechnology/degrees-programs/bs-ms-programs/cytotechnology-cell/overview.html>

Curriculum: MS, 1 year option without concentration

<u>Year 1 Fall</u>			<u>Year 1 Summer</u>		
BT 503	Molecular Preparatory Techniques	3	BT 812	Biotechnology Practicum I	3
BT 510	Fundamental Molecular Techniques	4	BT 813	Biotechnology Practicum II	3
BT 605	Applied Microbial Biotechnology	3	BT 814	Biotechnology Practicum III	3
LS 501	Molecular Biology	3	BT 815	Biotechnology Practicum IV	3
LS 504	Biochemistry	3	BT 816	Comprehensive Examination	0
LS 531	Immunology	3	LS 610	Regulatory and Fiscal Issues in Laboratory Management	3
LS 603	Research Design	3	LS 803	Contemp Topics Research	2
<u>Year 1 Spring</u>					
BT 520	Cell and Tissue Culture Techniques	4			
BT 525	Product Development and Management	3			
BT 603	Human Genetics	3			
BT 606	Introduction to Bioinformatics	2			
BT 610	Molecular Diagnostic Techniques	4			
BT 611	Protein Purification and Characterization	3			

Curriculum: MS, 1 year option with Biopharmaceutical Process Development concentration

<u>Year 1 Fall</u>			<u>Year 1 Summer</u>		
			Held at Jefferson Institute for Bioprocessing (JIB)		
BT 503	Molecular Preparatory Techniques	3	BT 601	Basic Engr for Scientists	2
BT 510	Fundamental Molecular Techniques	4	BT 603	Intro to Biopharmaceutical Processing	2
BT 605	Applied Microbial Biotechnology	3	BT 604	Intro Downstream Unit Operations	4
LS 501	Molecular Biology	3	BT 605	Intro to Upstream Unit Operations	4
LS 504	Biochemistry	3	BT 812	Biotechnology Practicum I	3
LS 531	Immunology	3	BT 813	Biotechnology Practicum II	3
LS 603	Research Design	3	BT 814	Biotechnology Practicum III	3
<u>Year 1 Spring</u>			BT 815	Biotechnology Practicum IV	3
BT 520	Cell and Tissue Culture Techniques	4	BT 816	Comprehensive Examination	0
BT 525	Product Development and Management	3			
BT 603	Human Genetics	3			
BT 606	Introduction to Bioinformatics	2			
BT 610	Molecular Diagnostic Techniques	4			
BT 611	Protein Purification and Characterization	3			

Curriculum: MS, 2 year option

<u>Year 1 Fall</u>			<u>Year 2 Fall</u>		
BT 503	Molecular Preparatory Techniques	3	BT 812	Biotechnology Practicum I	3
BT 510	Fundamental Molecular Techniques	4	BT 813	Biotechnology Practicum II	3
BT 605	Applied Microbial Biotechnology	3	LS 531	Immunology	3
LS 501	Molecular Biology	3	LS 603	Research Design	2
LS 504	Biochemistry	3	LS 804**	Experimental Research I	1
<u>Year 1 Spring</u>			<u>Year 2 Spring</u>		
BT 520	Cell and Tissue Culture Techniques	4	BT 525	Product Development & Mgt	3
BT 603	Human Genetics	3	BT 814	Biotechnology Practicum III	3
BT 606	Introduction to Bioinformatics	2	BT 815	Biotechnology Practicum IV	3
BT 610	Molecular Diagnostic Techniques	4	BT 816	Comprehensive Examination	0
BT 611	Protein Purification and Characterization	3	LS 610	Regulatory and Fiscal Issues in Laboratory Management	3
			LS 803**	Contemp Topics Research	2
			OR		
			LS 805**	Experimental Research II	1

**To meet the research requirement, students may take a classroom literature review-based course (LS 803) or, under special circumstances, engage in a two-semester wet bench research project with a selected PI (LS 804 and LS 805). Students must meet with their faculty advisor and/or program director to determine which option best meets their educational goals. LS 804 and LS 805 are not a substitute for nor may run concurrently with practica courses.

Biotechnology BS & MS

Bachelor of Science (BS) & Master of Science (MS)

Program	Scott Gygax, PhD
Director	Center City
Campus	https://www.jefferson.edu/university/health-professions/departments/medical-laboratory-biotechnology/degrees-programs/bs-ms-programs/biotechnology.html
Website	

Curriculum: BS/ MS, 2-year option

- Credits Required for Admission: 82

<u>Year 1 Fall Undergraduate Phase</u>			<u>Year 2 Fall Graduate Phase</u>		
BT 303	Molecular Preparatory Techniques	3	BT 812	Biotechnology Practicum I	3
BT 305	Survey of Biotechnology Applications	3	BT 813	Biotechnology Practicum II	3
BT 310	Fundamental Molecular Techniques	4	LS 531	Immunology	3
BT 405	Applied Microbial Biotechnology	3	LS 603	Research Design	2
LS 301	Molecular Biology	3	LS 640	Methods in Biosciences Education	3
LS 304	Biochemistry	3	LS 804*	Experimental Research I (approval)	1
				Program Approved Elective	3
<u>Year 1 Spring</u>			<u>Year 2 Spring</u>		
BT 320	Cell and Tissue Culture Techniques	4	BT 525	Product Development and Mgt.	3
BT 403	Human Genetics	3	BT 814	Biotechnology Practicum III	3
BT 406	Introduction to Bioinformatics	2	BT 815	Biotechnology Practicum IV	3
BT 410	Molecular Diagnostic Techniques	4	BT 816	Comprehensive Examination	0
BT 411	Protein Purification & Characterization	3	LS 610	Regulatory and Fiscal Issues in Laboratory Management	3
LS 540	Current Research in the Biosciences	3	LS 803**	Contemporary Topics Research (approval)	2
			or		
			LS 805*	Experimental Research II	1
				Program Approved Elective	3

**To meet the research requirement, students may take a classroom literature review-based course (LS 803) or, under special circumstances, engage in a two-semester wet bench research project with a selected PI (LS 804 and LS 805). Students must meet with their faculty advisor and/or program director to determine which option best meets their educational goals. LS 804 and LS 805 are not a substitute for nor may run concurrently with practica courses.

Cytotechnology & Cell Sciences

Bachelor of Science (BS)

Program Director	Tatiana Zorina, MD, PhD, CT(ASCP)
Campus	Center City
Website	https://www.jefferson.edu/university/health-professions/departments/medical-laboratory-biotechnology/degrees-programs/bs-ms-programs/cytotechnology-cell/overview.html

Program Description

Cytotechnologists are experts of cell and tissue structure morphology and function, and using microscopes, automated imaging systems and sophisticated laboratory techniques to detect and diagnose diseases. Cytotechnologists work both independently and collaboratively with pathologists, radiologists, oncologists and other members of a healthcare team.

Professionals in this field:

- Select and perform molecular and immunologic tests that help to personalize patient care Diagnose mysterious respiratory illnesses
- Assist clinicians in collecting and evaluating specimens
- Identify precancerous cells at their earliest and most curable stage

Curriculum: BS, 2 year option

- Credits Required for Admissions: 55

<u>Year 1 Fall</u>			<u>Year 2 Fall</u>		
LS 301	Molecular Biology	3	LS 331	Immunology	3
HUMN 315	Methods of Effective Thinking	3	CT 412	Cytotechnology Practicum I	3
LS 311	Functional Histology	2.5	CT 413	Cytotechnology Practicum II	3
CT 301	Principles of Cell Analytics	2	HCA 300	Health Services Delivery and Organization	3
CT 311	Cytopathology I	5	LS 498	Elective	3
CT 312	Cytopathology I Laboratory	3			
<u>Year 1 Spring</u>			<u>Year 2 Spring</u>		
LS 413	Pathology	2	LS 440	Current Research in the Biosciences	2
CT 310	Cytological and Surgical Pathology Techniques	2	CT 414	Cytotechnology Practicum III	3
LS 310	Intro to Molecular Diagnostics	2	CT 415	Cytotechnology Practicum IV	3
LS 426	Flow Cytometry I	2	CT 416	Comprehensive Examination	0
CT 315	Cytopathology II	4	CT 325	Cellular, Molecular, and Immuno Diagnostics	3
CT 317	Cytopathology III	3	LS 430	Laboratory Standards & Practice	3
				Program Approved Elective	2

Curriculum: BS, 1 year option

- Credits Required for Admissions: 70

<u>Year 1 Fall</u>			<u>Year 1 Summer</u>		
CT 301	Principles of Cell Analysis	2	CT 416	Comprehensive Examination	0
CT 311	Cytopathology I	5	CT 430	Laboratory Standards and Practices	3
CT 312	Cytopathology I Laboratory	3	CT 412	Cytotechnology Practicum I	3
HUMN 315	Methods of Effective Thinking	3	CT 413	Cytotechnology Practicum II	3
LS 301	Molecular Biology	3	CT 414	Cytotechnology Practicum III	3
LS 311	Functional Histology	2.5	CT 415	Cytotechnology Practicum IV	3
LS 331	Immunology	3			
<u>Year 1 Spring</u>					
LS 413	Pathology	2			
LS 440	Current Research in Biosciences	2			
LS 310	Intro to Molecular Diagnostics	2			
CT 310	Cytological & Surgical Pathology Technique	2			
LS 426	Flow Cytometry I	2			
CT 315	Cytopathology II	4			
CT 317	Cytopathology III	3			
CT 325	Cellular, Molecular & Immuno Diagnostics	3			

Cytotechnology & Cell Sciences

Master of Science (MS)

Program Director	Tatiana Zprina, MD, PhD, CT (ASCP)
Campus	Center City
Website	https://www.jefferson.edu/university/health-professions/departments/medical-laboratory-biotechnology/degrees-programs/bs-ms-programs/cytotechnology-cell/overview.html

Curriculum: MS, 2-year option

<u>Year 1 Fall</u>			<u>Year 2 Fall</u>		
LS 501	Molecular Biology	3	LS 531	Immunology	3
LS 511	Functional Histology	2.5	CT 812	Cytotechnology Practicum I	3
CT 501	Principles of Cell Analysis	2	CT 813	Cytotechnology Practicum II	3
CT 511	Cytopathology I	5	LS 603	Research Design	2
CT 512	Cytopathology I Laboratory	3	LS 804	Experimental Research I	1
<u>Year 1 Spring</u>			<u>Year 2 Spring</u>		
LS 613	Pathology	2	CT 525	Cellular, Molecular and Immuno Diagnostics	3
CT 510	Cytological & Surgical Pathology Techniques	2	LS 610	Regulatory & Fiscal Issues in Lab Management	3
CT 515	Cytopathology II	4	CT 814	Practicum III	3
CT 517	Cytopathology III	4	CT 815	Practicum IV	3
LS 510	Introduction to Molecular Diagnostics	2	CT 816	Comprehensive Exam	0
LS 626	Flow Cytometry I	2	LS 805	Contemporary Topics Research or Or	1
			LS 805	Experimental Research II	

Curriculum: MS, 1-year option

<u>Year 1 Fall</u>			<u>Year 1 Summer</u>		
LS 501	Molecular Biology	3	LS 610	Regulatory & Fiscal Issues Lab Mgt.	3
LS 603	Research Design	2	CT 812	Practicum I	3
LS 511	Functional Histology	2.5	CT 813	Practicum II	3
CT 501	Principles of Cell Analysis	2	CT 814	Practicum III	3
CT 511	Cytopathology I	5	CT 815	Practicum IV	3
CT 512	Cytopathology I Laboratory	3	CT 816	Comprehensive Examination	0
LS 531	Immunology	3	LS 803	Contemporary Topics Research	2
<u>Year 1 Spring</u>					
LS 510	Intro to Molecular Diagnostics	2			
CT 510	Cytological & Surgical Pathology Techniques	2			
LS 626	Flow Cytometry I	2			
CT 515	Cytopathology II	4			
CT 517	Cytopathology III	4			
CT 525	Cellular, Molecular and Immuno Diagnostics	3			
LS 613	Pathology	2			

Advanced M.S. Two year option (Part-time)

<u>Year 1</u>			<u>Year 2</u>		
LS 603	Research Design	2	LS 804	Experimental Research I	1
LS 640	Methods in Bioscience Education	3	LS 815	Practicum IV **	2
LS 812	Practicum I *	3	LS 504	Biochemistry	3
LS 610	Regulatory & Fiscal Issues in Laboratory Management	3	LS 803 or LS 805	Contemporary Topics Research or Experimental Research II	1
LS 613	Pathology	2	Concentration Electives		2- 4
LS 813	Practicum I *	2			
LS 814	Practicum III*	2			
	Conventional Elective***	3			
<p>* Or substitute LS 644 Lab Education, Administration and Instruction</p> <p>** Or substitute LS 644 Lab Education, Administration and Instruction, or LS 498 Special Topics in Lab Science</p>			<p>*** Select a total of 5-7 credits of concentration electives from graduate courses on contemporary areas of clinical or research lab management, administration and advanced practice.</p>		

Cytotechnology & Cell Sciences

Bachelor of Science (BS) & Master of Science (MS)

Program Director	Tatiana Zorina, MD, PhD, CT(ASCP)
Campus	Center City
Website	https://www.jefferson.edu/university/health-professions/departments/medical-laboratory-biotechnology/degrees-programs/bs-ms-programs/cytotechnology-cell/overview.html

Curriculum: BS /MS

- Credits Required for Admissions: 82

<u>Year 1 Fall Undergraduate Phase</u>			<u>Year 2 Fall Graduate Phase</u>		
LS 301	Molecular Biology	3	LS 603	Research Design	2
HUMN 315	Methods of Effective Thinking	3	LS 640	Methods in Biosciences Education	3
LS 311	Functional Histology	2.5	CT 812	Cytotechnology Practicum I	3
CT 301	Principles of Cell Analytics	2	CT 813	Cytotechnology Practicum II	3
CT 311	Cytopathology I	5	LS 644	Laboratory Education & Instruction, or Program Approved Elective	3-4
CT 312	Cytopathology I Laboratory	3			
LS 331	Immunology	3			
<u>Year 1 Spring</u>			<u>Year 2 Spring</u>		
LS 540	Current Research in Biosciences	3	LS 610	Regulatory & Fiscal Issues in Lab Management	3
LS 310	Intro to Molecular Diagnostics	2	LS 613	Pathology	2
CT 310	Cytological and Surgical Pathology Techniques	2	LS 803	Contemporary Topics Research	2
LS 426	Flow Cytometry I	2	CT 814	Cytotechnology Practicum III	3
LS 427	Flow Cytometry II or Program Approved Elective	2	CT 815	Cytotechnology Practicum IV	3
CT 315	Cytopathology II	4	CT 816	Comprehensive Examination	0
CT 317	Cytopathology III	3	CT 525	Cellular, Molecular, and Immuno Diagnostics	3

Medical Laboratory Sciences

Bachelor of Science (BS)

Program Director	Valerie Jalicke, MS, MLS(ASCP) ^{CM}
Campus	Center City
Website	https://www.jefferson.edu/university/health-professions/departments/medical-laboratory-biotechnology/degrees-programs/bs-ms-programs/medical-laboratory/overview.html

Program Description

Professionals in Medical Laboratory Sciences conduct health screening tests for diabetic and cardiac risk, examine patient specimens for the presence of infectious microorganisms, type and cross-match blood for transfusion, detect specific blood cells to reveal leukemia and measure a patient's response to medications and therapies and develop and manage complex technical systems to assist in performing these tests.

Curriculum: BS, 2 year option

<u>Year 1 Fall</u>			<u>Year 2 Fall</u>		
LS 301	Molecular Biology	3	HCA 300	Health Services Delivery & Organization	3
LS 331	Immunology	3	HUMN 315	Methods of Effective Thinking	3
MLS 312	Clinical Microbiology I	3.5	LS 311	Functional Histology	2.5
MLS 323	Clinical Chemistry I	3	MLS 412	Medical Lab Sciences Practicum I	3
MLS 341	Clinical- Hematology I	3	MLS 422	Medical Lab Sciences Practicum II	3
<u>Year 1 Spring</u>			<u>Year 2 Spring</u>		
LS 310	Intro to Molecular Diagnostics	2	LS 413	Pathology	2
LS 426	Flow Cytometry I	2	LS 427	Flow Cytometry II	2
MLS 313	Clinical Microbiology II	2	LS 430	Laboratory Standards and Practices	3
MLS 324	Clinical Chemistry II	2	LS 440	Current Research in the Biosciences	2
MLS 343	Clinical Hematology II	3	MLS 375	Medical Laboratory Sciences Seminar	2
MLS 352	Immunoematology	3	MLS 416	Comprehensive Examination	0
MLS 376	Urinalysis and Body Fluids	3	MLS 442	Medical Lab Sciences Practicum III	3
			MLS 454	Medical Lab Sciences Practicum IV	3

Curriculum: BS, 1 year option

- Credits Required for Admissions: 70

<u>Year 1 Fall</u>			<u>Year 1 Summer</u>		
LS 301	Molecular Biology	3	LS 430	Laboratory Standards and Practices	3
LS 331	Immunology	3	MLS 412	Medical Lab Sciences Practicum I	3
MLS 312	Clinical Microbiology I	3.5	MLS 416	Comprehensive Examination	0
MLS 323	Clinical Chemistry I	3	MLS 422	Medical Lab Sciences Practicum II	3
MLS 341	Clinical Hematology I	3	MLS 442	Medical Lab Sciences Practicum III	3
	<u>Year 1 Spring</u>		MLS 454	Medical Lab Sciences Practicum IV	3
LS 310	Intro to Molecular Diagnostics	2			
LS 413	Pathology	2			
LS 426	Flow Cytometry I	2			
LS 440	Current Research Biosciences	2			
MLS 313	Clinical Microbiology II	3.5			
MLS 324	Clinical Chemistry II	3			
MLS 343	Clinical Hematology II	3			
MLS 352	Immunoematology	3			
MLS 376	Urinalysis and Body Fluids	3			

Medical Laboratory Sciences

Master of Science (MS)

Program Director	Valerie Jalicke, MS, MLS(ASCP) ^{CM}
Campus	Center City
Website	https://www.jefferson.edu/university/health-professions/departments/medical-laboratory-biotechnology/degrees-programs/bs-ms-programs/medical-laboratory/overview.html

Curriculum: MS, 2-year option

<u>Year 1 Fall</u>			<u>Year 2 Fall</u>		
LS 531	Immunology	3	LS 501	Molecular Biology	3
MLS 512	Clinical Microbiology I	3.5	LS 603	Research Design	2
MLS 523	Clinical Chemistry I	3	LS 804**	Experimental Research I (approval)	1
MLS 541	Clinical Hematology I	3	MLS 812	Medical Lab Sciences Practicum I	3
			MLS 813	Medical Lab Sciences Practicum II	3
<u>Year 1 Spring</u>			<u>Year 2 Spring</u>		
LS 626	Flow Cytometry I	2	LS 510	Intro to Molecular Diagnostics	2
MLS 513	Clinical Microbiology II	3.5	LS 610	Regulatory and Fiscal Issues in Laboratory Management	3
MLS 524	Clinical Chemistry II	3	LS 613	Pathology	2
MLS 543	Clinical Hematology II	3	LS 803 OR	Contemporary Topics Research	2
MLS 552	Immunochemistry	3	LS 805**	Experimental Research II (approval)	1
MLS 576	Urinalysis and Body Fluids	3	MLS 575	Medical Laboratory Sciences Seminar	2
			MLS 814	Medical Lab Sciences Practicum III	3
			MLS 815	Medical Lab Sciences Practicum IV	3
			MLS 816	Comprehensive Examination	0

Curriculum: MS, 1 year option

<u>Year 1 Fall</u>			<u>Year 1 Summer</u>		
LS 501	Molecular Biology	3	LS 610	Regulatory and Fiscal Issues in Lab Mgt.	3
LS 531	Immunology	3	LS 803	Contemporary Topics Research	2
LS 603	Research Design	2	MLS 812	Medical Lab Sciences Practicum I	3
MLS 512	Clinical Microbiology I	3.5	MLS 813	Medical Lab Sciences Practicum II	3
MLS 523	Clinical Chemistry I	3	MLS 814	Medical Lab Sciences Practicum III	3
MLS 541	Clinical Hematology I	3	MLS 815	Medical Lab Sciences Practicum IV	3
			MLS 816	Comprehensive Examination	0
<u>Year 1 Spring</u>					
LS 510	Intro to Molecular Diagnostics	2			
LS 613	Pathology	2			
LS 626	Flow Cytometry I	2			
MLS 513	Clinical Microbiology II	3.5			
MLS 524	Clinical Chemistry II	3			
MLS 543	Clinical Hematology II	3			
MLS 552	Immunochemistry	3			
MLS 576	Urinalysis and Body Fluids	3			

**To meet the research requirement, students may take a classroom literature review-based course (LS 803) or, under special circumstances, engage in a two-semester wet bench research project with a selected PI (LS 804 and LS 805). Students must meet with their faculty advisor and/or program director to determine which option best meets their educational goals. LS 804 and LS 805 are not a substitute for nor may run concurrently with practica courses

Medical Laboratory Sciences BS & MS

Bachelor of Science (BS) & Master of Science (MS)

Program Director	Valerie Jalicke, MS, MLS(ASCP) ^{CM}
Campus	Center City
Website	https://www.jefferson.edu/university/health-professions/departments/medical-laboratory-biotechnology/degrees-programs/bs-ms-programs/medical-laboratory/overview.html

Curriculum: BS/MS, 2 year option

- Credits Required for Admission: 82

<u>Year 1 Fall Undergraduate Phase</u>			<u>Year 2 Fall Graduate Phase</u>		
LS 301	Molecular Biology	3	LS 603	Research Design	2
LS 331	Immunology	3	LS 640	Methods in Biosciences Education	3
MLS 312	Clinical Microbiology I	3.5	MLS 812	Medical Lab Sciences Practicum I	3
MLS 323	Clinical Chemistry I	3	MLS 813	Medical Lab Sciences Practicum II	3
MLS 341	Clinical Hematology I	3	TBD	Program-Approved Electives	6
			LS 644*	Laboratory Education, Administration, and Instruction (recommended)	3-4
<u>Year 1 Spring</u>			<u>Year 2 Spring</u>		
LS 310	Intro to Molecular Diagnostics	2	LS 610	Regulatory and Fiscal Issues in Laboratory Management	3
LS 426	Flow Cytometry I	2	LS 613	Pathology	2
LS 540	Current Research in Biosciences	3	LS 803**	Contemporary Topics Research	2
MLS 313	Clinical Microbiology II	3.5	MLS 575	Medical Laboratory Sciences Seminar	2
MLS 324	Clinical Chemistry II	3	MLS 814	Medical Lab Sciences Practicum III	3
MLS 343	Clinical Hematology II	3	MLS 815	Medical Lab Sciences Practicum IV	3
MLS 352	Immunoematology	3	MLS 816	Comprehensive Examination	0
MLS 376	Urinalysis and Body Fluids	3		Program-Approved Elective	3

*Program approval and minimum course grade requirements must be met to register for LS 644.

**To meet the research requirement, students may take a classroom literature review-based course (LS 803) or, under special circumstances, engage in a two-semester wet bench research project with a selected PI (LS 804 and LS 805). Students must meet with their faculty advisor and/or program director to determine which option best meets their educational goals. LS 804 and LS 805 are not a substitute for nor may run concurrently with practica courses.

Curriculum: Advanced MS, 1 year

<u>Year 1 Fall</u>		
LS 504	Biochemistry (BT and MLS programs only)	3
LS 531*	Immunology (CT program only)	3
LS 603	Research Design	2
LS 640	Methods in Biosciences Education	3
LS 804**	Experimental Research I (approval)	1
LS 812	Practicum I	3
LS 813 OR	Practicum II	3
LS 644*	Laboratory Education, Administration, and Instruction	3-4
LS 613	Program-Approved Electives	3
<u>Year 1 Spring</u>		
LS 610	Regulatory and Fiscal Issues in Laboratory Management	3
LS 613	Pathology	2
LS 803** OR	Contemporary Topics Research	2
LS 805**	Experimental Research II (requires special approval)	1
LS 814	Practicum III	3
LS 815	Practicum IV	3
or LS 644†	Laboratory Education and Instruction	3-4
or LS 698	Special Topics in the Laboratory Sciences	3-4
	Program-Approved Electives	2-4

*To meet entry-level competency requirements for immunology credits, students entering as certified cytotechnology graduates who have not completed three credits in immunology are required to enroll in LS 531 Immunology. Certified cytotechnology graduates who have completed three credits of immunology may enroll in a program-approved elective.

**To meet the research requirement, students may take a classroom literature review-based course (LS 803) or, under special circumstances, engage in a two-semester wet bench research project with a selected PI (LS 804 and LS 805). Students must meet with their faculty advisor and/or program director to determine which option best meets their educational goals. LS 804 and LS 805 are not a substitute for nor may run concurrently with practica courses.

*Program approval and minimum course grade requirements must be met to register for LS 644.

Curriculum: Advanced MS, 2 year, part-time

<u>Year 1 Fall</u>			<u>Year 2 Fall (Graduate Phase)</u>		
LS 603	Research Design	2	LS 504	Biochemistry (BT & MLS program only)	3
LS 640	Methods in Biosciences Education	3	LS 531*	Immunology (CT program only)	3
LS 812 or LS 644 or	Practicum I Laboratory Education, Administration, and Instruction	3 3-4	LS 804*	Experimental Research I (requires special approval)	1
	Program-Approved Electives	3		Program-Approved Electives	3
<u>Year 1 Spring</u>			<u>Year 2 Spring</u>		
LS 813	Practicum II	3	LS 613	Pathology	3
LS 644 or LS 698	Laboratory Education, Administration, and Instruction	3-4			
	Special Regulatory and Fiscal Issues in Laboratory Management Topics in Lab Sciences	3-4			
<u>Year 1 Summer</u>			LS 803**	Contemporary Topics Research	2
LS 610	Regulatory and Fiscal Issues in Laboratory Management	3	or LS 805	Experimental Research II (approval)	1
LS 814	Practicum III	3	LS 815 or LS 698	Practicum IV Special Topics in the Lab Sciences	3 3-4

*Program approval and minimum course grade requirements must be met to register for LS 644.

†To meet entry-level competency requirements for immunology credits, students entering as certified cytotechnology graduates who have not completed three credits in immunology are required to enroll in LS 531 Immunology. Certified cytotechnology graduates who have completed three credits of immunology may enroll in a program-approved elective.

**To meet the research requirement, students may take a classroom literature review-based course (LS 803) or, under special circumstances, engage in a two-semester wet bench research project with a selected PI (LS 804 and LS 805). Students must meet with their faculty advisor and/or program director to determine which option best meets their educational goals. LS 804 and LS 805 are not a substitute for nor may run concurrently with practica courses.

Clinical Chemistry

Graduate Certificate

Program Director	Valerie Jalicke, MS, MLS(ASCP) ^{CM}
Campus	Center City
Website	https://www.jefferson.edu/university/health-professions/departments/medical-laboratory-biotechnology/degrees-programs/graduate-certificates/clinical-chemistry.html

Program Description

Clinical chemists analyze blood and body fluids to determine their biochemical parameters and the physiological health of the patient. Clinical chemists use the latest technology to measure enzyme activity, blood gas saturation, drug and glucose concentrations and other biochemical reactions.

Curriculum: 27 credits

<u>Curriculum</u>		
LS 501	Molecular Biology	3
LS 523	Clinical Chemistry I	3
MT 531	Immunology	3
LS 613	Pathology	2
LS 626	Flow Cytometry I	2
LS 510	Intro to Molecular Diagnostics	2
MLS 524	Clinical Chemistry II	2
LS 610	Regulatory and Fiscal Issues in Laboratory Management	3
MLS 812	Medical Laboratory Sciences Practicum I (Clinical Chemistry)	3
MLS 576	Urinalysis and Body Fluids	3

Clinical Hematology

Graduate Certificate

Program Director	Valerie Jalicke, MS, MLS(ASCP) ^{CM}
Campus	Center City
Website	https://www.jefferson.edu/university/health-professions/departments/medical-laboratory-biotechnology/degrees-programs/graduate-certificates/hematology.html

Program Description

Hematologists analyze the function and formation of red and white blood cells and other elements of blood and body fluids. They also monitor the components of the coagulation system.

Curriculum: 25 credits

<u>Curriculum</u>		
LS 501	Molecular Biology	3
LS 531	Immunology	3
MLS 541	Clinical Hematology I	3
LS 613	Pathology	2
MLS 576	Urinalysis and Body Fluids	3
LS 626	Flow Cytometry I	2
MLS 543	Clinical Hematology II	3
LS 610	Regulatory and Fiscal Issues in Laboratory Management	3
MLS 812	Medical Laboratory Sciences Practicum I (Clinical Hematology)	3

Immunohematology

Graduate Certificate

Program Director	Valerie Jalicke, MS, MLS(ASCP) ^{CM}
Campus	Center City
Website	https://www.jefferson.edu/university/health-professions/departments/medical-laboratory-biotechnology/degrees-programs/graduate-certificates/immunohematology.html

Program Description

Immunohematologists type and cross-match blood from donors and recipients and analyze specific blood products for use in blood-component therapy. Bloodbanking (immunohematology and transfusion medicine) has become increasingly complicated, since therapy using individual blood components is more in demand than therapy using whole blood.

Curriculum: 24 credits

<u>Curriculum</u>		
LS 501	Molecular Biology	3
LS 531	Immunology	3
MLS 541	Clinical Hematology I	3
LS 613	Pathology	2
LS 510	Introduction to Molecular Diagnostics	2
MLS 552	Immunohematology	3
LS 626	Flow Cytometry I	2
LS 610	Regulatory and Fiscal Issues in Laboratory Management	3
MLS 812	Medical Laboratory Sciences Practicum I (Clinical Hematology)	3

Clinical Microbiology

Graduate Certificate

Program Director	Valerie Jalicke, MS, MLS(ASCP) ^{CM}
Campus	Center City
Website	https://www.jefferson.edu/university/health-professions/departments/medical-laboratory-biotechnology/degrees-programs/graduate-certificates/microbiology.html

Program Description

Microbiologists culture, isolate and diagnose bacteria, parasites and viruses to identify the cause of disease and the best course of treatment. The role of the microbiologist has become increasingly important in identifying and neutralizing potential biological attack agents as organisms continue to develop resistance to the drugs used to treat disease.

Curriculum: 28 credits

<u>Curriculum</u>		
LS 501	Molecular Biology	3
MLS 512	Clinical Microbiology I	3.5
LS 531	Immunology	3
LS 613	Pathology	2
LS 626	Flow Cytometry I	2
LS 510	Introduction to Molecular Diagnostics	2
MLS 513	Clinical Microbiology II	3.5
LS 610	Regulatory and Fiscal Issues in Laboratory Management	3
MLS 576	Urinalysis and Body Fluids	3
MLS 812	Medical Laboratory Sciences Practicum I (Clinical Microbiology)	3

Molecular Biology

Graduate Certificate

Program Director	Scott Gyga, PhD
Campus	Center City
Website	https://www.jefferson.edu/university/health-professions/departments/medical-laboratory-biotechnology/degrees-programs/graduate-certificates/molecular-biology.html

Program Description

Molecular biologists use a wide variety of techniques to prepare specimens for diagnosing genetic diseases, identifying infectious agents and paternity testing. These professionals are experts in tests and methods that are increasingly common in clinical diagnostic settings and in research and forensic laboratories. These methods include:

- DNA/RNA extraction
- Southern blot
- Western blot
- Gene amplification
- Gene sequencing

Curriculum: 29 credits

<u>Curriculum</u>		
LS 501	Molecular Biology	3
BT 503	Molecular Preparatory Techniques	1
BT 510	Fundamental Molecular Techniques	4
LS 613	Pathology	2
BT 603	Human Genetics	3
BT 610	Molecular Diagnostic Techniques	4
BT 611	Protein Purification and Characterization	3
LS 812	Practicum [Research Applications]	3
LS 813	Practicum [Clinical Applications]	3
LS 814	Practicum [Forensic Applications]	3

Midwifery	
Master of Science (MS)	
Program Director	Dana Perlman, DNP, CNM, FACNM
Campus	Online
Website	https://www.jefferson.edu/university/health-professions/departments/programs/midwifery-womens-health/ms-midwife.html

Program Description

The MS in Midwifery is a distance education program in midwifery for RNs and CM Pathway applicants who want to become midwives. Graduates are eligible to earn certification from the American Midwifery Certification Board as either a Certified Nurse-Midwife or Certified Midwife.

Curriculum: 62 credits

<u>Semester 1</u>			<u>Semester 4</u>		
MIDW 643	Advanced Physiology/ Pathophysiology Primary Care	3	MIDW 712	Introduction to Health Policy	3
MIDW 642	Professional Issues	3	MIDW 611	Intrapartum Care	4
MIDW 730	Theoretical Foundations for Midwifery	3	MIDW 639	Advanced Pharmacology II	1.5
MIDW 699	Advanced Health Assessment	3	MIDW 632	Clinical Well Woman and Maternity Care II	3
<u>Semester 2</u>			MIDW 640	Preparation for Full Scope Midwifery Practice	1
MIDW 645	Reproductive and Sexual Healthcare	4	<u>Semester 5</u>		
MIDW 638	Advanced Pharmacology I	2.5	MIDW 633	Clinical III: Full Scope Midwifery Care I	4
MIDW 731	Evidence-Based Care: Evaluating Research	3	MIDW 619	Advanced Perinatal Pathophysiology	4
<u>Semester 3</u>			<u>Semester 6</u>		
MIDW 613	Embryology and Genetics	1	Elective		
MIDW 641	Preparation for Office Based Practice	1	MIDW 634	Clinical IV: Full Scope Midwifery Care II	5
MIDW 610	Antepartum Care	4	MIDW 646	Midwifery Nexus Project	1.5
MIDW 612	Postpartum/Newborn Care	2.5			
MIDW 631	Clinical Well Woman and Maternity Care I	2			

Midwifery

Doctor of Midwifery (DM)

Program Director	Dana Perlman, DNP, CNM, FACNM
Campus	Online
Website	https://www.jefferson.edu/university/health-professions/departments/programs/midwifery-womens-health/doctor-midwifery.html

Program Description

The first-ever professional Doctor of Midwifery degree from the Midwifery Institute at Jefferson is designed to develop leadership skills for midwives. Students will gain the skills for evidence-based leadership to advance clinical practice, education, policy or administration.

Curriculum: 35 credits

<u>Semester 1</u>			<u>Semester 5</u>		
MIDV 501	Orientation Residency	.5	MIDW 812	Professional Communication	3
MIDW 800	Current Issues Midwifery & Women's Health	2	MIDW 822	AIM Operation Workshop	3
MIDW 810	Epidemiology for Midwifery & Women's Health	3			
<u>Semester 2</u>			<u>Semester 6</u>		
MIDW 811	Leadership in Midwifery	2	MIDW 815	Grant Writing	3
MIDW 712	Intro to Health Policy	3			
<u>Semester 3</u>			<u>Semester 7</u>		
MIDW 813	Midwifery Case Studies	2	MIDW 823	AIM: Implementation Workshop	3
MIDW 807	Data Driven Midwifery	1.5			
<u>Semester 4</u>			<u>Semester 8</u>		
MIDW 805	Organizational Change	3	MIDW 824	AIM: Analysis Workshop	3
MIDW 821	AIM: Project Design and Methods	2			
MIDW 812	Professional Communication	3	<u>Semester 9</u>		
			MIDW 825	AIM Dissemination Workshop Midwifery Thinks! Two-day on campus event	1

Physician Assistant Studies

Master of Science (MS)

Program Director	Michele Q. Zawora, MD
Campus	Center City
Website	https://www.jefferson.edu/university/health-professions/departments/physician-assistant-studies/degrees-programs/graduate/ms-center-city/overview.html

Program Description

The program prepares students to become competent physician assistants (PA), a medical professional who works as part of a team with a physician. After graduating from an accredited PA educational program, PAs become nationally certified and state-licensed to practice medicine with the supervision of a physician. All 50 states and the District of Columbia allow PAs to practice and prescribe medications. PAs work in all areas of medicine, ranging from family practice to surgical subspecialties such as neurosurgery, and they perform physical examinations, diagnose and treat illnesses, order and interpret lab tests, perform procedures, assist in surgery, provide patient education and counseling, and make rounds in hospitals and nursing facilities.

Curriculum: 27 months, 97.5 credits

<u>Pre-Fall</u>			<u>YEAR 2 Clinical Year</u>		
PAST 500	Advanced Human Anatomy	5	PAST 601	Clinical Rotation 1	5
PAST 510	Patient Communication	1.5	PAST 610	Clinical Rotation 2	5
PAST 520	Introduction to Professional Practice	1	PAST 620	Clinical Rotation 3	5
PAST 522	Legal & Ethical Aspects of Medicine	1	PAST 680	Healthcare I	1
PAST 523	Evidence Based Medicine & Pop Health	1	PAST 630	Clinical Rotation 4	5
<u>YEAR 1</u>			PAST 640	Clinical Rotation 5	5
PAST 511	Physical Diagnosis	2.5	PAST 650	Clinical Rotation 6	5
PAST 530	Clinical Medicine I	3.5	PAST 681	Healthcare II	1
PAST 540	Clinical Skills I	1	PAST 690	Graduate Project I	0.5
PAST 550	Pharmacology & Clinical Therapeutics I	2.5	PAST 660	Clinical Rotation 7	5
PAST 560	Physiology & Pathophysiology I	2	PAST 670	Clinical Rotation 8	5
PAST 570	Behavioral Sciences	2	PAST 691	Graduate Project II	0.5
PAST 533	Clinical Medicine II	3			
PAST 534	Clinical Medicine III	4			
PAST 541	Clinical Skills II	3			
PAST 551	Pharmacology & Clin Therapeutics II	2			
PAST 561	Physiology & Pathophysiology II	2.5			
HQS 500	Intro to Healthcare Quality & Safety	3			
PAST 535	Clinical Medicine IV	3.5			
PAST 542	Clinical Skills III	1.5			
PAST 552	Pharmacology & Clin Therapeutics III	1.5			
PAST 562	Physiology & Pathophysiology III	1.5			
PAST 581	Health Promotion & Disease Prevention	1.5			
PAST 590	Special Topics in Medicine	5			

Physician Assistant Studies

Master of Science (MS)

Program Director Jesse Coale, DMin, PA-C, DFAAPA
Campus East Falls & Voorhees, NJ
Website <https://www.jefferson.edu/university/health-professions/departments/physician-assistant-studies/degrees-programs/graduate/ms-east-falls.html>

Program Description

The Thomas Jefferson University Physician Assistant Studies Program - East Falls/New Jersey is a comprehensive academic experience that stresses the practical application of current medical theory. All of the program faculty members are actively practicing health care providers with a great depth of knowledge and experience. Students are exposed to the clinical environment throughout their education with patient contact even during the classroom or didactic portion of the program.

Curriculum: 25 months, 113 credits

	<u>Year 1 Summer</u>		<u>YEAR 2 Clinical Year</u>	
PASF 507GR	Advanced Human Anatomy A	2	Clinical Rotation 2	6
	<u>Year 1 Fall</u>		Clinical Rotation 3	6
PASF 507GR	Advanced Human Anatomy B	3	Clinical Rotation 4	6
PASF 513GR	Medical Physiology and Pathophysiology	3	Clinical Rotation 5	6
PASF 511GR	Applied Behavioral Sciences	3	Clinical Rotation 6	6
PASF 517GR	Medical History and Physical Diagnosis	5	Clinical Rotation 7	6
PASF 10GR	Medical and Professional Ethics	2	Clinical Rotation 8	6
PASF 518GR	Evidence Based Medicine	2	Medical/Surgical Selective	6
PASF 521GR	Medical Genetics, Immunology and Microbiology	2	Elective	6
	<u>Year 1 Spring</u>		PAS 772	Master's Comp Experience
PAS 605	Clinical Correlations of Public Health	1		2
PAS 611	Clinical Medicine	8		
PAS 612	Clinical Reasoning	2.5		
PAS 613	Pharmacology & Pharmacotherapeutics	4		
PAS 614	Emergency Medicine	3		
PAS 615	Diagnostic Medicine	2		
	<u>YEAR 1 Summer</u>			
PAS 621	Clinical Disciplines Overview (Surgery, Pediatrics, Women's Health)	6		
PAS 622	Pharmacotherapeutics Seminar	1		
PAS 623	Advanced Diagnostic Seminar	1		
PAS 561	Physiology & Pathophysiology II	1		
PAS 603	Advanced Physical Assessment	0.5		

Clinical Rotations (5 weeks each)

Internal Medicine
Primary Care I
Primary Care II
Pediatrics
Women's Health

Emergency Medicine
Psychiatry/Mental Health
Surgery
Elective
Medical Surgical Selective

Institute for Emerging Health Professions

Laura Pontiggia, PhD
Director Academic
Programs

<https://www.jefferson.edu/IEHP>

About Us

Thomas Jefferson University's IEHP is a first-of-its-kind educational think-tank and incubator aimed at providing today the training and education that workers in healthcare and related disciplines will need tomorrow.

Center for Digital Health & Data Science

The Center for Digital Health plays a pivotal role in the promotion, resourcing, design and coordination of clinical and evaluative digital health research at Jefferson. The Center is unique in its mission to engage industry partners in the rigorous validation of the efficacy and impact of digital health innovations in the clinical setting.

Programs

Cannabis Medicine	<i>Graduate Certificate</i>
Certified Medical Assistant	<i>UG Certificate</i>
Connected Care: Telehealth & Digital Health	<i>Graduate Certificate</i>
Integrative Nutrition	<i>Advanced Practice Certificate</i>
Mind-Body Medicine	<i>Advanced Practice Certificate</i>
Perfusion & Extracorporeal Technology	<i>Graduate Certificate</i>
Telehealth Facilitator	<i>UG Certificate/CME</i>

Cannabis Medicine			
Campus Website	Graduate Certificate in Cannabis Medicine Online https://www.jefferson.edu/CannabisMedicine		
Program Description	<p>The graduate certificate in Cannabis Medicine is designed to equip clinicians with the understanding of current cannabinoid therapies and their health effects.</p> <p>This certificate is offered in partnership with the Center for Forensic Science Research & Education For over twenty years the Center has been at the forefront of the forensic community, providing novel developments in research, training and education in the forensic sciences.</p>		
Curriculum	CMD 503 CMD 504 CMD 505 CMD 510 or CMD 520	Pathology Potentially Responsive to Cannabis Conventional & Cannabinoid Therapy of Disease Health Implications of Medicinal Cannabis Cultural History, Regulation, and Policy of Cannabis or Cannabinoid Research Design	3 3 3 3
Learning Outcomes	In this certificate program, gaining an understanding of the science underlying endocannabinoids, phytocannabinoids, and synthetic cannabinoids as well as their clinical applications will help to close the educational gap.		

Certified Medical Assistant Program

Program Director Contact Website	Teodoro Rios (215) 503-5466 https://www.jefferson.edu/university/emerging-health-professions/programs/certified-medical-assistant.html			
Program Description	Medical Assistants provide administrative and clinical support in a variety of health care settings for patients. The curriculum is designed for full-time students and includes a built-in externship within an ambulatory practice for 12 weeks. This program is a combination of formal education and clinical experience to prepare students to have a competitive edge as an entry-level Certified Medical Assistant (CMA).			
Curriculum	MOD 1	MA 100	Introduction to Medical Assisting	4
	MOD 1	MA 101	Medical Terminology	4
	MOD 2	MA 110	Psychology for Medical Assistants	4
	MOD 2	MA 106	Communications	4
	MOD 3	MA 103	Medical Law and Ethics	3
	MOD 3	MA 105	Administrative Procedures	4
	MOD 4	MA 102	Anatomy and Physiology	4
	MOD 5	MA104A	Clinical Procedures I	4
	MOD 5	MA 104A-L	Clinical Procedures I Lab	1.5
	MOD 6	MA 104B	Clinical Procedures II	4
	MOD 6	MA 104B-L	Clinical Procedures II Lab	1.5
	MOD 7	MA 112	Externship	8
Learning Outcomes	The Certified Medical Assistant Academy will produce competent, entry-level medical assistants in the cognitive, psychomotor, and affective learning domains. Graduates will be eligible to sit for the CMA national certification examination.			

Connected Care: Telehealth & Digital Health Innovation

Program Director	Shruti Chandra, MD, MEHP
Campus	Online
Website	https://www.jefferson.edu/university/emerging-health-professions/programs/Connected-Care-Telehealth-Digital-Health-Innovation.html
Program Description	This certificate delves into emerging developments in areas of both telehealth and connect care and digital health to provide students the knowledge of different healthcare data streams and arming them with best practices in technology adoption for business implementation.
Curriculum	<ul style="list-style-type: none"> • Telehealth and Connected Care: An Advanced Course • Data of Healthcare and Emerging Technologies • Business of Telehealth and Digital Health
Learning Outcomes	<ul style="list-style-type: none"> • Learners will gain a practical skill set to practice telehealth and implement and support telehealth programs. • Learners will understand the different aspects of business model creation to solve healthcare problems in telehealth and digital health within and outside their own institutions. • Learners will understand and apply various data science tools and health data streams. • Learners will identify the legal, ethical and regulatory consideration for telehealth and other forms of digital health.

Integrative Nutrition	
Program Director	Mary Gozza-Cohen, PhD
Campus	Hybrid- Online & Center City
Website	https://www.jefferson.edu/IntegrativeNutrition
Program Description	The Integrative Nutrition Advanced Practice Certificate is unique in that it provides a foundation in nutritional science, as well as clinical and integrative applications of diets and specific nutrients. With an increasingly high-demand for nutrition education among physicians and many other health professionals, learners will be better equipped to address nutrition as a tool for improving overall health outcomes across a wide range of patients.
Curriculum	<ul style="list-style-type: none"> • Foundations in Integrative Nutrition 3 • Functional Genomics, Proteomics, and Metabolomics 3 • Advanced Concepts in Integrative Nutrition 3
Learning Outcomes	<ul style="list-style-type: none"> • Understand the complex role of nutrition in biochemistry, physiology, illness and health • Describe the role of macro and micro nutrients in regard to nutritional status • Explain the differences among common dietary approaches and discuss the evidence and/or lack of evidence supporting their use • Define biomarkers of nutritional deficiencies and suboptimal nutritional states • Construct and integrative nutritional plan for a wide range of patients

Mind-Body Medicine							
Program Director	Mary Gozza-Cohen, PhD						
Campus	Online						
Website	https://www.jefferson.edu/MindBodyMedicine						
Program Description	With an increasingly high-demand for mind-body education among health professionals, learners will be better equipped to incorporate these modalities into practice to improve overall health outcomes across a wide range of patients. Upon completion of this certificate, students will fulfill the foundational course requirements needed for Mindfulness-Based Stress Reduction (MBSR) and the Neuro-Emotional Technique (NET) basic training.						
Curriculum	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding-right: 20px;">Foundations in Mind-Body Medicine</td> <td style="text-align: right;">3</td> </tr> <tr> <td>Advanced Mindfulness-Based Stress Reduction</td> <td style="text-align: right;">3</td> </tr> <tr> <td>Advanced Mind-Body Practice: The Neuro Emotional Tech</td> <td style="text-align: right;">3</td> </tr> </table>	Foundations in Mind-Body Medicine	3	Advanced Mindfulness-Based Stress Reduction	3	Advanced Mind-Body Practice: The Neuro Emotional Tech	3
Foundations in Mind-Body Medicine	3						
Advanced Mindfulness-Based Stress Reduction	3						
Advanced Mind-Body Practice: The Neuro Emotional Tech	3						
Learning Outcomes	<ul style="list-style-type: none"> • Understand the complex network that constitutes “mind-body” • Describe the role of stress in health outcomes • Explain common mind-body interventions and discuss the evidence and/or lack of evidence supporting their use • Define the relationship between nutrition and mind-body well-being • Construct an integrative mind-body plan for a wide range of patients 						

Perfusion & Extracorporeal Technology

Program Director	Brian Schwartz, CCP, RN, MBA					
Campus	On Campus (with some online components)					
Accreditation	Accreditation Committee-Perfusion Education (AC-PE)					
Website	https://www.jefferson.edu/Perfusion					
Program Description	The mission of the Perfusion and Extracorporeal Technology Certificate program is to train competent, focused and highly-skilled perfusion technicians. Using evidence-based medicine, the program will produce students ready for board examinations and prepare graduates to perform the duties and responsibilities of a cardiovascular perfusionist in a variety of clinical settings.					
Curriculum	PER 500	Perfusion Tech I	4	PER 540	Pathophysiology	3
	PER 510	Human Physiology I	4	PER 691	Clinical App in Perfusion II	4
	PER 520	Cardio Anatomy	3	PER 640	App of ECMO & VAD	1
	PER 690	Clinical Perfusion I	3	PER 692	Clinical App in Perfusion III	12
	PER 600	Perfusion Tech II	4	PER 690	Clinical App in Perfusion IV	12
	PER 522	Gen Pharmacology	3	PER 530	Medical Ethics	2
	PER 610	Human Physiology	4	PER 694	Clinical App in Perfusion V	12
				PER 550	Perfusion Basic Sci Review	2
Learning Outcomes	The Perfusion and Extracorporeal Technology program will produce competent entry- level perfusionists in the cognitive, psychomotor, and affective learning domains. Graduates will be eligible to apply to take the national certification examinations offered by the American Board of Cardiovascular Perfusion.					

Telehealth Facilitator

Program Director Shruti Chandra, MD, MEHP
Campus Online
Website <https://www.jefferson.edu/Telehealth>

Program Description The goal of the program is to prepare graduates for a role in Telehealth facilitation as part of the inter-professional healthcare team by providing both Telehealth content expertise and Telehealth facilitation competencies. You will develop the skills to successfully facilitate, evaluate, and advocate for Telehealth in their departments and organizations.

Learning Outcomes

- Facilitate conversation between patient and provide
- Initiate the encounter, manage the interface between doctor and patient and address all technical challenges that may arise
- Ensure a sound and successful, professional medico-legal, culturally sensitive experience for the patient



**COLLEGE OF
HUMANITIES & SCIENCES**

Dean: Barbara Kimmelman, PhD | 215- 951-2612 | Jefferson.edu/JCHS

About Us

Our students tackle real-world issues through collaborative and experiential studies, exploring their passions as they develop communication skills and learn ethical professional practices.”

Human interactions with social, natural, and physical environments are the focus of the College of Humanities & Sciences, where we take an interdisciplinary approach to learning at the intersections of the liberal arts with the social and behavioral sciences to form a truly innovative curriculum.

Our students explore their passions, develop communication skills, and learn ethical professional practices. They tackle real-world issues through collaborative and experiential study. With attentive advising, community engagement, and participation in faculty research, our students are prepared to succeed in the professional realm in a wide range of careers, or to continue their academic studies in graduate and professional programs. Whatever career path they choose, our graduates are valued for their integrative thinking, collaborative worth ethic and global perspective.

Hallmarks Program for General Education

Jefferson pursues its mission of professional education with a broad and innovative approach to general education that advances a set of shared learning goals across the general education core curriculum (the Hallmarks Core), the majors, and co-curricular activities such as internships and study abroad. The Hallmarks Program for General Education coordinates these three dimensions of the Jefferson undergraduate experience to deliver our value proposition for General Education.

The Hallmarks Program is organized around a value proposition that defines our goals for each student:

The Hallmarks Program for General Education prepares Jefferson students to imagine and realize better futures, empowering them to”

- **Question**, based on rigorous inquiry and critical analysis
- **Adapt**, based on contextual communication and global perspectives
- **Contribute**, based on intercultural insight and collaborative creation
- **Act**, based on intellectual risk-taking and ethical reflection

This statement identifies eight Hallmarks outcomes that we consider vital to our students' personal and professional success. These also serve as the learning goals for the Hallmarks Program Core curriculum:

RIGOROUS INQUIRY	Create strategies for expanding knowledge through reflection and research
CRITICAL ANALYSIS	Challenge concepts, practices and experts with reasoning and evidence.
CONTEXTUAL COMMUNICATION	Develop and share insights using appropriate means of expression.
GLOBAL PERSPECTIVES	Navigate diverse environments and complex issues by managing multiple systems of knowledge and behavior.
INTERCULTURAL INSIGHT	Consider multiple perspectives in order to relate to others and strengthen communities.
COLLABORATIVE CREATION	Achieve goals by integrating skills and knowledge in a team setting.
INTELLECTUAL RISK-TAKING	Take creative and intellectual risks when exploring ideas and real-world problems.
ETHICAL REFLECTION	Affirm an ethical compass to guide personal, civic and professional life.

Within this framework of learning outcomes, our Hallmarks Program advances and tracks student achievement through a coherent and comprehensive general education core curriculum (the Hallmarks Core) and a learning portfolio process (the Hallmarks portfolio). The Hallmarks Core sets the foundation for these 8 outcomes and develops them progressively across four years of study. These outcomes are reinforced and given professional context in each student's major and they are given personal meaning in co-curricular activities like study abroad, student organizations, and internships. The Hallmarks portfolio is the digital space where students collect and post evidence of their progress towards fulfilling the 8 Hallmarks outcomes. This learning portfolio allows students to display "artifacts" of their learning for each outcome in all three components of their educational experience: their major, the Hallmarks Core and their co-curricular activities.

Key Capabilities	Hallmarks Learning Goals: your “Power Skills”	Two samples of your work for each learning goal, taken from 2 different parts of your Jefferson learning experience: your major, the Hallmarks Core, or your co-curricular experience.	
Question	Rigorous Inquiry	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Critical Analysis	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Adapt	Contextual Communication	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Global Perspectives	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Contribute	Intercultural Insight	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Collaborative Creation	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Act	Intellectual Risk-Taking	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Ethical Reflection	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

The Hallmarks Core

The Hallmarks Core, our general education core curriculum, guides Jefferson students through an integrated education in the liberal arts and sciences and advances their mastery of the eight Hallmarks learning outcomes, in partnership with the broader Hallmarks Program for General Education. The Hallmarks Core also supports and supervises our students in the completion of their Hallmarks portfolios, with “touchstone” courses in each year of the curriculum where faculty review the progress of each student’s learning portfolio. The “touchstone” courses are AMST 114 Topics in American Studies, WRIT-201/202 Writing Seminar II: Multimedia Communication, CGIS 300 Contemporary Global Issues, and PHIL 499 Philosophies of the Good Life.

Key Capabilities

Year One	Year Two	Year Three	Year Four
4 “touchstone” courses			
Topics in American Studies	Writing Seminar II	Contemporary Global Issues	Philosophies of the Good Life
Writing Seminar I	American Diversity	Integrative Seminar	
First Year Seminar (1 credit)	Ethics		
	Global Citizenship		
	Global Diversity		
Scientific Understanding			
Mathematics			
Mathematics or Scientific Understanding			

The curriculum chart below identifies the prerequisites and course options for the different requirement categories in the Hallmarks Core. The Hallmarks Core sequences its requirements over four years in order to build skills, knowledge and learning outcomes progressively. In most cases, majors have scheduled these requirements in specific years or semesters within their curricula. Students should consult with their academic advisors before registering each semester and use the chart provided here to ensure that they are on track in terms of sequencing and prerequisites.

First Year	Sophomore Year	Junior Year	Senior Year
First Year Seminar FYS 100 Pathways Seminar: Preparing for Academic and Professional Success (1 credit)	Writing Seminar II: Multimedia Communication WRIT 201/202: Writing Seminar II (Prereq: WRIT 101/101G)	Contemporary Global Issues CGIS 300 Contemporary Global Issues (Prereq: WRIT 201/202, GDIV 2xx or GCIT 2xx)	Philosophies of the Good Life PHIL 499 Philosophies of the Good Life (Prereq: CGIS 300, ISEM 3xx, ETHC 2xx, ADIV 2xx, GCIT 2xx, MATH 1xx, Scientific Understanding)
	Global Diversity GDIV 200 Global Cultures of Modernity GDIV 221 The Environment and World Cultures GDIV 229 Intercultural Encounters GDIV 231 Cultures of the Spanish Speaking World GDIV 233 World Cinemas GDIV 235 World Religions GDIV 333 Pop Culture in Global Society (Prereq: AMST 114, WRIT 101/101G)	Integrative Seminars ISEM 301 Animals and Society ISEM 302 Telling Stories, Selling Stories ISEM 304 Cultures of Health and Illness ISEM 305 Healthcare Economics and Policy ISEM 313 Conspiracy Theories ISEM 340 Sustainability and Development in the Non-Western World ISEM 360 Human Behavior and the Physical Environment ISEM 378/DECM 300 Ethnographic Research Methods (Prereq: WRIT 201/202, GDIV 2xx or GCIT 2xx)	
Writing Seminar I: Written Communication WRIT 101/101G Writing Seminar I	Ethics ETHC 200 Bioethics ETHC 201 Honors Moral Philosophy ETHC 202 Environmental Ethics ETHC 204 The Ethics of Apocalypse: Dystopian Film and Literature ETHC 215 Evil and Good (Prereq: AMST 114, WRIT 101/101G)		
	American Diversity ADIV 200 American Social Justice ADIV 201 Defining American Voices ADIV 202 Immigrant America ADIV 203 Thomas Jefferson in a Diverse America ADIV 204 Red and Blue America ADIV 206 Gender and Diversity in the U.S. ADIV 211 African American Studies ADIV 212 Asian American Studies ADIV 213 Jewish American Studies ADIV 214 Race in America ADIV 215 Latinx American Studies ADIV 216 LGBTQIA American Studies ADIV 217 Muslim American Studies (Prereq: AMST 114, WRIT 101/101G)		

<p>Topics in American Studies</p> <p>AMST 114 Topics in American Studies</p>	<p>Global Citizenship</p> <p>GCIT 200 War and Political Violence GCIT 210 Human Rights GCIT 211 The Global Economy GCIT 214 Global Environmental Citizenship GCIT 215 Global Immigration GCIT 225 Global Politics</p> <p>(Prereq: AMST 114, WRIT 101/101G)</p> <p>World Languages</p> <p>FREN 101/201/301/401: French I-IV GER 101/201: German I-II ITAL 101/201/301/401: Italian I-IV JAPN 101/201/301/401: Japanese I-IV SPAN 101/201/301/401: Spanish I-IV SPAN 202: Medical Spanish SPAN 302: Intermediate Medical Spanish</p>	
<p>Mathematics</p> <p>MATH 100/1 Finite Math MATH 102 Pre-Calculus MATH 103 Introduction to Calculus MATH 110 Precalculus for Science and Engineers MATH 111 Calculus I</p>		
<p>Scientific Understanding</p> <p>SCI 101 Environmental Science SCI 102 Exploring Science SCI 106 Biology for Design SCI 108 Sustainability and Eco-Innovation SCI 110 Landscape Ecology BIOL 101 Current Topics in Biology</p>	<p>CHEM 101 General Chemistry PHYS 101 Gen. Physics CHEM 103 Chemistry I (4 cr.) BIOL 103 Biology I (4 cr.) PHYS 201 Physics I (4 cr.)</p>	
<p>Mathematics OR Scientific Understanding</p> <p>Any third course from the above two categories (or STAT 201 in some majors - please consult the check sheet for your program)</p>		

Introductory and Fundamentals courses:

Some students begin the Hallmarks Core sequence with appropriate preparatory courses in reading, writing and mathematics (determined by placement testing). Courses at the 100-level (WRTG-100 Introduction to Academic Writing, WRTG-100G Introduction to Academic Writing: Global, and TXIS-100 Textual Analysis for International Students) carry academic credits that apply towards graduation. Courses at the 099-level (MATH-099 Fundamentals of College Mathematics) carry credits that do not apply towards graduation.

Arlen Specter Center

The (Senator) Arlen Specter Center at Jefferson facilitates and promotes public service and civic education in a cross-disciplinary, nonpartisan setting. The Center is also home to Senator Specter's historic archive of papers, photographs and political documents for the benefit of researchers, scholars and the public.

The Specter Center Includes:

- Arlen Specter Collection
- Roxboro Roundtables
- Knowledge Exchange
- Special Events
- Research Fellowship
- Historic Roxboro House

Academic Programs

Undergraduate

Biopsychology	<i>BS</i>
Communication	<i>BS</i>
Law & Society	<i>BS</i>
Psychology	<i>BS</i>

Accelerated/Dual Degree

BS Psychology & MS Community & Trauma Counseling	<i>BS & MS</i> <i>*See Program Director for Plan of Study</i>
BS Psychology & MS Occupational Therapy	<i>BS & MOT</i> <i>*See Program Director for Plan of Study</i>

Biopsychology

Bachelor of Science (BS)

Program Director	John D Pierce, PhD
Campus	East Falls
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/humanities-sciences/degree-programs/biopsychology.html

Program Description

In this program, you will study psychology alongside biology, chemistry, anatomy & physiology, making this an ideal first step into further studies in a variety of experimental psychology settings, neuroscience, health fields, and scientific research. You will work closely with faculty to develop an avenue of career possibilities. First, you select a concentration option - pre-medical or graduate school - allowing you to adapt your curriculum to your career goals and interests. You will also learn to conduct professional-level research, completing an independent research project your senior year. During your time in the program, you can further enrich your education with internships in research, legal and educational settings; or study abroad anywhere in the world.

Learning Goals/Outcomes

- Analyze and apply the scientific process to psychology.
- Locate, retrieve, critically evaluate and communicate scientific data and knowledge.
- Communicate effectively and professionally.
- Express expertise in specific content areas of psychology.
- Display knowledge of the ethical standards, personal integrity and professional responsibilities of psychologists.
- Apply principles and practice of core information and values in a psychology practice environment through internships and applied research.

Curriculum: 4 year, 120-130 credits

<u>Year 1</u>			<u>Year 3</u>		
FYS 100	Pathways Seminar	1	GCIT 2XX	Global Citizenship	3
WRIT 101	Written Communication	3	CGIS 300	Contemporary Global Issues	3
AMST 114	Topics in American Studies	3	ISEM 3XX	Integrative Seminar	3
MATH 1XX	Math 100, 101,102,103, or 111	3-4	BIOL 201/L	Anatomy and Physiology I/Lab	4
	Quant Reasoning II or Elective	3-4	STAT 220	Stats for Behavioral Sciences	3
BIOL 103	Biology I/Lab	4	PSYC 240	Comparative Psychology	3
BIOL 104	Biology II/Lab	4	PSYC 322	Research Method Behavioral Sci	3
PSYC 101	Introduction to Psychology	3	PSYC 2XX	Select: PSYC 240, 241,242	3
PSYC 213	Developmental Psychology	3	PSYC XXX	PSYC Concentration course	3-4
PSYC 103	Physiological Psychology	3	PSYC XXX	PSYC Concentration course	3-4
				Free Electives	3
<u>Year 2</u>			<u>Year 4</u>		
ETHIC 2XX	Ethics	3	PHIL 499	Philosophies of Good Life	3
GDIV 2XX	Global Diversity	3	PSYC 391	Adv Research in Psychology	3
WRIT 201	Multimedia Communication	3	PSYC 410	Sr. Colloquium in Psychology	3
ADIV 2XX	American Diversity	3	PSYC 2XX	Select: PSYC 240, 241,242	3
CHEM 103/L	Chemistry I/Lab	4	PSYC XXX	PSYC Concentration course	3-4
CHEM 104/L	Chemistry II/Lab	4	PSYC XXX	PSYC Concentration course	3-4
PSYC 2XX	Select: PSYC 240, 241,242	3	PSYC XXX	PSYC Concentration course	3-4
PSYC XXX	Concentration Course	3-4		Free Electives	9
PSYC XXX	Concentration Course	3-4			

Psychology Concentration Option (See academic advisor *before* selecting one of the following)

Pre-Med Option (students must take MATH-111 & MATH-112 to fulfill the Math requirement)

CHEM-201/201L, CHEM-202/202L, PHYS-201/201L, PHYS-203/203L, and three additional advanced courses from Biology and Psychology (see advisor)

Graduate Study Option

Select seven advanced courses from Biology and Psychology areas (at least three from each area; see advisor)

Introductory and Fundamentals Courses: (Fundamental "099" courses do not count toward graduation requirements. However, WRTG-100 can be used toward graduation credits as a free elective.

Communication

Bachelor of Science (BS)

Program Director	Letrell Crittenden, PhD
Campus	East Falls
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/humanities-sciences/degree-programs/communication.html

Program Description

The Jefferson Communication program prepares students for today's media marketplace through a broad-based education that emphasizes storytelling, critical thinking, and creative problem-solving and multimedia skills development.

The program tailors itself to the unique career goals of each student, and provides the key skills necessary to transition into new areas of communications, as the marketplace continues to change and grow.

Learning Goals/Outcomes

- Planning and Process: apply a process of self-reflection and self-evaluation in order to plan their course of study and professional path in Communication [integration]
- Visual Literacy: read, interpret, and analyze visual information in multiple forms of 153 media [visual]
- Idea Invention: engage in generative and iterative processes to develop and communicate original ideas to achieve specific communication goals [rhetoric, practice, visual, integration]
- Rhetoric and Writing: identify and apply written techniques of argument and persuasion appropriate to specific tasks, audiences, and platforms [rhetoric, practice]
- Visual/Verbal Presentation: synthesize & understanding of visual and verbal communication techniques and technologies to create effective presentations for specific audiences [rhetoric, practice, visual, integration]
- Narrative Creation: identify and apply written and visual narrative strategies to the invention and communication of persuasive stories for specific audiences [rhetoric, practice, visual, integration]
- History/Theory: explore the relationship between meaning and context through analysis of historical and contemporary communicative expressions [rhetoric, practice, visual integration]

Curriculum: 4 year, 122-128 credits

<u>Year 1</u>			<u>Year 3</u>		
FYS 100	Pathways Seminar	1	GCIT 2xx	Global Citizenship	3
WRIT 101	Writing I: Written Communication	3	ISEM 3XX	Integrative Seminar	3
DBTU 114	Debating U.S. Issues	3	MKTG 102	Principles of Marketing	3
MATH XXX	Mathematics	3-4	MKTG XXX	Marketing Elective	3
	Scientific Understanding	3-4	COM 316	Journalism in Multimedia World	
	Scientific Understanding/Math/STAT	3-4		Com Related Minor 1	3-4
COM 101	Intro to Communication	3		Com related Minor 2	3-4
COM 202	Research Methods	3		Com Related Minor 1	3-4
COM 107	Radio Production	1		Com Related Minor 2	3-4
COM 102	Public Speaking	3		Free Elective	3
COM 204	Social Media Strategies	3			
	Free Elective	3			
<u>Year 2</u>			<u>Year 4</u>		
ADIV 2XX	American Diversity	3	HALLMK 499	Capstone Folio Workshop	3
ETHS 1XX	Ethics	3	ETHIC 1XX	Ethics	3
WRIT 20X	Multimedia Communication	3	COM 402	Pro Ethics in Communication	3
GDIV 1XX	Global Diversity	3	COM 404	Communication Capstone	3
PHTO 205	Comm as Photography	3		Com Related Minor 3	3-4
COM 206	Strategic Communication	3		Com Related Minor 4	3-4
COM 300	Text, Sound and Image	3		Com Elective/Open Minor 3	3-4
DBTG 300	Debating Global Issues	3		Com Elective/Open Minor 4	3-4
COM 307	Fund. of Web Programming	3		Free Electives	9
COM 200	Visual Communications	3			

Law & Society

Bachelor of Science (BS)

Program Director Evan Laine, JD, MA
Campus East Falls
Website <https://www.jefferson.edu/academics/colleges-schools-institutes/humanities-sciences/degree-programs/law-society.html>

Program Description

Interdisciplinary program that encourages active student participation and debate on issues concerning how competing powers create law, for what purpose, and how these laws are implemented and why they are followed. The program develops leadership by building critical thinking and communication skills in an energetic, practically oriented environment. Graduates are prepared broadly for careers in the legal profession, such as law school, paralegal and legal assistantships, and for positions in criminal justice, law enforcement, politics, nonprofits and government organizations

Learning Goals/Outcomes

- Experience in a broad interdisciplinary major
- Obtain an understanding of the structures and functions of the legal systems in both the American and global context
- Have strong experiences in writing across contexts
- Ability to apply understanding and skills to the recognition and resolution of problems in contemporary society
- Prepared for graduate & professional careers, within the legal system and without, as well as a variety of public and private settings
- Understanding of the historical, philosophical, political, and social foundations of the law and its roles in society, and its relationship to economic, political, social and cultural structures and values in contemporary world

Curriculum: 4 years, 121 credits

<u>Year 1</u>			<u>Year 3</u>		
FYS 100	Pathways Seminar	1	DBTG 300	Debating Global Issues	3
WRIT 101	Written Communication	3	GCIT 3XX	Contemporary Global Issues	3
DBTU 114	Debating U.S. Issues	3	GCIT 3XX	Global Citizenship	3
	Science I	3-4	ISEM 3XX	Integrative Seminar	3
MATH xxx	Mathematics	3-4	LAW 300	International Law	3
LAW 101	Intro to Law & Society	3	LAW 306	Legal Research, Wrtg & Moot Court	3
LAW 103	Crime And Justice	3	LAW 302	Law and Ethics	3
LAW 105	American Government	3	LAW 304	Law, Media and Society	3
	Free Elective	9		Minor Courses	6
<u>Year 2</u>			<u>Year 4</u>		
ETHIC 1XX	Ethics	3	HALLMK 499	Capstone Folio Workshop	3
	Science II	3-4	LAW 499	Sr Cap: Public Policy Advocacy	3
WRIT-201	Multimedia Communication	3		Minor Courses	6
ADIV 2XX	American Diversity	3		Designated Law Electives	6
GDIV 2XX	Global Diversity or Lang	3	LAW 411	First Amendment: Senior Seminar	3
LAW 203	Comparative Legal Systems	3		Free Electives	9
LAW 201	Constit Law/Supreme Court	3			
LAW 313	Conspiracies Theories	3			
	Designated Electives	9			
	Free Elective	3			

Psychology

Bachelor of Science (BS)

Program Director
Campus
Website

John Pierce Jr., PhD
East Falls
<https://www.jefferson.edu/academics/colleges-schools-institutes/humanities-sciences/degree-programs/psychology.html>

Program Description

The scientific study of behavior, is a remarkably diverse and far-reaching field. The Bachelor of Science in Psychology is designed to provide an overview of the many areas of the field, with an emphasis on the scientific nature of psychology. The comprehensive curriculum provides students with an in-depth understanding of the principles of behavior and the scientific methods used to derive those principles. The curriculum covers the discipline from academic and applied perspectives. Students graduating from the psychology program are well prepared for graduate work in psychology or for starting careers outside of academic psychology. Students take a core group of courses that emphasize the research-based nature of psychology and select additional courses in psychology depending upon their interests and goals. At the senior level, students conduct an advanced research project and may pursue internships at local counseling centers, human-services agencies, hospitals, residential treatment centers or other locations.

Psychology graduates may choose to work in professions such as counseling, social work, education or research. Other positions available to psychology majors include human resource management, rehabilitation, community counseling and crisis intervention. The major allows students the flexibility to pursue graduate studies in related disciplines such as education, occupational therapy and management.

Learning Goals/Outcomes

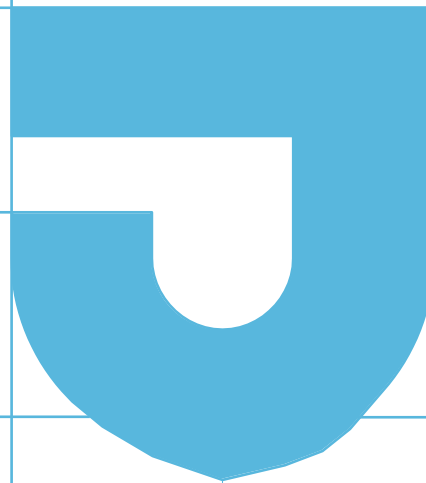
- Analyze and apply the scientific process to psychology
- Locate, retrieve, critically evaluate and communicate scientific data and knowledge
- Communicate effectively and professionally
- Express expertise in specific content areas of psychology
- Display knowledge of the ethical standards, personal integrity and professional responsibilities of psychologists
- Apply principles and practice of core information and values in a psychology practice environment through internships and applied research.

Curriculum: 4 years, 121-129 credits

<u>Year 1</u>			<u>Year 3</u>		
FYS 100	Pathways Seminar	1	GCIT 2XX	Global Citizenship	3
WRIT 101	Written Communication	3	ISEM 3XX	Integrative Seminar	3
AMST 114	Topics in American Studies	3	CGIS 300	Contemporary Global Issues	3
	Scientific Understanding I	3	STAT 220	Statistics for Behavioral Sciences	3
MATH 1XX	Math 100, 102, 103, or 111	3-4	PSYC 322	Research Methods Behavioral Sci	3
	Quantitative Reasoning I	3-4			
	Quantitative Reasoning II or Free Elective	3-4	PSYC XXX	Psyc Electives (Designated)	9
PSYC 101	Introduction to Psychology	3		Minor Course	3-4
PSYC 103	Physiological Psychology	3		Free Electives	3
PSYC 213	Developmental Psychology	3			
	Science Elective(Designated)	3-4			
	Free Elective	3			
<u>Year 2</u>			<u>Year 4</u>		
ETHIC 2XX	Ethics	3	PHIL 499	Philosophies Good Life	3
GDIV 2xx	Global Diversity	3	PSYC 391	Advanced Research in Psychology	3
WRIT 201	Multimedia Communication	3	PSYC 410	Senior Colloquium in Psychology	3
ADIV 2XX	American Diversity	3		Psyc Electives (Designated)	9
PSYC 201	Abnormal Psychology	3		Minor Courses	6-8
PSYC XXX	Psyc Electives (Designated)	6		Free Electives	6
	Minor Course	3-4			
	Free Electives	6			

<u>Psychology Distribution Electives (select two courses from each area)</u>					
<u>Experimental Psychology</u>			<u>Social/Organizational Psychology</u>		
PSYC 210	Forensic Psychology	3	PSYC 221	Personality Theory	3
PSYC 211	Learning Theory	3	PSYC 230	Industrial/Organizational Psy	3
PSYC 212	Cognitive Psychology	3	PSYC 231	Psychological Assessment	3
PSYC 214	History of Psychology	3	PSYC 232	Social Psychology	3
PSYC 215	Sports Psychology	3	PSYC 233	Interpersonal Relations & Small Group Dynamics	3
			PSYC 234	Cultural and Social Diversity	3
<u>Clinical Psychology</u>			<u>Biological Bases of Behavior</u>		
PSYC 220	Clinical Psychology	3	PSYC 240	Comparative Psychology	3
PSYC 222	Counseling Psychology	3	PSYC 241	Psychopharmacology	3
PSYC 223	Marriage and Family	3	PSYC 242	Sensations and Perceptions	3
PSYC 224	Psychology of Addiction	3	PSYC 243	Human Sexuality	3
PSYC 226	Psychology of Trauma	3			
PSYC 227	Intro to Art Therapy	3			

COLLEGE OF LIFE SCIENCES



Dean: Gerald B. Grunwald, PhD | 215- 503-4400 | Jefferson.edu/JCLS

About Us

The mission of the Jefferson College of Life Sciences (JCLS) is to “Train Tomorrow’s Scientific Leaders Today” by providing the highest quality undergraduate, graduate and postdoctoral education and research training in the life sciences, in order to prepare our students and fellows to make significant contributions to the progress of life science through careers including academia, industry, and government. To achieve this goal, our academic programs span both the Jefferson-East Falls Campus, home of our Department of Biological and Chemical Sciences, and the Jefferson-Center City Campus, home of our Jefferson Graduate School of Biomedical Sciences. JCLS and its faculty offering courses and programs across a wide field of basic and translational sciences, leading to the BS degree, PhD degree, the MS degree and graduate certificate programs. In addition, JCLS offers a Post baccalaureate Pre-Professional Program for candidates interested in completing their prerequisite course work for medical and professional schools. The College also coordinates postdoctoral training programs across the campus. Additionally, JCLS, in conjunction with the Sidney Kimmel Medical College, offers a combined MD/PhD program.

Our education and training programs provide a solid foundation for our graduates, who have gone forward to continue with additional graduate and professional education and training programs or directly on to successful careers including positions at colleges and universities, pharmaceutical and biotechnology companies, healthcare settings, government agencies, and many other professional venues.

Research

Biomedical research and training at Jefferson is anchored by a large and diverse portfolio of active research programs with extensive outside grant support. That foundation, combined with Jefferson’s clinical research and patient-care programs, provides opportunities for basic and translational research in a challenging, exciting and satisfying graduate training environment. Research Areas include:

- Biochemistry & Molecular Pharmacology
- Cell & Developmental Biology
- Genetics, Genomics & Cancer Biology
- Immunology & Microbial Pathogenesis
- Integrative Physiology
- Neuroscience

Office of Postdoctoral Affairs

The Office of Postdoctoral Affairs works with the academic departments to determine human resource needs and training opportunities for postdoctoral fellows. Jefferson postdocs create a thriving community, where postdoctoral training encompasses not only research, but also many aspects of professional development and personal growth. These include, but are not limited to:

- Working with the human resources department to implement salary and benefits guidelines
- Creating a database of postdoctoral fellows
- Coordinating career and professional development workshops
- Being a central resource for postdoctoral fellows as well as departmental administrators and PIs

Accreditations

<ul style="list-style-type: none"> American Chemical Society (ACS) Chemistry (BS) 	www.acs.org
<ul style="list-style-type: none"> Accreditation Council for Genetic Counseling (ACGC) Human Genetics and Genetics Counseling (MS) 	www.gceducation.org

Academic Programs

Undergraduate

Biochemistry	BS
Biology	BS
Chemistry	BS
Pre-Medical Studies	BS

Graduate

Biomedical Sciences	MS
Cell & Developmental Biology	MS
Clinical Research	MS
Forensic Biology	MS
Forensic Toxicology	MS
Human Genetics, Genomics & Cancer Biology	MS
Microbiology & Immunology	MS
Pharmacology	MS
Biochemistry & Molecular Pharmacology	PhD
Cell Biology & Regenerative Medicine	PhD
Human Genetics, Genomics & Cancer Biology	PhD
Immunology & Microbial Pathogenesis	PhD
Integrative Physiology	PhD
Neuroscience	PhD

Certificate

Clinical Research	Graduate Certificate
Clinical Research & Trials: Implementations	Graduate Certificate
Clinical Research: Operations	Graduate Certificate
Human Clinical Investigation: Theory	Graduate Certificate
Infectious Disease Control	Graduate Certificate
Patient-Centered Research	Graduate Certificate

Accelerated/Dual Degree

Medicine & Doctor of Philosophy	MD & PhD (SKMS pg. 246)
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Biochemistry

Bachelor of Science (BS)

Program Director	Niny Rao, PhD
Campus	East Falls
Website	https://www.jefferson.edu/university/life-sciences/degrees-programs/undergraduate-programs/biochemistry.html

Program Description

This active and collaborative program will prepare you for what's next. You start collecting chemical knowledge and skills through core courses and shadowing faculty and upper-level student researchers. As a sophomore, you will start helping with authentic, real-world research projects - experience many biochemistry students don't get until graduate programs. This is possible thanks to the individual attention you get in our small classes and our well-equipped research laboratories.

Learning Goals/Outcomes

- Describe laws & theories of chemistry pertaining to the properties of matter, chemical reactions and their stoichiometry, properties of gases, solution chemistry and acid/base chemistry.
- Describe chemistry of organic molecules including functional group structure and properties, structure and stereochemistry of alkanes, nucleophilic substitution and elimination reactions of alkyl halides, the structure/synthesis/reactions of alkenes, alcohols, aromatic compounds, amines, carboxylic acids, carboxylic acid derivatives and aldehydes/ketones.
- Summarize chemical thermodynamics, chemical kinetics & quantum mechanics and relate information to modern day chemistry.
- Develop language, terms & critical thinking/problem solving skills to use and understand analytical instrumentation used in chemistry and biochemistry today.
- Acquire laboratory skills, including knowledge of laboratory safety, proper laboratory behavior, and to be functional with laboratory equipment and techniques.
- Describe the chemistry of inorganic compounds, to include symmetry and group theory, molecular orbital theory, coordination chemistry, main group element chemistry and the chemistry of the solid state.
- Describe metabolism (including signaling mechanisms, basic biochemistry of DNA and RNA and mechanisms of control of gene expression), protein structure-function and laboratory techniques used in biochemical research.
- Garner information and critically analyze information (Information Literacy skills in general).
- Effectively communicate in written formats germane to the sciences.
- Successfully use their garnered research skills to probe new avenues of scientific inquiry.
- Utilize communication skills to disseminate research to both the general public and the scientific community.

Curriculum: 4 year, 124-125 credits

<u>Year 1</u>			<u>Year 3</u>		
FYS 100	Pathways Seminar	1	ADIV 1XX	American Diversity	3
WRIT 101	Written Communication	3	GCIT 2XX	Global Citizenship	3
DBTU 114	Debating U.S. Issues	3	DBTG 300	Debating Global Issues	3
CHEM 103	Chemistry I/Lab	4	ISEM 3XX	Integrative Seminar	3
BIOL 103	Biology I/Lab	4	BCHEM 312	Biochemistry I/Lab	4
MATH 111	Calculus	4	BCHEM 313	Biochemistry II/Lab	4
MATH 112	Calculus II	4	CHEM 305	Physical Chemistry	4
CHEM 104	Chemistry II/Lab	4	CHEM 323	Instrumental Method Analysis	4
BIOL 104	Biology II/Lab	4			
<u>Year 2</u>			<u>Year 4</u>		
ETHIC 1XX	Ethics	3	HALLMK 499	Capstone Folio Workshop	3
WRIT 201	Multimedia Communication Global	3	CHEM 309	Inorganic Chemistry	4
GDIV 1XX	Diversity	3		Electives	9-10
MATH 213	Calculus III	4		Free Electives	12
STAT 301	Biostatistics	4			
PHYS 201	Physics I/Lab	4			
PHYS 203	Physics II/Lab	4			
CHEM 201	Organic Chemistry I/Lab	4			
CHEM 202	Organic Chemistry II/Lab	4			

Biology

Bachelor of Science (BS)

Program Director	Jeffrey Klemens, PhD
Campus	East Falls
Website	https://www.jefferson.edu/university/life-sciences/degrees-programs/undergraduate-programs/biology.html

Program Description

With an innovative curriculum providing broad scientific study, the BS in Biology program allows undergraduates to explore their passions. Students receive hands-on instruction through field work in the Philadelphia area. Study abroad opportunities give students a global perspective.

Learning Goals/Outcomes

- Select and apply elementary and advanced biological principles to projects at multiple levels
- Prepare oral presentations based on laboratory work or literature review information
- Interpret and employ graphical and tabular presentations of data
- Execute and perfect laboratory skills
- Prepare comprehensive laboratory reports in manuscript format
- Synthesize content and skills in planning a research project
- Identify, summarize and compare contrasting expert viewpoints on biological subjects
- Integrate critical review of biological literature in support of a research project
- Recognize the diversity of professions available to persons trained in biological sciences
- Display professional conduct in a variety of academic and professional environments in the biological sciences

Curriculum: 4 year, 122-132 credits

<u>Year 1</u>			<u>Year 3</u>		
FYS 100	Pathways Seminar	1	ADIV 2XX	American Diversity	3
WRIT 101	Written Communication	3	GCIT 2XX	Global Citizenship	3
DBTU 114	Debating U.S. Issues	3	DBTG 300	Contemporary Global Issues	3
CHEM 103	Chemistry I/Lab	4	ISEM 3XX	Integrative Seminar	3
BIOL 103	Biology I/Lab	4	PHYS 201	Physics I/Lab	4
MATH 111	Calculus	4	PHYS 203	Physics II/Lab	4
MATH 112	Calculus II	4	BIOL 208	Biodiversity	3
CHEM 104	Chemistry II/Lab	4	BIOL XXX	Advanced Biology Electives	6-8
BIOL 104	Biology II/Lab	4		Free Elective	3
<u>Year 2</u>			<u>Year 4</u>		
ETHC 200	Ethics	3	PHIL 499	Philosophies of Good Life	3
WRIT 2XX	Multimedia Comm.	3	STAT 301	Biostatistics	3
GDIV 2XX	Global Diversity	3	SCI 402	Science Seminar	3
CHEM 201	Organic Chemistry II/Lab	4		Advanced Biology Electives	9-12
CHEM 202	Environmental Issues	4		Free Electives	9-12
BIOL 105	Medicinal Plants	3			
BIOL 207	Principles of Genetics/Lab	4			
	Free Elective	3-4			

Program Director	Niny Rao, PhD
Campus	East Falls
Website	https://www.jefferson.edu/university/life-sciences/degrees-programs/undergraduate-programs/chemistry.html

Program Description

You will be a sought-after candidate for scientific careers or graduate programs, thanks to professional research and presentation experience, and close faculty mentorship.

This active and collaborative program will prepare you for what's next. You start collecting chemical knowledge and skills through core courses and shadowing faculty and upper-level student researchers. As a sophomore, you will start helping with authentic, real-world research projects - experience many biochemistry students don't get until graduate programs. This is possible thanks to the individual attention you get in our small classes and our well-equipped research laboratories.

Learning Goals/Outcomes

- Describe the laws and theories of chemistry pertaining to the properties of matter, chemical reactions and their stoichiometry, properties of gases, solution chemistry and acid/base chemistry.
- Describe the chemistry of organic molecules including functional group structure and properties, structure and stereochemistry of alkanes, nucleophilic substitution and elimination reactions of 233 alkyl halides, the structure/synthesis/reactions of alkenes, alcohols, aromatic compounds, amines, carboxylic acids, carboxylic acid derivatives and aldehydes/ketones.
- Summarize chemical thermodynamics, chemical kinetics, and quantum mechanics and relate this information to modern day chemistry.
- Develop the language, terms and critical thinking/problem solving skills to use and understand analytical instrumentation used in chemistry and biochemistry today.
- Acquire the necessary laboratory skills, including knowledge of laboratory safety, proper laboratory behavior, and to be functional with laboratory equipment and techniques.
- Describe the chemistry of inorganic compounds, to include symmetry and group theory, molecular orbital theory, coordination chemistry, main group element chemistry and the chemistry of the solid state.
- Describe metabolism (including signaling mechanisms, basic biochemistry of DNA and RNA and mechanisms of control of gene expression), protein structure-function and laboratory techniques used in biochemical research.
- Garner information and critically analyze information (Information Literacy skills in general).
- Effectively communicate in written formats germane to the sciences.
- Successfully use their garnered research skills to probe new avenues of scientific inquiry.

Curriculum: 4 years, 126-129 credits

<u>Year 1</u>			<u>Year 3</u>		
FYS 100	Pathways Seminar	1	ADIV 1XX	American Diversity	3
WRIT 101	Written Communication	3	GCIT 2XX	Global Citizenship	3
DBTU 114	Debating U.S. Issues	3	CGIS 300	Contemporary Global Issues	3
CHEM 103/l	Chemistry I/Lab	4	ISEM 3XX	Integrative Seminar	3
BIOL 103 /l	Biology I/Lab	4	BIOC 312/L	Biochemistry I/Lab	4
MATH 111	Calculus I	4	BIOC 313/L	Biochemistry II/Lab	4
MATH 112	Calculus II	4	CHEM 323	Instrumental Methods of Analysis	4
CHEM 104/ l	Chemistry II /Lab	4	CHEM 305	Physical Chemistry I	4
BIOL 104/ l	Biology II/Lab	4	CHEM 306	Physical Chemistry II	4
<u>Year 2</u>			<u>Year 4</u>		
ETHIC 2XX	Ethics	3	PHIL 499	Philosophies Good Life	3
WRIT 201	Multimedia Com	3	CHEM 309	Inorganic Chemistry	4
GDIV 1XX	Global Diversity	3		Advanced Chemistry Electives	12-14
MATH 331	Mathematical Methods	3		Free Electives	9
PHYS 201 /L	Physics I /Lab	4			
PHYS 203/ L	Physics II/Lab	4			
CHEM 201 /l	Organic Chemistry I/Lab	4			
CHEM 202/l	Organic Chemistry II/Lab	4			
	Free Electives	6			

Pre-Medical Studies

Bachelor of Science (BS)

Program Director	Diana Cundell, PhD
Campus	East Falls
Website	https://www.jefferson.edu/university/life-sciences/degrees-programs/undergraduate-programs/pre-medical-studies.html

Program Description

Pre-medical studies is an “umbrella major” providing academic and professional training to students planning to attend medical school as well as other graduate health care institutions. The major is distinguished by a series of unique upper-level science courses whose case history and problem-based learning approach mirrors that of first-year graduate students in the health care professions, and which are designed to develop students’ proficiency in interpreting complex scientific data. Students spend 100 hours developing their empathic, professional and clinical evaluation skills through two hands-on, off-campus preceptorship experiences performed with licensed health care practitioners. Our graduates are nationally competitive, as evidenced by their MCAT, GRE and DAT scores, and more than 90 percent of our students to date have gone on to various successful careers as physicians, dentists, physical therapists, veterinarians, pharmacists, optometrists, podiatrists and chiropractors.

Learning Goals/Outcomes

- knowledge of health care through hands-on training in HIPAA law, taking history and basic physical measurements and professional conduct with patients
- Demonstrate oral and written communication skills with both lay people and professionals
- Recognize and use medical terminology
- Formal, analytical, synthetic & problem solving science skills
- Synthesize information from diverse sources to make decisions
- Recognize the social challenges faced in both national and global medical practice
- Comprehend and be able to explain a variety of commonly used clinical laboratory techniques
- Recognize and employ the professional empathy needed in an effective health care professional
- Demonstrate an optimal performance on national standardized graduate school exams (MCAT, GRE, DAT etc.)
- Recognize the varied health care careers and their spheres of expertise

Curriculum: 4 years, 127-128 credits

	Year 1			Year 3		
FYS 100	Pathways Seminar	1		ISEM 3XX	Integrative Seminar	3
WRIT 101	Written Communication	3		GCIT 2xx	Global Citizenship	3
DBTU 114	Debating U.S. Issues	3		ETHC 2xx	Ethics	3
CHEM 103/L	Chemistry I/Lab	4		PHYS 201/L	Physics I/Lab	4
BIO 103/L	Biology I/Lab	4		PHYS 203/L	Physics II /Lab	4
MATH 111	Calculus I	4		BIOC 312/L	Biochemistry I/Lab	4
CHEM 104/L	Chemistry II/Lab	4		BIOC 313/L	Biochemistry II	4
BIOL 104/L	Biology II/Lab	4			Free Electives	6-8
	Year 2			Year 4		
ADIV-2XX	American Diversity	3		CGIS 300	Contemporary Global Issues	3
WRIT 201	Multimedia Com	3		PHIL 499	Philosophies of Good Life	3
STAT 301	Biostatistics	3		BIOL 207/L	Principles of Genetics/Lab	4
GDIV 2xx	Global Diversity	3		BIOL 221/L	Microbiology	4
ADIV 2xx	American Diversity	3		BIOL 413	Pathology	4
CHEM 201/L	Organic Chemistry I/Lab	4			Designated Elective	3
CHEM 202/L	Organic Chemistry II/Lab	4			Free Electives	9-12
MATH 112	Calculus II	4				
BIOL 201/L	Anatomy & Physiology I/Lab	4				
BIOL 202/L	Anatomy & Physiology I/Lab	4				
	Year 2 Summer					
BIOL 493	Preceptorship I	3				
BIOL 494	Preceptorship II	3				

Biomedical Sciences

Master of Science (MS)

Program Director Charles Scott, PhD
Campus Center City
Website <https://www.jefferson.edu/university/life-sciences/degrees-programs/master-programs/biomedical-sciences.html>

Program Description, Learning Goals & Outcomes

The Master of Science Program in Biomedical Sciences prepares graduates for positions in the pharmaceutical/biotechnology industry or medical toxicology, such as:

- Managers of clinical laboratories
- Consultants
- Research associates
- Research scientists
- Graduates of the program have been accepted into PhD and professional doctoral programs.

Curriculum: 1.5- 4 years (FT/PT), 40 credits

<u>Core Courses</u>			<u>Management Courses (select two)</u>		
BI 550	Topics Biomedical Chemistry	3	GC 510	Database Design and Management	2
GC 660	Biostatistical Methods of Data Analysis	3	GC 525	Information Technology Decision Making	3
GC 715	MS Basic Sciences Seminar	1	GC 600	Management Skills	3
GC 680	Lab Techniques-Molecular Biology	3	GC 605	Performance Improvement	2
GC 560	Principles of Cell Biology	3	GC 610	Strategic Mgt.: Increasing R&D Productivity	2
BI 870	Master's Research	1-6	GC 617	Mgt. of Pharm Drug Development Projects	2
BI 880	Master's Research	1-6	GC 620	Fundamentals of Financial Management	3
BI 890	Master's Research	1-6	GC 621	Biotechnology Venture Management	2
	Electives (Designated)	15-17	GC 635	Fundamentals of Clinical Trials Mgt.	2
			GC 636	Principles of Career Management	2

Cell & Developmental Biology

Master of Science (MS)

Program Director	Gerald Grunwald, PhD
Campus	Center City
Website	https://www.jefferson.edu/university/life-sciences/degrees-programs/master-programs/cell-developmental-biology.html

Program Description

This program consists of a core basic science curriculum in cell and developmental biology, supplemented with elective courses suited to individual career interests in the basic sciences or in management. Students in our program receive training in theoretical, experimental and practical aspects of normal cell development as well as abnormal aspects of these processes, which may cause birth defects or disease.

Learning Goals/Outcomes

- Prepares its graduates for positions in research and development in academia, industry and government
- Graduates may be employed as basic research scientists in academic institutions and industrial positions, or may go on to further study in PhD and professional doctoral programs.
- Graduates of the program have been accepted into PhD and professional doctoral programs.

Curriculum: 1.5- 4 year (FT/PT), 40 credits

<u>Core Courses</u>			<u>Management Courses (select two)</u>		
BI 550	Topics in Biomedical Chemistry	3	GC 510	Database Design and Management	2
GC 660	Biostatistical Methods of Data Analysis	3	GC 525	Information Technology for Decision Making	3
CB 615	Embryology	3	GC 600	Management Skills	3
CB 560	Principles of Cell Biology	3	GC 605	Performance Improvement	2
CB 635	Gene-Environment Interactions in Birth Defects & Disease	3	GC 610	Strategic Mgmt: Increasing R&D Productivity	2
BI 870	Master's Research	1-6	GC 617	Mgmt of Pharm Drug Development Projects	2
BI 880	Master's Research	1-6	GC 620	Fundamentals of Financial Management	3
BI 890	Master's Research	1-6	GC 621	Biotechnology Venture Management	2
	Electives (Designated)	15-17	GC 635	Fundamentals of Clinical Trials Mgt.	2
			GC 636	Principles of Career Management	2

Clinical Research

Master of Science (MS) & Certificate Program

Program Director	Melissa McCarey, MPH
Campus	Center City
Website	https://www.jefferson.edu/university/life-sciences/degrees-programs/master-programs/clinical-research-MS.html

Program Description

Created to prepare students for the wide array of career opportunities in the clinical research industry. This program is well suited for career changers with a background in life, physical or clinical sciences that would like to break into the field of clinical research. It is also appropriate for individuals already in the industry and looking for additional graduate-level training.

The field of clinical research is rapidly expanding and knowledgeable professionals are needed to coordinate, manage, and administer clinical trials. This master of science degree will provide students with the foundation needed to be successful in the field of clinical research.

Learning Goals/Outcomes

- Understand experimental design, statistical analysis and interpretation, and regulatory and ethical issues pertaining to human clinical research and trials
- Read, understand, & critique published reports of clinical trials
- Acquire management skills that will enable them to successfully manage multi-disciplinary teams involved in clinical research projects
- Prepare for employment in the pharmaceutical industry, as well as academic and hospital clinical research settings.

Curriculum: Certificate Program: 17 credits

GC 660	Statistical Methods of Data Analysis	3	GC 640	Research Ethics & Responsible Conduct	1
GC 630	Fundamentals of Clinical Trials	3	GC 690	Regulatory Issues in Scientific Research	2
GC 510	Database Design and Management	2		Elective	3
MI 580	Epidemiology (GC 660 pre-requisite)	3			

Curriculum: MS Program: 36 credits

<u>Core Courses</u>			<u>Management Courses (select two)</u>		
GC 660	Statistical Methods of Data Analysis	3	GC 720	Scientific Writing	2
GC 630	Fundamentals of Clinical Trials	3	GC 617	Mgmt. of Pharm Drug Dev Projects	2
GC 635	Intro to Clinical Trials Management	2	GC 600	Managerial and Teamwork Skills	3
GC 637	Advanced Clinical Trials Management	2	GC 615	Grants and Contracts Management	2
GC 640	Research Ethics & Responsible Conduct	1	GC 510	Database Design and Management	2
GC 690	Regulatory Issues in Scientific Research	2		Electives	12

Forensic Biology

Master of Science (MS)

Program Director Heather E. McKiernan, PhD
Campus Center City/CFSRE laboratory Willow Grove, PA
Website <https://www.jefferson.edu/university/life-sciences/degrees-programs/master-programs/forensic-biology.html>

Program Description, Learning Goals & Outcomes

- Full-time, two-year program with courses taught at both the Jefferson Center City campus as well as at CFSRE laboratory in Willow Grove, PA.
- Designed to position students for advancement and professional development in the specific field of forensic biology.
- One of the aspects, which sets our forensic biology program apart from other universities, is that students will be working adjacent to a fully functioning, ISO-17025 accredited, private DNA laboratory. Instead of spending the duration of the program in a classroom, Jefferson students will be learning within an actual forensic laboratory and working alongside practicing scientists who serve as faculty and mentors. This teaching setting allows our students to engage first-hand in crime lab operation, offering an unparalleled educational experience.

Curriculum: 2 years, 40 credits

<u>Year 1</u>			<u>Year 2</u>		
FB 605	Forensic Serology & Immunology	2	FB 715	Advanced Forensic Genetics	3
FB 606	Forensic Serology & Immunology Lab	1	FB 716	Advanced Forensic Genetics Lab	1
	Management or General Elective	3	FB 620	Forensic Science Forum	1
GE 637	Advanced Human Genetics	3	FB 870	Master's Thesis Research	1
FB 610	Legal Procedure and Ethics	1	FB 717	Journal Club in Forensic Genetics	1
FM 607	Journal Club Forensic Serology & Immunology	1		Management or General Elective	3
FB 705	Forensic Genetics	3	FB 880	Master's Thesis Research	1
FM 706	Forensic Genetics Lab	1		Management or General Elective	3
	Management or General Elective	2	FB 830	Laboratory Clerkship	1
FB 890	Master's Thesis Research	2	FB 890	Master's Thesis Research	1
GC 660	Statistical Methods of Data Analysis	3			
				Minimum two Prof Develop Courses (Designated)	
				Minimum two Elective Courses (Designated)	

Forensic Toxicology

Master of Science (MS)

Program Director Barry K. Logan, PhD, F-ABF
Campus Center City/CFSRE laboratory Willow Grove, PA
Website <https://www.jefferson.edu/university/life-sciences/degrees-programs/master-programs/forensic-toxicology.html>

Program Description, Learning Goals & Outcomes

The MS Program in Forensic Toxicology is a unique program designed to position students for advancement and professional development in the specific field of forensic toxicology. This is a full-time, two-year program with courses taught at both the Thomas Jefferson University campus and CFSRE's Willow Grove, PA location.

This partnership will provide our students with expertise in all areas of toxicology, including:

- Workplace drug testing
- Postmortem analysis
- Human performance toxicology
- Legal procedure and ethics
- Business & management coursework

Curriculum: 2 year, 40 credits

<u>Year 1</u>			<u>Year 2</u>		
FT 605	Analytical Forensic Toxicology	3	FT 715	Interpretative Forensic Toxicology	3
FT 606	Analytical Forensic Toxicology Lab	1	FT716	Interpretative Forensic Toxicology Lab	1
	Management or General Elective	2	FT 880	Management or General Elective	3
FT 705	Advanced Analytical Forensic Toxicology	3	FT 880	Master's Thesis Research	1
FT 706	Advanced Analytical Forensic Toxicology Lab	1	FT 620	Forensic Science Forum	1
FT 610	Legal Procedure and Ethics	1		Management or General Elective	3
PR 525	Clinical Pharmacology	3	FT 880	Forensic Science Forum	1
	Management or General Elective	2		Management or General Elective	3
FT 880	Master's Thesis Research	1	FT 810	Laboratory Clerkship	3
GC 660	Statistical Methods of Data Analysis	3	FT 815	Regulatory Issues in Forensic Toxicology	1
			Minimum two Prof Develop Courses (Designated)		
			Minimum two Elective Courses (Designated)		

Human Genetics & Genetic Counseling

Master of Science (MS)

Program Directors	Rachael Brandt, PhD, MS, LCGC & Zohra Ali-Khan Catts, MS, LCGC
Campus	Center City
Website	https://www.jefferson.edu/university/life-sciences/degrees-programs/master-programs/genetic-counseling.html

Program Description

The Human Genetics and Genetic Counseling MS program will provide students integrative education and training to become compassionate and knowledgeable genetic counselors.

The program in Human Genetics & Genetic Counseling is a participant in the Genetic Counseling Admissions Match through National Matching Services (NMS).

Learning Goals/Outcomes: Genetics Expertise & Analysis

- Demonstrate & utilize a understanding and knowledge of genetics and genomics core concepts and principles
- Integrate knowledge of psychosocial aspects of conditions with a genetic component to promote client well- being
- Construct relevant, targeted and comprehensive personal and family histories and pedigrees
- Identify, assess, facilitate, and integrate genetic testing options in genetic counseling practice
- Assess individuals' and their relatives' probability of conditions with a genetic component or carrier status based on their pedigree, test result(s), and other pertinent information
- Demonstrate skills necessary to manage genetic counseling case
- Critically assess genetic/genomic, medical and social science literature and information

Learning Goals/Outcome: Psychosocial and Counseling Skills

- Establish a mutually agreed upon genetic counseling agenda with the client

- Employ active listening and interviewing skills to identify, assess, and empathically respond to stated and emerging concerns
- Use range of genetic counseling skills & models to facilitate informed decision-making & adaptation to genetic risks or conditions
- Promote client-centered, informed, non-coercive and value-based decision-making
- Understand how to adapt genetic counseling skills for varied service delivery model
- Apply genetic counseling skills in a culturally responsive and respectful manner to all clients

Learning Goals/Outcome: Education

- Educate clients about a wide range of genetics and genomics information based on their needs, their characteristics and the circumstances of the encounter
- Write concise and understandable clinical and scientific information for audiences of varying educational backgrounds
- Give a presentation on genetics, genomics and genetic counseling issue

Learning Goals/Outcome: Prof Development & Practice

- Use Ethical, legal, philosophical principles & values
- Demonstrate understanding of the research process
- Advocate for individuals, families, communities profession
- Demonstrate a self-reflective, evidenced-based and current approach to genetic counseling practice
- Understand the methods, roles and responsibilities of the process of clinical supervision of trainee
- Establish and maintain professional interdisciplinary relationships in both team and one-on-one settings, and recognize one's role in the larger healthcare system

Microbiology & Immunology

Master of Science (MS)

Program Director	Aleksandra Snyder, PhD
Campus	Center City
Website	https://www.jefferson.edu/university/life-sciences/degrees-programs/master-programs/microbiology.html

Program Description, Learning Goals & Outcomes

The MS in Microbiology & Immunology Program offers choices for career specialization with flexible schedules, professional training for academic credit and academic preparation for national professional certification.

The broad-based curriculum includes a minimum of 40 credits. Course content includes:

- The biology of microorganisms
- Immunology
- Epidemiology
- Pathology
- Biostatistics
- Management
- Clerkship
- Master's research thesis or, alternatively, a Non-Thesis Option

Curriculum: 2 year, 40 credits

<u>Core Curriculum</u>			<u>Management Curriculum</u>		
MI 505	Biochemistry of Microorganisms	3	GC 510	Database Design & Management	2
MI 521	Intro to Immunology	2	GC 525	Info Technology for Decision Making	3
MI 580	Principles of Epidemiology	3	GC 600	Managerial & Teamwork Skills	3
MI 582	Diagnostic Microbiology	3	GC 605	Performance Improvement	2
GC 640	Research Ethics	1	GC 610	Strategic Mgmt: Increasing R&D Productivity	2
GC 660	Statistical Methods for Data Analysis	3	GC 617	Mgmt of Pharma Drug Development Projects	2
CB 570	Pathologic Aspects Disease	3	GC 620	Fundamentals of Financial Management	3
MI 870	Master's Research	1-6	GC 621	Biotechnology Venture Management	2
MI 880	Master's Research	1-6	GC 635	Fundamentals of Clinical Trials Mgmt.	2
MI 890	Master's Research	1-6	GC 636	Principles of Career Management	2
				Electives (Designated)	10-12

Pharmacology

Master of Science (MS)

Program Director Carol Beck, PhD
Campus Center City
Website <https://www.jefferson.edu/university/life-sciences/degrees-programs/master-programs/pharmacology.html>

Program Description, Learning Goals & Outcomes

The MS Program in Pharmacology prepares graduates for positions in:

- Research and development
- Research management
- Clinical trials and toxicology review and assessment
- Graduates have been accepted into PhD and professional degree programs.
- The MS Pharmacology Program also offers a track in Human Investigation. This track is for residents and fellows doing post-graduate clinical training.

Curriculum: 1.5- 4 year (FT/PT), 40 credits

<u>Core Courses</u>			<u>Human Investigation Track</u>		
BI 550	Topics in Biomedical Chemistry	3	BI 550	Topics in Biomedical Chemistry**	3
GC 660	Biostatistical Methods of Data Analysis	3	PR 522	General Pharmacology**	3
GC 715	MS Basic Sciences Seminar	1	CB 570	Pathologic Aspects of Disease**	3
PR 522	General Pharmacology	3	CB 510	Database Design & Management	2
PR 525	Clinical Pharmacology	3	GC 630	Fundamentals of Clinical Trials	3
PR 870	Master's Research	1-6	GC 640	Research Ethics and Responsible Conduct	1
PR 880	Master's Research	1-6	GC 650	Economic Analysis Healthcare Interventions	3
PR 890	Master's Research	1-6	GC 654	Pharmacoepidemiology	2
	Mgt. Electives (Designated)	4-6	GC 660	Biostatistical Methods of Data Analysis	3
	General Electives	15-17	GC 690	Regulatory Issues in Scientific Affairs	2
			MI 580	Regulatory Issues in Scientific Affairs	2
			PR 525	Epidemiology	3
			PR 810	Clinical Pharmacology	3
			PR 820	Laboratory Clerkship	1-3
			PR 830	Laboratory Clerkship	1-3
			PR 870	Laboratory Clerkship	1-3
			PR 880	Master's Research	1-6
			PR 890	Master's Research	1-6

*Nine credits transferred from medical/clinical education

Biochemistry & Molecular Pharmacology

Doctor of Philosophy (PhD)

Program Director	Edward Winter, PhD
Campus	Center City
Website	https://www.jefferson.edu/university/life-sciences/degrees-programs/phd-programs/biochemistry-pharmacology.html

Program Description, Learning Goals & Outcomes

Employs a multidisciplinary approach to train students in the rigors of experimental biomedical sciences & prepare them for independent research careers. The curriculum is designed to convey the fundamentals of biochemistry, molecular biology, structural biology, molecular pharmacology, cell biology and genetics.

- The education is reinforced at the bench in advanced research laboratories broadly grouped into three research emphases: Molecular & Cellular Pharmacology, Chemical & Structural Biology and Molecular Biology & Gene Regulation.
- In addition to extensive basic equipment found in each laboratory, students have access to numerous specialized resources, including genomic and multiplex sequencing, microarray analysis, flow cytometry and cell sorting, confocal and TIRF microscopy, X-ray crystallography and macromolecular characterization (surface plasmon resonance, calorimetry, circular dichroism and fluorescence spectroscopy).
- Students graduating from this program will have the comprehensive scientific foundation and technical expertise to excel in all areas of biomedical research.

Curriculum: 2 year, 180 credits

<u>Year 1</u>			<u>Year 2</u>		
CS 550	Foundations of Biomedical Sciences	10		Elective	
BI 511	Research Rotation 1	3	GC 730	Planning & Writing a Research Grant	1
BI 710	Seminar in Biochemistry & Molecular Pharmacology	1	BI 710	Seminar in Biochemistry & Molecular Pharmacology	2
BI 910	Research		BI 715	Journal Club	1
BI 521	Research Rotation 2	3	BI 910	Research	
BI 525	Biochem - Genetics Info Transfer	3		Elective	
PR 613	Macromolecular Structure	3	BI 720	Seminar in Biochemistry & Molecular Pharmacology	2
GC 640	Research Ethics	1	BI 725	Journal Club	1
BI 720	Seminar in Biochemistry & Molecular Pharmacology	1	BI 730	Seminar Biochemistry & Molecular Pharmacology	2
BI 725	Journal Club	1	BI 735	Journal Club	1
	Elective		BI 920	Research	
BI 531	Research Rotation 3	3	BI 930	Research	
NS 740	Applied Statistics	2		Elective	
BI 730	Seminar in Biochemistry & Molecular Pharmacology	1			
BI 735	Journal Club	1	Course requirements are usually completed by end of second year, and students spend an average of another two to three years to complete thesis projects		
BI 920	Research				
BI 930	Research				

Cell Biology & Regenerative Medicine

Doctor of Philosophy (PhD)

Program Directors	Nancy Philip, PhD & Makarand Risbud, PhD
Campus Website	Center City https://www.jefferson.edu/university/life-sciences/degrees-programs/phd-programs/cell-biology.html

Program Description, Learning Goals & Outcomes

The PhD Graduate Program in Cell Biology & Regenerative Medicine (CBRM) provides students with a background, training and experience that are necessary to launch careers as independent scientific investigators in the field of cancer cell biology, systems biology, computational medicine, matrix biology, neuro-degenerative disorders, vision, mitochondrial metabolism and pathology.

CBRM seeks students with a strong interest and background in science and engineering, particularly cell biology, biochemistry, developmental biology and bioengineering. Students are offered comprehensive coursework, seminars, journal clubs and research discussion groups to further enrich their academic experience.

The Graduate Program boasts an outstanding faculty and state-of-the-art research facilities, which offers students a wide range of advanced research opportunities. Students' research and education is supported through NIH training grants, endowed fellowships and investigator initiated research grants. Graduates of the CBRM program have successfully pursued career options in both academia and industry, with several obtaining faculty positions after post-doctoral training. There are five major areas within the program:

- Cancer Biology
- Computational Biology & Systems Biology
- Matrix Biology, Musculoskeletal & Connective Tissue
- Mitochondrial Metabolism & Pathology
- Neurodegenerative Disorders & Vision
- Tissue Engineering & Regenerative Medicine

Curriculum: 3 years, 180 credits

<u>Year 1 (Certificate)</u>			<u>MS (Grad Certificate + Courses Below)</u>		
GC 550	Foundations in Biomedical Sciences	10	CB 616	Current Topic: Journal Club & Research in Progress	1
GC 640	Research Ethics	1	CB 710	Seminar: Grand Round, Showcase Seminar, MPM's	1
GD 750/760	PhD Laboratory Rotations	3	CB 910	Research	
CB 616	Current Topic: Journal Club & Research in Progress	1	CB 626	Current Topic: Journal Club & Research in Progress	1
CB 710	Seminar: Grand Round, Showcase Seminar, MPM's	1	CB 720	Seminar: Grand Round, Showcase Seminar, MPM's	1
CB 910	Research		CB 920	Research	
CB 620	Research Rotations II		CB 636	Current Topic: Journal Club & Research in Progress	1
CB 626	Current Topic: Journal Club & Research in Progress	1	CB 730	Seminar: Grand Round, Showcase Seminar, MPM's	1
CB 720	Seminar: Grand Round, Showcase Seminar, MPM's	1	CB 930	Research	
CB 920	Research				
	Elective	3			
CB 529	Lab Animal Science	2			
GC 645	Genomics and Bioinformatics	3			
CB 630	Research Rotations III				
CB 636	Current Topic: Journal Club & Research in Progress	1			
CB 730	Seminar: Grand Round, Showcase Seminar, MPM's	1			
GC 720	Scientific Writing	2			
CB 930	Research				
	<u>Year 2</u>				
CB 616	Current Topic: Journal Club & Research in Progress	1			
CB 710	Seminar: Grand Round, Showcase Seminar, MPM's	1			
CB 910	Research				
TE 624	Extracellular Matrix	2			
GD 660	Statistical Methods	3			
	Elective				

Genetics, Genomics & Cancer Biology

Doctor of Philosophy (PhD)

Chair Cancer Biology
Campus
Website

Lucia Languino, PhD
Center City

<https://www.jefferson.edu/university/life-sciences/degrees-programs/phd-programs/genetics.html>

Program Description, Learning Goals & Outcomes

The PhD Program in Genetics, Genomics & Cancer Biology provides aspiring students with the background, training and experience necessary to launch careers as independent scientific investigators and scholars in the field of molecular genetics of disease, genomics and cancer biology.

The Program is designed to take a multidisciplinary approach to the field by providing the student with a strong basic knowledge of genetics, biochemistry, cell biology and molecular biology, with additional exposure to other areas of related interest. Additionally, the Program provides sufficient flexibility so that graduating students can pursue research careers in either an academic or industrial setting.

Typical areas of research include: functional genomics and epigenetics, analysis of the human genome, genetics of cancer susceptibility, genetics of the immune system, molecular genetics of animal models of human disease, molecular genetics of hematopoietic neoplasias and solid tumors, mechanisms of altered growth regulation by oncogenes and tumor suppressor genes, transcriptional regulation, chromatin organization and the control of gene expression, translational research, molecular therapeutics and personalized medicine.

Immunology & Microbial Pathogenesis

Doctor of Philosophy (PhD)

Program Directors	Fabienne Paumet, PhD
Campus	Christopher Snyder, PhD
Website	Center City https://www.jefferson.edu/university/life-sciences/degrees-programs/phd-programs/immunology.html

Program Description, Learning Goals & Outcomes

The PhD Program in Immunology & Microbial Pathogenesis provides aspiring students with the background, training and experience necessary to launch careers as independent scientific investigators in the fields of immunology, microbiology, biochemistry, cell biology and molecular biology.

- A multidisciplinary approach to the field by providing the student with a strong, basic knowledge of immunology, microbiology, biochemistry, cell biology and molecular biology, with additional exposure to other areas of related interest.
- The ultimate goal of this program is to provide aspiring students with the background, training and experience necessary to launch careers as independent scientific investigators.

Curriculum: 4-5 years, 180 credits

<u>Year 1</u>			<u>Year 2</u>		
CG 550	Foundations of Biomedical Sciences	10	IMP 530 or IMP 605	Infection & Immunity OR Adv Cellular & Molecular Immunology	3
IMP 710	Seminar	1	GC 730	Plan & Writing a Research Grant	1
IMP 610	Lab Rotation 1	3	IMP 710	Seminar	1
IMP 910	Research		IMP 712	Current Literature	1
IMP 505A	Fundamentals of Immunology	2	IMP 910	Research	TBD
IMP 600A	Bacteriology, Mycology, & Parasitology	2		Elective(s)	
IMP 720	Seminar	1	IMP 720	Seminar	1
IMP 722	Current Literature	1	IMP 722	Current Literature	1
IMP 620	Lab Rotation 2	3		Elective(s)	
ETHIC 2XX	Ethics	3	IMP 730	Seminar	1
IMP 505B	Immune System Health & Disease	2	IMP 732	Current Literature	1
IMP 600B	Virology	3	IMP 920	Research	
IMP 730	Seminar	1	IMP 930	Research	
IMP 732	Current Literature	1		<u>Year 3</u>	
IMP 630	Lab Rotation 3	3	IMP 530 or IMP 605	Infection & Immunity OR Advanced Cellular & Molecular Immunology	3
NS 740	Applied Statistics in Neuroscience	2	IMP 710	Seminar	1
IMP 920	Research		IMP 712	Current Literature	1
IMP 930	Research		IMP 910	Research	
				Comprehensive Exam	
			IMP 720	Seminar	1
			IMP 722	Current Literature	1
			IMP 730	Seminar	1
			IMP 732	Current Literature	1
			IMP 920	Research	TBD
			IMP 930	Research	TBD

Integrative Physiology

Doctor of Philosophy (PhD)

Program Director	Ulhas P. Naik, PhD
Campus	Center City
Website	https://www.jefferson.edu/university/life-sciences/degrees-programs/phd-programs/integrative-physiology.html

Program Description, Learning Goals & Outcomes

The PhD Program in Integrative Physiology employs a multidisciplinary approach to train students in the rigors of experimental biomedical sciences and to prepare them for careers across a broad array of academic, industry, and government careers. The main theme of the program is in Cardiovascular Physiology, and many of the faculty are drawn from the Cardeza Foundation - Division of Hematology, and the Center for Translational Medicine, of the Department of Medicine at Sidney Kimmel Medical College. However, the program includes faculty from across many academic departments, divisions and research centers across Jefferson, whose research interests encompass a broad spectrum of basic and translational topics and model systems including cellular and molecular physiology, and normal and pathophysiology of the cardiovascular, pulmonary and gastrointestinal systems.

Curriculum: 4-5 years, 180 credits

<u>Year 1</u>			<u>Year 2</u>		
CG 550	Foundations of Biomedical Sciences	10		Elective	
PS 511	Research Rotation 1		PS 710	Seminar Integrative Physiology	1
PS 710	Seminar in Integrative Physiology	1	PS 730	Current Topics Physiology Journal Club	1
PS 730	Current Topics Phyc Journal Club	1	PS 910	Research	
PS 910	Research		GC730	Plan & Writing Research Grant	1
PS 521	Research Rotation 2			Elective	
PS 525	Biochemistry - Genetics Info Transfer	3	PS 720	Seminar Integrative Physiology	1
PS 655	Integrative Physiology	3	PS 731	Current Topics Physiology Journal Club	1
GC 640	Research Ethics	1		Elective	
PS 720	Seminar in Integrative Physiology	1	PS 730	Seminar Integrative Physiology	2
PS 731	Current Topics Integrative Physiology Journal Club	1	PS 732	Current Topics Physiology Journal Club	1
PSXXX	Advanced Cardiovascular Physiology	3	PS 920	Research	
PS 531	Research Rotation 3		PS 930	Research	
NS 740	Applied Statistics	2		<u>Year 3</u>	
PS 730	Seminar in Integrative Physiology	1	PS 710	Seminar Integrative Physiology	1
PS 732	Current Topics Physiology Journal Club	1	PS 730	Current Topics Physiology Journal Club	1
PS 920	Research		PS 910	Research	
PS 930	Research		PS 720	Seminar in Integrative Physiology	2
			PS 731	Current Topics Physiology Journal Club	1
			PS 920	Research	
			PS 730	Seminar Integrative Physiology	2
			PS 732	Current Topics Physiology Journal Club	1
			PS 930	Research	
				<u>Year 4-5</u>	
				Thesis	

Neuroscience

Doctor of Philosophy (PhD)

Program Directors	Kyunghee Koh, PhD & Angelo Lepore, PhD
Campus	Center City
Website	https://www.jefferson.edu/university/life-sciences/degrees-programs/phd-programs/neuroscience.html

Program Description, Learning Goals & Outcomes

The PhD Graduate Program in Neuroscience (GPN) provides high-level, scholarly, scientific training to qualified individuals interested in pursuing diverse careers to research, foster, disseminate and facilitate an in-depth understanding of the nervous system under normal and pathological conditions.

- Provides high-level, scholarly, scientific training
- disseminate and facilitate an in-depth understanding of the nervous system under normal and pathological conditions
- Curriculum of study includes neurophysiology, neuroanatomy, cell biology, biochemistry and molecular biology Requires completion of a research thesis under the tutelage of internationally recognized GPN faculty

Curriculum: 4-5 years, 180 credits

<u>Year 1</u>			<u>Year 2</u>		
CG 550	Foundations Biomedical Sciences	10	NS 616	Journal Club	1
NS 601	Profiles in Neuroscience	1	NS 710	Seminar	1
NS 616	Journal Club	1	NS 910	Research (Variable)	
NS 710	Seminar	1	NS 626	Journal Club	1
NS 610	Research Rotation		NS 720	Seminar	1
NS 910	Research (Variable)		NS 690	Neuropharmacology	3
NS 700	Cellular Neurophysiology	4	NS 636	Journal Club	1
GC 640	Research Ethics	1	NS 730	Seminar	1
NS 626	Journal Club	1	NS 530	Neuroanatomy	4
NS 720	Seminar	1	NS 740	Applied Statistics in Neuroscience	2
NS 620	Research Rotation II		GC 730	Grant Writing	1
NS 920	Research (Variable)		NS 920	Research (Variable)	
NS 715	Cellular & Molecular Neuroscience	3		Elective	
NS 636	Journal Club	1	NS 930	Research (Variable)	
NS 730	Seminar	1		Comprehensive Examination	
NS 630	Research Rotation III			<u>Year 3 -5</u>	
NS 920	Research (Variable)			Continue/complete Thesis Research	
	Elective				
NS 920	Research (Variable)				

Clinical Research & Trials: Implications

Graduate Certificate

Program Director Melissa McCarey, MPH
Campus Center City
Website <https://www.jefferson.edu/university/life-sciences/degrees-programs/graduate-certificate/research-trials.html>

Program Description, Learning Goals & Outcomes

The Certificate Program in Clinical Research & Trials: Implementation provides the core competencies and skills needed by professionals in the field of clinical trials. The Program trains individuals in administration, coordination and management of clinical research studies focused on developing new drugs, medical devices and treatment regimens. This certificate is complementary to the certificate in Human Clinical Investigation: Theory.

- Introduce the roles and responsibilities of investigators and sponsors
- Educate on the regulations governing clinical research
- Train for managing clinical trials

Curriculum: 1 Year, 15 credits

<u>Core Curriculum</u>			
GC 625	Drug Development OR	2	
	OR Management of Pharmaceutical		
GC 617	Drug Development Projects		
GC 630	Fundamentals of Clinical Trials (GC 660 is pre-req)	3	
GC 635	Fundamentals of Clinical Trial Management	2	
GC 660	Statistical Methods of Data Analysis	3	
	Elective		5

Clinical Research Operations

Graduate Certificate

Program Director	Melissa McCarey, MPH
Campus	Center City
Website	https://www.jefferson.edu/university/life-sciences/degrees-programs/graduate-certificate/clinical-trials-operations.html

Program Description, Learning Goals & Outcomes

The Certificate Program in Clinical Research: Operations trains individuals in the administration, coordination and management of clinical research studies.

Clinical research is a rapidly expanding field, with diverse employment opportunities in settings such as universities, hospital systems, and the pharmaceutical industry. Human subjects research is complex and requires an understanding of funding sources, regulatory issues, project management, study design, and data analysis. This program is designed to introduce students to careers in Clinical Research.

- The Certificate in Clinical Trials: Operations will provide students with foundational knowledge of the clinical trials process.
- Introduce students to project, financial, and data management of clinical trials.
- Provide education on the regulations and ethical issues that surround human subject research

Curriculum: 1 year, 15 credits

<u>Core Curriculum</u>			<u>Select Elective</u>		3
GC 510	Database Design and Management	3	AHE 509	Epidemiology Outcomes Research	
GC 615	Grants and Contracts Management	3	GC 650	Economic Analysis of Healthcare Interventions	
GC 620 OR GC 631	Financial Management OR Comparative Effectiveness & Patient Centered Outcomes Research	3	GC 630	Fundamentals of Clinical Trials (GC 660 is pre-req)	
GC 635	Fundamentals of Clinical Trials Management	3			
GC 640	Research Ethics	3			
GC 660 OR PBH 504	Statistical Methods OR Basic Public Health Statistics	3			

Human Clinical Investigation: Theory

Graduate Certificate

Program Director	Carol Beck, PhD
Campus	Center City
Website	https://www.jefferson.edu/university/life-sciences/degrees-programs/graduate-certificate/clinical-investigation.html

Program Description, Learning Goals & Outcomes

Clinicians trained in the basics of human clinical investigation are needed to design and initiate clinical trials in academic medicine and in the pharmaceutical industry. This certificate focuses on the theory rather than the implementation. This certificate program is the didactic component of the MS Pharmacology Program, Human Clinical Investigation track. No thesis is required for the certificate.

The Certificate Program in Human Clinical Investigation: Theory provides the core competencies and skills needed for those interested in clinical research or careers in academic medicine. This program is designed for clinicians, but could be taken by others interested in understanding the theory behind clinical trial design.

- Provide the theory behind the design of human clinical studies and appropriate design and use of databases
- Educate on the ethics and regulations governing clinical research
- Provide a background in statistics and epidemiology necessary for human clinical investigation

Curriculum: 17 credits

<u>Core Curriculum</u>			<u>Select Elective</u>		3
GC 660	Statistical Methods of Data Analysis	3	PR 525	Clinical Pharmacology	
GC 630	Fundamentals of Clinical Trials (GC 660 is pre-req)	3	GC 650	Economic Analysis of Healthcare Interventions	
MI 580	Epidemiology (GC 660 is pre-requisite)	3	GC 654	Pharmacoepidemiology (GC 660, MI 580 are pre-requisites)	
GC 510	Database Design and Management	2	PR 810, 820, 830	Pharmacology Clerkship	
GC 640	Research Ethics and Responsible Conduct	1			
GC 690	Regulatory Issues in Human Subject Research	2			

Infectious Disease Control

Graduate Certificate

Program Director	Aleks Snyder, PhD
Campus	Center City
Website	https://www.jefferson.edu/university/life-sciences/degrees-programs/graduate-certificate/disease-control.html

Program Description, Learning Goals & Outcomes

The curriculum for the Graduate Certificate in Infectious Disease Control is built from core courses and expertise in microbiology and immunology.

- Key areas: Microbiology of Antimicrobial & Antiviral Agents, Vaccinology & Immunotherapeutics, Epidemiology and Management skills.
- The certificate program comprise about one-third of the requirement for a Master of Science degree.
- Degree candidates may also pursue certificates as part of their graduate curriculum

Curriculum: 1 year, 15 credits

<u>Core Curriculum</u>				
GC 660	Statistical Methods in Data Analysis	3	MI 552 Vaccinology and Immunotherapeutics	2
MI 540	Microbiology of Antimicrobial and Antiviral Agents	2	Elective	5
MI 580	Epidemiology (GC 660 is prerequisite)	3		

Patient-Centered Research

Graduate Certificate

Program Director	Carol Beck, PhD
Campus	Center City
Website	https://www.jefferson.edu/university/life-sciences/degrees-programs/graduate-certificate/patient-centered-research.html

Program Description, Learning Goals & Outcomes

The Graduate Certificate in Patient-Centered Research is designed to train students in the principles and methods of patient-centered outcomes research (PCOR) and comparative effectiveness research (CER). Students in the Program may come from clinical or scientific backgrounds.

Educate and train the next generation of health service researchers in the principles and methods of:

- Patient-centered outcomes research (PCOR)
- Comparative effectiveness research (CER)
- The certificate program comprise about one-third of the requirement for a Master of Science degree
- Degree candidates may also pursue certificates as part of their graduate curriculum

Curriculum: 1 year, 18 credits

<u>Core Curriculum</u>				
GC 660	Statistical Methods in Data Analysis	3	GC 652 Decision Support and Shared Decision Making in Health Care	2
MI 580 OR AHE 509	Principles of Epidemiology OR Epidemiology for Outcomes Research	3	GC XXX Integrative Seminar in Patient-Centered Research	1
AHE 506	Subjective Outcomes in Healthcare Evaluation	3	Elective	3
GC 631	Comparative Effectiveness & Patient-Centered Outcomes Research	3		

SIDNEY KIMMEL MEDICAL COLLEGE



Dean: Mark L. Tykocinski, MD | 215- 955-6983 | Jefferson.edu/SKMC

About Us

Founded in 1824, Jefferson Medical College, now the Sidney Kimmel Medical College (SKMC), has awarded more than 31,000 medical degrees and has more living graduates than any other private medical school in the nation. It offers both undergraduate medical education programs and innovative joint degree programs to more than 1,000 students each year.

The Sidney Kimmel Medical College is recognized for its balanced approach to medical education, and approximately **one out of four** to **one out of five** applicants throughout the U.S. apply to Sidney Kimmel.

Mission To educate physicians who will serve, lead and discover.

Values Put the patient first; Foster respect and humility; Insist on integrity and personal responsibility; Develop a passion for learning, collaborative practice and continuous reflection

Medical Departments of SKMC

Anesthesiology	Molecular Physiology & Biophysics	Pediatrics
Biochemistry & Molecular Biology	Neurological Surgery	Pharmacology & Experimental Therapeutics
Cancer Biology	Neurology	Psychology & Human Behavior
Dermatology & Cutaneous Biology	Neuroscience	Radiation Oncology
Emergency Medicine	Obstetrics & Gynecology	Radiology
Family & Community Medicine	Oral & Maxillofacial Surgery	Rehabilitation Medicine
Medical Oncology	Orthopedic Surgery	Surgery
Medicine	Otolaryngology / Head & Neck Surgery	Urology
Microbiology & Immunology	Pathology, Anatomy & Cell Biology	

Programmatic Research Domains

Autism Research Program	Cancer
Computational Medicine	Fibrosis
Hematology & Vascular Disease	Immunology & Infectious Disease
Population Health	Musculoskeletal Disease
Neuroscience	Metabolism & Mitochondrial Function
Pulmonary Disease	

Accreditation

Liaison Commission on Medical Education (LCME) Medicine (MD)	www.aamc.org
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Academic Programs

MD	Our innovative curriculum prepares future doctors to learn actively and think critically as they develop core professional competencies to prepare them to make positive, impactful changes on healthcare. https://www.jefferson.edu/university/skmc/md-curriculum.html
MD/PHD	Our students provide patient care, lead research discovery, advocate for basic and translational research and assume leadership roles in biomedical research and the delivery of health care. https://www.jefferson.edu/university/skmc/programs/md-phd.html
Post-baccalaureate/Pre-Health	Programs for students who have a Baccalaureate degree but need to complete additional course work to meet the prerequisites for entry into medical school. https://www.jefferson.edu/university/skmc/programs/pbph.html
Physician Shortage Area Program	An admissions and educational program designed to increase the supply and retention of physicians in rural areas and small towns, especially in Pennsylvania and Delaware. https://www.jefferson.edu/university/skmc/programs/physician-shortage-area-program.html
Penn State Accelerated BS/MD	A seven-year, cooperative BS/MD program, run by SMMC and Pennsylvania State University . https://www.jefferson.edu/university/skmc/programs/penn-state-accelerated.html
Idea Program	This Program invites Princeton University students pursuing non-traditional pre-med majors or concentrations to apply for early admission to SKMC. https://www.jefferson.edu/university/skmc/programs/idea.html
Delaware Institute of Medical Education & Research	This program, known as DIMER, provides an opportunity for Delaware residents to obtain a high-quality medical education, rather than attending a state-supported medical school. https://www.jefferson.edu/university/skmc/programs/dimer.html
University of Delaware Medical Scholars	An educational collaboration between the University of Delaware and Sidney Kimmel Medical College, which links college to medical school with an early admission process for qualified students. https://www.jefferson.edu/university/skmc/programs/msp.html
Joint MD/MBA-MHA	A joint five-year MD/MBA (and MHA) program is offered in collaboration with Widener University . An additional MD/MBA opportunity is available through the University of Delaware at its main campus. These joint MD/MBA-MHA programs are under the direction of the Jefferson College of Population Health. https://www.jefferson.edu/university/skmc/programs/md-mba-mha.html
Dual MD/MPH	In conjunction with the Jefferson College of Population Health , medical students have the opportunity to earn the master of public health (MPH) degree as part of their SKMC education. https://www.jefferson.edu/university/skmc/programs/md-mph.html

Vice Dean, Academic Affairs
Campus
Website

Steven Herrine, MD
Center City
<https://www.jefferson.edu/university/skmc/md-curriculum.html>

Program Description

Contribute to SKMC's proud tradition of excellence. You will have many opportunities to develop as a leader in your profession – in clinical settings, research labs and community service. JeffMD, SKMC's curriculum, will support you by giving you sound fundamentals, combined with elements you can customize to your interests. You will find strong integration of clinical experience and science instruction throughout your four years here. In keeping with modern medical practice, you will gain the analytical skills to evaluate changing data and treatment options, sharpened emotional intelligence, and comfort working in multi-specialty teams. The study of medicine has always been one of the most deeply satisfying, exciting – and challenging – ways you could develop your talents. JeffMD deepens all these truths at SKMC.

Graduation Competencies

1. **Patient Care**- Physicians should provide patient-centered care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.
2. **Knowledge of Practice**- Physicians should demonstrate knowledge of established and evolving biomedical, clinical, epidemiological, and social-behavioral sciences, as well as the application of this knowledge to patient care.
3. **Practice Based Learning & Improvement**- Physicians demonstrate knowledge of established and evolving biomedical, clinical, epidemiological, and social-behavioral sciences, as well as the application of this knowledge to patient care
4. **Interpersonal & Communication Skills**- Communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals.
5. **Professionalism**- Physicians should demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles.
6. **System Based Practice** - Physicians should demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care.
7. **Interprofessional Collaboration**- Physicians should demonstrate the ability to engage in an interprofessional team in a manner that optimizes safe, effective patient and population-centered care
8. **Personal & Professional Development**- Physicians should demonstrate the qualities required to sustain lifelong personal and professional growth.

See additional information about Graduation Competencies in Student Handbook:
<https://www.jefferson.edu/content/dam/university/skmc/student-resources/StudentHandbook/SHB2019.pdf>

Curriculum:

At SKMC, our innovative curriculum prepares future doctors to learn actively and think critically as they develop core professional competencies to prepare them to make positive, impactful changes on healthcare. Learn more about the ways that we are creating leaders in the medical field.

Foundations of Medicine

The basic science and clinical skills that are the bedrock of medical education are found in our 21-month long course, Foundations of Medicine.

Clinical Experience

Students do not have to wait to interact with the community they will serve. Learn more about the early clinical experience will shape our student

Humanities Selective

This interdisciplinary course offers a multitude of different opportunities for every learner.

Scholarly Inquiry

The greatest doctors have always been seekers. Learn more how we foster that desire to learn in our innovative Scholarly Inquiry course.

Phase I

Students focus on the foundations of medicine through eight organ system blocks that interweave fundamental and clinical sciences.

- Introduction to Foundations of Medicine
- Host Defense/Blood
- Cardio/Pulmonary
- GI/Liver/Renal
- Urology/Endocrine/Reproductive
- Musculoskeletal/ Integumentary
- Neuroscience/ Psychiatry
- Complex Cases
- USMLE Prep

Phase II

Students begin their clinical rotations, shifting the balance of learning toward clinical skills and application of knowledge. Students also continue to learn more advanced basic science as it relates to patient care during this phase. The order of rotations differs from student to student.

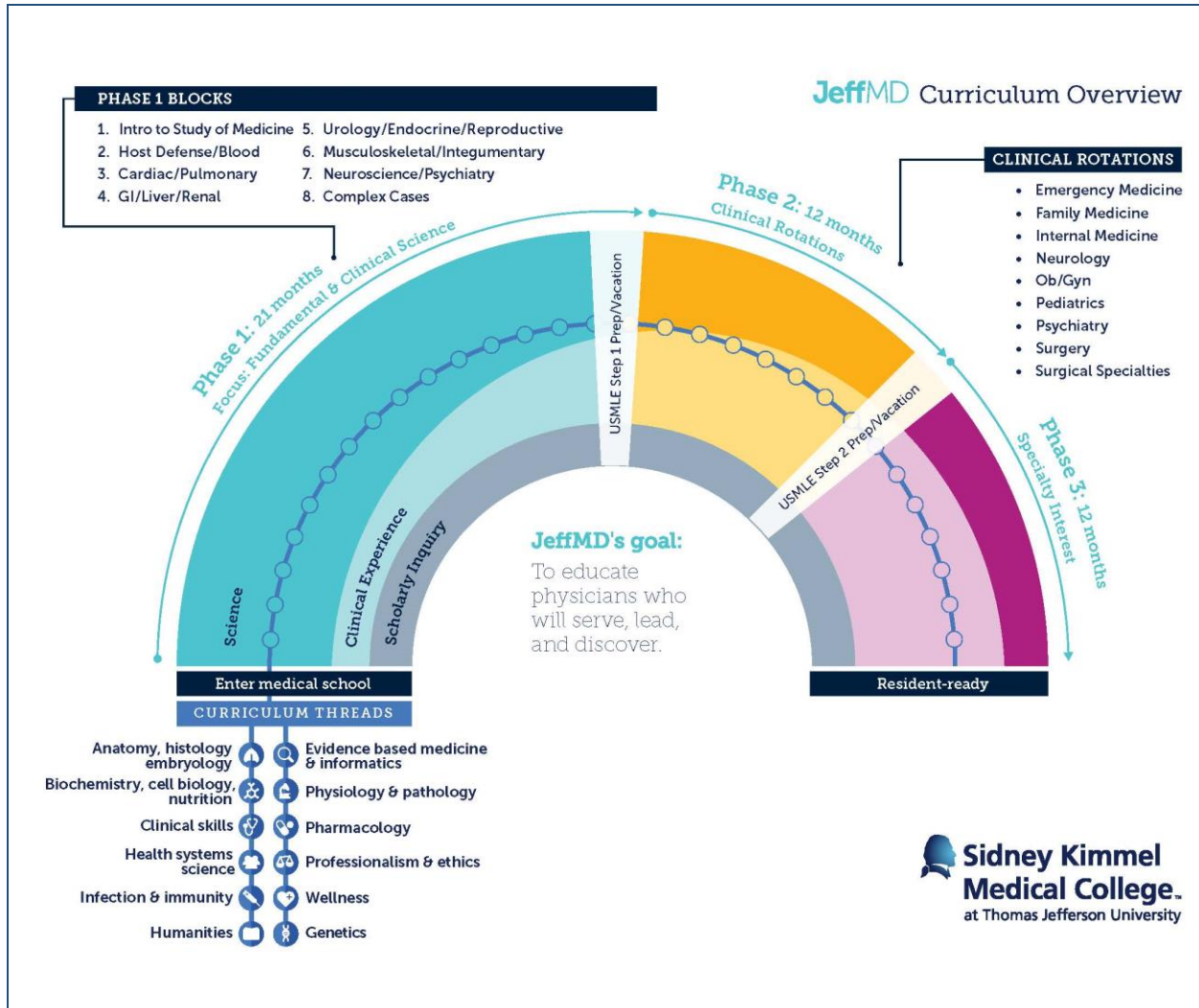
- Internal Medicine & Neurology
- Surgery, Surgical Subspecialty & Emergency Medicine
- Family Medicine & Psychiatry
- Obstetrics/Gynecology & Pediatrics

Phase III

Phase 3 of the curriculum is 12 weeks longer than the fourth year of a traditional curriculum, which allows students more time to prepare their residency applications and to take electives appropriate to their specialty interest. (Phase 1 is correspondingly 12 weeks shorter than years 1-2 in a traditional curriculum.)

- Internal Medicine
- Surgery/OBG/EM
- Pediatrics
- Family Medicine

Jeff MD Curriculum Diagram



COLLEGE OF NURSING



Dean: Marie Ann Marino, EdD, RN, FAAN
Center City 215-503-8890 | Horsham 215-481-5500 | Jefferson.edu/JCN

About Us

Jefferson offers unparalleled advantages to students who have the desire and aptitude to become successful nurses, and to nurses who are ready to explore their career potential for growth and advancement. We offer an exceptional continuum of fully accredited nursing degree programs, from baccalaureate through doctoral levels.

Jefferson College of Nursing is an integral part of a premier academic health center. Our partner in clinical care education, Thomas Jefferson University Hospital (TJUH), is one of the top-ranked hospitals in the nation and recognized by the American Nurses Credentialing Center as a Magnet® hospital for quality patient care, nursing excellence, and innovations in professional nursing practice.

Our faculty are outstanding clinicians and exemplary teachers, many of whom maintain a clinical practice at TJUH or elsewhere in Jefferson Health. Their commitment to the goals of the successful student is evident in our classroom and clinical settings. Equally important, our low student-to-faculty ratio fosters a nurturing environment where mentorship, shared learning, and camaraderie flourish.

Jefferson Nursing graduates enter the practice world with excellent clinical skills, real-world nursing experience, and confidence in their ability to work effectively with peers and team members.

Locations

- **Jefferson Center City** 901 Walnut Street, Philadelphia PA
- **Jefferson Dixon** 300 Lakeside Drive, Horsham PA

Accreditations

Commission on Collegiate Nursing Education (CCNE) Nursing (BSN); Nursing (MSN); Nursing Practice (DNP)	www.aacnnursing.org
Council on Accreditation of Nurse Anesthesia Educational Programs (CRNA) Nurse Anesthesia (DNP)	www.gceducation.org

Academic Programs

Undergraduate

Nursing	BSN
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Graduate

Nursing Specialties:	<i>MSN (Nurse Practitioner and post BSN-DNP)</i>
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- Adult Gerontology- Acute Care NP
- Adult Gerontology NP
- Community Systems Administration
- Family/Individual Across Lifespan
- Neonatal NP
- Nursing Informatics
- Pediatric Primary Care NP
- Women's Health Gender-Related NP

Nursing	<i>DNP</i>
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Nurse Anesthesia	<i>DNP</i>
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Certificate

Advanced Headache Diagnosis & Management	<i>Post-Master's Certificate</i>
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Community Systems Administration	<i>Post-Master's Certificate</i>
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Nursing Informatics	<i>Post-Master's Certificate</i>
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Nurse Practitioner	<i>Post-Master's Certificate</i>
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Office of Admissions Campus Website	215-895-5918 Center City https://www.jefferson.edu/academics/colleges-schools-institutes/nursing/degrees-programs/bachelor-science-nursing.html
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Training Options

Options for High School Seniors

3+2 Entry-Level Master's Partnership Program

Options for College Students

BS One-year option
BS Two-year option
FACT 1 & FACT 2 programs
MS
DNP
Post BSN-DNP

Program Description

Jefferson College of Nursing offers a fully-accredited prelicensure program option that is a proven pathway to a successful nursing career.

Jefferson's Bachelor of Science in Nursing (BSN) degree program offers a fully-accredited prelicensure option that is a proven pathway to a successful nursing career. Jefferson graduates are recognized throughout the country as leaders in education, research, healthcare delivery and community service. Request information to receive a link to your personal website via email.

The BSN Traditional Track Program is for students with a high school diploma and 59 specific college credits.

In addition, for students who hold non-nursing bachelor's degrees, Jefferson offers two accelerated pathways to the Bachelor of Science in Nursing:

Full-time Accelerated Coursework Track (FACT) - 1 Year

Full-time Accelerated Coursework Track (FACT) - 2 Year

Learning Goals/Outcomes

- Students receive training in the clinical skills necessary to become a successful nurse.
- Jefferson graduates are recognized throughout the country as leaders in education, research, healthcare delivery and community service.
- The pass rate for BSN graduates who took the National Council Licensure Examination for Registered Nurses is higher than the national average.
- Jefferson BSN graduates have been pursued by employers in the Philadelphia region and across the nation.
- Starting salary range for BSN graduates is \$50,000 to \$65,000.

Curriculum: Nursing BS Full-time, FACT-1, Requires 60 approved transfer credits

<u>Semester 1</u>			<u>Semester 3</u>		
NU 315	Health Assessment Across the Lifespan	3	NU 605	Role of the Advanced Practice Nurse	3
NU 340	Medication Calculations in Nursing	1	NU 494	Population Health and Care Transition Management	4
NU 341	Foundations in Nursing	4	NU 496	Clinical Judgement Applications	10
NU 342	Health Promotion Applications Across the Lifespan I	7.5	NU 497	Transitions to Professional Practice & NCLEX-RN Prep	3
NU 343	Pathophysiology	3			
NU 346	Professional Practice in Nursing	2			
NU 603	Research for Advanced Practice Nursing I	3			
<u>Semester 2</u>					
NU 344	Health Promotion Applications Across the Lifespan II	10			
NU 345	Pharmacology	3			
NU 696	Leadership and Critical Decision Making	3			
NU 495	Health Promotion Applications Across the Lifespan III: Childbearing & Childrearing Families	9.5			

Curriculum: Nursing BS Full-time, FACT-2, Requires 60 approved transfer credits

<u>Year 1</u>			<u>Year 2</u>		
NU 315	Health Assessment Across the Lifespan	3	NU 696	Leadership and Critical Decision Making	3
NU 340	Medication Calculations in Nursing	1	NU 494	Population Health and Care Transition Management	4
NU 341	Foundations in Nursing	4	NU 344	Health Promotion Applications Across the Lifespan II	10
NU 342	Health Promotion Across the Lifespan I	7.5	NU 496	Clinical Judgement Applications	10
NU 343	Pathophysiology	3	NU 497	Transitions to Professional Practice & NCLEX-RN Prep	3
NU 495	Health Promotion Applications Across the Lifespan III: Childbearing & Childrearing Families	9.5	NU 605	Role of the Advanced Practice Nurse	3
NU 345	Pharmacology	3			
NU 346	Professional Practice in Nursing	2			
NU 603	Research for Advanced Practice Nursing I	3			

**Curriculum: Nursing BS full-time, two year, traditional track,
Requires the following courses/credits (55) approved transfer credits & 3+2 Program**

WRIT 101	Writing Seminar I	3	PSYCH 101	Introduction to Psychology	3
WRIT 201	Writing Seminar II or World Lit	3	PSYCH 213	Developmental Psychology	3
BIOL 201	Anatomy & Physiology I/Lab	4	PSYCH 201	Abnormal Psychology	3
BIOL 202	Anatomy & Physiology II/Lab	4	GDIV 203 OR ADIV 20	Class, Gender, Race in World Societies or Immigrant America	3
CHEM 103	Chemistry I /Lab	4	HSCI 304	Nutrition and Health	3
CHEM 104	Chemistry II/Lab	4		Free Electives	6
BIOL 221	Microbiology/Lab	4			
MATH 102	Pre-Calc. or Calculus I	3		Choose 2:	6
STAT 201	Introduction to Statistics or Biostatistics	3		-Bioethics	
				-Environmental Ethics	
				-Dystopian Film & Lit.	
				-Applied Professional	
				-Ethics	
				-Evil and Good	
				-World Philosophies	
				-Personality & World Cultures	

Nursing

Master of Science (MSN)

Office of Admissions 215-895-5918
 Campus Center City
 Website <https://www.jefferson.edu/academics/colleges-schools-institutes/nursing/degrees-programs/bachelor-science-nursing.html>

Curriculum: Nursing MSN, Core Curriculum, 18 credits

NU 602	Health Policy, Legal & Ethical Dimensions of Practice	3	NU 605	Role of the Advanced Practice Nurse	3
NU 603	Research For Advanced Nursing Practice I	3	NU 625	Epidemiology for Health Professions	3
NU 604	Research for Advanced Nursing Practice II	3	NU 672	Role of Advanced Practice Nurse	3

Curriculum: Nursing MS, Adult- Gerontology, Acute Care Nurse Practitioner

NU 560	Advanced Pharmacology	3	NU 632	Diagnostic Reasoning & Clinical Decision Making for Acute Care II	3
NU 570	Pathophysiology	3	NU 633	Diagnostic Reasoning & Clinical Decision Making for Acute Care III	3
NU 631	Diagnostic Reasoning & Clinical Decision Making for Acute Care I	3	NU 673	Comprehensive Assessment for Clinical Decision Making	3

Curriculum: Nursing MS, Community Systems Administration

GC 600	Management Skills	3	NU 683	Community Systems Administration III	3
NU 681	Community Systems Administration I	3	NU 691	Healthcare Economics I Financial Management for Nurses	3
NU 682	Community Systems Administration II	3		Elective	3

Curriculum: Nursing MS: Adult- Gerontology, Primary Care Nurse Practitioner

NU 560	Advanced Pharmacology	3	NU 673	Comprehensive Assessment for Clinical Decision Making	3
NU 570	Pathophysiology	3	NU 674	Mgt. of Common Health Problems in Primary Care	3
NU 630	Diagnostic Reason & Clinical Making for Advanced Practice Nurse II	3	NU 676	Management of Adult & Older Adult in Ambulatory Care	3

Curriculum: Nursing MS, Community Systems Administration Family-Individual Across Lifespan

NU 560	Advanced Pharmacology	3	NU 676	Management of Adult & Older Adult Ambulatory Care	3
NU 570	Pathophysiology	3	NU 681	Community Systems Administration I	3
NU 673	Comprehensive Assessment for Clinical Decision Making	3	NU 682	Community Systems Administration II	3
NU 674	Mgt. of Common Health Problems in Primary Care	3	NU 683	Community Systems Administration III	3
			NU 691	Healthcare Economics & Financial Mgt. for Nurses	3

Curriculum: Nursing MS, Community Systems Administration Nursing Informatics Indirect Care

NU 681	Community Systems Admin I	3	NU 691	Healthcare Economics & Financial Mgt. for Nurses	3
NU 682	Community Systems Admin II	3		Elective	3
	Elective	3	NU 693	Nursing Informatics Seminar & Practicum I	3
NU 689	Healthcare Informatics: Ethics, Issues & Trends	3	NU 694	Nursing Informatics Seminar & Practicum II	3
NU 690	Nursing/Healthcare Informatics: Project Mgt.	3		Elective	3

Curriculum: Nursing MSN, Community Systems Administration Nursing Informatics full-time curriculum (also available in part-time format)

Summer 1			Summer 2		
NU 602	Health Policy, Legal & Ethical Dimensions of Care	3	NU 683	Community Systems Administration III	3
NU 605	Role of Advanced Practice Nurse	3	NU 691	Healthcare Economics & Financial Mgt. for Nurses	3
NU 672	Informatics Advanced Practice Nursing	3		Elective	3
Year 1 Fall			Year 2 Fall		
NU 603	Research for Advanced Practice Nursing I	3	NU 693	Nursing Informatics Seminar and Practicum I	3
NU 625	Epidemiology	3			
NU 681	Community Systems Administration I	3			
NU 690	Nursing/Healthcare Informatics: Project Mgt.	3			
Year 1 Spring			Year 2 Spring		
NU 604	Research for Advanced Practice Nurse II	3	NU 694	Nursing Informatics Seminar & Practicum II	3
NU 682	Community Systems Administration II	3			
NU 689	Healthcare Informatics: Ethics, Issues, & Trends	3	NU 695	Nursing Informatics Seminar & Practicum III	3

Curriculum: Nursing MS, Family Individual Across Lifespan Nurse Practitioner

NU 560	Advanced Pharmacotherapeutics	3	NU 674	Mgt. Common Health Problems in Primary Care	3
NU 570	Pathophysiology of Human Disease		NU 675	Management of Women and Children in Ambulatory Care	3
NU 673	Comprehensive Assessment Clinical Decision Making	3	NU 676	Chronic Illness & Health Problems of Adult & Older Adult in Ambulatory Care	3

Curriculum: Nursing MSN, Pediatric Primary Care Nurse Practitioner Direct Care

NU 560	Advanced Pharmacotherapeutics	3	NU 641	Diagnostic Reasoning & Clinical Decision Making for Pediatric Advanced Practice Nurse II	3
NU 570	Pathophysiology of Human Disease		NU 642	Diagnostic Reasoning & Clinical Decision Making for Pediatric Advanced Practice Nurse III*	3
NU 640	Diagnostic Reasoning & Clinical Decision Making for Pediatric Advanced Practice Nurse I	3	NU 673	Comprehensive Assessment in Clinical Decision Making	3

Curriculum: Nursing MS, Women's Health-Gender Related NP Direct Care

NU 560	Advanced Pharmacotherapeutics	3	NU 591	Diagnostic Reasoning & Clinical Decision Making for Women's Healthcare Advanced Practice Nurse II	3
NU 570	Pathophysiology of Human Disease	3	NU 592	Diagnostic Reasoning & Clinical Decision Making For Women's HealthCare Advanced Practice Nurse III	3
NU 590	Diagnostic Reasoning & Clinical Decision Making for Women's Healthcare Advanced Practice Nurse I	3	NU 673	Comprehensive Assessment Clinical Decision Making	3

Curriculum: Nursing MS, Neonatal NP

NU 570	Pathophysiology Human Disease	3	NU 664	Diagnostic reasoning & Clinical Decision Making Neonatal Nurse Practitioner III	3
NU 662	Diagnostic Reasoning and Clinical Decision Making For Neonatal Nurse Practitioner I	3	NU 665	Comprehensive Assessment for Clinical Decision Making for the Mother and the Neonate	3
NU 663	Diagnostic Reasoning & Clinical Decision Making Neonatal Nurse Practitioner I	3	NU 667	Advanced Pharmacotherapeutics Neonatal Nurse Practitioner	3

Curriculum: Nursing MS, informatics

NU 689	Healthcare Informatics: Ethics, Issues & Trends	3	NU 694	Nursing Informatics Seminar & Practicum II	3
NU 690	Nursing/Healthcare Informatics: Project Management	3		Elective	3
NU 693	Nursing Informatics Seminar & Practicum I	3		Elective	3

Doctoral Programs (NDP)

Office of Admissions 215-895-5918
 Campus Center City
 Website <https://www.jefferson.edu/academics/colleges-schools-institutes/nursing/degrees-programs/bachelor-Center for Forensic Science Research & Educatio-nursing.html>

Curriculum: Nursing DNP, Core Curriculum 69 credits

NU 560	Advanced Pharmacology	3	NU 702	Practice Inquiry: Design, Methods & Analysis	3
NU 570	Pathophysiology	3	NU 703	Organizational Change	3
NU 602	Health Policy	3	NU 704	Methods for Evidence Based Practice	3
NU 603	Research for the APN	3	NU 705	Advance Topics in Informatics	3
NU 605	Role of the APN	3	NU 706	Healthcare Quality & Safety	3
NU 625	Epidemiology	3	NU 707	Leadership & Inter-professional Collaboration	3
NU 651	Clinical I	3	NU 708	Clinical Prevention/Population Health	3
NU 652	Clinical II	3	NU 709	Health & Social Policy	3
NU 653	Clinical III	3	NU 710	Practicum I	3
NU 672	Informatics	3	NU 711	Practicum II	3
NU 673	Physical Assessment	3	NU 712	Practicum III	3
NU 701	Scientific Underpinnings	3			

Curriculum: Nursing DNP, Post-Master's, 2 years

<u>Year 1</u>			<u>Year 2</u>		
NJ 709	Current Issues Health & Social Policy: Planning, Participating & Policy	3	NU 706	Quality Measurement & Outcomes Analysis Health Care	3
NU 702	Practice Inquiry: Designs, Methods & Analyses	3	NU 710	Practicum I	3
NU 704	Philosophy, Foundations & Methods for Evidence Based Practice	3	NU 703	Theoretical Foundations Organizational Change Health Care System	3
NU 705	Advanced Topics in Health Informatics	3	NU 711	Practicum II	3
NU 701	Scientific Underpinnings for Nursing Practice	3	NJ 708	Clinical Prevention/Pop Health Improving National Health	3
			NU 712	Practicum III	3

Curriculum: Nursing DNP, Post-Master's, 3 years

<u>Year 1</u>			<u>Year 3</u>		
NJ 709	Current Issues Health & Social Policy: Planning, Participating & Policy	3	NU 710	Practicum I	3
NU 705	Advanced Topics in Health Informatics	3	NU 711	Practicum II	3
NU 701	Scientific Underpinnings for Nursing Practice	3	NU 712	Practicum III	3
<u>Year 2</u>					
NU 702	Practice Inquiry: Designs, Methods and Analyses	3			
NU 706	Quality Measurement & Outcomes Analysis in Health Care	3			
NU 703	Theoretical Foundations for Organizational Change in Health Care System	3			
NJ 704	Philosophy, Foundations & Methods for Evidence Based Practice	3			
NU 707	Leadership & Inter-professional Collaboration	3			
NJ 708	Clinical Prevention/Pop Health for Improving National Health	3			

Curriculum: Nursing DNP, Post-Master's, 4 years

<u>Year 1</u>			<u>Year 3</u>		
NJ 709	Current Issues Health & Social Policy: Planning, Participating & Policy	3	NU 706	Quality Measurement & Outcomes Analysis in Health Care	3
NU 705	Advanced Topics in Health Informatics	3	NU 703	Theoretical Foundations for Organizational Change in Health Care System	3
NU 701	Scientific Underpinnings for Nursing Practice	3	NJ 708	Clinical Prevention/Pop Health for Improving National Health	3
<u>Year 2</u>			<u>Year 4</u>		
NU 702	Practice Inquiry: Designs, Methods and Analyses	3	NU 710	Practicum I	3
NJ 704	Philosophy, Foundations & Methods for Evidence Based Practice	3	NU 711	Practicum II	3
NU 707	Leadership & Inter-professional Collaboration	3	NU 712	Practicum III	3
NJ 708	Clinical Prevention/Pop Health for Improving National Health	3			

Curriculum: Nursing DNP, Anesthesia, 3 years

<u>Year 1</u>			<u>Year 3</u>		
NU 560	Advanced Pharmacotherapeutics	3	NU 655	Clinical Practice V	3
NU 603	Research for Advanced Practice Nursing I	3	NU 709	Current Issues in Health and Social Policy: Planning, Participating, and Policymaking	3
NU 624	Chemistry & Physics Related to Anesthesia	2	NU 710	Practicum I	3
NU 625	Epidemiology for the Health Professions	3	NU 656	Clinical Practice VI	3
NU 706	Quality Measurement & Outcomes Analysis in Healthcare	3	NU 705	Advanced Topics in Health Informatics	3
NU 673	Comprehensive Assessment Clinical Decision-Making	3	NU 711	Practicum II	3
NU 570	Pathophysiology of Human Disease	3			
NU 568	Basic Principles Anesthesia & Advanced Health	3			
NU 600	Pharmacokinetics & Dynamics of Anesthesia Agents	3			
NU 650	Orientation to Clinical Practice	NC			
NU 575	Pathologic Aspects of Disease II	3			
NU 658	Advanced Principles of Anesthesia	3			
NU 651	Clinical Practice I	3			
NU 707	Leadership & Inter-professional Collaboration	3			
<u>Year 2</u>					
NU 668	Advance Principles Anesthesia II	3			
NU 653	Clinical Practice II	3			
NU 702	Practice Inquiry: Design, Method, & Analysis	3			
NU 605	Role of Advanced Practice Nurse	3			
NU 703	Theoretical Foundation Organizational Change in Healthcare Systems	3			
NU 704	Philosophy, Foundations, and Methods for Evidence-Based Practice	3			
NU 654	Clinical Practice IV	3			
NU 701	Scientific Underpinnings for Nursing Practice	3			
NU 708	Clinical Prevention & Pop Health Improving Nation's Health	3			

Headache Diagnosis and Management

Post-Graduate Certificate

Program Director Hannah R Smith, PhD
Campus Hybrid- Center City & Online
Website <https://www.jefferson.edu/university/pharmacy/doctor-of-pharmacy.html>

Program Description

Develop new expertise in Headache Medicine utilizing a unique inter-professional collaboration supporting new avenues of learning and expertise for nurses and other health professionals.

Learning Goals/Outcomes

- Teach clinically important and novel information to improve patient care and morbidity related to headache disorders
- Produce practitioners with expertise in headache medicine
- Teach a diverse group of clinical learners
- Encourage learners to bring enthusiasm for, expertise in, and accessibility to headache medicine management and treatment to their communities

Curriculum: 12 credits

NU xxx	Headache Course I: Diagnosis and Pathophysiology of Headache	4
NU xxx	Headache Course II: Treatment of Primary and Secondary Headache	4
NU xxx	Headache Course III: Psychological Factors and Business Management	4
	<u>On-site Intensive Weekends</u>	
	Winter & Spring	

Post-Graduate Certificate Programs

Post-Graduate Certificate

Contact Campus Website	Office of Admissions Hybrid- Center City & Online https://www.jefferson.edu/academics/colleges-schools-institutes/nursing/degrees-programs/graduate-certificates/post-masters-degree-certificate-programs.html
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Curriculum: Community Systems Administration, 18 credits

NU 690	Nursing/Healthcare Informatics: Project Management	3	NU 681	Community Systems Administration I	3
NU 691	Healthcare Economics & Financial Management for Nurses	3	NU 682	Community Systems Administration II	3
NU XXX	Elective	3	NU 683	Community Systems Administration III	3

Curriculum: Nursing Informatics, 18 credits

NU 680	Health Care Informatics: Ethics, Issues and Trends	3	NU 693	Nursing Informatics Seminar and Practicum I	3
NU 690	Nursing/Healthcare Informatics: Project Management	3	NU 694	Nursing Informatics Seminar and Practicum II	3
NU 691	Healthcare Economics & Financial Management for Nurses	3	NU 695	Nursing Informatics Seminar and Practicum III	3

Curriculum: Nurse Practitioners, 18 credits

NU 560	Advanced Pharmacotherapeutics	3	NU 6xx	Specialty Clinical Course I	3
NU 570	Pathophysiology of Human Disease	3	NU 6xx	Specialty Clinical Course II	3
NU 673	Comprehensive Assessment for Clinical Decision Making	3	NU 6xx	Specialty Clinical Course III	3

COLLEGE OF PHARMACY



Dean: Rebecca S. Finley, PharmD, MS | 215-503-9000 | Jefferson.edu/Pharmacy

About Us

Welcome to the Jefferson College of Pharmacy (JCP), an integral part of one of the nation's premier academic healthcare centers.

Founded in 2008, we have built an innovative Doctor of Pharmacy program that effectively prepares our graduates for interesting and challenging pharmacy practice roles across the health care continuum. Underpinning our curriculum is an accomplished and diverse team of healthcare leaders, teachers, researchers and preceptors (practitioners) who make up our faculty. Collectively, this group brings a broad range of experiences and perspectives to our students, and they are recognized for their leadership in national and international pharmacy and healthcare membership organizations as well as their research in pharmaceuticals, pharmacology, health outcomes, the clinical sciences and related fields.

Our classroom, laboratory and pharmacy-practice experiences at the Jefferson College of Pharmacy are complemented by a wide range of co-curricular and extracurricular activities designed to enable our student pharmacists to become competent and confident practitioners who apply their knowledge and skills to care for individual patients as well as improve the overall health of our community. With a strong emphasis on leadership skills and social responsibility, JCP graduates are prepared to make an impact!

Interprofessional Education

Since matriculating its first class in the Fall of 2008, the Jefferson College of Pharmacy has embraced inter-professional education (IPE) and has been an active member of the Jefferson Center for Interprofessional Practice and Education. Beginning their first semester on campus, JCP student pharmacists participate in required IPE activities. These activities include students from many other Jefferson programs including couple and family therapy, medical laboratory sciences, medicine, nursing, occupational therapy, physical therapy and physician's assistant. In addition to the formal IPE activities, students may also participate in numerous co-curricular IPE activities. We also have affiliations with a broad range of clinical practice sites where team-based collaborative care is the standard of practice. JCP student pharmacists have the opportunity to observe and practice team-base collaborative care at increasing levels of engagement as they proceed through the four-year Doctor of Pharmacy curriculum.

As a result of its efforts in IPE, JCP faculty have been invited to numerous national meetings to share what they have learned and to showcase IPE activities. Numerous JCP student pharmacists have also had the opportunity to present or publish reports of their IPE experiences. Many prospective student pharmacists have identified Jefferson's IPE as a reason for selecting Jefferson as their Pharmacy College of choice. In addition, many incoming students have identified the ability to work with inter-professional healthcare teams among their top ten reasons for attending Jefferson.

Accreditation

Accreditation Council for Pharmacy Education (ACPE)

Thomas Jefferson University's Doctor of Pharmacy program is fully accredited until June 30, 2026 by: Accreditation Council for Pharmacy Education

www.acpe-accredit.org

135 South LaSalle Street,
Suite 4100
Chicago, IL 60503
(312) 664-3575
(312) 664-4652 fax

Academic Programs

Graduate

Doctor of Pharmacy	<i>PharmD</i>
Population Health Pharmacy	<i>MS</i>
Pharmaceutical Sciences	<i>MS</i>

Certificate

Population Health Pharmacy	<i>Graduate Certificate</i>
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Accelerated/Dual Degree

Pharm.D Pharmacy & MPH Public Health	<i>PharmD/MPH</i>
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Pharmacy

Doctor of Pharmacy (PharmD)

Campus
Accreditation
Website

Center City
Accreditation Council for Pharmacy Education
<https://www.jefferson.edu/university/pharmacy/doctor-of-pharmacy.html>

Program Description

The JCP Doctor of Pharmacy (PharmD) curriculum prepares its graduates to provide patient-centered and population-based care that ensures optimal health outcomes to practice in diverse patient care environments and become valued members of healthcare team. JCP graduates will embrace life-long, self-directed learning.

Throughout the curriculum, faculty incorporate active learning, simulated patient-care experiences and other strategies to facilitate the continued development and application of critical thinking and clinical skills. Team-based learning is also used extensively throughout the curriculum. The curriculum has been created vertically such that material learned in earlier years is further developed and built upon in the latter years. Student pharmacists participate in interprofessional education and diverse co-curricular activities, and if interested have opportunities for research and scholarly activities that contribute to their personal and professional growth.

The Doctor of Pharmacy program is accredited by the Accreditation Council for Pharmacy Education (ACPE) through June 30, 2026.

Learning Goals/Outcomes

- The knowledge, understanding and application of biomedical sciences, pharmaceutical sciences, social/behavioral /administrative sciences and clinical sciences
- The ability to think critically and problem solve
- Effective communication through written and verbal means
- The highest level of professional, legal and ethical behavior
- The professional acumen to identify & analyze emerging health-related issues
- A working knowledge of how legislation, regulations and related programs affect the practice of pharmacy

Curriculum: 4 years, 141 credits

<u>Year 1</u>			<u>Year 3</u>		
PHRM 510	Biochemistry	3	PHRM 557	Clinical Diagnosis /Pharmacotherapy III: Cardiovascular / Pulmonary Module	3
PHRM 525	Immunology	3	PHRM 544	Clinical Diagnosis /Pharmacotherapy IV: Infectious Diseases Module	3
PRRM 524	Healthcare Communications & Patient Counseling	3	PHRM 558	IPPE - Direct Patient Care	2
PHRM 519	Healthcare Delivery Systems	3	PHRM 539	Pharmacology III	3
PHRM 525	Pathophysiology I	3	PHRM 550	Interprofessional Grand Rounds	2
PHRM 516	Pharmacy Practice I	1	PHRM 545	Pharmacy Practice Lab II Elective(s)	1 2-3
PHRM 512	Preventive Healthcare and Self-Care Issues	2	PHRM 546	Clinical Diagnosis /Pharmacotherapy V: Neurology-Psychology Module	3
PHRM 522	IPPE - Healthcare Related Service Learning	1	PHRM 547	Clinical Diagnosis /Pharmacotherapy VI: Oncology Module	3
PHRM 511	Biostatistics	3	PHRM 548	Pharmacy Practice Lab III	1
PHRM 523	IPPE - Community Pharmacy	3	PHRM 551	Pharmacoeconomics and Health Outcomes	3
PHRM 513	Medicinal Chemistry	2	PHRM 552	Integrated Practice Applications	1
PHRM 520	Molecular and Cell Biology	2	PHRM 553	Professional Seminar I	2
PHRM 515	Pathophysiology II	3	PHRM 568	IPPE: Elective Site	2
PHRM 517	Pharmacy Practice II	1	PHRM 610	Pharmacy Law Elective(s)	1 2-3
PHRM 526	Physical Assess & Clinical Skills	3	PHRM 586	Student Pharmacist Enrichment III	.25
PHRM 584	Student Pharmacist Enrichment I	.25	<u>Year 4</u>		
	<u>Year 2</u>		PHRM 630	APPE: Community Pharmacy	6
PHRM 527	Drug Information & Lit Evaluation	3	PHRM 640	APPE: Hospital Pharmacy	6
PHRM 528	IPPE - Hospital Pharmacy	1	PHRM 650	APPE: Ambulatory Care	6
PHRM 529	Medication Safety	2	PHRM 660	APPE Direct Inpatient Care	6
PHRM 530	Pharmaceutics & Drug Delivery Systems	3	PHRM 670	APPE: Direct Patient Care Ele	6
PHRM 531	Pharmaceutics Lab	1	PHRM 680	APPE: Indirect Patient Care Ele	6
PHRM 549	Pharmacology I	3	PHRM 589	Board Review Course	1
PHRM 533	Pharmacy Management: Theory and Applications	3	PHRM 587	Student Pharmacist Enrich IV	.25
PHRM 534	Pharmacy Practice III	1			
PHRM 521	Pharmaceutical Calculations	2			
PHRM 554	Clinical Diagnosis /Pharmacotherapy I: Introductory Pharmacotherapy Principles / Endocrine Module	2			
PHRM 555	Clinical Diagnosis /Pharmacotherapy II: Renal / Gastrointestinal Module	2			
PHRM 535	Biopharmaceutics and Principles of Clinical Pharmacokinetics	3			
PHRM 537	IPPE - Ambulatory Care Clinic	1			
PHRM 556	Pharmacology II	3			
PHRM 538	Pharmacy Practice IV	1			
PHRM 542	Pharmacy Practice Lab I	1			
PHRM 585	Student Pharmacist Enrich II Elective(s)	.25 2-3			

Population Health Pharmacy

Master of Science (MS) & Graduate Certificate

Program Director
Campus
Website

Emily R. Hajjar, PharmD, MS, BCPS, BCACP, BCGP
Online
<https://www.jefferson.edu/university/pharmacy/ms-in-population-health-pharmacy.html>

Program Description

Population Health Pharmacy focuses on the impact of the distribution of health determinants on those receiving medication management services by pharmacists. This also includes the strategies used to improve health outcomes associated with medication use. With the rising health care costs and limited resources, pharmacists play an integral role in population health and there is an increasing demand for pharmacists with this expertise. The Population Health Pharmacy degree is a collaborative effort between the Jefferson College of Pharmacy and the Jefferson College of Population Health designed to give practicing pharmacists an expertise in population health pharmacy. By leveraging pharmacy specific knowledge with population health principles, these graduates will be poised to meet the needs of the current resource-limited, fragmented US health care system.

The MS in Population Health Pharmacy requires completion of 33 credits and includes a capstone presentation following completion of all coursework.

The Graduate Certificate in Population Health Pharmacy requires completion of 15 credits, all of which can be applied to the MS in Population Health Pharmacy.

Students can begin the program in the Fall (September) or Spring (January) terms. All courses will be offered online in an asynchronous manner by experienced faculty. Two, 7-week terms will be offered for the Fall, Spring, and Summer semesters. Courses will be offered in a manner that allows students to graduate in as little as 2 years.

Learning Goals/Outcomes

- Identify and analyze the determinants of population health (healthcare, behavioral, genetic, social, environmental, cultural)
- Assess the distribution and impact of determinants of population health on the impact on health outcomes as pertaining to pharmacy
- Describe the problem of health disparities and the impact on population health
- Recommend strategies to manage health disparities
- Assess the current US healthcare system and its impact on population health
- Makes evidence-based decisions for medication use protocols, disease state management policies, programs, and services
- Apply pharmacoeconomic principles to evidenced based decisions and health policies
- Evaluate and interpret the quality of evidence of biomedical literature using biostatistical, epidemiologic, and study design principles
- Apply informatics technology to collect, assess and analyze population health information
- Interpret and apply data analytics to improve population health medication use outcomes at institutional, community, regional and national levels
- Create and apply cost management techniques to improve population health medication use outcomes
- Evaluate the impact of health policies on population medication use outcomes
- Articulate new approaches to pharmacy benefit design and management and specialty pharmacy
- Recommend population health management strategies to improve medication use outcomes

Curriculum: MS Population Health Pharmacy, 33 credits

HPL 500	US Healthcare Organization & Delivery*	3
POP 500	Essentials of Population Health*	3
HQS 500	Intro to HC Quality and Safety	3
HPL 506	Health Policy: Analysis and Advocacy	3
PHP 501	Pharmacoepidemiology*	3
PHP 502	Applied Pharmacoeconomics	3
PHP 503	Evidence-Based Medicine and Care Pathway Development	3
PHP 504	Pharmacy Informatics and Healthcare Data Analytics*	3
PHP 505	Pharmacy Benefit Design*	3
PHP 506	Capstone Seminar	3
PHP 507	Capstone	3

*Required for the Graduate Certificate in Population Health Pharmacy

Curriculum: Graduate Certificate Health Pharmacy, 15 credits

(all of which can be applied to the MS in Population Health Pharmacy)

HPL 500	US Healthcare Organization & Delivery	3
POP 500	Essentials of Population Health	3
PHP 501	Pharmacoepidemiology*	3
PHP 504	Pharmacy Informatics and Healthcare Data Analytics	3
PHP 505	Pharmacy Benefit Design	3

Pharmaceutical Sciences

Master of Science (MS)

Program Director
Campus
Website

Alok Bhushan, PhD
Center City
<https://www.jefferson.edu/university/pharmacy>

Program Description

The MS program in Pharmaceutical Sciences is housed in the Jefferson College of Pharmacy (JCP) and offered in collaboration with Jefferson College of Life Sciences. The program may be completed on either a fulltime or part-time course of study and students enrolling in this 34 credit MS program may select either a thesis or non-thesis track.

The curriculum provides instruction in all phases of the drug and biologic development process including preclinical drug discovery and development (computational design and synthesis of new molecular entities and molecular characterization), screening and formulation, analytical support for clinical trials, health care pharmacogenomics profiling, metabolite analysis, pharmacokinetic characterization and pharmacodynamics.

Learning Goals/Outcomes

- Graduates will demonstrate expertise in the design and application of research methodologies to meet the needs of the evolving biomedical and pharmaceutical industries and academic laboratories.
- Graduates of this program will be prepared for employment as Research Technicians/Assistants in various laboratories in academic institutions and pharmaceutical industry.
- Graduates will be prepared to pursue further education and training including PhD programs.

Curriculum: Thesis Track, 2 years, 34 credits

<u>Year 1</u>			<u>Year 2</u>		
PSCI	Molecular Pharmaceutical Sci	3	PHRM 581	Methods & Pharmaceutical Tech	2
PHARM 577	Drug Discovery	3		Elective	2
GC 660	Bio-statistical Methods of Data Analysis	3	GC 720	Scientific Writing	2
PSCI XXX	Pharmaceutical Sci Rotation	1	PSCI XX3	Pharmaceutical Sci Research	2
PSCI XXX	Biological Pharmaceutical Sci	3	PSCI XXX	Pharmaceutical Sci Seminar	1
PSCI XXX	Research Ethics	1		Elective	2
PSCI XX1	Pharmaceutical Sci Research	3		Elective	2
PSCI XXX	Special Techniques in Pharmaceutical Sciences	2	PSCI XX4	Pharmaceutical Sci Research	2
<u>Summer</u>					
PSCI XX2	Pharmaceutical Sci Research	1			

Curriculum: Non-Thesis Track, 2 years, 34 credits

<u>Year 1</u>			<u>Year 2</u>		
PSCI XXX	Molecular Pharmaceutical Sci	3	PHRM 581	Methods and Pharmaceutical Technology	2
PHRM 577	Drug Discovery	2		Elective	2
GC 660	Bios-statistical Methods of Data Analysis	3	GC 720	Scientific Writing	2
PSCI XXX	Pharmaceutical Sciences Rotation	1	PSCI XX3	Pharmaceutical Sci Research	2
PSCI XXX	Biological Pharmaceutical Sci	3	PSCI XXX	Pharmaceutical Sci Seminar	1
PSCI XXX	Research Foundation and Ethics	2		Elective	2
PSCI XXX	Pharmaceutical Sci Practicum	3		Elective	2
PSCI XXX	Special Techniques in Pharmaceutical Sciences	2	PSCI XX4	Pharmaceutical Sci Practicum	2
PSCI XX2	Pharmaceutical Sci Practicum	1			

Pharmaceutical Sciences & Public Health

Dual PharmD/MPH

Program Directors	Alok Bhushan, PhD & Rosemary (Rosie) Frasso, PhD, MSc, CPH
Campus	Center City
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/population-health/degrees-programs/degrees-graduate-certificates/public-health/Pathways/dual-degrees/PharmDMPH.html

The PharmD/MPH recognizes the growing synergy between pharmacy services and public health services and reflects the growing interest among professionals to seek advanced graduate training in research methods, leadership, and population health.

PharmD/MPH students may apply to the MPH degree program during their 4th year or within 3 years of graduation.

Students may complete the degree on a full-time or part-time basis. PharmD/MPH students complete 36 credits (12 courses) of MPH coursework. Additionally, students work closely with faculty to design and complete an independent research project on a topic of their choice.



**COLLEGE OF
POPULATION HEALTH**

Dean: Willie (Billy) Oglesby, PhD, MBA, MSPH, FACHE
215-503-0174 | Jefferson.edu/PopulationHealth

About Us

Established in 2008, a leading academic health center founded in Philadelphia, PA in 1824 as Jefferson Medical College (now the Sidney Kimmel Medical College). We are dedicated to exploring the policies and forces that define the health and well-being of populations. Our mission is to prepare leaders with global vision to examine the social determinants of health and to evaluate, develop and implement health policies and systems that will improve the health of populations and thereby enhance the quality of life.

We do this by providing exemplary graduate academic programming in population health, public health, health policy, healthcare quality and safety, and health outcomes research. Our educational offerings are enhanced by research, publications, continuing education, and professional development offerings in these areas.

Population health seeks to create conditions that promote health, prevent adverse events, and improve outcomes.¹ Population health builds on *public health* foundations by:

- Connecting prevention, wellness and behavioral health sciences with health care delivery, quality and safety, disease prevention/management and economic issues of value and risk - all in the service of a specific population, be it a city, provider's practice, employee group, hospital's primary service area or age group
- Identifying socio-economic and cultural factors that determine the health of populations and developing policies that address the impact of these determinants
- Applying epidemiology and biostatistics in new ways to model disease states, map their incidence and predict their impact
- Using data analysis to design social and community interventions and new models of health care delivery that stress care coordination and ease of accessibility

Population health in the broadest sense addresses the large-scale social, economic, and environmental issues that impact health outcomes of groups of people. Population health can also be defined more narrowly as specific interventions to address the health needs of attributed and discretely defined subpopulations. This latter definition is generally referred to as *population health management*, as the populations are usually under the care of a health system or provider or have an identifiable disease state.¹ When applied to health care delivery, population health differs from conventional health care by emphasizing value rather than volume of services rendered.

Six Domains of Curriculum Framework:

Knowledge -Based Domains

Health Systems	Addressing the structure, stakeholders and processes of local, state and national health systems
Legal, Regiatory & Administative	Incorporating local, state and federal laws, agency and regulatory body regulations, and ethical standards
Social/Behavioral/ Environmental	Addressing the factors outside of medical care that influence health outcomes

Skills-Based Domains

Analytics	Incorporating epidemiological and outcomes research, sources of data and statistical analyses
Process and Design	Addressing the underlying skills necessary to complete many of the topics seen in the other domains, including the skills required to plan, build and maintain an organization or intervention
Interpersonal	Incorporating skills and techniques for greater communication and collaboration between various parties* <small>*Harris D, Puskarz K, & Golab C. Population Health: curriculum framework for an emerging discipline. <i>Population Health Management</i>, 2016,19(1), 39-45. doi:10.1089/pop.2015.0129.</small>

Center for Population Health

Through the Center for Population Health Innovation, the College of Population Health offers diverse opportunities for professionals to enhance and update their awareness of the issues and challenges inherent in today's evolving health care environment

- Jefferson College of Population Health Forum
- Hearst Health Prize
- Population Health Academy Series
- Population Health Colloquium
- Grandon Society
- Population Health Leadership Series & Poptalk Webinars
- Continuing Pharmacy Education
- Quality Improvement & Patient Safety Leadership Development Program (QIPS)

Accreditation

Council on Education for Public Health (CEPH)
Public Health (MS)

www.ceph.org

Academic Programs

Graduate

Applied Health Economics & Outcomes Research (online)	MS
Health Policy (online)	MS
Healthcare Quality & Safety (online)	MS
Health Sciences in Population Health (online)	DHSc
Operational Excellence	MS
Population Health (online)	MS
Population Health Intelligence	MPH
Population Health Science	PhD
Public Health (on campus)	MPH

Graduate Certificates

Applied Health Economics & Outcomes Research (online)	Graduate Certificate
Health Policy (online)	Graduate Certificate
Health Quality & Safety (online)	Graduate Certificate
Operational Excellence	Graduate Certificate
Population Health (online)	Graduate Certificate
Population Health Intelligence	Graduate Certificate
Public Health (on campus)	Graduate Certificate

Advanced Practice Certificates

Healthcare Quality & Safety	Advanced Practice Certificate
Healthcare Quality & Safety Education	Advanced Practice Certificate
Health Systems Science	Advanced Practice Certificate
Health Systems Science Education	Advanced Practice Certificate
Population Health	Advanced Practice Certificate
Population Health Education	Advanced Practice Certificate
	Advanced Practice Certificate

Accelerated/Dual Degree

Medicine (SKMC) & Public Health	MD/MPH (See SKMS Pg. 246)
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Applied Health Economics & Outcomes Research

Master of Science (MS) & Graduate Certificate

Program Director Dr. Vittorio Maio
Campus Online
Website <https://www.jefferson.edu/university/population-health/degrees-programs/applied-health-economics.html>

Program Description

AHEOR is an academic discipline that establishes the efficacy of a product, service, or treatment; compares its effectiveness to other interventions; and considers its incremental cost efficiency to determine optimal clinical application and overall economic value. Demand for AHEOR professionals continues to be strong globally as rising healthcare delivery and pharmaceutical costs continue to challenge every nation's economy.

Learning Goals/Outcomes (Certificate)

- Compare historical trends to current issues in U.S. healthcare organization, delivery and financing
- Explore impact of government policies on health insurance products
- Examine strengths & weaknesses of research design & statistical method in evaluating product/ service efficacy

- Discuss key concepts & applications of quantitative modeling in economic evaluations in health care

Learning Goals/Outcomes (MS) above plus:

- Analyze structure & function of U.S. healthcare institutions with emphasis on financing & delivery
- Apply analytic methods to inform resource allocation, relative value assessments & policy initiatives
- Interpret & apply conceptual frameworks used in AHEOR, such as economic metrics, quality of life evaluations and healthcare technology assessment evaluations
- Communicate policy implications to various stakeholders & decision-makers that reflect AHEOR concepts and techniques
- Assume leadership roles in the decision process regarding the allocation of healthcare resources

Curriculum: Graduate Certificate 1 year, Graduate Degree 2 years

<u>Graduate Certificate</u>			<u>MS (Grad Certificate + Courses Below)</u>		
AHE 501	Economics of Health Insurance	3	AHE 509	Epidemiology for Outcomes Research	3
AHE 503	Hospital Finance and Accounting	3	AHE 512	Advanced Economic Modeling	3
AHE 504	Basic Economic Modeling I	3	AHE 511	Advanced Statistical Concepts in AHEOR	3
AHE 506	Subjective Outcomes in Health Evaluation	3	AHE 510	Advanced Research Methods in AHEOR	3
	Elective	3	AHE 514	Economic and Outcomes Analyses	3
			AHE 650	Capstone Seminar and Project	3

Health Policy

Master of Science (MS) & Graduate Certificate

Contact	Ms. Karen Walsh
Campus	Online
Website	https://www.jefferson.edu/university/population-health/degrees-programs/health-policy.html

Program Description

The health policy program has two degree options and the master's degree has two tracks. All coursework is 100% online, and uses an accelerated semester format specifically designed for working professionals. This enables students to focus on one set of skills at a time, but still graduate at the same pace as a traditional graduate degree program.

Graduate Certificate

The Graduate Certificate focuses on the foundations of policy-driven solutions to population health improvement. This option contains five online courses, and can be completed in one year.

Master's Degree

The Master of Science (MS) degree builds upon the foundational concepts presented in the Graduate Certificate, and prepares graduates to be health policy leaders who possess advanced analytic and advocacy skills for problem identification and actionable policy solutions and implementation.

Learning Goals/Outcomes Graduate Certificate

- Identify inter-relationship among key stakeholders in U.S. health and health care
- Examine influence of social, economic, behavioral and political factors on health outcomes
- Explore theoretical principles of economics and their application in healthcare sector
- Understand the legal, legislative and regulatory process that influence health policy
- Understand role of information systems and data analysis in the policy-making process

Learning Goals/Outcomes Graduate Degree

- Design, conduct and evaluate health policy briefs, statements, analyses and research
- Apply data driven analytical skills to identify problems, model solutions and predict outcomes.
- Develop approaches that consider market forces and multiple stakeholder positions development of actionable policy solutions.
- Develop competencies in multi-sector collaboration
- Explore approaches to developing & financing policies to address social determinants of health
- Select and integrate information systems and technology to support decision-making and workflow within and across settings and sectors
- Learn effective approaches to communication and dissemination of information and data
- Apply advanced management and leadership skills to develop policies that manage costs of health care and that improve access, quality and safety.

Curriculum: Graduate Certificate 1 year, Graduate Degree 2 years

<u>Year 1: Graduate Certificate</u>			<u>Year 2: MS Curriculum</u>		
HPL 500	U.S. Healthcare Org & Delivery	3	HPL 511	Policy Approaches to Addressing Social Determinants of Health	3
POP 500	Essentials of Population Health	3	HPL 512	Medicare and Medicaid	3
HPL 504	Health Law and Regulatory Issues		HPL 513	Effective Communication and Dissemination of Data	3
HPL 505	Legislative, Executive, and Regulatory Processes	3	HPL 520	Practice-Based Health Statistics	3
HPL 506	Health Policy Analysis and Development	3	HPL 650	Capstone Seminar and Project	3
				Elective	3
				<u>Global Health Policy Track</u>	
			HPL 513	Effective Communication and Dissemination of Data	3
			HPL 515	Refugee and Migrant Health	3
			HPL 516	Delivering Health Services in Resource-Limited Countries	3
			HPL 520	Practice-Based Health Statistics	3
			HPL 650	Capstone Seminar & Project	3
				Global Health Elective	3

Healthcare Quality & Safety

Master of Science (MS) & Graduate Certificate

Contact	Mary Reich Cooper, MD,JD
Campus	Online
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/population-health/degrees-programs/degrees-graduate-certificates/healthcare-quality-safety.html

Program Description

Healthcare Quality and Safety (HQS) is the study and prevention of adverse events, suboptimal care, ineffective treatments, inefficient processes and unnecessary clinical variation in health systems. HQS professionals are on the forefront of transitioning healthcare delivery towards high-value care.

Graduate Certificate

The Graduate Certificate focuses on the foundations of HQS. This option contains five online courses and can be completed in one year.

Master's Degree

The Master of Science (MS) builds upon the foundation concepts presented in the Graduate Certificate and focuses on the advanced application of HQS concepts necessary for the analysis, management, and improvement of HQS and the systems that deliver healthcare services. This option contains 10 online courses and a capstone project, which is specifically designed to enhance the student's career trajectory. This option can be completed in two years.

Learning Goals/Outcomes

Domestic Track

Students wishing to practice within the United States will learn how to apply HQS concepts to the organization, delivery and financing of healthcare services specific to the unique aspects of the U.S. healthcare system.

International Track

Students wishing to practice outside the U.S. will learn to apply HQS concepts to other healthcare environments, such as socialized and nationalized healthcare models and resource constrained healthcare systems with diverse regulatory requirements.

Management Track

Students with an MBA, MHA, or qualifying education from the our program partners will combine their prior management training with HQS program concepts to lead quality improvement and patient safety in large, complex organizations

Curriculum: Graduate Certificate 1 year, Graduate Degree 2 years

<u>Year 1 Graduate Certificate</u>			<u>Year 2 MS Curriculum</u>		
HPL 500	U.S. Healthcare Org & Delivery	3	POP 520	Change Management	3
HQS 500	Intro to Healthcare Quality & Safety	3	HPL 520	Fund of Practice-Based Statistics	3
HPL 509	Applied Principles of Healthcare Quality	3	POP 530	Applied Leadership Strategies for Effective Change	3
HPL 515	Applied Principles of Patient Safety	3	HQS 505	Advanced Tools & Methods HQS	3
	Elective	3	HQS 507	Advanced Applications of HQS in Clinical Settings	3
			HQS 560	Capstone Seminar and Project	3

Healthcare Quality & Safety

Advanced Practice Certificates

Contact	Mary Reich Cooper, MD, JD
Campus	Online
Website	https://www.jefferson.edu/university/population-health/degrees-programs/healthcare-quality-safety.html

Curriculum: Healthcare Quality & Safety Advanced Practice Certificates

Healthcare Quality & Safety

HQS 500	Introduction to Healthcare Quality & Safety	3
HQS 509	Applied Principles of Healthcare Quality	3
HQS 515	Applied Principles of Patient Safety	3

Healthcare Quality & Safety Education

HQS 509	Applied Principles of Healthcare Quality	3
HQS 515	Applied Principles of Patient Safety	3
HQS xxx	Teaching Quality & Safety	3

Health Systems Science

HPL 500	U.S. Healthcare Organization & Delivery	3
HQS 500	Introduction to Healthcare Quality & Safety	3
	Elective	3

Health Systems Science Education

HQS 500	Introduction to Healthcare Quality & Safety	3
	Elective	3
HQS xxx	Teaching Health Systems Science	3

Operational Excellence

Master of Science (MS) & Graduate Certificate

Program Director Mary Reich Cooper, MD,JD
Campus Online
Website <https://www.jefferson.edu/university/population-health/degrees-programs/operational-excellence.html>

Program Description

Operational Excellence (OpX) is the academic and professional field focused on developing and implementing evidence-based performance improvement methodologies needed to promote value and efficiency in healthcare. OpX professionals lead healthcare transformation by focusing on eliminating waste and improving system performance.

Learning Goals/Outcomes Graduate Certificate

- Apply foundational concepts of quality & safety measurement, improvement and analysis
- Utilize project management tools & framework to design and implement improvement projects
- Distinguish various evaluation methods used to assess a healthcare organization's performance
- Identify and evaluate appropriate healthcare situations to utilize operational excellence tools

Learning Goals/Outcomes Master's Degree (above plus)

- Evaluate effectiveness of various performance improvement evaluation approaches as well as improvement interventions
- Integrate quality, safety & transformation/change management tools to promote quality, safety & process efficiency
- Design and implement operational excellence tools and strategies at a system level
- Develop systematic approaches to drive broad-impacting improvements across a healthcare organization

Curriculum: Graduate Certificate 1 year, Graduate Degree 2 years

<u>Year 1: Graduate Certificate</u>			<u>Year 2: MS Curriculum</u>		
HPL 500	U.S. Healthcare Organization & Delivery	3	OPX 525	Executing Lean Improvements	3
HQS 500	Introduction to Healthcare Quality & Safety	3	OPX 535	Strategic Execution	3
OPX 531	Evaluating Healthcare Organizations	3	POP 520	Change Management	3
OPX 532	Project Management Essentials	3	HPL 520	Fundamentals of Practice-Based Statistics	3
	Elective	3	OPX 540	Baldrige	3
			AHE 503	Hospital Finance & Accounting	3

Population Health

Master of Science (MS) and Graduate Certificate

Program Director	Mitchell Kaminski, MD, MBA
Campus	Hybrid: Center City/Online
Website	https://www.jefferson.edu/university/population-health/degrees-programs/population-health.html

Program Description

Population Health (PopH) is an academic and professional field that draws upon diverse disciplines to create a new paradigm for health improvement that engages all key stakeholders that impact the delivery of health services. Health systems in the U.S. and around the world are shifting from volume to value. Population health professionals are on the leading edge of driving this change.

Learning Goals/Outcomes (Graduate Certificate)

- Articulate U.S. Healthcare organization & delivery, and how it impacts strategy and operations for achieving value-based care
- Define population health & describe how public health resources align to address social determinants of health in order to improve health care outcomes
- Incorporate principles of healthcare quality and safety to improve the care of patients and populations
- Apply principals of economics, risk and finance to development & implementation of health care strategies
- Describe how policy, medicolegal and regulatory factors inform and impact health care systems (Science track)
- Organize and implement clinical programs understanding the role of analytics and principles of implementation science. (Management track)

Learning Goals/Outcomes MS (Certificate plus)

Both Science and Management Tracks:

- Apply quantitative and qualitative analytic skills to develop, implement and evaluate programs that address population health issues at the institutional, community, regional and national levels
- Apply principles of change management to more successfully influence healthcare programs and outcomes.

Science Track:

- Assess and interpret healthcare policies, legal precedents, statutes and regulations
- Analyze the impact of socio-cultural factors on access to health care and adjust health promotions and interventions accordingly
- Apply social, behavioral & organizational science to diagnosis, development and implementation of organizational change
- Participate in structured simulations that demonstrate the breadth of population health.

Management Track:

- Discuss and design clinical programs and initiatives which demonstrate understanding of social, clinical and financial factors impacting population health
- Apply leadership strategies for effective change to clinical operations.

Curriculum: Graduate Certificate 1 year, Graduate Degree 2 year

<u>Graduate Certificate</u> Population Health Science			<u>Graduate Certificate</u> Population Health Management		
HPL 500	U.S. Healthcare Org & Delivery	3	POP 500	Essentials of Population Health	3
POP 500	Essentials of Population Health (1)	3	POP 510	Health Economics, Risk, & Finance	3
HQS 500	Intro to Healthcare Quality & Safety	3	HQS 509	Applied Principles of Healthcare Quality	3
HPL 504	Health Law & Regulatory Issue	3	PHI 501	Health Informatics & Analytics	3
POP 510	Health Economics, Risk, & Finance	3	PHI 538	Implementation Science	3

<u>MS Population Health Science</u>			<u>MS Population Health Management</u>		
HPL 500	U.S. Healthcare Organization & Delivery (2,4)	3	POP 500	Essentials of Population Health	3
POP 500	Essentials of Population Health	3	POP 510	Health Econ, Risk, & Finance	3
HQS 500	Intro to Healthcare Quality & Safety	3	PHI 501	Health Informatics & Analytics	3
POP 510	Health Economics, Risk, & Finance	3	POP 520	Change Management	3
HPL 504	Health Law & Regulatory Issues	3	HQS 509	App Principles Healthcare Quality	3
PHI 501	Health Informatics & Analytics	3	PHI 538	Implementation Science	3
AHE 509	Epidemiology & Evidence Outcomes Research	3	POP 560	Pop Health Strategy & Mgt. I	3
HPL 506	Health Policy Analysis & Advocacy	3	POP 561	Pop Health Strategy & Mgt. II	3
POP 520	Change Management	3	POP 530	Applied Leadership Strategies Effective Changes	3
	Elective	3		Elective	3
POP 650	Capstone Seminar & Project	3	POP 650	Capstone Seminar & Project	3

Curriculum: Population Health Advanced Practice Certificates

Population Health

HPL 500	U.S. Healthcare Organization & Delivery	3
POP 500	Essentials of Population Health	3
POP 510	Health Economics, Risk, & Finance	3

Population Health Education

POP 500	Essentials of Population Health	3
POP 510	Health Economics, Risk, & Finance	3
POP xxx	Teaching Population Health	3

Population Health Intelligence

Master of Science (MS) and Graduate Certificate

Program Director Ms. Karen Walsh, MS, MBA
 Campus Online
 Website <https://www.jefferson.edu/university/population-health/degrees-programs/population-health-intelligence.html>

Program Description

Population Health Intelligence® (PHI) is a term we coined to describe a new discipline, the role of which is to collect, organize, harmonize, analyze, disseminate and act upon the data available to clinicians, health system leaders, the pharmaceutical and biotechnology industry, and healthcare payers. In today’s dynamic healthcare environment, health data analytic experts are in high demand.

Learning Goals/Outcomes (Graduate Certificate)

- Identify and respond to socio-economic, environmental and behavioral determinants of health
- Assess health system’s hardware & software to determine security compliance & conformance with purchasing requirements.
- Develop strategy for identifying & integrating disparate, non-health & population-level data into clinical decision making
- Apply principles of effective and ethical data governance.
- Account for the impact of health law and regulations on the collection, aggregation, analysis and presentation of data.

Learning Goals/Outcomes MS (Certificate plus)

- Evaluate questions of efficiency and effectiveness in health care employing an array of quantitative methods used by health analytics practitioners.
- Apply management and leadership skills to data-driven decision-making.
- Develop a strategy for analyzing and assessing payer contracts for at-risk populations.
- Adopt data visualization techniques that contribute to effective presentations and population health management dashboards.
- Assess population health initiatives employing program implementation and evaluation techniques.
- Apply epidemiological research methods to identify factors affecting patient care and health outcomes.

Curriculum: Graduate Certificate 1 year, Graduate Degree 2 years

<u>Graduate Certificate Curriculum</u>			<u>MS Curriculum (Certificate plus)</u>		
POP 500	Essentials of Population Health	3	PHI 605	Advanced Statistics for Data Analytics	3
AHE 509	Epidemiology & Evidence for Outcomes Research in Pop Health	3	PHI 516	Specialized Data Topics	3
AHE 511	Advanced Statistics for AHEOR	3	PHI 532	Data Presentation Architecture	3
PHI 501	Health Informatics & Analytics	3	PHI 538	Implementation Science	3
PHI 508	Data Science	3	PHI 527	Analytics Leadership	3
			PHI 650	Capstone Seminar & Project	3

Public Health

Master of Science (MS) & Graduate Certificate

Contact	Rosemary (Rosie) Frasso, PhD, MSc, CPH
Campus	Center City
Website	https://www.jefferson.edu/university/population-health/degrees-programs/public-health.html

Program Description

Public health is an interdisciplinary field of study and practice with two primary goals: (1) the prevention of illness, disease, and injury; and (2) the promotion and protection of human health. In achieving these goals, public health emphasizes social justice, supports human rights and respects the dignity of individuals and the integrity of communities.

Public health professionals track outbreaks of disease, conduct community health assessments, plan health education programs and direct campaigns to reduce risk factors that foster chronic health conditions like heart disease and diabetes. They develop and advocate policies, both public and private, that reduce harmful environmental exposures and that provide increased access to preventive health services for underserved populations. Many engage in public health research and support multi-cultural global health initiatives here and abroad.

Public health professionals perform these tasks in local, state and federal health agencies, community health centers and hospitals, non-governmental health organizations (NGOs), schools and universities, professional health agencies, health insurance companies and businesses.

Learning Goals/Outcomes Graduate Certificate

The Council on Education for Public Health has identified the essential knowledge and skills needed in public health practice, education and research. The JCPH MPH program uses these competencies to guide curriculum development and assess student learning. Every course in the program links these competencies to graded assignments allowing faculty and students to track progress.

Learn More at:

<https://www.jefferson.edu/university/population-health/degrees-programs/public-health/outcomes.html>

Concentration Options:

Public Health Analytics	Focuses on bolstering students' epidemiological and statistical expertise through advanced coursework giving students the ability to collect, analyze, interpret and visualize data.
Public Health Policy & Advocacy	Gives students the skillset to promote public health policy at the local, state, federal and international levels.
Healthcare Quality & Safety	Focuses on integrating public health knowledge and skills in the clinical space. This concentration is particularly of interest to students currently in or intending to enter the medical field.
Public Health Practice (Generalist)	Concentration gives students the most freedom to choose electives that appeal to them. Academic advisors will support students in determining which electives support their career goals.

Curriculum: core courses all concentrations, 27-28 credits

PBH 501	Foundations of Public Health	3	PBH 509	Foundations of Policy & Advocacy	3
PBH 500	Foundations of US Healthcare System	3	PBH 510	Health Research Methods	3
PBH 502	Society, Behavior & the Environment	3	PBH 520	Program Planning, Implementation & Evaluation	3
PBH 504 OR 505	Fundamentals of Statistics	3	PBH 651	Clerkship-Applied Practice Experience (C-APE)	3
PBH 506	Fundamentals of Epidemiology	3	PBH 611, 612 OR 313 AND 614	Capstone-Integrative Learning Experience (C-ILE)	1-2

Curriculum: concentrations, 18 credits

Public Health Analytics			Healthcare Quality & Safety		
PBH 512	Qualitative Research Methods	3	HQS 500	Intro to Healthcare Quality & Safety	3
PBH 605	Advanced Statistics	3	HQS 509	Applied Principles of Healthcare Quality	3
PBH 606	Advanced Epidemiology	3	HQS 515	Applied Principles of Patient Safety	3
PBH 609	GIS Mapping	3	OPX 532	Project Management Essentials	3
	Free Electives	6		Free Electives	6
Public Health Practice (Generalist)			Public Health Policy & Advocacy		
	Free Electives	18	PBH 507	Fundamentals of Environmental Health: Public	3
			PBH 513	Health Law & Ethics	3
			PBH 518	Applied Policy & Advocacy	3
			AHE 501	Economics of Health Insurance	3
				Free Electives	6

Population Health Science

Doctor of Philosophy

Program Director	Marianna (Marnie) LaNoue, PhD, MS
Campus	Hybrid: Center City/Online
Website	https://www.jefferson.edu/university/population-health/degrees-programs/doctorate-degree.html

Program Description

The Jefferson College of Population Health's (JCPH) PhD in Population Health Science prepares leaders to analyze the determinants of health and to develop, implement and evaluate health interventions, and health policies and systems that improve the health and quality of life of populations. More specifically, the PhD program prepares leaders to be scholars, researchers, educators and practitioners in core aspects of population health.

Students specialize in one of five areas:

- Health Policy
- Healthcare Quality & Safety (HQS)
- Health Behavior Science
- Applied Health Economics & Outcomes Research (AHEOR)
- Population Health Intelligence

Learning Goals/Outcomes

- Demonstrate advanced knowledge and application of population health frameworks and concepts
- Apply knowledge of the structures, performance, quality, policy and environmental context of health care to the formulation of solutions to and prevention of population health problems
- Formulate population health research questions that are informed by relevant theoretical and conceptual models; systematic reviews of the literature; valid, reliable and generalizable data; and stakeholder needs
- Select appropriate study designs to address specific population health research questions
- Collect, analyze and/or interpret data obtained either prospectively (by survey, surveillance, qualitative or mixed methods) or retrospectively through existing public and private sources to identify determinants of health
- Conduct ethical and responsible research in the design, implementation and dissemination of population health research through implementation of research protocols with standardized procedures
- Apply appropriate design and analytic methods to clarify associations between variables and to identify causal inferences
- Communicate findings and implications of population health science research through multiple modalities to academic, professional and lay audiences.

Curriculum: required courses all concentrations

<u>Integrative & Mentored Research (7 credits)</u>		
PHS 700	Integrative Research Seminar	4
PHS 660	Mentored Research Experience	1-3
<u>Core Coursework Fundamentals (16 credits)</u>		
HPL 500	U.S. Healthcare Organization & Delivery	3
POP 500	Essentials of Population Health	3
AHE 501	Economics of Health Insurance	3
PBH 502	Social & Behavioral Foundations of Public Health	3
PBH 602	Bioethics	1
PHS 620	Teaching & Learning Seminar	3
<u>Examination & Dissertation (12 credits)</u>		
PHS 800	Comprehensive Exam Prep	1
PHS 801	Comprehensive Exam	1
PHS 805	Dissertation Proposal Seminar	3
PHS 807	Dissertation Proposal Defense	1
PHS 810	Dissertation	3

Curriculum: Applied Health Economics & Outcomes Research (AHEOR)

<u>Specialization Coursework (Select 5)</u>			<u>Core Coursework (12 credits)</u>		
AHE 504	Economic Modeling I	3	PHS 605	Advanced Stats Methods Data Analysis	3
AHE 512	Economic Modeling II	3	PHS 615	Advanced Stats for Population Health Science: Multi-Level Modeling	3
AHE 506	Subjective Outcomes in Health Evaluation	3	AHE 509	Epidemiology & Evidence Outcomes Research	3
AHE 503	Hospital Finance & Accounting	3	AHE 510	Econometric & Observational Methods	3
AHE 511	Advanced Statistics for AHEOR & PHI (<i>required</i>)	3			
AHE 514	Economic & Outcomes Analyses (<i>with permission</i>)	3			
PHS 650	Evaluative & Outcomes & Research Design	3			

Curriculum: Health Policy (HP)

<u>Specialization Coursework (Select 5)</u>			<u>Core Coursework (12 credits)</u>		
HPL 506	Health Policy: Analysis & Development	3	PBH 605	Advanced Statistical Methods for Data Analysis	3
HPL 054	Health Law & Regulatory Issues	3	PHS 615	Advanced Stats for Population Health Science: Multi-Level Modeling	3
HPL 505	Legislative, Executive & Regulatory Processes	3	PBH 606	Advanced Epidemiology <i>or</i> Epidemiology & Evidence for Outcomes	3
HPL 511	Policy Approaches to Addressing Social Determinants of Health	3	AHE 509	Epidemiology & Evidence for Outcomes	3
HPL 512	Medicare & Medicaid	3	PHS 650	Evaluative & Outcomes Research & Design	3
HPL 513	Effective Communication & Dissemination of Data	3			
POP 520	Change Management <i>or</i> Applied Leadership Strategies for Effective Change	3			
OR	Applied Leadership Strategies for Effective Change	3			
POP 530	Effective Change	3			
HPL 550	Comparative Health Systems	3			

Curriculum: Healthcare Quality & Safety (HQS)

<u>Specialization Coursework (Select 5)</u>			<u>Core Coursework (AHEOR) (12 credits)</u>		
HQS 500	Intro to Healthcare Quality and Safety	3	PBH 605	Adv Stat Methods for Data Analysis	3
HQS 509	Applied Principles of Healthcare Quality	3	PHS 615	Advanced Stats for Population Health Science: Multi-Level Modeling	3
HQS 515	Applied Principles of Patient Safety	3	PBH 606 OR AHE 509	Advanced Epidemiology <i>or</i> Epidemiology & Evidence for Outcomes	3
HQS 505	Advanced Tools & Methods for Healthcare Quality & Safety	3	PHS 650	Evaluative & Outcomes Research & Design	3
HQS 507	Advanced Applications of HQS in Clinical Settings	3			
POP 520 OR POP 520	Change Management <i>or</i> Applied Leadership Strategies for Effective Change	3			

Curriculum: Health Behavior Science

<u>Specialization Coursework</u>			<u>Core Coursework (AHEOR) (12 credits)</u>		
PBH 602	Advanced Social & Behavioral Theories & Interventions	3	PBH 605	Advanced Statistical Methods for Data Analysis	3
PBH 512	Qualitative Research Methods	3	PHS 615	Advanced Stats for Population Health Science: Multi-Level Modeling	3
PBH 515	Cultural Humility & Competence	3	PBH 606 OR AHE 509	Advanced Epidemiology <i>or</i> Epidemiology & Evidence for Outcomes	3
PBH 710	Advanced Health Behavior Methods & Measurement	3	PHS 650	Evaluative & Outcomes Research & Design	3
PBH 680	Advanced Analytic Methods for Health Behavior Science	3			

Curriculum: Population Health Intelligence (PHI)

<u>Specialization Coursework (Select 5)</u>			<u>Core Coursework (AHEOR) (12 credits)</u>		
PBH 501	Health Data Acquisition	3	PBH 605	Advanced Statistical Methods for Data Analysis	3
PHI 518	Data Science	3	PHS 615	Advanced Stats for Population Health Science: Multi-Level Modeling	3
PHI 532	Data Presentation Architecture	3	PBH 606 OR AHE 509	Advanced Epidemiology <i>or</i> Epidemiology & Evidence for Outcomes	3
PHI 516	Specialized Data Topics	3	PHS 650	Evaluative & Outcomes Research & Design	3
PHI 527	Analytics Leadership & Administration	3			
PHI 538	Implementation Science	3			

Health Science in Population Health

Doctor of Health Science (DHSc)

Program Director	Alexis Skoufalos, EdD
Campus	Online
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/population-health/degrees-programs/degrees-graduate-certificates/dhsc-in-population-health.html

Program Description

The Jefferson College of Population Health's doctor in Population Health (DHSc) program is designed for working professionals who are determined to transform the healthcare system. This cohort-based program is small, interactive and focused on creating a community of practice among the participants as they develop their knowledge and skills. Graduate will leave the program prepared to improve their organizations and solve real population health challenges.

Learning Goals/Outcomes

- Assume Leadership role in professional, clinical, academic, or community organizations
- Apply knowledge of concepts to lead, inspire and facilitate the work of interprofessional teams
- Assess and evaluate issues of strategic importance and offer recommendations based on relevant data
- Collaborate with key stakeholders to develop and test population health interventions that are informed by relevant models, valid and reliable data and stakeholder needs
- Assess the impact and effectiveness of strategic population health improvement plans

Curriculum: (Sample), 51 credits

<u>Core Population Health Courses</u>		<u>Integrative Courses</u>	
Medicate & Medicaid	3	Implementation Science I	3
Comparative Health Systems	3	Implementation Science II	3
Population Health Management Strategies	3	Strategic Implementation and Evaluation	3
<u>Core Methods Courses</u>		In-person Residencies (Spring & Fall)	6
Fundamentals of Practice-Based Statistics	3		
Advanced Practice-Based Statistical Applications	3		
Observational Research Methods	3		
Systematic Reviews and Analysis	3		



**COLLEGE OF
REHABILITATION SCIENCES**

Dean: Steven Williams, MD | Jefferson.edu/JCRS

About Us

Jefferson College of Rehabilitation Sciences brings together Occupational Therapy, Physical Therapy, Athletic Training, Speech and Language Pathology. Our goal is to provide programs that are unique in terms of educating students to provide high-quality care that will integrate people back into their communities.

The College of Rehabilitation Sciences is proud to be home to two programs ranked by U.S. News & World Report: Occupational Therapy was and the Department of Physical Therapy. Both programs offer students opportunities to participate in research, clinical, and educational experiences.

The College is committed to becoming a recognized leader in innovative educational, clinical and research programs

Departments & Divisions

- *Athletic Training*
- *Jefferson Elder Care*
- *Occupational Therapy*
- *Physical Therapy*
- *Hand & Upper Limb Rehabilitation*
- *Using Design in Healthcare Delivery*
- *Speech Language Pathology*
- *Center for Outcomes & Measurement*

Residency

The Mission of the Jefferson College of Rehabilitation Sciences Clinical and Education Training programs is to develop practitioners of choice who are rehabilitation specialists to meet the needs of society. These programs will develop expert clinicians with advanced clinical skills in critical and innovative thinking as well as patient-centered, evidence-based, and autonomous practice. Graduates will exemplify professionalism, compassion, accountability, altruism, integrity, ethical conduct, and social responsibility and will contribute to the profession and to health care through their leadership, clinical excellence, teaching, consultative activities, and pursuit of scholarship and lifelong learning. **Pillars for the Programs: *Advanced Clinical Competence, Education, Practice Management, Professionalism, Scholarship.***

The Jefferson College of Rehabilitation post-professional clinical and education training programs are designed to develop and advance the skills, knowledge and behaviors of rehabilitation clinicians in specialized areas of practice. We currently offer the following programs

- *Neurologic Physical Therapy Residency*
- *Orthopedic Physical Therapy Residency*

Residency Programs

Thomas Jefferson University & Magee Rehabilitation Hospital Neurologic Residency

A post-professional clinical and didactic education program that is designed to advance the participant's preparation to become a practitioner of choice in the field of neurologic physical therapy. The program combines opportunities for ongoing clinical mentoring with a scientific basis for advanced practice. At the end of the experience, the resident will be academically and clinically prepared to pass the American Board of Physical Therapy Specialist (ABPTS) Neurologic Clinical Specialist Examination, and to become a leader in the world of neurologic physical therapy.

Jefferson-Strive Physical Therapy Orthopedic Residency

A post-professional clinical and didactic education program, designed to advance a physical therapist's preparation as a practitioner of choice in the field of orthopedic physical therapy. The program combines opportunities for ongoing clinical mentoring with a scientific basis for advanced practice. At the end of the experience, the resident will be academically and clinically prepared to pass the American Board of Physical Therapy Specialist (ABPTS) Orthopedic Clinical Specialist Examination.

Accreditation

Accreditation Council for Occupational Therapy Education (ACOTE) Occupational Therapy (MS); Occupational Therapy Assistant Studies (AS)	www.aota.org
Commission on Accreditation of Athletic Training Education Athletic Training (MS)	www.caate.net
Commission on Accreditation of Physical Therapy Education (CAPTE) Physical Therapy (DPT)	www.capteonline.org

Graduates are eligible to take the qualifying examinations of the state and/or national licensing or registry bodies and to become members of the appropriate professional organizations.

Academic Programs

Undergraduate

Exercise Science	BS
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Graduate

Athletic Training	MS
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Occupational Therapy- Center City	MSOT
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Occupational Therapy- East Falls	MSOT
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Occupational Therapy	OTD
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Post Professional Occupational Therapy	PPOTD
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Physical Therapy	DPT
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Graduate Certificate

Emerging as Leaders in Autism Practice & Research	<i>Advanced Practice Certificate</i>
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Hand & Upper Limb Rehabilitation	<i>Advanced Practice Certificate</i>
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Health Coaching in Context	<i>Advanced Practice Certificate</i>
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Neuroscience: Advanced Concepts for Evidence Based Practice	<i>Advanced Practice Certificate</i>
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Teaching in the Digital Age	<i>Advanced Practice Certificate</i>
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Using Design in Healthcare Delivery	<i>Advanced Practice Certificate</i>
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Accelerated/Dual Degree

BS / MS Athletic Training	2+3 (see JCHP Pg. 145)
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BS Exercise Science & DPT Physical Therapy	3+3 *See Program Director for Plan of Study
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BS Occupation & Health MS Occupational Therapy	2+3
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Exercise Science

Accelerated Bachelor of Science (BS)

Chair	Susan Wainwright, PT, PhD
Contact	215-951-6332
Campus	East Falls
Website	www.jefferson.edu/athletictraining

Program Description, Learning Goals & Outcomes

The mission of the Bachelor of Science in Exercise Science is to prepare graduates to pursue graduate study in health-related fields or pursue employment in the health and wellness arena. The program will promote academic excellence, evidence-informed practice, development of professionalism, and career-long learning to enhance patient/client management in graduates' chosen fields. The BSES is designed to prepare two groups of learners:

Curriculum: 3 years, 104 credits

<u>Year 1</u>			<u>Year 2 continued</u>		
FYS 100	Pathways Seminar	1		Concentration coursework	3
WRIT 101	Written Communication	3	GCIT 2XX	Global Citizenship (Incl world languages)	3
DBTU 114	Debating U.S. Issues	3	ADIV 2XX	American Diversity	3
CHEM 103	Chemistry I Lecture	3	PHYS 112	Physics II Lecture	3
CHEM 103l	Chemistry II Lab	1	PHYS 112 L	Physics II Lab	1
MATH 110	Quant. Reasoning: Pre-calc or higher	3-4	JRCS XXX	Exercise Physiology	3
PSYCH 101	Introduction to Psychology	3		Concentration coursework	3
JCRS 100	Orientation: Professional Issues I	3		<u>Year 3</u>	
WRIT 202	Multimedia Communication	3	JRSC 200	Orientation: Professional Issues II	3
PSYCH 213	Developmental Psychology	3	BIO 201	Anatomy & Physiology I Lecture	3
CHEM 104	Chemistry II Lecture	3	BIO 201 L	Anatomy & Physiology I Lab	1
CHEM 104 l	Chemistry II Lab	1	DBTG 300	Debating Global Issues	3
BIO 110	Biology Lecture	3	JRSC 3XX	Health Behavior Theory & Practice	3
BIO 110 L	Biology I Lab	1	JRCS 3XX	Nutrition (for fitness)	3
	Concentration coursework	3	JRSC 3XX	Safety, First Aid & Injury Prevention	3
	<u>Year 2</u>		BIO 202	Anatomy & Physiology II Lecture	3
GDIV 2XX	Global Diversity (Incl world languages)	3	BIO 202 L	Anatomy & Physiology II Lab	1
PHYS 111	Physics I Lecture	3	JCRS 3XX	Internship	
PHYS 111 l	Physics I Lab	1		Concentration coursework	3
STAT 2XX	Statistics	3	ISEM 3XX	Integrative Seminar	3
BIO 207	Genetics Lecture	3	HALLMK	Capstone Folio	3
BIO 207 L	Genetics Lab	1			

Athletic Training

Master of Science (MS)

Program Director Ali El-Kerdi, PhD, DPT, PT, ATC, LAT, CAT(C), CSCS, EMT
Contact 215-951-6332
Campus East Falls
Website www.jefferson.edu/athletictraining

Program Description, Learning Goals & Outcomes

Designed to help meet the growing demand for professional Certified Athletic Trainers (ATC). The athletic training program is constructed to prepare highly motivated students with an interest in the medical field to sit for the National Athletic Trainers Association Board of Certification (BOC) examination upon graduation.

- Provide students with the fundamental knowledge, concepts, and skills grounded in evidence-based practice as determined by the Athletic Training governing bodies: Board of Certification (BOC), Commission on Accrediting Athletic Training Education (CAATE) and the Educational Council.
- Prepare students for employment in entry-level athletic training positions located in a variety of clinical healthcare settings and/or for the pursuit of advanced degrees in athletic training or health related professions
- Provide practical experience and ethical reflection to enable graduates to assume leadership roles in various health care settings to enhance the quality of patient health care and to advance the profession of athletic training.

Curriculum: 2 years, 65 credits

	<u>Year 1 Fall 1</u>			<u>Year 2 Fall 1</u>		
ATP 601	Current Concepts in Emergency Care for Athletic Training	1		ATP 661	Practicum in Athletic Training III	3
ATP 602	Scientific Inquiry and Writing	1			<u>Year 2 Fall 2</u>	
ATP 605	Fundamentals of Athletic Training	4		ATP 665	Prevention, Evaluation and Treatment of Athletic Injuries II	4
ATP 610	Basics of Rehabilitation	3		ATP 675	Strength and Conditioning	3
HSCI 610	Emergency Medical Technician	3		ATP 685	Organization & Administration AT	2
ATP 615	Functional Human Anatomy	3		ATP 690	General Medical Condition and Pharmacology in Athletic Training	3
	<u>Year 1 Fall 2</u>				<u>Year 2 Spring 1</u>	
ATP 620	Practicum in Athletic Training	2		ATP 662	Practicum in AT IV	3
	<u>Year 1 Spring 1</u>				<u>Year 2 Spring 2</u>	
ATP 625	Prevention, Evaluation and Treatment of Athletic Injuries I	4		ATP 670	Prevention, Evaluation and Treatment of Athletic Injuries III (Spine and advanced techniques)	4
ATP 630	Therapeutic Modalities	3		ATP 695	Psychological Aspects of Injury and Rehabilitation	3
ATP 635	Human Physiology	3		ATP 696	Special Topics in AT 2	2
ATP 645	Motor Control and Human Movement	3		ATP 692	Research/Collaborative Project II	1
	<u>Year 1 Spring 2</u>					
ATP 640	Practicum in Athletic Training II	3				
	<u>Year 1 Summer</u>					
ATP 691	Research / Collaborative Project I	1				
ATP 660	Specialty Practicum in AT	2				

Occupational Therapy

Doctor of Occupational Therapy (OTD)
Master of Science Occupational Therapy (MSOT)
Combined Bachelor of Science (BS) & Master of Science (MSOT)

Dept. Chair Catherine Verrier Pierrsol, PhD, OTR/L, FAOTA
Campus Center City 215-503-8010 East Falls 215-951-2911
Website <https://www.jefferson.edu/university/rehabilitation-sciences/departments/occupational-therapy/degrees-programs/doctorate/overview.html>

Training Options

Center City Programs

- Bachelor of Science/Master of Occupational Therapy (BS/MSOT)
- Master of Occupational Therapy (MSOT)
- Doctor of Occupational Therapy (OTD)
- Post-Professional Doctor of Occupational Therapy (PPOT)

East Falls Programs

- Bachelor of Science/Master of Occupational Therapy (BS/MSOT)
- Master of Occupational Therapy (MSOT)

Curriculum: Occupational Therapy: BS/MSOT- Center City, 120 UG credits +35 GR credits

<u>Year 1 Fall</u>			<u>Year 2 Fall</u>		
OT 300	Intro Applied Science	1	OT 440	Interventions: Enhancing Human Performance, Fieldwork Level I	3
OT 302	Applied Anatomy & Kinesiology /LB	4	OT 441	Interventions: Enhancing Social Participation: Fieldwork Level I	2
OT 311	Health & Health Conditions	4	OT 522	Interventions: Enhancing Human Performance Practicum/Lab	5
OT 321	Foundations of Occupation-Centered Practice I	2	OT 558	Interventions: Enhancing Social Participation/Lab	3
OT 330	Using Occupational Therapy Lens in Clinical: Fieldwork Level I	2		Gen Elective or Independent Study	3
OT 336	Occupation Through Life Span	5	<u>Year 2 Spring</u>		
<u>Year 1 Spring</u>			OT 400	Inter-professional Care Planning	3
OT 308	Neuroscience Foundation OT	4	OT 306	Understanding Research Principles	3
OT 322	Found of Occupation- Practice II	2	OT 560	Interventions: Environ Competence	3
OT 340	Domains OT Practice: Fieldwork L I	2	OT 561	Environmental Competence Lab	1
OT 357	Evaluation Process	4	OT 562	Environmental Competence in Action	1
OT 577	Hist Perspective Theory-Based Practice	3	OT 600	Occ Therapy Professional Seminar	1
<u>Year 1 Summer</u>				Undergraduate Elective	3
OT 341	Occ Analysis & Eval: Fieldwork L I	2	<u>Year 2 Summer</u>		
OT 390	Participation Occupation & Health	3	OT 467	Health Service Administration	2
			OT 603	Research Mentorship & Methods	4
			<u>Year 3 Pre-Fall</u>		
			OT 480	Fieldwork Level II A	6
			OT 578	Evidence-Based Practice (online)	1
			<u>Year 3 Fall</u>		
			OT 482	Fieldwork Level II B	6
			OT 579	Evidence Based Practice II (on-line)	1
			<u>Year 3 Spring</u>		
			OT 682	Clinical Leadership	3
			OT 627	Program Design & Evaluation	3
			OT 670	Advanced Research Seminar	3

Curriculum: Occupational Therapy: MSOT- Center City, 82 credits

<u>Year 1 Fall</u>			<u>Year 2 Fall</u>		
OT 302	Applied Anatomy & Kinesiology/Lab	4	OT 440	Interventions: Enhancing Human Performance Fieldwork Level I	2
OT 311	Health and Health Conditions	4	OT 441	Interventions: Enhancing Social Participation, Fieldwork Level I	2
OT 321	Foundations Occupation-Centered Practice I	2	OT 552	Interventions: Enhancing Human Performance/Lab	5
OT 336	Occupation Through Life Span	5	OT 558	Interventions: Enhancing Social Participation/Lab	3
OT 340	Domains Occupational Therapy Practice: Fieldwork Level I	2		Graduate Elective or Independent Study	3
OT 600	Occ Therapy Prof Seminar	1			
<u>Year 1 Spring</u>			<u>Year 2 Spring</u>		
OT 308	Neuroscience Foundations Occupational Therapy	4	OT 480	Fieldwork Level II A	6
OT 322	Foundations of Occupation-Centered Practice II	2	OT 578	Evidence-Based Practice I	1
OT 357	Evaluation Process	4			
OT 560	Interventions: Environmental Competence	3	<u>Year 2 Summer</u>		
OT 561	Environmental Competence Lab	1	OT 482	Fieldwork Level II B	6
OT 562	Environmental Competence in Action	1	OT 579	Evidence-Based Practice II	1
OT 577	Historical Perspectives on Theory-Based Practice	3	OT 627	Program Design & Evaluation	3
<u>Year 1 Summer</u>			OT 670	Advanced Practice Seminar	3
OT 341	Occupational Analysis & Evaluation: Fieldwork Level I	2	OT 682	Clinical Leadership	3
OT 467	Health Services Administration	2			
OT 603	Research Mentorship and Methods	4			

Curriculum: Occupational Therapy, BS/MSOT- East Falls

The BS/MSOT East Falls is for high school students who are committed to becoming an Occupational Therapist. The first three years of the undergraduate experience is known as the pre-professional phase. During this period, the major requirements for the BS degree and OT program prerequisites are completed.

Students who meet the admission criteria matriculate into the MSOT program, known as the professional phase. This phase begins in the fourth year of the student's undergraduate studies and is delivered in a hybrid online/in-person format.

Year 1 (4th Year)		2.5 Track A	
September-April	Fall & Spring coursework	July-September	Fieldwork A
May-June	Summer coursework	October-December	Fieldwork B
Year 2 (5th Year)		2.5 Track A	
September-April	Fall & Spring coursework	October-December	Fieldwork A
May-June	Summer coursework	January-March	Fieldwork B

Curriculum: Occupational Therapy, MSOT, East Falls, 72 credits

Year 1 Fall			Year 2 Fall		
OCC 610	Evolving Prof Seminar	1	OCC 745	Level 1 Fieldwork B	1
OCC 611	Foundations for Practice	3	OCC 748	Assessment and Intervention: Adults	5
OCC 613	Functional Anatomy	4	OCC 749	Children & Youth A	3
OCC 621	Occupational Competence	3	OCC 754	Environmental Dimensions of Occupation	3
OCC 625	Clinical Skills	1	Year 2 Spring		
OCC 616	Assistive Technology Design	2	OCC 751	Professional Issues and Trends	3
OCC 623	Applied Neuroanatomy	4	OCC 756	Level I Fieldwork C	1
OCC 628	Intro to Evaluation	1	OCC 757	Innovative Practice in OT	3
OCC 635	Clinical Skills B	1	OCC 759	Children & Youth B	3
OCC 645	Clinical Skills C	1	OCC 767	Critical Inquiry I	2
OCC 741	Interpersonal Relationships & Groups	3	Year 2 Summer		
OCC 626	Evidence-Based Practice	3	OCC 764	Specialty Practice: Upper Extremity Rehab	2
OCC 735	Level I Fieldwork A	1	OCC 769	Critical Inquiry II	1
OCC 746	Psychosocial Interventions	4	OCC 784	Mastery	1
OCC 766	Older Adults: Enabling Participation	2	Year 2.5		
			OCC 778	Level II Fieldwork (Summer or Fall)	5
			OCC 779	Level II Fieldwork (Fall or Spring)	5

Curriculum: Occupational Therapy, Doctorate (OTD), Center City, 115 credits

<u>Year 1 Fall</u>			<u>Year 2 Fall</u>		
OT 302	Applied Anatomy & Kinesiology	4	OT 440	Interventions: Enhancing Human Performance- Fieldwork Level I	2
OT 311	Health & Health Conditions	4	OT 441	Interventions: Enhancing Social Participation- Fieldwork Level I	2
OT 321	Foundations of Occupation-Centered Practice I	2	OT 552	Interventions: Enhancing Human Performance/Lab	5
OT 336	Occupation through the Life Span/Lab	5	OT 558	Interventions: Enhancing Social Participation/Lab	3
OT 340	Domains Occupational Therapy Practice - Fieldwork Level I	2	OT 703	Professional Practice & Inquiry in Occupational Therapy	3
OT 700	Developing Your OTD Practice Toolkit	1		Elective	3
<u>Year 1 Spring</u>			<u>Year 2 Spring</u>		
OT 308	Neuroscience Foundations of Occupational Therapy	4	OT 480	Fieldwork Level II A	6
OT 322	Foundations of Occupation-Centered Practice Lab II	2	OT 704A	Evidence-Based Practice and Data Driven Decision Making Process 1	3
OT 357	Evaluation Process	4	<u>Year 2 Summer</u>		
OT 560	Interventions: Environ Competence	3	OT 482	Fieldwork Level II B	6
OT 561	Environmental Competence Lab	1	OT 704B	Evidence-Based Practice and the Data Driven Decision Making Process II	3
OT 562	Environmental Competence In Action	1	<u>Year 3 Fall</u>		
OT 577	Historical Perspective on Theory Based Practice	3	OT 720	Doctoral Capstone Seminar A	12
OT 701	Exploration of Doctoral Level OT Practice: The Faculty-Mentored Experience	1	<u>Year 3 Spring</u>		
<u>Year 1 Summer</u>			OT 721	Doctoral Capstone Seminar B	12
OT 341	Occupational Analysis & Evaluation - Fieldwork Level I	2			
OT 467	Health Services Administration	2			
OT 603	Research Mentorship and Methods	4			
OT 702	OTD Leadership: National and Global Perspectives	1			

Curriculum: Occupational Therapy, Post-Professional Doctorate (PPOTD), Center City

<u>Students entering without Masters' Degree</u>			
OT 603	Research Methods & Mentorship	All semesters except Summer II	4
OT 680	Leading Edge Occupational Therapy Practice	Fall & Spring	3
OT 681	Advanced Occupational Therapy Practicum	All semesters except Summer II	6
<u>All Students</u>			
OT 778	Adv Level Evidence Based Practice	Fall	3
OT 782	Leadership> Move Beyond Traditional Roles	Spring	3
OT 727	Visionary Practice Develop & Evaluation	Fall & Spring	3
OT 798	Seminar A	All	1
OT 798	Seminar B	All	1
OT 798	Seminar C	All	1
OT 797	Seminar in clinical Research	All	3

Curriculum: Advanced Practice, 9 credits

<u>Areas of Study</u>	
<ul style="list-style-type: none"> • Children & Their Families • Health & Community Participation • Rehabilitation & Disability Studies • Teaching in the Digital Age 	

Curriculum: Clinical Fellowship & Capstone courses, 6-9 credits

OT 800	Clinical Fellowship*	All semesters	3-6
OT 801	Capstone Project	All semesters	3
<ul style="list-style-type: none"> • Students with less than three years experience in OT take six fellowship credit; Students with more than three take three years 			

Physical Therapy

Doctoral Degree (DPT)

Program Chair Susan Flannery Wainwright, PT, PhD
Contact 215-503-5799
Campus Center City
Website <https://www.jefferson.edu/university/rehabilitation-sciences/departments/physical-therapy/doctor-of-physical-therapy.html>

Program Description, Learning Goals & Outcomes

The Doctor of Physical Therapy (DPT) Program is a 3-year (10 semester) full-time program. The curriculum is built on a strong basic science foundation with emphasis on evidence-based physical therapy practice, and integrated part-time experiential learning activities and 42 weeks of full-time clinical education.

- Graduates are prepared to examine and treat musculoskeletal and neuromuscular problems and develop injury prevention & health maintenance programs for people at all stages of life.
- Graduates are prepared to apply scientific knowledge, humanistic values, critical analysis and a systematic approach to patient care when making clinical decisions.

Curriculum: 3 years, 121 credits

<u>Year 1 Pre-Fall</u>			<u>Year 2 Fall</u>		
PT 507	Advanced Human Anatomy	6	PT 608	Musculoskeletal Physical Therapy II	4
PT 534	Practice Issues: Intro to the PT profession (online)	1	PT 612	Cardiovascular and Pulmonary PT II	3
PT 536	Practice Issues: Language of Practice (online)	1	PT 621	Neuromuscular Physical Therapy I	5
PT 527	Critical Inquiry I	3	PT 628	Capstone Project in Physical Therapy I	1
	<u>Year 1 Fall</u>		PT 645	Integrated Clinical Experience (ICE) III (1/2 class)	1
PT 516	Neuroscience	3	PT 670	Prosthetics and Orthotic Intervention	3
PT 506	Biomechanics and Kinesiology	4	PT 680	Introduction to Clinical Education	1
PT 533	Introduction to PT Examination	5		<u>Year 2 Spring A</u>	
PT 539	PT Practice Issues: Clin Decision Making	1	Pt 682	Clinical Experience I	4
PT 538	PT Practice Issues: Psychosocial Aspects of PT & PTs as Teachers and Learners	2		<u>Year 2 Spring B</u>	
PT 545	Integrated Clin Experience (ICE) I	1	PT 609	Musculoskeletal III	4
	<u>Year 1 Spring</u>		PT 622	Neuromuscular II	4
PT 513	Pathophysiology I	3	PT 710	Capstone in PT II	1
PT 624	Critical Inquiry II	2		<u>Year 3 Pre-Fall</u>	
PT 546	Integrated Clin Experience (ICE) II	1	PT 781	Clinical Experience II	6
PT 553	Biophysical Agents	3		<u>Year 3 Fall</u>	
PT 556	Therapeutic Interventions	3	PT 632	Healthcare Delivery Sys	3
PT 518	PT Practice & Movement System	2	PT 764	Pediatric Physical Therapy Practice	3
	<u>Year 2 Pre-Fall</u>		PT 700	Differential Diagnosis	2
PT 514	Pathophysiology II	3	PT 705	Comprehensive Case Analysis I	2
PT 607	Musculoskeletal Physical Therapy I	4	PT 711	Capstone in PT III	1
PT 611	Cardiovascular and Pulmonary PT I	2	PT 736	Business and Leadership in Physical Therapy Practice	3
PT 613	Pharmacology	2	PT 774	Geriatric PT Practice	3
PT 661	PT for the Integumentary System	3		<u>Year 3 Spring</u>	
			PT 707	Comprehensive Case Analysis II	1
			PT 782	Clinical Experience III	8

Emerging Leaders in Autism Practice & Research

Advanced Practice Certificate

Program Director Roseann C. Schaaf, PhD, OTR/L, FAOTA
Campus Online
Website <https://www.jefferson.edu/university/rehabilitation-sciences/departments/occupational-therapy/degrees-programs/advanced-practice-certificates/autism/overview.html>

Program Description, Learning Goals & Outcomes

This advanced practice certificate offers registered and licensed occupational therapists advanced knowledge about Autism Spectrum Disorders (ASD) and skills for working with persons who have ASD.

- Courses are taught by experts in the field
- Four graduate-level courses (12 credits)
- Courses are designed to interface with our OTD program, and may be used for graduate credit toward a Doctorate degree

Curriculum: 12-16 months, 12 credits

<u>Core Curriculum</u>					
OT 761	Autism: The State of the Field	3	OT 751	Neuroscience Foundations for Practice	3
OT 766	Assessment and Intervention Strategies for Individuals with Autism Spectrum Disorder	3	OT 770	Knowledge Translation to Promote Best Practice	3

Hand & Upper Limb Rehabilitation

Advanced Practice Certificate

Program Director Jane Fedorczyk, PT, PhD, CHT
Campus Center City
Website <https://www.jefferson.edu/university/rehabilitation-sciences/departments/hand-upper-limb-rehabilitation.html>

Program Description, Learning Goals & Outcomes

The Advanced Practice Certification in Hand and Upper Limb Rehabilitation Certificate Program is designed for physical therapists or occupational therapists who wish to participate in advanced study of the hand and upper limb.

- Fundamentals of project management and development of new products and services
- Be ready to work in settings such as hospitals, universities and the diagnostics, device and pharmaceutical industries and to function in roles including R&D, manufacturing, regulatory affairs and quality assurance, marketing and support

Critical management and leadership skills required to be successful in medical product development.

Curriculum: 12-16 months, 12 credits

<u>Core Curriculum</u>				
JCRS 750	Foundations in Hand Therapy	3	JCRS 752 Joint Pathology of the Hand and Upper Limb	3
JCRS 751	Nerve Injuries of the Hand and Upper Limb	3	JCRS 753 Diseases That Affect the Hand and Upper Limb	3

Health Coaching In Context

Advanced Practice Certificate

Contact
Campus
Website

Office of Admissions
Online

<https://www.jefferson.edu/university/rehabilitation-sciences/departments/outcomes-measurement/education/health-coaching-in-context.html>

Program Description, Learning Goals & Outcomes

This Advanced Practice Certificate (APC), Health Coaching in Context was designed and created to provide healthcare professionals with specific skills and training to use coaching as an intervention within their practice.

- Coaching provides clients a means to identify and solve issues that are potential barriers to their performance in their life roles through goal focused problem solving.
- Students will discover coaching evidence, principles, methods and practice, develop skills to implement evidence based coaching within their practice, coach with fidelity reflecting standards and evolve to provide mentorship to other coaches.
- The Health Coaching in Context APC is built on evidence from positive psychology and principles of health coaching. We will focus on coaching that promotes self-efficacy and problem solving to support client's autonomy so that clients can live their best lives regardless of health circumstances.

Curriculum: 12-16 months, 12 credits

<u>Core Curriculum</u>					
JCRS 760	Introduction & Development	3	JCRS 762	Reflection on Coaching Standards	3
JCRS 761	Skills for Evidenced Based Coaching	3	JCRS 764	Coaching Evolution and Mentorship	3

Neuroscience: Advanced Concepts for Evidence Based Practice

Graduate Certificate

Program Director	Roseann C. Schaaf, PhD, OTR/L, FAOTA
Campus	Online
Website	https://www.jefferson.edu/university/rehabilitation-sciences/departments/occupational-therapy/degrees-programs/advanced-practice-certificates/neuroscience.html

Program Description, Learning Goals & Outcomes

This advanced practice certificate is designed for registered and licensed occupational therapists, physical therapists and other rehabilitation professionals who wish to participate in advanced study of neuroscience and neuro-based rehabilitation intervention strategies.

- Credits may be applied toward Doctoral degree

Curriculum: 12-16 months, 12 credits

<u>Core Curriculum</u>					
OT 751	Neuroscience Foundations for Practice	3	OT 770	Knowledge Translation to Support Best Practice	3
OT 753	Advanced Concepts in Neuroscience I	3	OT 778	Advanced Evidence-Based Practice	3

Teaching in the Digital Age

Advanced Practice Certificate

Program Director Campus Website	Susan Toth-Cohen, PhD, OTR/L Online https://www.jefferson.edu/university/rehabilitation-sciences/departments/occupational-therapy/degrees-programs/advanced-practice-certificates/teaching.html
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Program Description, Learning Goals & Outcomes

As the need for occupational therapists increases, so does the demand for qualified OT educators to prepare the future workforce.

- Fundamental knowledge and skills to teach OT curricula in schools and other applied settings
- Courses are designed to interface with our OTD program and may be used for graduate credit toward a Doctorate degree

Curriculum: 12-16 months, 12 credits

<u>Core Curriculum</u>				
OT 783	Bridging the Gap between Classroom and Clinical Practice (Summer 1)	3	OT 782 Leadership: Moving Beyond Traditional Roles (Spring)	3
OT 784	College Teaching in the Digital Age (Fall)	3	OT 785 The Evidence Base of Teaching: Advanced Curriculum Development (Fall)	3

Using Design In Healthcare Delivery

Advanced Practice Certificate

Program Director Mikael Avery, MArch, MS, OTR/L
 Campus Online
 Website <https://www.jefferson.edu/university/rehabilitation-sciences/departments/design-in-healthcare-delivery.html>

Program Description, Learning Goals & Outcomes

The Advanced Practice Certificate in Using Design in Healthcare Delivery was created to provide practicing occupational therapy practitioners and other healthcare professionals with specific knowledge in design principles and a distinct skill-set in design approaches and methods that will enhance their practice and expand inter-professional collaborative opportunities.

- Learn to apply design principles and strategies to enhance client intervention planning, implementation, and outcomes
- Role of health professionals within a design team
- Integration of design approaches and methods into healthcare practice
- Iterative nature of the design process, in which research, prototyping, testing, and redesign are interconnected
- Expand tool kit to include the application of design concepts and specific design strategies within their practice

Credits may be applied to Post-Professional OTD program offered at Thomas Jefferson University. Students may transfer credits from the certificate program to degree programs at other universities

Curriculum: 12-16 months, 12 credits

<u>Core Curriculum</u>					
JCRS 740	Design Approaches in Healthcare	3	JCRS 742	Scaling Up and Finding a Market	3
JCRS 741	New Methods for Assistive Technology Creation	3	JCRS 743	Quality Improvement through Design	3

SCHOOL OF CONTINUING & PROFESSIONAL STUDIES



Dean: Shelley Osagie, EdD | 215-951-2900 | Jefferson.edu/SCPS

About Us

Jefferson is uniquely prepared to help you attain a degree or certificate of choice. Organizational leaders and consultants, business professionals, healthcare professionals, human resource managers, IT managers, medical office managers, medical coders, paramedics, firefighters, and occupational therapy assistants are just some of the positions our students aspire to or currently hold.

With convenient locations, accelerated courses, flexible class times (evening, afternoon, and Saturday), online and hybrid course options, and individualized advising, earning a degree or certificate is accessible and possible.

Locations

- **Jefferson Bucks County** 4800 E. Street Road, Treose, PA
- **Jefferson Center City** 901 Walnut Street, Philadelphia PA
- **Jefferson East Falls** 4201 Henry Avenue, Philadelphia PA
- **Jefferson Online** online.jefferson.edu

Educational Programs Offered

<i>Accelerated Programs</i>	Certificate, associate's, bachelor's, master's, and doctoral programs
<i>Corporate Training</i>	Assist a range of enterprises, from large corporations to small businesses, creating specific skills and training programs to bring employees up-to-speed in various skill areas.
<i>Individual Course(s)</i>	Students interested in our Center City Campus offerings who want to take courses or complete prerequisites before entering a degree program can register for individual courses. These credits are transferrable to the appropriate degree programs.
<i>Professional Development Certificates</i>	Short courses and certificate programs to give you up-to-date training, hands-on experience, and tools that will keep you at the forefront of your field, or help you explore a new interest.

Academic Programs

Certificate Programs

Healthcare Information Systems	<i>Undergraduate Certificate</i>
Medical Coding and Data Quality	<i>Undergraduate Certificate</i>
Medical Practice Management	<i>Undergraduate Certificate</i>

Associate's Degree Programs

Health & Human Services	AS
Health & Human Services-Radiologic Technology	AS
Occupational Therapy	AS

Bachelor's Degree Programs

Accounting	BS
Behavioral & Health Services	BS
Building & Construction Studies	BS
Business Management	BS
Health Sciences	BS
Health Services Management	BS
Human Resource Management	BS
Information Technology	BS
Leadership in Emergency Services	BS
Organizational Leadership	BS

Graduate Degree Programs

Organizational Leadership	MS
Strategic Leadership	DMgt

Healthcare Information Systems Undergraduate Certificate

Contact	SCPS@Jefferson.edu		
Campus	Center City		
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/continuing-professional-studies/professional-development/certificates/healthcare-management-information-systems.html		
Program Description	The 21.0-credit Certificate in Healthcare Information Systems provides competency in key areas of healthcare information. All credits earned may be transferred to our baccalaureate program in information technology.		
Curriculum	CMST 212	Database Management	3
	HCA 300	Health Services Delivery and Organization	3
	HMIS 310	Management Information Systems in Healthcare	3
	HMIS 311	Informatics Resources & Technology for Health Services	3
	HMIS 401	Network Management	3
	HMIS 402	Systems Design	3
	HMIS 420	Informatics Analysis and Utilization in HSOs	3

Medical Coding and Data Quality Undergraduate Certificate

Contact	SCPS@Jefferson.edu		
Campus	Center City		
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/continuing-professional-studies/professional-development/certificates/medical-coding-and-data-quality.html		
Program Description	<p>The 34.0-credit Medical Coding and Data Quality Certificate Program at Jefferson combines traditional academic coursework, state-of-the-art technology, and supervised fieldwork with expert certified medical coders. The program emphasizes ethical and regulatory policies necessary to produce accurate high-quality coding data that support the economic vitality of the US healthcare system. Learners complete the program with members of an inter-professional team at the nation's oldest and most respected freestanding academic medical center. The Coding Certificate is what you need to succeed in the Health Information field, which is expected to grow by over 21% through 2020, according to the Bureau of Labor Statistics. Students in our Medical Coding & Data Quality Certificate program learn entry-level medical coding positions in a physician's practice, hospital, rehabilitation center, skilled nursing facility or other healthcare settings.</p>		
Curriculum	HSC 120	Medical Terminology	3
	HSC 201	Human Disease and Treatment	3
	HSM 303	Healthcare Law	3
	CODP 100	Intro Health Information & Data Quality	3
	CODP 200	Structure and Function of Human Body	3
	CODP 202	ICD-10-CM	3
	CODP 203	CPT Coding Concepts	3
	CODP 204	Application of CPT Coding	3
	CODP 205	ICD-10 PCS	3
	CODP 206	ICD-10 Principles/Applications	3
	CODP 207	Reimbursement Methodology	3
	CODP 210	Coding PPE	3

Medical Practice Management Undergraduate Certificate

Contact	SCPS@Jefferson.edu		
Campus	Center City		
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/continuing-professional-studies/professional-development/certificates/medical-practice-management.html		
Program Description	The 36.0-credit Certificate in Medical Practice Management provides comprehensive preparation for the management and administration of day-to-day operations of a health professional practice. The program includes enhanced skills in computer applications, managerial accounting and management as well as presentation of legal issues related to healthcare practice. All courses are transferable to the BS in Health Services Management.		
Curriculum	ACCT 101	Financial Accounting	3
	ACCT 102	Managerial Accounting	3
	CMST 201	Technology Apps for Healthcare	3
	ENGL 101	Composition I	3
	ENGL 103	Business and Technical Writing	3
	GNST 120	Medical Terminology	3
	HCA 300	Health Services Delivery and Organization	3
	HCA 302	Healthcare Classification Systems	3
	HCA 303	Business & HC Law	3
	HCA 410	Medical Practice Management	3
	MGMT 101	Principles of Management and Organizational Behavior	3
	MGMT 102	Human Resources Management	3

School of Continuing & Professional Studies

Associate's Degree Programs

Health & Human Services (AS)	
Contact	SCPS@Jefferson.edu
Campus	Restricted Enrollment: District 119C Training & Upgrading Fund
Website	https://www.jefferson.edu/university/continuing-professional-studies
Program Description	This 60-credit program builds on technical training programs that have been approved by the Pennsylvania Department of Education for post-secondary credit and that have articulation agreements with the University.

Curriculum: 60 credits

<u>General Education Core</u>			<u>Major Courses</u>		
WRIT 101	Writing Seminar I	3	PSYC 251	Abnormal Psychology	3
COM 320	Professional Comm Skills	3	PSYC 263	Interpersonal Relations and Small Group Dynamics	3
MATH 215	College Algebra	3	PSYC 254	Psychology of Addiction	3
SCI 101	Environmental Science	3	COMM 310	Comm Theory and Practice	3
HIST 114 ACC	America in Focus: Themes in U.S. History	3	BHLT 290	Clinical Interactions in Behavioral Health	3
PSYC 100	Introduction to Psychology	3	BHLT 199C	Behavioral Health Technician Training Program	21
HLSV 210	Ethical Issues for Health & Human Services Providers	3			
IT 101	Intro to Computer Applications	3			

Health & Human Services: Radiologic Technology (AS)

Contact	SCPS@Jefferson.edu
Campus	Restricted Enrollment: Einstein
Website	https://www.jefferson.edu/university/continuing-professional-studies
Program Description	<p>This 63-credit program builds on transferable credits earned through successful completion of specified Albert Einstein Medical Center School of Radiologic Technology coursework.</p> <ul style="list-style-type: none"> • Block Transfer Segment 1: Radiologic Technology Technician Program 5 credits • Block Transfer Segment 2: Radiologic Technology Technician Program 20 credits • Block Transfer Segment 3: Radiologic Technology Technician Program 17 credits

Curriculum: 63 credits (includes block transfer)

<u>General Education Core</u>		
WRIT 105	Writing About Workplace Culture	3
PLA 100	Scientific Reasoning	3
MATH 215	College Algebra	3
HIST 114AC	America in Focus: Themes in U.S. History	3
PSYCH 100	Introduction to Psychology	3
HUMN 301 OR HUMN 310	Art in Context Or Globalization & World Politics	3
IT 201	Learning and Technology	3

Occupational Therapy Assistant Studies (AS)

Contact Campus Website	SCPS@Jefferson.edu Bucks County https://www.jefferson.edu/academics/colleges-schools-institutes/continuing-professional-studies/degree-options/associates-occupational-therapy.html
Program Description/Learning Outcomes	Certified Occupational Therapy Assistants, or COTAs, work in collaboration with occupational therapists to provide hands-on services to people of all ages who are learning or relearning ways to succeed in the occupations of life: any tasks one may do on a daily basis for work or leisure.
ABOUT THE PROGRAM	<ul style="list-style-type: none"> ▪ Five 8-week terms per year, with classes two evenings per week and Saturday mornings. ▪ Additional learning and activities occur through an online format ▪ Clinical component, with five total clinical fieldwork experiences required. The first three placements are part-time (36 hours per term), and the final two terms consist of two 8-week, full-time clinical placements—preparing you for your transition into the field.

Curriculum: 69 credits

IT 201	Learning and Technology	3	OTA 310	Environments & Contexts of Occupation	3
WRIT 105	Writing About Workplace Culture	3	OTA 410	Interventions I: Infancy through Adolescence	4
HIST 232	History & Philosophy of OTA Practice	3	OTA 412	Interventions II: Young through Middle Adulthood	4
BIOL 101	Current Topics in Biology	3	MATH 215	College Algebra	3
OTA 300	Anatomy, Physiology & Biomechanics	6	OTA 414	Interventions III: Late Adulthood	4
OTA 101	Intro Psychology and Mental Health for the OTA	3	OTA 400	Leadership and Human Service Systems	3
OTA 302	Occupations Across the Lifespan I: Infancy through Adolescence	3	OTA 406	Fieldwork II A	6
OTA 306	Conditions I: Infancy through Adolescence	3	OTA 402	Ethics and Critical Thinking I	2
OTA 304	Occupations Across the Lifespan II: Adulthood	3	OTA 408	Fieldwork II B	6
OTA 308	Conditions II: Adulthood	3	OTA 404	Ethics and Critical Thinking II	1

School of Continuing & Professional Studies

Bachelor's Degree Programs

*Students must earn a minimum of 120 credits to earn a bachelor's degree at TJU. Students must complete a minimum of 33 credits at TJU.

Accounting (BS)	
Contact	SCPS@Jefferson.edu
Campus	Online
Website	https://online.jefferson.edu/online-degrees/bs-accounting/
Program Description	The BS in Accounting features a curriculum focused on core accounting fundamentals as well as the latest accounting technology, tax law changes and government regulations. Whether you choose to be a part of the workforce or continue with business graduate study, the online Bachelor's in Accounting will help you achieve your goals.
Learning Outcomes	This program teaches the fundamentals of accounting and the latest accounting technology, preparing you for further study and helping you qualify to take the CPA exam.

Curriculum: 120 credits

	General Requirements		Continuing Professional Studies Core		
CSSX 101	Learning Across Lifespan	3	LCSX 105	Elements of Organization	3
	Writing Elective	3	MGTX 105	Principles of Management	3
	Math Elective	3	MGTX 361	Leader & Ethical Practices	3
	Science Elective	3	ECNX 311	Economic Decision Making	3
	History Elective	3	STAX 311	Finding & Eval Stat Data	3
	Social Science Elective	3	FINX 323	Financial Decision Making	3
	Humanities Elective	3	ITX 201	Learning and Technology	3
	Information Systems Elective	3			
	General Education Core		Major Courses		
HISX 321	Bus, Industry & Work in Am History	3	ACCX 102	Managerial Accounting	3
HUMX 310	Globalization and World Politics	3	ACCX 203	Intermediate Accounting I	3
SOC 310	The Social Science of Workplace	3	ACCX 204	Intermediate Accounting II	3
ACCX 111	Financial Accounting	3	ACCX 303	Accounting Theory & Pract.	3
COMX 320	Professional Communication Skills	3	ACCX 309	Federal Taxes I	3
CSSX 499	Prof Studies Capstone Seminar	3	ACCX 316	Cost Accounting	3
			ACCX 409	Auditing	3
			ACCX 412	Advanced Accounting	3
				Free Elective	36

Behavioral & Health Services (BS)

Contact	SCPS@Jefferson.edu
Campus	Bucks County/East Falls/Online
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/continuing-professional-studies/degree-options/accelerated-bachelors-degree-completion/list-of-majors/behavioral-and-health-services.html https://online.jefferson.edu/online-degrees/bs-behavioral-health-services/
Program Description	The behavioral and health services major specifically targets the needs of health-care providers who work in a variety of behavioral health environments, and provides a foundation in developmental, abnormal, and counseling psychology. Your courses will be rooted in the real world-culminating in an in-depth, work-based project focusing on the applications of behavioral health and neurorehabilitation in a specific professional environment. Graduates are prepared for entry-level positions in mental health settings and for graduate programs, such as Jefferson's MS in Community and Trauma Counseling.

Curriculum: 120 credits

<u>General Requirements</u>			<u>Continuing Professional Studies Core</u>		
CSSX 101*	Learning Across the Lifespan	3	LCSX 105*	Elements of Organization	3
	Writing Elective	3	MGTX 105*	Principles of Management	3
	Math Elective	3	MGMT 361	Lead Theory & Ethical Practices	3
	Science Elective	3	ECON 331	Economic Decision Making	3
	History Elective	3	STAT 311	Find & Eval Statistical Data	3
PSYC 101	Intro Psychology	3	FIN 323	Financial Decision Making	3
	Humanities Elective	3	IT 201	Learning and Technology	3
	Information Systems Elective	3	CSSE 300**	Prof Practice Seminar	3
	<u>General Education Core</u>			<u>Major Courses***</u>	
HIST 321	Bus, Industry & Work Am History	3			
HUMN 310	Globalization and World Politics	3	PSYC 251	Abnormal Psychology	3
SOC 310	Social Science of the Workplace	3	PSYC 253	Developmental Psychology	3
COMM 320	Professional Communication Skills	3	PSYC 262	Counseling Psychology	3
CSSE 499	Prof Studies Capstone Seminar	3	PSYC 263	Interpersonal Relations and Small Group Dynamics	2
ACCT 111*	Financial Accounting	3	BHLT 341	Behavioral Health and Neurorehabilitation	3
			BHLT 499	Applied Project in Behavioral Health and Neurorehabilitation	3
				Free Electives	36
					-
					51

*Jefferson Online students only.

**On-ground students only.

***Jefferson Online Students complete all six courses. On-ground students select five of six courses.

Building & Construction Studies (BS)

Contact	SCPS@Jefferson.edu
Campus	<ul style="list-style-type: none"> •East Falls •Bucks County (all courses except major requirements)
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/continuing-professional-studies/degree-options/accelerated-bachelors-degree-completion/list-of-majors/building-and-construction.html
Program Description	<p>The Bachelor of Science Degree Completion Program building and construction studies major is intended for those looking to increase their employment opportunities and segue into administrative and project management positions. You will benefit from coursework that combines building materials and methods, construction graphics and business practices. Graduates will be enabled to perform technical, supervisory, operational and middle management functions in small to large construction-related enterprises, as employees or entrepreneurs. This program option is offered through a partnership between Jefferson's School of Continuing and Professional Studies and College of Architecture and the Built Environment.</p> <p>As a graduate of the building and construction studies major, you will be prepared to apply for graduate studies, such as in Jefferson's Master of Science in Sustainable Design or Master of Science in Construction Management .</p>

Curriculum: 120 credits

<u>General Requirements</u>		<u>Continuing Professional Studies Core</u>		
	Writing Elective	3	MGMT 361 Leadership Theory & Ethical Practices	3
	Math Elective	3	ECON 331 Economic Decision Making	3
	Science Elective	3	STAT 311 Find & Eval Stat Data	3
	History Elective	3	FINC 323 Financial Decision Making	3
	Social Science Elective	3	IT 201 Learning and Technology	3
	Humanities Elective	3	CSSE 300 Prof Practice Seminar	3
	Information Systems Elective	3		
<u>General Education Core</u>		<u>Major Courses</u>		
HIST 321	Business, Industry and Work in American History	3	CMGT 104 Intro Estimating & Schedule	3
HUMN 310	Globalization and World Politics	3	CMGT 220 Intro to Construction Draw	3
SOC 310	Social Science of the Workplace	3	CMGT 208 Materials and Methods of Construction	3
COMM 320	Professional Communication Skills	3	ARCH 204 Great Buildings: Structure, Style and Context	3
CSSE 499	Prof Studies Capstone Seminar	3	ARST 221 Contemporary Preservation and Adaptive Reuse	3
			CMGT 302 Construction Contract Admin	3
			CMGT XXX Project Mgt. in Construction	3
			Free Electives	45

Business Management (BS)

Contact	SCPS@Jefferson.edu
Campus	Bucks County/East Falls/Online
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/continuing-professional-studies/degree-options/accelerated-bachelors-degree-completion/list-of-majors/business-management.html https://online.jefferson.edu/online-degrees/bs-business-management/
Program Description	Management and leadership are imperative skills for a career in business. In the business management major, you will develop these essential qualities while gaining valuable expertise in teamwork, marketing, professional communication, accounting and operations management. Collaborative courses help prepare you to advance your career and pursue leadership positions.
Learning Outcomes	As a graduate of this program, you will be prepared to apply for graduate studies, such as in Jefferson's <u>Master of Business Administration</u> program with advanced standing-a range of iMBA foundation courses are part of the bachelor's requirements.

Curriculum: 120 credits

<u>General Requirements</u>			<u>Continuing Professional Studies Core</u>		
CSSX 101*	Learning Across the Lifespan	3	LCSX 105*	Elements of Organization	3
	Writing Elective	3	MGTX 105*	Principles of Mgt.	3
	Math Elective	3	MGMT 361	Lead Theory & Ethical Practices	3
	Science Elective	3	ECON 331	Econ Decision Making	3
	History Elective	3	STAT 311	Find & Eval Stat Data	3
	Social Science Elective	3	FIN 323	Fin Decision Making	3
	Humanities Elective	3	IT 201	Learning and Technology	3
	Information Systems Elective	3	CSSE 300**	Prof Practice Seminar	3
<u>General Education Core</u>			<u>Major Courses***</u>		
HIST 321	Bus, Industry & Work Am History	3	ACCT 101/111	Financial Accounting	3
HUMN 310	Globalization and World Politics	3	ACCT 102	Managerial Accounting	3
SOC 310	Social Science of the Workplace	3	MKTG 102	Principles of Marketing	3
COMM 320	Professional Communication Skills	3	MGMT 401	Operations Management	3
CSSE 499	Prof Studies Capstone Seminar	3	MGMT 405*	Organizational Behavior	3
			BUS 499	Bus Capstone Seminar	3
				Free Electives	51

*Jefferson Online students only.

**On-ground students only.

Health Sciences (BS) Students Admitted in Fall 2020 Only

Contact Campus	SCPS@Jefferson.edu
Website	<ul style="list-style-type: none"> • East Falls • Bucks County (all courses except biology, and anatomy and physiology) https://www.jefferson.edu/academics/colleges-schools-institutes/continuing-professional-studies/degree-options/accelerated-bachelors-degree-completion/list-of-majors/health-sciences.html
Program Description	The health sciences major provides you with the necessary background and skills to work in health careers that require knowledge of both behavioral and biological sciences. Additionally, you will complete prerequisite coursework for entry into graduate programs for a variety of health professions.

Curriculum: 120 credits

<u>SCPS General Education Requirements</u>			<u>Continuing Professional Studies Core</u>		
	Writing Elective	3	MGMT 361	Leadership Theory & Ethical Practices	3
	Math Elective	3	BIOL 104AC/104LA	Biology II/Lab	4
BIOL 103AC/LA	Biology I /Lab	4	STAT 311	Find & Eval Stat Data	3
	History Elective	3	BIOL 201 AC/201LA	Anatomy & Phys I/Lab	4
	Social Science Elective	3	IT 201	Learning and Technology	3
PSYC 100	Intro to Psychology	3	CSSE 300	Prof Practice Seminar	3
	Information Systems Elective	3			
	<u>General Education Core</u>			<u>Major Courses</u>	
HIST 321	Business, Industry and Work in American History	3	BIOL 202AC/202LA	Anatomy & Physiology II/Lab	4
HUMN 310	Globalization and World Politics	3	PSYC 201	Abnormal Psychology	3
SOC 310	Social Science of the Workplace	3	PSYC 213	Developmental Psychology	3
COMM 320	Professional Communication Skills	3	PSYC 233	Interpersonal Relations & Small Group Dynamics	3
CSSE 499	Prof Studies Capstone Seminar	3	BHLT 341	Behav Health and Neurorehabilitation	3
			BHLT 499	Project in Beh Health & Neurorehabilitation	3
				Free Electives	47-48

Health Sciences (BS)	
Students Admitted in Spring & Summer 2021 Only	
Contact Campus	SCPS@Jefferson.edu <ul style="list-style-type: none"> Bucks County (all courses except biology, and anatomy and physiology) Center City East Falls
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/continuing-professional-studies/degree-options/accelerated-bachelors-degree-completion/list-of-majors/health-sciences.html
Program Description	The health sciences major provides knowledge and skills for career paths in clinical and non-clinical roles. You will be prepared for roles that require critical thinking, data analysis, and leadership skills in contexts such as hospitals, clinics, insurance companies, pharmaceutical companies, research labs, or community agencies. You also will complete prerequisite coursework for entry into graduate programs in a variety of health professions.
Program Outcomes	Graduates of the BS in Health Sciences will: <ul style="list-style-type: none"> Demonstrate sound foundational knowledge of biology, chemistry, human anatomy and physiology, and disease treatment and prevention as they relate to health outcomes; Access, use, and evaluate evidence-based information effectively; Demonstrate knowledge of the forces impacting health delivery systems and the effective management of healthcare organizations; Exhibit leadership behaviors in preparation to lead effectively in an interprofessional healthcare role; Apply legal and ethical principles to health care scenarios; Demonstrate commitment to self-directed lifelong learning to promote personal and professional development.

Curriculum: 120 credits

<u>SCPS General Education Requirements</u>			<u>Creativity & Leadership Core</u>		
ENGL 101	English Composition	3	CLC 310	Creativity Found and App	3
	Any ENGL higher than 101	3	CLS 320	Creativity in Digital Age	3
MATH 350	Statistics	3	CLS 330	Project Management	3
BIOL 121/122	Biology I/Lab	4	CLS 340	Leading Diverse Organizations	3
COMM 220	Speaking to Lead in Digital Age	3	CLS 350	Creative Leadership	3
PHIL 301	Healthcare Ethics	3		<u>Health Science Electives</u>	
	Social Science Elective	3		Choose electives from biological sciences, physical sciences, or social sciences.	6
	<u>Foundation Requirements</u>			<u>Major Requirements</u>	
CCSE 101	Learning Across Lifespan	3			
BIOL 110/113	Anatomy and Physiology I/lab	4	HSC 202	Human Disease/Treatment	3
BIOL 111/114	Anatomy and Physiology II/Lab	4	HSM 301	Health Systems and Policy	3
BIOL 123/124	Biology II/Lab	4	HSM 350	Princ of PH & Epidemiology	3
CHEM 110/111	Chemistry I/Lab	4	HSM 412	Compliance, Quality, and Outcomes Analysis	3
HSC 120	Medical Terminology	3	HSM 499	Health Sciences Capstone	3
HSC 200	Intro Health Professions	3		Free Electives	37

Health Services Management (BS) Students Admitted in Fall 2020 Only

Contact Campus Website	<p>SCPS@Jefferson.edu</p> <ul style="list-style-type: none"> Bucks County/East Falls/Online <p>https://www.jefferson.edu/academics/colleges-schools-institutes/continuing-professional-studies/degree-options/accelerated-bachelors-degree-completion/list-of-majors/health-services-management.html</p> <p>https://online.jefferson.edu/online-degrees/bs-health-services-management/</p>
Program Description	<p>The Bachelor of Science in Health Services Management prepares individuals for entry-level management in a wide variety of healthcare settings. Managers within these organizations plan, organize, coordinate and supervise the delivery of healthcare services. They may be generalists who administer, manage or help to manage entire facilities or systems, or specialists who manage clinical departments or services specific to the healthcare industry.</p>

Curriculum: 120 credits

<u>SCPS General Education Requirements</u>			<u>Continuing Professional Studies Core</u>		
CSSX 101*	Learning Across Lifespan	3	LCSX 105*	Elements of Organization	3
	Writing Elective	3	MGTX 105*	Principles of Management	3
	Math Elective	3	MGMT 361	Leadership Theory & Ethical Practices	3
	Science Elective	3	ECON 331	Economic Decision Making	3
	History Elective	3	STAT 311	Find & Eval Stat Data	3
	Social Science Elective	3	FIN 323	Financial Decision Making	3
	Humanities Elective	3	IT 201	Learning and Technology	3
	Information Systems Elective	3	CSSE 300**	Prof Practice Seminar	3
	<u>General Education Core</u>			<u>Major Courses</u>	
HIST 321	Business, Industry and Work in American History	3	HRM 350	Cross-Cultural Comm and Diversity Mgt	3
HUMN 310	Globalization and World Politics	3	HLSV 310	Survey of Health Services Delivery Systems	3
SOC 310	Social Science of the Workplace	3	HLSV 315	Public Policy and Planning in Healthcare	3
COMM 320	Professional Communication Skills	3	HLSV 325	Emerging Issues Healthcare	3
CSSE 499	Prof Studies Capstone Seminar	3	HLSV 499	Capstone Seminar in Health Services Mgmt	3
ACCX 111*	Financial Accounting	3		Free Electives	42-51

*Jefferson Online students only.

**On-ground students only.

Health Services Management (BS)

Students Admitted in Spring & Summer 2021 Only

Contact Campus	SCPS@Jefferson.edu
Website	<ul style="list-style-type: none"> • Bucks County/East Falls/Online • Center City (Restricted to Jefferson Employees) https://online.jefferson.edu/online-degrees/bs-health-services-management/
Program Description	<p>Bachelor of Science in Health Services Management prepares individuals for entry-level management positions in a wide variety of healthcare settings. Health services managers plan, organize, coordinate and supervise the delivery of healthcare services. They may be generalists who manage or help to manage entire facilities or systems, or specialists who manage clinical departments or services specific to the healthcare industry. You will learn to be familiar with and adapt to changes in healthcare policies, laws, regulations, and technology.</p>

Curriculum: 120 credits

<u>General Education Requirements</u>			<u>Creativity & Leadership Core</u>		
ENGL 101	English Composition	3	CLC 310	Creativity Foundations and Applications	3
	Any ENGL above ENGL 101	3	CLC 320	Creativity in the Digital Age	3
MATH 350	Statistics	3	CLC 330	Project Management	3
	Science elective	3			
COMM 220	Speaking to Lead in the Digital Age	3	CLC 340	Leadership Diverse Org	3
PHIL 301	Healthcare Ethics	3	CLC 350	Creative Leadership	3
	Social Science Elective	3			
<u>Foundation Requirements</u>			<u>Major Requirements</u>		
CSS 101	Learning Across Lifespan	3	HSM 301	Health Systems and Policy	3
CPS 210	Financial Concepts for Nonfinancial Leaders	3	HSM 303	Healthcare Law	3
ECON 331	Economic Decision Making	3	HSM 311	Health Informatics	3
			HSM 351	Strategic Planning and Marketing for HSOs	3
			HSM 407	Financial Management HSOs	3
			HSM 412	Compliance, Quality, and Outcomes Analysis	3
			HSM 499	Health Services Mgt Capstone	3
				Free Electives	51

Human Resource Management (BS)

Contact	SCPS@Jefferson.edu
Campus	Bucks County/East Falls/Online
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/continuing-professional-studies/degree-options/accelerated-bachelors-degree-completion/list-of-majors/human-resource-management.html https://online.jefferson.edu/online-degrees/bs-human-resources-management/
Program Description	The human resource management major will enable you to become a knowledgeable human resources professional for an array of organizations, through a curriculum guided by the professional organizations that govern the field. Culminating in a hands-on project building an advanced plan for human resource development, you will have practical experience to stand out in your job search.

Curriculum: 120 credits

<u>General Education Requirements</u>			<u>Continuing Professional Studies Core</u>		
CSSX 101*	Learning Across Lifespan	3	LCSX 105*	Elements of Organization	3
	Writing Elective	3	MGTX 105*	Princ of Management	3
	Math Elective	3	MGMT 361	Leadership Theory & Ethical Practices	3
	Science Elective	3	ECON 331	Econ Decision Making	3
	History Elective	3	STAT 311	Find & Eval Stat Data	3
	Social Science Elective	3	FIN 323	Finc Decision Making	3
	Humanities Elective	3	IT 201	Learning and Technology	3
	Information Systems Elective	3	CSSE 300**	Prof Practice Seminar	3
	<u>General Education Core</u>		<u>Major Courses (ONLINE STUDENTS)</u>		
HIST 321	Business, Industry and Work in American History	3	MGTX 201	Human Resource Mgt.	3
HUMN 310	Globalization and World Politics	3	MGTX 303	Labor/Mgmt. Relations	3
SOC 310	Social Science of the Workplace	3	MGMT 307	Compensation & Benefits	3
COMM 320	Professional Communication Skills	3	MGTX 308	Train and Development	3
CSSE 499	Prof Studies Capstone Seminar	3	HRMX 499	Applied Research and Practice in HR Mgt	3
ACCX 111*	Financial Accounting	3	<u>Major Courses (ON-CAMPUS STUDENTS)</u>		
			MGMT 320	HR Pract/Tools	3
			HRM 321	Staff & Resource Develop.	3
			HRM 336	Compensation, Benefits, and Health and Safety	3
			HRM 421	Org & Employ Relations	3
			HRM 499	Applied Research and Practice HR Management	3
				Free Electives	51

*Jefferson Online students only.

**On-campus students only.

Information Technology (BS) Students Admitted Fall 2020 Only

Contact SCPS@Jefferson.edu
Campus • East Falls/Online
Website • Bucks County (all courses except major requirements)
<https://www.jefferson.edu/academics/colleges-schools-institutes/continuing-professional-studies/degree-options/accelerated-bachelors-degree-completion/list-of-majors/information-technology.html>

Program Description In the information technology major, you will learn computer applications, basic programming, and database management, while gaining valuable skills in needs assessment and IT project management.

Curriculum: 120 credits

<u>SCPS General Education Requirements</u>			<u>Continuing Professional Studies Core</u>		
CSSX 101*	Learning Across Lifespan	3	LCSX 105*	Elements of Organization	3
	Writing Elective	3	MGTX 105*	Princ of Management	3
	Math Elective	3	MGMT 361	Leadership Theory & Ethical Practices	3
	Science Elective	3	ECON 331	Econ Decision Making	3
	History Elective	3	STAT 311	Find & Eval Stat Data	3
	Social Science Elective	3	FINC 323	Finc Decision Making	3
	Humanities Elective	3	IT 201	Learning and Technology	3
	Information Systems Elective	3	CSSE 300**	Prof Practice Seminar	3
	<u>General Education Core</u>		<u>Major Courses</u>		
HIST 321	Business, Industry and Work in American History	3	IT 315	Information Technology I	3
HUMN 310	Globalization and World Politics	3	IT 317	Information Technology II	3
SOC 310	Social Science of the Workplace	3	IT 320	Database Management	3
COMM 320	Prof Communication Skills	3	IT 410	Needs Assessment	3
CSSE 499	Prof Studies Capstone Seminar	3	IT 499	Project Management	3
ACCX 111*	Financial Accounting	3		Free Electives	51

*Jefferson Online students only.

**On-campus students only.

Information Technology (BS)

Students Admitted Spring and Summer 2021 Only

Contact Campus Website	<p>SCPS@Jefferson.edu</p> <ul style="list-style-type: none"> • East Falls/Online • Bucks County (all courses except major requirements) <p>https://www.jefferson.edu/academics/colleges-schools-institutes/continuing-professional-studies/degree-options/accelerated-bachelors-degree-completion/list-of-majors/information-technology.html</p> <p>https://online.jefferson.edu/online-degrees/bs-information-technology-management/</p>
Program Description	<p>In the information technology major you will study foundational topics such as hardware, operating systems, and software development. Then you will study concepts and administration in several IT domains, such as databases, networks, systems analysis and design, cloud, and cybersecurity. The program concludes with study of IT process and service management and a capstone.</p>
Program Outcomes	<p>Graduates of the BS in Information Technology will:</p> <ol style="list-style-type: none"> 1. Analyze a complex computing problem and apply principles of computing and other relevant disciplines to identify solutions. 2. Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline. 3. Communicate effectively in a variety of professional contexts. 4. Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles. 5. Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline. 6. Demonstrate commitment to self-directed lifelong learning to promote personal and professional development

Curriculum: 120 credits

<u>SCPS General Education Requirements</u>			<u>Creativity & Leadership Core</u>		
ENGL 101	English Composition	3	CLC 310	Creativity Foundations and Applications	3
	Any ENGL above ENGL 101	3	CLC 320	Creativity in the Digital Age	3
	Science elective	3			
	Math elective	3	CLC 330	Project Management	3
COMM 220	Speaking to Lead Digital Age	3	CLC 340	Leadership Diverse Org	3
	Social Science Elective	3	CLC 350	Creative Leadership	3
<u>Foundation Requirements</u>			<u>Major Requirements</u>		
CSSE 101	Learning Across Lifespan	3	IT 211	Intro to Information Systems	3
CPS 210	Financial Concepts for Nonfinancial Leaders	3	IT 212	Hardware and Operating Syst	3
			IT 241	Software Development	3
			IT 320	Database Management	3
			IT 321	Systems Analysis and Design	3
			IT 322	Network Management	3
			IT 323	Cloud Management	3
			IT 324	Cybersecurity Management	3
			IT 325	IT Process and Service Mgmt	3
			IT 499	Information Tech Capstone	3
				Free Electives	48

Leadership in Emergency Services (BS)

Contact	SCPS@Jefferson.edu
Campus	<ul style="list-style-type: none"> • East Falls • Bucks County (all courses except major requirements)
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/continuing-professional-studies/degree-options/accelerated-bachelors-degree-completion/list-of-majors/leadership-in-emergency-services.html
Program Description/Learning Outcomes	In the leadership in emergency services major, you will gain the background and skills necessary to grow into leadership positions in fire, rescue, public safety, and Emergency Medical Services fields. This curriculum provides the coursework and experience for you to pursue a supervisory or management career in an array of emergency services agencies. You also will be prepared for graduate programs, such as Jefferson's MS in Disaster Medicine and Management.

Curriculum: 120 credits

<u>SCPS General Education Requirements</u>			<u>Continuing Professional Studies Core</u>		
	Writing Elective	3	MGMT 361	Leadership Theory & Ethical Practices	3
	Math Elective	3	ECON 331	Econ Decision Making	3
	Science Elective	3	STAT 311	Find & Eval Stat Data	3
	History Elective	3	FIN 323	Finc Decision Making	3
	Social Science Elective	3	IT 201	Learning and Technology	3
	Humanities Elective	3	CSSE 300	Prof Practice Seminar	3
	Information Systems Elective	3			
	<u>General Education Core</u>			<u>Major Courses</u>	
HIST 321	Business, Industry and Work in American History	3	EMS 310	Emergency Services Law	3
HUMN 310	Globalization and World Politics	3	EMS 320	Emergency Mgt Planning	3
SOC 310	Social Science of the Workplace	3	EMS 330	Publ Health Issues Impacting Emergency Services	3
COMM 320	Prof Communication Skills	3	EMS 410	Disaster Response and Recovery Planning	3
CSSE 499	Prof Studies Capstone Seminar	3	EMS 499	Theoretical App & Applied Project Emergency Services Leadership	3
				Free Electives	51

Organizational Leadership (BS)

Contact Campus Website	<p>SCPS@Jefferson.edu Bucks County/East Falls/Online https://www.jefferson.edu/academics/colleges-schools-institutes/continuing-professional-studies/degree-options/accelerated-bachelors-degree-completion/list-of-majors/organizational-leadership.html https://online.jefferson.edu/online-degrees/bs-organizational-leadership/</p>
Program Description	<p>In the organizational leadership major, you will build your skills for promotion and entry to a variety of business-related fields. Our collaborative curriculum will help you develop computer proficiency, as well as effective oral, written, interpersonal and cross-cultural communication skills. You will learn basic business fundamentals and you will gain leadership skills necessary to advance in today's complex organizations.</p>

Curriculum: 120 credits

<u>General Education Requirements</u>			<u>Continuing Professional Studies Core</u>		
CSSX 101*	Learning Across Lifespan	3	LCSX 105*	Elements of Organization	3
	Writing Elective	3	MGTX 105*	Princ of Management	3
	Math Elective	3	MGMT 361	Leadership Theory & Ethical Practices	3
	Science Elective	3	ECON 331	Econ Decision Making	3
	History Elective	3	STAT 311	Find & Eval Stat Data	3
	Social Science Elective	3	FIN 323	Finc Decision Making	3
	Humanities Elective	3	IT 201	Learning and Technology	3
	Information Systems Elective	3	CSSE 300**	Prof Practice Seminar	3
	<u>General Education Core</u>		<u>Major Courses -ONLINE STUDENTS</u>		
HIST 321	Business, Industry and Work in American History	3	COMM 204	Technologies of Communication	3
HUMN 310	Globalization and World Politics	3	COM 375	Public Relations	3
SOC 310	Social Science of the Workplace	3	MGTX 305	Managing a Diverse Workplace	3
COMM 320	Prof Communication Skills	3	MGTX 405	Organizational Behavior	3
CSSE 499	Prof Studies Capstone Seminar	3	MGTX 408	Org Theory and Develop	3
ACCX 111*	Financial Accounting	3	<u>Major Courses -ON-CAMPUS STUDENTS</u>		
			COMM 310	Commun Theory/Pr	3
			MKTG 320	Visual Literacy	3
			HRM 350	Cross-Cultural Commun and Diversity Mgt	3
			PSYC 263	Interpersonal Relations and Small Group Dynamics	3
				Org. Leadership Elective	3
				Free Electives	51

*Jefferson Online students only.

**On-ground students only.

Organizational Leadership (MS)

Contact	SCPS@Jefferson.edu
Campus	Online
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/continuing-professional-studies/degree-options/ms-organizational-leadership.html
Program Description	<p>The MS in Organizational Leadership (MSOL) will focus on the human processes side of leadership education. As the demand for leaders who are prepared to handle volatility, uncertainty, complexity, and ambiguity (VUCA) increases, the MSOL program will meet those needs by providing education that embraces the VUCA environment by teaching necessary skills to meet complexity head on.</p> <ul style="list-style-type: none"> • A dynamic academic community will be cultivated in this online program, with one residency per year, bringing organizational leaders together to brainstorm and create a learning community that will give back to their employer and city communities through vision, understanding, creativity, and adaptability/agility. • The program supports experiential and learner-centered teaching provided to each student in the form of independent and group projects, self-assessment, and reflective, purposeful and participatory learning. Learners will be able to customize their curriculum by choosing a concentration and adding another concentration, if they choose. <p>Concentrations:</p> <ol style="list-style-type: none"> 1. Organizational Leadership 2. Healthcare Leadership 3. Project Management 4. Human Capital 5. Data Science

Curriculum: 36 credits

<u>Domain I: Leadership Skills & Knowledge</u>			<u>Domain III: OL Concentration</u>		
LDSP 510	Team Dynamics & Collaboration	3	LDSP 620	Psychology of Global Leadership	3
LDSP 515	Organizational Innovation, Creativity, & Change	3	LDSP 625	Consulting I	3
LDSP 520	Strategic Leadership in a VUCA World	3	LDSP 630	Systems & Design Thinking	3
<u>Domain II: Organizational Knowledge</u>			LDSP 640	Psychology of Conflict and Negotiation in Organizations	3
LDSP 580	Human Relations & Employee Development	3	LDSP 699	Capstone	3
LDSP 590	Organizational Awareness	3			
LDSP 605	Leading in the Digital Age	3			
LDSP 610	Organiz Performance Metrics	3			

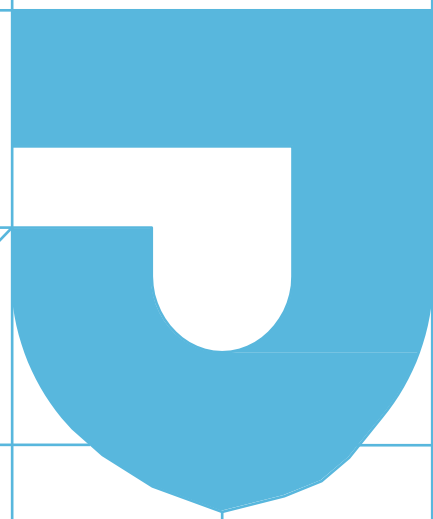
Strategic Leadership (DMgt)

Contact	SCPS@Jefferson.edu
Campus	East Falls
Website	https://www.jefferson.edu/academics/colleges-schools-institutes/continuing-professional-studies/degree-options/doctor-of-management-strategic-leadership.html
Program Description	<p>Designed by doctoral students, faculty, corporate, government, and not-for-profit stakeholders, this distinctive systems/complexity-based Doctor of Management (D.Mgt.) degree program uses conceptual, experiential and reflective learning to meet the complex educational and practice needs created by the ever-evolving workplace, rapid expansion of knowledge underlying practice, increased technological advances, and the cultural and geographic diversity of the global workplace. The D.Mgt. in Strategic Leadership is a professional executive research degree that builds a community and network of adult professional students, faculty, scholars, and practitioners. Executive coaches and research mentors support doctoral students in leadership development, communication skills, and applied research formulation and delivery. The program enables development of leaders who can strategically and effectively navigate situational and organizational complexity, and who can apply tools leading to creative and innovative outcomes. Graduates of the program will have the competency to astutely identify new opportunities, help solve complex organizational problems, and meet the leadership needs of employers and society in the United States and abroad.</p>

Curriculum: 45 credits

<u>Conceptual Requirements</u>			<u>Conceptual Electives (Select 3)</u>			9
DSL 700	Strategic Leadership Frameworks	3	DSL 703	Military and Civilian Strategic Leadership		
DSL 701	Systems and Design Thinking	3	DSL 705	Enabling Info Technology		
DSL 702	Applied Research Methods I	3	DSL 707	Theory of Constraints		
DSL 704	Complex Project Leadership and Management	3	DSL 709	Leading in the Digital Transformation Age		
DSL 706	Applied Research Methods II	3	DSL 713	Patterns of Strategy		
DSL 708	Strategic Organization Development and Change	3	DSL 714	Survey Research Methods		
<u>Project-Based Requirements</u>			<u>Project-Based Elect (Select 2)</u>			6
DSL 801	Strategic Leadership Research	3	DSL 710	Advanced Independent Study		
DSL 802	Strategic Leadership Executive Education	3	DSL 711	Special Topics		
			DSL 712	Strategic Interactive Planning		
			DSL 800	Strategic Consulting		
			<u>Dissertation</u>			
			DSL 900	Dissertation/Capstone Proposal	3	
			DSL 901	Dissertation/Capstone Delivery	3	
			DSL 901E	Dissertation Extension (if needed)	3	

MINORS & CONCENTRATIONS



Accounting, 12 credits

Courses	<u>Required Courses</u> ACCT 203 Intermediate Accounting I ACCT 204 Intermediate Accounting II ACCT 309 Federal Taxes I	<u>One of the Following</u> ACCT 303 Accounting: Theory and Practice ACCT 316 Cost Accounting I ACCT 409 Auditing ACCT 412 Advanced Accounting
Notes	<ul style="list-style-type: none"> Permits students to enrich their knowledge of the “language of business”. No matter what profession a graduate enters, the ability to read and comprehend historical and prospective financial information will be essential. Students will be provided with an in-depth understanding of generally accepted accounting principles through intermediate accounting courses, an exposure to federal taxation and a choice of accounting electives for more intensive study. 	

Animation and Digital Media, 14 credits

Courses	<u>Required Courses</u> ANIM 307 3D Modeling ANIM 308N 3D Animation ANIM 301N Motion Graphics I ANIM 3xx Digital Audio Production OR ANIM 312 Motion Graphics II
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Architectural History, 12 credits

Courses	<u>Required Course</u> ARCH 422 Theories of Arch Seminar	<u>Any three of the following</u> ARCH 320, ARCH 341, ARCH 371, ARCH 409, ARCH 410, ARCH 425, ARCH 434
Notes	<ul style="list-style-type: none"> Offers students the opportunity to study art/architectural history and theory beyond the introductory level. Provides in-depth knowledge and analysis of historical periods and theoretical issues relative to the meaning and practice of architecture and related disciplines. 	

Biodiversity 12-16 credits

Courses	<u>Select three or four of the following</u> BIOL 205, BIOL 209, BIOL 310, BIOL 371, BIOL 391, BIOL 392, CHEM 323, CHEM 417, BIOL 108, ECBIO 201, ECBIO 207, ECBIO 208, ECBIO 301, HSCI 303, ECBIO 305, ECBIO 316, ECBIO 318, ECBIO 319, ECBIO 409, ECBIO 415, PSYC 240, SCI 381, SCI 382, SCI 493, STAT 301, STUAB 300.	
Notes	<ul style="list-style-type: none"> Provides students with a broad overview of the status of the world’s ecosystems and how decisions made by individuals, governments and businesses impact the environmental health of our planet both positively and negatively. Students can also opt to take a number of these courses abroad through the School for Field Studies articulation agreement. 	

Building Technology, 12 credits

Courses	<u>Required Course</u> ARCH 304 Structures 2 ARCH 313 Tech 3: Dynamic Enviro. ARCH 314 Tech 4: Adv Build Analysis	<u>One of the Following</u> ARCH 413 Experimental Structures ARCH 414 Experimental Materials ARCH 419 High Perform Building Envelope ARCH 426 Design/Build LARC 310 GIS for Landscape Arch
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Business for non-business majors, 12-13 credits

Courses	<p><u>Any four of the following</u> ACCT 101 Financial Accounting MKTG 102 Principles of Marketing MGMT 301 Principles of Management ECON 205 Macroeconomics FINC 301 Financial Management</p>
Notes	<ul style="list-style-type: none"> • This minor is for the non-business major. • Provides students with marketable business skills that are useful to any professional person.

Business of Health Minor, 12 credits

Courses	<p><u>Required Course</u> HSCI-313: Issues in Community Health (Fall) HSCI-301: Health, Law & Ethics (Spring) ISEM-305: Healthcare Economics & Policy BUS-XXX: Business Tools for Healthcare</p>
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Communication, 12-credits

Courses	<p><u>Required Course</u> COMM 101 Intro to Communication COMM 206 Strategic Communication</p>	<p><u>Any two of the following</u> COMM 200 Reading the Visual COMM 204 Technologies of Communication COMM 300 Text, Sound and Image COMM 307 Public Relations & Media Writing COMM 318 Crisis Communication COMM 312 Fashion Communication COMM 314 Sports Communication</p>
Notes	<ul style="list-style-type: none"> • A Professional Communication minor will enhance students' capacity to think critically and communicate effectively. • The minor offers practical, professional experience and hands-on projects. • With a minor in professional communication, for example, you will be equipped to write and edit copy, design and publish a brochure and give an effective presentation on your work. These skills are in high demand among today's employers. 	

Computational Design, 12-13 credits

Courses	<p><u>Select any four of the following</u> ARCH 324 Experimental Modeling ARCH 413 Experimental Structures ARCH 414 Experimental Materials ARCH 415 Multimedia INTD 306 Advanced Vis: Interiors</p>	<p>ANIM 307 3D Modeling ANIM 308 3D Animation MATH 3xx Data Visualization ENGR 104 Introduction to Computing</p>
Notes	<ul style="list-style-type: none"> • This minor introduces students to the concepts and applications of computation in architectural design, and explores computational design thinking through novel techniques, tools, processes and theories, including parametric design, geometric reasoning, algorithmic modeling, performance-based modeling, physical computing, data visualization, and digital fabrication. The minor focuses on understanding the implications of computation on design and creative processes. 	

Construction Management, 12 credits

Courses	<u>Required Course</u> CMGT 102 Intro Construction Industry <u>One of the following</u> CMGT 104 Intro Estimate & Schedule CMGT 600 Construct Estimate & Sch	<u>Any two of the following</u> CMGT 200 Construct Plan & Scheduling CMGT 202 Construct Cost & Budget CMGT 603 Construct Law: Roles and Respon CMGT 604 Project Finance and Cost Control CMGT 606 Construction Risk Management CMGT 614 Materials & Methods Construction
Notes	<ul style="list-style-type: none"> • Provides an introduction to construction management concepts and principles as applied to contemporary practice and investigates the intersecting roles of construction manager, architect, client and general contractor. • Topics encompass planning, programming and documentation from pre-construction to project close-out; legal aspects relative to environmental protection, public and worker safety; contract documents; insurance and bonds; labor relations and inspection; project control; estimating and scheduling; total quality and ethics; and the development of analytical and communication skills. 	

Custom, 12 credits

Courses	A custom minor is a thematic grouping of four courses from any of the Colleges and is appropriate only for courses that are currently delivered at Philadelphia University, i.e. existing faculty & facilities within the University must support the topic of the custom minor. At least 6 credits toward the custom minor must be completed in residence, and the courses utilized for the custom minor, whether in-residence or transfer, must currently exist in the University catalog. A maximum of 3 credits may be delivered as Independent Study or Course-by-Appointment.
Notes	The student must have approval to design a custom minor. The “Declaring a Custom Minor” form contains complete details and is available online from the Learning and Advising Center website www.eastfalls.jefferson.edu/successcenter . If a minor is required by the student’s major, the Program Director reserves the right to identify the topic or individual courses that may not be part of a custom minor, i.e. the proposed custom minor must meet learning outcomes specified for minors within that program.

Custom Specialization, 12 credits

Courses	A custom specialization is a thematic grouping of three business or related courses; these courses need not exist within the University. Custom specialization must be declared at the time of transfer student’s admission or at the time of a degree change in order to ensure the harvesting of relevant courses. <ul style="list-style-type: none"> • The custom specialization must be approved by SBA program director or associate dean. The custom specialization option is available exclusively to transfer students.
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Diversity Studies, 12 credits

Courses	<u>Any four of the following</u> ADIV 200 American Social Justice ADIV 201 Defining American Voices ADIV 202 Immigrant America ADIV 204 Red and Blue America ADIV 206 Gender and Diversity U.S. ADIV 210 African Am Experience	DIV 211 African Am Studies: Diversity & Equity U ADIV 212 Asian Am Studies: Diversity and Equity ADIV 213 Jewish Am Studies: Diversity & Equity ADIV 214 Race in America ADIV 215 Latin Am Studies: Diversity & Equity ADIV 216 LGBTQIA Am Studies: Diversity & Equity ADIV 217 Muslim Am Studies: Diversity and Equity PSY 234 Cultural and Social Diversity
Notes	The Diversity Studies minor allows students to expand their understanding of diversity issues in the context of U.S. society. The ability to recognize, value and navigate cultural diversity is vital for both 21st century careers and citizenship in the United States. The course options in the minor give students the opportunity to explore diversity issues from a variety of cultural perspectives and academic disciplines.	

Entrepreneurship (for non-Kanbar College Majors), 12 credits

Courses	<u>Required Course</u> MGMT 111 Ess of Entrepreneurship MGMT 411 Venture Creation ACCT 2XX Entrep Acct & Finance	<u>One of the following</u> MGMT 315 Comm, Negotiation, Creative Economy MKTG 302 Product Development and Innovation MKTG 310 Integrated Marketing Communication DECG 480 Interdisciplinary Integrative Project
Notes	The entrepreneurship minor allows students to evaluate their skills, talents, and potential role in the entrepreneurial ecosystem; Students will apply concepts that cover all major elements of venture creation.	

Environmental Studies & Sustainability , 12 credits

Courses	<u>Any four courses</u> SUST 100 Fund of Sustainability SUST 102 Water Resources & Environ SUST 104 Atmosphere and Enviro SUST 120 Sustainable Food Chains SUST 200 Energy Systems & Politics SUST 202 Econ of Sustainability SUST 204 Sustainable Plan Land Use SUST 206 Environmental Policy SUST 300 Sustainable Tech for Arch SUST 302 Industrial Ecology SUST 402 Managing Sustainable Org SUST 421 Environmental History	LARC 310 GIS Landscape Analysis* ETHC 202 Environmental Ethics* GCIT 208 Global Environmental Citizenship* GDIV 221 Environment and World Cultures* ISEM 340 Sustain & Develop Non-Western World* SC 101 Environmental Science* SCI 106 Biology for Design* ** SCI 108 Sustainability and Eco-Innovation* ** SCI 110 Landscape Ecology BIOL 102 Introduction to Botany* BIOL 319 Oceanography*
Notes	<ul style="list-style-type: none"> • Students explore how human societies and the ecosystems that support them have co-evolved over time and analyze the political, economic and cultural dynamics that have produced the sustainability challenges now clouding our future on planet Earth. • *Courses taken to fulfill requirements in a student's major or in the Hallmarks Core cannot also be applied towards the minor. 	

Exercise Science, 12 credits

Courses	<u>Required Courses</u> HSCI 304 Nutrition and Health HSCI 305 Concepts in Fitness & Wellness HSCI 306 Intro to Exercise Physiology (Spring) HSCI 307 Introduction to Kinesiology (Fall)
Notes	<ul style="list-style-type: none">• This minor emphasizes the close associations between physical activity, longevity, and disease prevention. It is meant for students interested in health and wellness who wish to enhance their knowledge of exercise science• When HSCI-304, HSCI-305, HSCI-306, and HSCI-307 are applied toward completion of the Exercise Science minor, they may NOT also be used to fulfill "designated Health Science elective" credits for the Health Science Major.

Fashion Industry Management, 12 credits

Courses	<u>Required Courses</u> FASM 101 Survey of Global Products TEXT 101 Survey of Textile Industry	<u>Any two of the following</u> FASM 305 Production FASM 408 Apparel/Textile Sourcing TEXT 331 Apparel Fabric Performance
Notes	<ul style="list-style-type: none">• Students choosing a minor in Fashion Industry Management can look forward to employment in the textile and apparel sectors of the apparel and textile supply chain.	

Fashion Merchandising Management, 12 credits

Courses	<u>Required Courses</u> FASM 101 Global Fashion Insight MKTG 217 Retail Strategy & Structure MKTG 328 Merch Buying Operations	<u>One of the following</u> MKTG 305 Brand Management FASM 304 Visual Merchandising FASM 470 Global Fashion Value Chain
Notes	<ul style="list-style-type: none">• The Fashion Merchandising and Management minor provides students with an overview of the fashion industry by exposing them to the fashion value chain which includes design concepts, product development, production, merchandising and marketing.	

Finance, 12 credits

Courses	<u>Any four courses</u> FINC 303 Intermediate Financial Management FINC 318 Intermediate Finance and Development FINC 321 Investment and Portfolio Management FINC 322 Capital Market and Financial Institution FINC 4XX Financial Modeling
Notes	<ul style="list-style-type: none">• Finance plays a crucial role in all profit and nonprofit organizations. The minor provides students with knowledge of the global financial markets, financial institutions, financial instruments, and valuable financial tools that can be used to analyze the financial viability of all decisions.

Genetics, 12 credits

Courses	<p><u>Any four courses</u></p> <p>BIOL 207 Principles of Genetics BIOL 207/L Principles of Genetics Lab BIOL 302 Medical Genetics BIOL 307 Developmental Genetics BIOL 401 Molecular Genetics BIOL 402 Genetics Seminar (Required 4th course)</p> <ul style="list-style-type: none">• Students taking BIOL-207/207L as part of the major curriculum (i.e. Biology, Pre-Medical Studies, Physician Assistant Studies) will need to choose BIOL 302, BIOL 307, BIOL 401 and BIOL 402. Students who do not have a requirement to complete BIOL 207/207L as part of their major (i.e. Biochemistry, Biopsychology, Chemistry, Environmental and Conservation Biology, Health Sciences, Psychology) will need to complete BIOL 207/207L to satisfy prerequisite requirements for BIOL 402 (and BIOL 302 if this course is elected).
	<ul style="list-style-type: none">• The Genetics Minor will offer students a strong background in a science, which is an integral part of biological and health-focused fields.• Completion of the minor will equip graduates with a skillset that will enhance their professional practice. Future practitioners will gain the ability to recognize “red flags” in a family history that may indicate a future illness or explain present symptoms.• In the lab, personnel will have had hands-on experience with diagnostic and investigative tools used currently in research, clinical, and forensics fields worldwide. Prerequisite: minimum grade of “C-” (1.67) in Biology II and BIOL-104L Biology II Lab (BIOL-104/104L).

Gender & Health Studies, 12 credits

Courses	<p><u>Any four courses</u></p> <p>ADIV-216 Gender & Diversity ISEM-304 Cultures of Health LAW-308 Law, Women & Gender HSCI-308 Women’s Health (Spring) HSCI-313 Issues in Community Health (Fall)</p>
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Geographic Information Systems (GIS), 12 credits

Courses	<p><u>Required Courses</u></p> <p>LARCH 310/GEOD 610 Intro to GIS LARCH 515/GEOD 615 Adv. Landscape Analysis GEOD 617 Adv. GIS for Urban Planning & Development GEO 625 Internet GIS Tech</p>
Notes	<ul style="list-style-type: none">• This minor in GIS (Geographic Information Systems) consists of four courses in geospatial technology and is targeted at students with an interest in GIS and the opportunity to apply geospatial technology to various their discipline.• The courses span introduction to advanced concepts in geospatial technology and include desktop as well as internet technologies.

Graphic Design for Non-Design Majors, 12 credits

Courses	<p><u>Non-Design students</u></p> <p>VDES 101 Design I Design Essentials GRPH 110 Digital Imaging for Graphic GRPH 102 Design II Intro Graphic Design GRPH 201 Design III Intro Typography</p>
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Graphic Design for Design Majors, 12 credits

Courses

Required Courses

GRPH 110 Digital Imaging for Graphic Design
GRPH 102 Design II Intro to Graphic Design
GRPH 201 Design III Intro Typography

Select One

VDES 101 Design I Design Essentials
ARFD 101 Design Foundation I (Arch or Interior Design)
INDD 101 Design Foundation I (Industrial Design)

Select One

GRPH 202 Design IV Advanced Typography
GRPH 208 History of Graphic Design
GRPH 305 Exhibit Design and Signage
GRPH 341 Illustration
GRPH 408 Advanced Publication Design
GRPH 409 Issues in Information Design

Graphic Design for Visual Comm. Design: Web Design & Development Concentration, 12 credits

Courses

Required Courses

GRPH 301 Intro Branding
GRPH 302 Advanced Branding
GRPH Elective
GRPH Elective

Historic Preservation, 12 credits

Courses

Required Courses

ARCST 221 Intro to Historic Preservation
ARCST 266 Building Conservation
ARCST 412 Adapt Reuse & Sustainability

One of the following

ARCST 428 LARCH 507, ARCST 341,
ARCST 302, ARCST 324, PHOT 436,
ARCST 300

Notes

- This minor provides a foundation in the field of historic preservation.
- The required courses cover contemporary practice and field work, economic consequences, sustainability issues, and building conservation.
- Elective courses broaden the student's experience and include: methods of archival research, standards for documentation, and American architectural traditions, as well as design considerations in the adaptive reuse of historical structures.

Influencers of Childhood Development, 12 credits

Courses

Required Courses

CTC 200 Relating Trauma to Typical Childhood Development
CTC 202 The Impact of Trauma in Childhood: Enhancing Trauma Awareness
CTC 2XX Applying Trauma Principles in Childhood
CTC 2XX Enhancing Capacity for Applying Trauma Principles in Childhood

Notes

- This minor is open to students who seek to understand the complex impact of childhood trauma on development.
- This minor offers advanced trauma knowledge, skills and competencies to promote healing and growth for children and families impacted by childhood adversity.

International Business, 12 credits		
Courses	<u>Required Courses</u> MGMT 307 International Management MKTG 324 International Marketing FINC 318 International Finance and Development ECON 401 International Economics	
Notes	<ul style="list-style-type: none"> The world in which business is being conducted is changing rapidly and is creating new challenges and opportunities for managers. The International Business minor is provided for students who want to strengthen their knowledge and understanding of global changes and their impact on business. 	
Interior Design, 13-16 credits		
Courses	<u>One of the following</u> INTD 201 Design 3 for Interior Design INTD 202 Design 4 for Interior Design INTD 301 Design 5 for Interior Design <u>Any three of the following (Arch Students)</u> INTD 206 Interior Building Technology INTD 310 Textile & Materials Intr Design INDT 325 Furniture Design IARC 603 History II for Interior Architecture IARC 608 Technology II for Interior Arch	<u>Any three (Arch Studies Students)</u> INTD 201 Design 3 for Interior Design INTD 202 Design 4 for Interior Design INTD 301 Design 5 for Interior Design INTD 206 Interior Building Technology INTD 310** Textiles & Material for ID INTD 325 Furniture Design IARC 603 History II for Interior Arch IARC 608 Technology II Interior Arch
Landscape Design, 13-15 credits		
Courses	<u>Required Courses</u> LARCH 207 LA Tech: Grading <u>One of the following</u> LARCH 208 Local Flora SCI 110 Landscape Ecology	<u>One of the following</u> LARCH 206 History of Landscape Arch I LARCH 307 History of Landscape Arch II LARCH 411 Landscape Arch History III <u>One of the following</u> LARCH 201 Design 3: Site Design LARCH 300 Design 4: Urban Design 1 LARCH 304 Design 5: Community Dsn LARCH 401 Design 7: Interdiscipl Dsn
Notes	<ul style="list-style-type: none"> For design majors (primarily for architecture or interior design majors) Introduce the student to the field of landscape architecture 	
Landscape Planning, 12 credits		
Courses	<u>Required Courses</u> LARC 207 LA Tech: Grading LARC 411 LA History III <u>One of the following</u> LARCH 208 Local Flora SCI 110 Landscape Ecology	<u>One of the following</u> LARCH 310 GIS for Landscape Analysis LARCH 412 Technology III: Hydrology
Notes	<ul style="list-style-type: none"> For non-design majors (primarily for environmental and conservation biology or environmental sustainability majors) Introduce the student to the field of landscape architecture 	

Law and Society, 12 credits

Notes	<u>Any four courses</u> LAW 101 Intro Law and Society LAW 103 Crime and Justice LAW 105 Am Government & Legal System LAW 201 Constit Law & Supreme Court LAW 203 Comparative Legal Systems	LAW 205 Philadelphia Law and Politics LAW 300 International Law LAW 302 Law and Ethics LAW 304 Law Media and Society LAW 306 Legal Research, Write & Moot
Notes	<ul style="list-style-type: none">• The Law and Society minor will contribute to students' understanding of law from interdisciplinary perspectives (sociology, psychology, anthropology and political science).• It will prepare students for professional careers in fields that rely on critical thinking and written and oral advocacy skills.• The Law and Society minor will also provide a firm background in legal, political and social issues for students who are focusing on a broad array of other professional fields at Thomas Jefferson University such as professional communications, pre-med, environmental sustainability, business, design, psychology, midwifery and physician assistance.	

Management, 12 credits

Courses	<u>Required Courses</u> MGMT 310 Ppl & Teams in Org MGMT 320 HR Practice & Tools	<u>Any two of the following</u> MGMT 307 International Mgt MGMT 309 Systems Analysis MGMT 315 Comm, Negotiations and Creative Econ MGMT 111 Ess Entrepreneurship MGMT 411 Venture Creation
Notes	<ul style="list-style-type: none">• Management skills are necessary in both non-supervisory and supervisory positions.• This group of courses helps students to develop vital professional and managerial skills, including communication, teamwork, conflict resolution, and leadership. Together with the knowledge base learned in students' major fields, this minor increases students' understanding of all types of organizations and jobs, and increases opportunities for entry-level and managerial positions.	

Marketing, 12 credits

Courses	<u>Any four courses</u> MKTG 207 Consumer in the Market Place MKTG 305 Contemporary Brand Management MKTG 310 Integrated Marketing Communication MKTG 315 Marketing in a Digital Environment MKTG 324 International Marketing MKTG 391 Marketing Research	
Notes	<ul style="list-style-type: none">• The marketing of goods or services is the central focus of most profit and nonprofit organizations.• Thus, regardless of students' majors, a solid understanding and appreciation of the marketing discipline will enhance students' decision-making capabilities and make them better managers	

Multimedia & Visualization, 12 credits

Courses	<u>Required Courses</u> ARCH 3 24 Visualization: Experimental Modeling ARCH 326 Visualization: Advanced Modeling ARCH 415 Visualization: Multimedia GRAPH 310 Digital Imaging and Photographic Manipulation	
Notes	<ul style="list-style-type: none"> This minor introduces students to the conceptual and technical issues involved in creating and producing multimedia and visualization projects. Emphasis will focus on the application of digital technologies to enhance the design and presentation process. 	

Photography, 12 credits

Courses	<u>Required Courses</u> PHOT 101 Intro Photo: Black and White PHOT 102 Intro to Photo: Digital PHOT 307 History of Photography	<u>One of the following</u> PHOT 436, PHOT 201, PHOT 204, PHOT 205, PHOTO-303
Notes	<ul style="list-style-type: none"> This minor provides a foundation in photographic techniques, processes, history and theory. Coursework focuses upon photography as a tool for the documentation, research and preservation of architecture as part of visual culture in its application to commercial, fashion, advertising and product design, and as a medium for self-expression. 	

Pre-MBA (for Business Majors), 12 credits

Courses	<u>Required Courses</u> IMBA 627 Competitive Tech Intelligence IMBA 628 Accounting for Mgmt Decisions	<u>Any two of the following</u> in consultation with upper level advisor and MBA program director
Notes	<ul style="list-style-type: none"> Provides the opportunity to begin taking graduate-level business courses in the senior year, allowing students who have completed their Bachelor of Science Degree to complete an MBA degree in one year. This minor is for undergraduate business majors only. Students may begin taking graduate courses in senior year with prior approval of MBA program director. 	

Pre-MBA (for non-Business Majors), 18 credits

Courses	<u>Required Course</u> MGMT 104 Management Foundations MKT 104 Marketing Foundations IMBF 503 Found of Economic Analysis IMBF 504 Fin & Managerial Accounting IMBF 505 Financial Management	IMBF 508 Stat Analysis for Business IMBF 510 Operations Management IMBA 627 Competitive Tech Intelligence IMBA 628 Accounting for Mgt Decision
Note	<ul style="list-style-type: none"> Provides students the opportunity to take two graduate level business courses in their senior year, as well as other courses that position them to complete the MBA in one year of full-time study following the completion of their bachelor's degrees. The Accounting (CPA) and Finance (CFA) MBA options are typically limited to students with undergraduate degrees in accounting or finance. It is highly recommended that students interested in these fields consult with their academic advisors prior to enrolling in classes. 	

Psychology, 12 credits		
Courses	<u>Required Course</u> PSYCH 101 Introduction to Psychology	<u>Any three of the following</u> Any three Psychology courses chosen in consultation with a psychology faculty member
Notes	<ul style="list-style-type: none"> All disciplines in the social sciences analyze human behavior on one level or another. Psychology's uniqueness lies mainly in the fact that it is an experimental science. Students who minor in Psychology will study a body of knowledge about the causes of human and animal behavior and the experimental methods used to study behavior. Students completing this minor should be better able to understand their own behavior and the behavior of others in both work and leisure settings. 	

Public Health, 12 credits		
Courses	<u>Required Courses</u> HSCI 313 Issues in Community Health HSCI 304 Nutrition BIOL 209 Medical Plants XXX-XXX One of the following: BIOL 304 - Preventive Medicine (Fall) ISEM 304- Cultures of Health and Illness PSYC 222- Counseling PSYCH 243-Human Sexuality DMM 643-Public Health Implications of Disaster (seniors only)	

Real Estate Development, 12 credits		
Courses	<u>Required Course</u> MRE 601 Sustain RE Develop Process	<u>One of the following</u> MRE 620 Case Study Studio: Urban Revitalization, Adaptive Reuse & Historic Neighborhood MRE XXX Case Study: Commercial, Mixed-Use and Healthcare Facilities
Notes	<ul style="list-style-type: none"> This minor introduces the economic, social and physical issues inherent in environmentally and fiscally sustainable real estate and land-use development. Through real-world case studies presented by leading developers, coursework encompasses market analysis and valuation, finance and investment, legal issues of ownership and land-use, public-private partnerships, urban regeneration and adaptive reuse, construction science and management, in addition to multiple design and development paradigms and their long-term local, national, and global impacts. Sustainable strategies inform a curriculum sensitive both to the ethical dimension of development and the parameters of a capital-driven market 	

Social Science, 12 credits		
Courses	<u>Required Course</u> Hallmarks Core requirements plus four additional courses approved by Hallmarks Associate Dean. Please see the Office of the Hallmarks Program Associate Dean for more information.	

Spanish, 12 credits

Courses	<u>Required Course</u> SPAN 202 SPAN 302 Select two: SPAN 101, SPAN 201, SPAN 301, SPAN 401, GDIV 231
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Sustainable Design, 12 credits

Courses	<u>Required Course</u> SDN 601 Sustainable Design Methodologies SDN 602 Adaptive Design SDN 603 Sustainable Systems SDN 604 Green Materials & Life Cycle Assess
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Notes	<ul style="list-style-type: none"> The minor introduces students to the theory of sustainability and how it is applied in the built environment. Students will be grounded in the methodologies of sustainable design, learn to measure, predict and design for thermal comfort, adaptable opportunities and resilience across scales. Students will also learn how to design and calculate sustainable systems, and learn to evaluate, compare, and perform life cycle analyses of materials.
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Textile Design, 12 credits

Courses	<u>Required Course</u> KNIT 201 Knit Technology I WEAV 201 Weaving Technology I TEXT 105 Textile Design Studio I Ideation TEXT 205 Textile Design Studio II Fashion
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Textile Materials Technology, 12-16 credits

Courses	<u>One of the following</u> TEXT 101 Survey of Textile Industry TEXT 104 Fiber and Yarn Studies	<u>Any three of the following</u> KNIT 201 Knit Technology I KNIT 205 Knit Technology II WEAV 201 Weave Technology I WEAV 301 Weave Technology II TEXT 321 Nonwovens TEXT 301 Textile Materials or TEXT 242 Dyeing and Finishing or TEXT 301 Coloring and Finishing TEXT 338 Organic/Textile Chemistry
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Notes	<ul style="list-style-type: none"> The TMT minor offers students an introduction to the process flow of fibers through finished products. A sequence of four courses will give a student the opportunity to understand the interdisciplinary nature of textile materials in a wide variety of disciplines and their potential capabilities and limitations.
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Visual Studies, 12 credits

Courses	<u>One of the following</u> VSDES 101, ADFND 101, INDD 101, DSGNFND 103 or DSGNFND 423 <u>One of the following</u> DRAW 101, VSDRAW 101 or ADFND 103	<u>Any two of the following</u> ADFND 102, LARCH 102, INTD 102, ADFND 108, ADFND 109, DSGNFND 203, CAD 201, CAD 204, CAD 206, DRAW 201, DRAW 206, DRAW 303, or any course from a design major approved by director of that program.
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Notes	<ul style="list-style-type: none"> The Visual Studies minor introduces students to the design process through the application of the fundamental principles of design and drawing.
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- Students will develop skills including: a sensitivity to value and color, experimentation with a variety of media, process methodologies, and problem solving strategies.
- A general survey of philosophy and utility of CAD systems may be accomplished.

Web Design & Development (non-Visual Communication students), 12 credits

Courses	<p><u>Required Course</u> DIGD 200 Fundamentals of Web Programming DIGD 206 Fundamentals of Web Design & Strategy DIGD 320 JavaScript Programming</p> <p><u>One of the following</u> DIGD 403 Web Development DIGD 307 Advanced Web Design & Strategy</p>
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Web Design & Development for Visual Communication majors. 12 credits

Courses	<p><u>Required Course</u> DIGD 307 Advanced Web Design and Strategy DIGD 310 JavaScript Programming DIGD 403 Web Development DIGD Elective</p>
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Web Design & Development for Visual Communication Design: Graphic Design Communication Concentration, 12 credits

Courses	<p><u>Required Course</u> DIGD 307 Advanced Web Design and Strategy DIGD 320 JavaScript Programming DIGD 403 Web Development DIGD Elective</p>
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Concentrations

Business Analytics	<p>The Business Analytics concentration in MBA program will allow students to integrate information technology (IT) in the development of business strategies in all areas of business that include accounting, finance, marketing, and general management. The concentration is intended to provide the analytical skills and knowledge that business professionals need to engage in innovative thinking and to gain competitive edge in the highly competitive global market place.</p>
Financial Planning	<p>The Financial Planning concentration in the MS in Taxation program will allow students who are interested in pursuing a career in taxation with a focus on personal financial planning. This curriculum of this track satisfies the educational requirements needed to become a Certified Financial Planner (CFP).</p>
Pre-Occupational Therapy Concentration	<p>Occupational therapy is a health care profession that helps people to maximize their functional independence after illness or injury. Occupational therapists (OTs) assist children with motor and learning needs to participate in school and everyday tasks. They help adults to develop strategies to manage the physical and emotional changes associated with long-term health needs. Therapy frequently involves assisting individuals to relearn old skills, develop new skills or adapt the environment to enable them to live more satisfying and independent lives.</p> <p><u>Required Course</u></p>

BIOL 104/ BIOL 104L	Biology II lecture/lab
PSYC 213	Developmental Psychology
BIOL 201/BIOL 201L	Human Anatomy and Phys I lecture/lab
BIOL 202/BIOL 202L	Human Anatomy and Phys II lecture/lab
PSY Elective	two courses

STUDENT SUPPORT OFFICES & CONTACTS



Student Support Contact Information

“The difference between success and failure is a great team” (Kerpen, D. 2015).

At Jefferson, we are a team who is dedicated to support each other in pursuing our individual and shared goals. Below is a sampling of the departments that stand ready to support you in your academic pursuit, personal development and degree completion.

Academic Policies	A-Z index of University-wide Graduate and Undergraduate policies	jefferson.edu/academicpolicies
Accessibility	Collaborating with community members to provide access to all educational opportunities, programs, and services.	<p>Center City 215-503-6335 Edison Bldg, Suite 1120 https://www.jefferson.edu/university/academic-affairs/schools/student-affairs/disability-accommodations.html</p> <p>East Falls 215-951-6380 https://eastfalls.jefferson.edu/accessibilityservices/</p>
Advising & Tutoring	Maximize student performance: advising, Tutoring, Writing, Academic Skill Development & Moore	<p>Center City 215-503-6335 Office of Student Affairs Edison Building, Suite 1120 https://www.jefferson.edu/university/academic-affairs/schools/student-affairs/academic-support/academic_support.html</p> <p>East Falls 215-951- 2799 Academic Success Center</p>

		Haggar Hall http://www.eastfalls.jefferson.edu/successcenter/
Affiliated Hospitals	Excellent clinical setting for our patients and a foundation for learning experience of Jefferson students and residents.	https://www.jefferson.edu/university/jmc/departments/orthopaedic/education/residency/affiliations.html
Athletics	Students have an opportunity to play as hard as they work.	Center City 215-503-7949 Alumni Hall, B 100 https://www.jefferson.edu/university/fitness.html East Falls 215-951- 2700 Gallagher Athletic Center http://jeffersonrams.com/landing/index
Career Services	Assists students and alumni in advancing their Jefferson experience toward securing their professional goals	Center City 215-503-5805 Edison Building, Suite 1120 https://www.jefferson.edu/university/academic-affairs/schools/career-development-center.html East Falls 215-951- 2930 Academic Success Center Kanbar Center, Suite 313 https://www.eastfalls.jefferson.edu/careerservices/index.html
Clubs & Organizations	Take an active role in your community (outside the classroom)	Center City 215-503-7743 Alumni Hall, Room 105 https://www.jefferson.edu/university/student-life-engagement/student_organizations/directory.html East Falls 215-951- 2634 Kanbar Campus Center, Suite 317 and 301 https://www.eastfalls.jefferson.edu/studentengagement/ClubsandOrganizations/index.html
Community & Civic Engagement	For community - conscious leaders at Jefferson	Center City “Leadership Live” student-led organization https://www.jefferson.edu/university/student-life-engagement/leadership_live/leadership_live.html

		<p>East Falls 215-951- 2634 Kanbar Campus Center, Suite 301 https://www.eastfalls.jefferson.edu/studentengagement/communityService/index.html</p>
Commuter Services	Provides resources and facilities to meet the basic needs of commuter and off-campus students.	<p>Center City 215-955-6417 109 Chestnut St. (inside University Bookstore) https://www.jefferson.edu/university/customer_service/commuter.html</p> <p>East Falls 215-951-2744 Kanbar Campus Center, Suite 301 http://www.eastfalls.jefferson.edu/nsp/commuters.html</p>
Counseling	Assistance in addressing personal challenges that interfere with academic progress and growth.	<p>Center City 215-955-4357 833 Chestnut St, Suite 230 https://www.jefferson.edu/university/security/counseling_center.html</p> <p>East Falls 215-951-2868 Kanbar Campus Center, Suite 323 http://www.eastfalls.jefferson.edu/counseling/</p>
Creativity Core	Explore individual & collaborative creative aptitude and equips students to yield novel and valuable results	<p>East Falls 215-951-2104</p>
Dining Services	Fresh, made-from-scratch food; we're here to help you eat healthy your way.	<p>Center City Numerous selection from fast-food to fine dining right on campus.</p> <p>East Falls 4 locations on campus https://www.eastfalls.jefferson.edu/diningservices/</p>
Diversity & Inclusion	support and promote an inclusive environment that embraces and celebrates the diversity of our people.	<p>Office of Diversity & Inclusion Initiatives 1025 Walnut Street College Building, Room 119 Philadelphia, PA 19107 (215) 503-4795 (215) 503-4095 fax Diversity@jefferson.edu https://www.jefferson.edu/university/diversity/contact.html</p>
Emergency Fund	Helping with short-term financial	<p>Center City Information and application at:</p>

	assistance in the event of an unforeseen emergency.	https://www.jefferson.edu/university/academic-affairs/schools/student-affairs/jeffsecure.html East Falls Information and application at: http://eastfalls.jefferson.edu/jeffsecure/
Financial-Aid	Assists students in securing federal, state, institutional, & private funding to help meet the cost of pursuing an education at Jefferson	Center City 215-955-2867 Curtis Building, Suite 115 https://www.jefferson.edu/university/academic-affairs/tju/academic-services/financial_aid.html East Falls 215-951- 2660 White Corners, First Floor https://www.eastfalls.jefferson.edu/financialaid/
Health	Providing confidential sick and wellness care for our students.	Center City Overview & Application Form https://www.jefferson.edu/university/academic-affairs/schools/student-affairs/sexual-misconduct.html East Falls Overview & Application Form http://eastfalls.jefferson.edu/jeffsecure/
Hallmarks Program for General Education	Advances a set of shared learning goals across the general education core curriculum	East Falls https://www.jefferson.edu/university/hallmarks-program.html
Honors Institute	Platform for academically high-achieving students to discover & pursue academic and interests	East Falls 215-951- 5367 Kanbar Campus Center, Suite 301 Guttman Library, 102 https://www.eastfalls.jefferson.edu/honorsprogram/faq.html
International Affairs	Sets a high priority on the exchange of ideas, research, education and patient care with members of the international community.	Center City 215-503-4335 Alumni Hall, M-70 https://www.jefferson.edu/university/international_affairs.html East Falls 215-951- 2660 Kanbar Campus Center, Suite 102 https://www.eastfalls.jefferson.edu/nsp/international.html
Libraries	Information, technology, study space is at your fingertips	Center City 215-503-6994 Scott Memorial Library http://library.jefferson.edu/scott.cfm

		<p>East Falls 215-951- 2848 Gutman Library http://library.jefferson.edu/gutman.cfm</p> <p>Montgomery County 214-481-2096 Wilmer Memorial Library (Abington Hospital) https://www.abingtonhealth.org/academic-programs/wilmer-library/#.XO03MmJKg_U</p>
LGBTQ	Providing, Educational Resource, Support, and Social/Professional networking	<p>Center City 215-861-8800 833 Chestnut St., Suite 300 https://www.jefferson.edu/university/student-life-engagement/student_organizations/jeff-lgbtq.html</p> <p>East Falls Kanbar Campus Center, Suite 317 215-951-2634 https://www.eastfalls.jefferson.edu/studentengagement/lgbtq.html</p>
Nexus Learning	Preparing students for the future of work by ensuring development of critical skills employers seek for tomorrow's work place.	https://nexus.jefferson.edu/
Provost	Provides oversight and support for Programs & policy, and research	<p>Center City 215-955-4760 Scott Memorial Library, Suite 643 https://www.jefferson.edu/university/provost.html</p> <p>East Falls 215-951- 2740 Reichlin House, 2nd Floor https://www.jefferson.edu/university/provost.html</p>
Registrar	Maintaining the accuracy and integrity of all student & academic records	<p>Center City 215-503-8734 Curtis Building, Suite 115 https://www.jefferson.edu/university/academic-affairs/tju/academic-services/registrar.html</p> <p>East Falls 215-951-2917 Archer Hall, First Floor http://www.eastfalls.jefferson.edu/registrar/index.html</p>
Residential Life	Provides safe, attractive, and comfortable facilities in an	<p>Center City 215-955-8913 or 811 Orlowitz Residence, Suite 103 https://www.jefferson.edu/university/housing.html</p>

	atmosphere that contributes to students' academic success.	<p>East Falls 215-951-2741 Kanbar Campus Center, Suite 311 https://www.eastfalls.jefferson.edu/reslife/</p>
Security	Placing the highest priority on the safety of our community.	<p>Center City 215- 955-8888 Edison Bldg, Suite 1630 https://www.jefferson.edu/university/security.html</p> <p>East Falls 215-951-2999 Ravenhill, next to Partridge Hall https://www.eastfalls.jefferson.edu/security/</p>
Specter Center	Facilitate & promote public service and civic education in a cross-disciplinary, nonpartisan setting	<p>East Falls 215-951- 2847 3240 Netherfield Rd. https://www.jefferson.edu/academics/colleges-schools-institutes/humanities-sciences/student-resources/specter-center.html</p>
Student Accounts (Bursar)		<p>Center City 215-503-7660 Curtis Center, Suite 925E https://www.jefferson.edu/university/finance/student_alumni.html</p> <p>East Falls 215-951-2708 Archer Hall, First Floor https://www.jefferson.edu/university/finance/student_alumni.html</p>
Spirituality	Opportunity to connect with people of similar and diverse faiths.	<p>Center City Student-led Organizations https://www.jefferson.edu/university/student-life-engagement/student_organizations/directory.html</p> <p>East Falls Kanbar Campus Center, Suite 317 215-951-2634 https://www.eastfalls.jefferson.edu/studentengagement/SpiritualDevelopment/index.html</p>
Student Engagement (Center City) & Dean of Students (East Falls)	Supporting student life outside the classroom.	<p>Center City Office of Student Life & Engagement 215-503-7743 Alumni Hall, Room 105 https://www.jefferson.edu/university/student-life-engagement.html</p> <p>East Falls 215-951- 2740 Dean of Student Office Kanbar Campus Center, Suite 321 http://www.eastfalls.jefferson.edu/deanofstudents/</p>

<p>Student Government (SGA)</p>	<p>A forum for student expression & involvement in their University.</p>	<p>Center City Several Student-led organizations within the colleges https://www.jefferson.edu/university/student-life-engagement/student_organizations/directory.html</p> <p>East Falls 215-951- 2634 Kanbar Campus Center, Suite 301 https://www.eastfalls.jefferson.edu/studentengagement/ClubsandOrganizations/sga.html</p>
<p>Study Away</p>	<p>Experience the world beyond the borders of our campus and country.</p>	<p>Center City 215-503-4335 Alumni Hall, M-70 https://www.jefferson.edu/university/international_affairs/contact.html</p> <p>East Falls 215-951- 2815 Kanbar Campus Center, Suite 102 https://philau.studioabroad.com/</p>
<p>Technology</p>	<p>Analysts in Jefferson’s Information Systems and Technologies team are available to answer your technology questions or issues</p>	<p>Center City Information Services & Technology (IS&T) Solution Center 1837 Gibbon 215-503-7975 https://www.jefferson.edu/university/jefferson/email_calendar/contact.html</p> <p>East Falls 215-951-4648 Search Hall, first floor http://eastfalls.jefferson.edu/OIR/TechnologyHelpDesk.html</p>
<p>Textile & Costume Collection</p>	<p>Diverse & wide-ranging museum-quality collection used for teaching, inspiration, research, and scholarship</p>	<p>East Falls Design Center http://library.jefferson.edu/gutman/special_collections/collections/costume.cfm</p>
<p>Title IX & Sexual Misconduct</p>	<p>Fostering an environment free of discrimination including sexual harassment and sexual violence.</p>	<p>Title IX Coordinator: Katie Colgan Vodzak, J.D. 215-951-2520 4201 Henry Avenue, Archer Hall 200 Philadelphia, PA 19144 Kathleen.vodzak@jefferson.edu titleix@jefferson.edu http://www.jefferson.edu/titleix</p> <p>Director Accessibility Services (Interim Director, August- October, 2021), Zoe Gingold, 215-951-2733 GingoldZ@PhilaU.edu</p>

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