

INTEGRATED AND APPLIED SCIENCES, PH.D.

Saint Louis University's Integrated and Applied Sciences (IAS) doctoral program, offered in the Doisy College of Health Sciences, exposes students to all areas of science, encourages collaboration across departments and colleges, and better trains graduate students to present their research to a more diverse audience.

Program Highlights

Saint Louis University's Integrated and Applied Sciences doctoral program prepares students to become scholars and researchers in academic, clinical research, and/or practice settings. It allows students to pair their areas of study with interdisciplinary courses in biological, behavioral, psychosocial and environmental aspects of human health.

Students specialize in a health sciences discipline content area that aligns with the research being conducted by their faculty mentor. Currently available areas of study are:

- Athletic Training
- Clinical Health Sciences
- Nutrition and Dietetics
- Occupational Science and Occupational Therapy
- Physical Therapy
- Speech, Language and Hearing Sciences

Curriculum Overview

SLU's Doctor of Philosophy in Integrated and Applied Sciences program utilizes interdisciplinary approaches and collaboration to prepare graduates to confidently assume multi-faceted roles in the changing health care environment.

The distribution of courses is determined on an individual basis. The student and their faculty mentor develop an appropriate coursework track with subsequent review by and feedback from the IAS administrative committee. A typical coursework structure is detailed below. To review the research being done in the Doisy College of Health Sciences, please visit our research page (<https://www.slu.edu/doisy/doisy-research/>).

- Research Courses (6 credits)
- Courses specific to the student's Program of Study (21 credits)
- Directed Independent Study (1 credit)
- Required Course (2 credits)
- Dissertation credits (12 credits)

Careers

This research-intensive doctoral program trains students for careers in pharmaceutical, health care, and biochemical industries, as well as in academia.

Admission Requirements

The successful applicant possesses a minimum of a baccalaureate degree from an accredited, recognized college or university in a discipline relevant to the research of the integrated and applied sciences faculty mentor. Students are required to proactively identify and establish a relationship with a faculty mentor whose research aligns with that of the student's interest prior to admission into the program. To review

the research being done in DCHS, please visit our Doisy Research page (<https://www.slu.edu/doisy/doisy-research/>).

Application Requirements

- Identification of and an established relationship with a faculty mentor
- Application form and fee
- Transcript(s)
- Two letters of recommendation
- Curriculum vitae
- Professional goals statement

Requirements for International Students

All admission policies and requirements for domestic students apply to international students. International students must also meet the following additional requirements:

- Demonstrate English Language Proficiency (<https://catalog.slu.edu/academic-policies/office-admission/undergraduate/english-language-proficiency/>)
- Financial documents are required to complete an application for admission and be reviewed for admission and merit scholarships.
- Proof of financial support that must include:
 - A letter of financial support from the person(s) or sponsoring agency funding the student's time at Saint Louis University
 - A letter from the sponsor's bank verifying that the funds are available and will be so for the duration of the student's study at the University
- Academic records, in English translation, of students who have undertaken postsecondary studies outside the United States must include:
 - Courses taken and/or lectures attended
 - Practical laboratory work
 - The maximum and minimum grades attainable
 - The grades earned or the results of all end-of-term examinations
 - Any honors or degrees received.

WES and ECE transcripts are accepted.

Review Process

The IAS program director reviews all application materials for completeness. Complete applications are forwarded to the identified faculty mentor for review and admission consideration. The program director then communicates the admission decision along with a description of the next steps to the student. The faculty mentor is copied on all admissions communications.

Tuition

Tuition	Cost Per Credit
Graduate Tuition	\$1,310

Additional charges may apply. Other resources are listed below:

Net Price Calculator (<https://www.slu.edu/financial-aid/tuition-and-costs/calculator.php>)

Information on Tuition and Fees (<https://catalog.slu.edu/academic-policies/student-financial-services/tuition/>)

Miscellaneous Fees (<https://catalog.slu.edu/academic-policies/student-financial-services/fees/>)

Information on Summer Tuition (<https://catalog.slu.edu/academic-policies/student-financial-services/tuition-summer/>)

Scholarships, Assistantships and Financial Aid

For priority consideration for a graduate assistantship, apply by the program admission deadlines listed. Fellowships and assistantships provide a stipend and may include health insurance and a tuition scholarship for the duration of the award.

Explore Scholarships and Financial Aid Options (<https://www.slu.edu/financial-aid/>)

Learning Outcomes

1. Graduates will demonstrate an understanding of the independent and interactive aspects of health sciences through intellectual inquiry and reflection.
2. Graduates will exhibit competency in designing and implementing health sciences research to advance knowledge while applying principles of ethical scientific inquiry/conduct.
3. Graduates will display the ability to translate research findings and communicate them to a variety of audiences for effective dissemination.
4. Graduates will articulate a long-term trajectory for an impactful scholarly leadership plan that will support a successful career path.

Requirements

Code	Title	Credits
Required Courses		
HSCI 6220	Foundations of Scholarly Excellence	2
HSCI 6980	Independent Study	1
Research Courses pertinent to the student's Program of Study		6
Courses specific to the student's Program of Study		21
Dissertation Research		12
HSCI 6990	Dissertation Research (taken over multiple semesters)	
Total Credits		42

Non-Course Requirements

Assuming successful completion of oral and written comprehensive exams, students should complete the Ph.D. program in approximately four years. Students entering the program with an appropriate M.S. degree may complete the program in less time, again assuming successful completion of oral and written comprehensive exams.

Continuation Standards

Students must maintain a cumulative grade point average (GPA) of 3.00 in all graduate/professional courses.

Course Listing

Code	Title	Credits
Courses offered in the Doisy College of Health Sciences		
BLS 5125	Introduction to Clinical Laboratory Medicine	
SLHS 5450	Speech Sound Disorders in Children	

SLHS 5510	Social Communication Development and Disorders
SLHS 5550	Early Childhood Language Disorders
SLHS 5560	School-Age Language Disorders
SLHS 5630	Dysphagia
SLHS 5700	Voice Disorders
SLHS 5710	Cleft Palate and Craniofacial Anomalies
SLHS 5720	Neurogenic Communication Disorders in Adults
SLHS 5760	Motor Speech Disorders
SLHS 5770	Multilingual Communication Disorders
SLHS 5820	Cognitive Communication Disorders
DIET 5010	Survey of Nutrition for Allied Health Professionals
DIET 5030	Sustainable Food Systems
DIET 5050	Food Processing: Farm to Institution
DIET 5060	Maternal and Child Nutrition and Health
DIET 5070	Culinary Medicine
DIET 5100	Human Nutrition: Physiology and Metabolism I
DIET 5130	Human Nutrition: Physiology and Metabolism II
DIET 5210	Pediatric Nutrition
DIET 5220	Gerontological Nutrition
DIET 5300	Community Nutrition
DIET 5480	Nutrition Education and Counseling
DIET 5550	Nutr. & Physical Performance
DIET 5690	Bioenergetics of Exercise
DIET 5700	Exercise Testing And Prescription
DIET 5750	Gastronomy
DIET 5870	Seminar in Dietetics Research
MOT 5150	Kinesiology
MOT 5250	Administration & Leadership in Occupational Therapy
MOT 5300	Foundations of Occupational Therapy Practice
MOT 5400	Occupational Therapy Practice with Adults 1
MOT 5410	Occupational Therapy Practice in Mental Health
MOT 5450	Occupational Therapy Practice with Children and Youth 1
MOT 5550	Occupational Therapy Practice with Adults 2
MOT 5560	Occupational Therapy Practice in the Community
DPT 5123	Clinical Gait
DPT 5142	Evidence Based Practice
DPT 5149	Applied Neuroscience
DPT 5218	Effective Communication and Teaching
DPT 6124	Biomechanical Interventions
DPT 6178	Applied Administration and Management
MAT 5160	Aspects of Nutrition
MAT 5620	Psychology of Sport and Injury
MAT 5650	Research in Athletic Training
MAT 6160	Enhancing Human Performance
PAED 5300	Evidence-Based Medicine

Courses offered in other schools and colleges

BME 5150	Brain Computer Interface
BME 5210	Human Movement Biomechanics
BME 5320	Drug Delivery
BME 5400	Tissue-Material Interfaces

BME 5410	Tissue Engineering
BME 5420	Tissue Engineering Scaffold Fabrication Techniques
BME 5430	Regenerative Engineering
BME 5600	Quantitative Physiology I
BME 5650	Quantitative Physiology II
CHEM 5440	Bioorganic Chemistry
CHEM 5610	Biochemistry 1
CHEM 5615	Biochemistry 2
CHEM 5620	Biophysical Chemistry
CHEM 5630	Introduction to Chemical Biology and Biotechnology
CVNG 4190	Sustainable Land Development Engineering
CVNG 5260	Environmental Solutions in Developing Countries
CVNG 5450	Traffic Engineering
CVNG 5470	Urban Transportation Planning
MATH 5021	Introduction to Analysis
MATH 5023	Multivariable Analysis
MATH 5080	Probability Theory
ORES 5010	Introduction to Biostatistics for Health Outcomes
ORES 5150	Multivariate Analysis for Health Outcomes Research
ORES 5300	Foundations of Outcomes Research I
ORES 5430	Health Outcomes Measurement
ORES 5100	Research Methods in Health & Medicine

Roadmap

Roadmaps are recommended semester-by-semester plans of study for programs and assume full-time enrollment unless otherwise noted.

Courses and milestones designated as critical (marked with !) must be completed in the semester listed to ensure a timely graduation. Transfer credit may change the roadmap.

This roadmap should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor/mentor each semester. Requirements, course availability and sequencing are subject to change.

Course	Title	Credits
Year One		
Fall		
Program of Study-specific course		3
Research course specific to Program of Study		3
Credits		6
Spring		
Program of Study-specific course		3
Research course specific to Program of Study		3
Credits		6
Summer		
HSCI 6980	Independent Study	1
Credits		1

Year Two

Fall

Program of Study-specific courses	9
Credits	9

Spring

Program of Study-specific course	3	
HSCI 6220	Foundations of Scholarly Excellence	2
Credits		5

Summer

HSCI 6990	Dissertation Research	0
Credits		0

Year Three

Fall

HSCI 6990	Dissertation Research	3
Program of Study-specific course		3
Credits		6

Spring

HSCI 6990	Dissertation Research	3
Credits		3

Summer

HSCI 6990	Dissertation Research	0
Credits		0

Year Four

Fall

HSCI 6990	Dissertation Research	3
Credits		3

Spring

HSCI 6990	Dissertation Research	3
Credits		3

Total Credits 42

Program Notes

Courses designated as those specific to the program of study refer to those that may be in or complementary to the program of study discipline.

Contact Us

For more information about this program, please contact:

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