

SCHOOL OF
HEALTH SCIENCES

2010 through 2011 CATALOG



PURDUE
UNIVERSITY

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School of Health Sciences

2010 through 2011

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Purdue: A World of Possibilities

Consider the impact of Purdue University on your world!

Some of you are Purdue students, poised on the launch pad of your adult life. Others, high school students still trying to zero in on your career path and life mission. Consider looking at your future through the expansive and engaging field of vision Purdue offers in this increasingly global and technologically advanced world.

Telescopic View of Purdue

- Founded in 1869 as Indiana's land-grant university and named for benefactor John Purdue
- Ranks 22nd among the nation's public universities and 61st among all universities by *U.S. News & World Report* (2009)
- Among the largest universities in the United States with a state system-wide enrollment of more than 74,300 at four campuses and 10 Technology Statewide locations throughout Indiana; about 39,700 at the main campus in West Lafayette
- Ranks 9th in *SmartMoney* magazine's "pay-back" survey, quantifying the long-term value of a college education — or earnings compared to tuition investment (2009)
- Included in The Princeton Review 100 "best value" ranking for offering a high-quality education at a reasonable price (2009)
- Named among the top 20 by The Princeton Review in a variety of campus-life categories, including best athletics, best college newspaper, and best campus food (2009)

Discover the World at Purdue

- A world of choices: 200 majors
- Highly touted programs and graduates in the STEM disciplines (science, technology, engineering, math) and business, liberal arts, and agriculture; several interdisciplinary options
- Culturally diverse campus, with students from more than 125 countries and all 50 states
- Typically ranks No. 1 or No. 2 in international student enrollment among public institutions in the United States

- First university to have its own airport (1930); also the first university to establish a department of computer science (1962)
- Community service experiences available in 175 courses; Engineering Projects in Community Service (EPICS) founded at Purdue, now a popular program nationally
- Incredible research opportunities for students to learn from, and work with, world-renowned faculty in Discovery Park's enviable interdisciplinary centers and laboratory facilities in nanotechnology, biosciences, information technology, alternative fuels, and the study of learning
- Study Abroad programs in 45 countries
- Number of recognized student organizations: 850
- Member of the Big Ten Conference, noted for both academic excellence and competitive athletic programs
- Nationally recognized career preparation track via Professional Practice (co-op and internship programs)
- Some 700 companies recruit on campus, valuing the work ethic of Purdue's new graduates and alumni who have earned a degree that is respected around the world
- Median salary for graduates three years after graduation of \$51,400; median salary 15 years after graduation of \$90,500 (data from *SmartMoney* ranking, classes of 2005 and 1993)
- Living alumni network of 410,000 world-wide

Proven World Leader

- To date, 22 alumni chosen for space flight — headlined by Neil Armstrong and Gene Cernan, the first and last humans on the moon
- Two Purdue professors in three years received the World Food Prize, considered the Nobel Prize of Agriculture: Philip Nelson (2007) and Gebisa Ejeta (2009); Nelson developed aseptic storage and distribution of processed fruits and vegetables, and Ejeta's research increased sorghum production, which is one of the world's main cereal grains
- Early work by Purdue researchers led to the first successful transmission of a black-and-white television picture

- Purdue graduate Carol Morgan Pottenger, rear admiral in the U.S. Navy, is one of the first women selected for sea duty and the first woman to lead a combat strike group
- Boilermakers Len Dawson, Bob Griese, Hank Stram, and Rod Woodson, are all enshrined in the Pro Football Hall of Fame
- Brian Lamb, who started public-affairs channel C-SPAN 30 years ago, is an alumnus
- Don Thompson, president of McDonald's Corp. USA, has a Purdue engineering degree
- More Forbes 800 corporate chief executive officers hold an undergraduate degree from Purdue than from any other public university
- Aviation pioneer Amelia Earhart was a career counselor to women students on campus; gift funds from the Purdue Research Foundation made possible the purchase of Earhart's "Flying Laboratory" used for her ill-fated around-the-world flight attempt
- Basketball coaching legend John Wooden, an Indiana native, led Purdue to the 1932 National Championship
- Orville Redenbacher "the Popcorn King," was a Purdue graduate
- Purdue has graduated more women engineers than any other university, and one in 50 engineers in the United States is Purdue-trained

Academic programs at Purdue are organized within colleges and schools. A brief description of each college and school follows, but we encourage you to visit the Purdue Web site — www.purdue.edu. Plan to spend some time discovering Purdue. You'll find, in the online details, information about the University's academic programs and courses. We appreciate your interest and welcome your questions. You're invited to campus for the "real" Boilermaker experience. You'll see a galaxy of opportunities before you — paths similar to many Boilermakers whose impact has taken them to great heights around the world ... and high above it!

College of Agriculture

Among the nation's highest ranked and most prestigious institutions, the college offers excellent teaching, research, extension, and international programs. More than 40 programs of study prepare life scientists, engineers, business representatives, producers, information specialists, and resource managers for professional careers in the world's food and natural resource systems. See www.ag.purdue.edu/oap.

College of Consumer and Family Sciences

The college, one of the largest and highest ranked of its kind in the nation, prepares men and women for careers related to the needs of families and consumers. Students can choose a Bachelor of Science degree program from 13 majors in the areas of family studies and child development, consumer sciences and consumer business, hospitality and tourism, nutrition, health and fitness, and education. The Department of Hospitality and Tourism Management also offers an associate degree program. See www.cfs.purdue.edu.

College of Education

The state-accredited and nationally ranked and accredited College of Education prepares outstanding teachers, instructional leaders, administrators, school counselors, counseling psychologists, curriculum specialists, teacher educators, and educational researchers for the essential roles they play in guiding the education of our youth. Through interdisciplinary instructional programs in teacher education, research in the educational process, and engagement with Indiana schools, College of Education graduates are well prepared for a rewarding career in education. The dedicated and experienced faculty members, some of whom are known internationally as experts in their fields, are respected leaders in a wide range of curriculum areas and are actively engaged in research. Together the students and faculty share a passion for learning, teaching, and changing the world. The college offers undergraduate and graduate degrees in a variety of disciplines. In addition to the teacher education programs offered by the College of Education, teacher preparation programs also are offered through other colleges and schools across campus. See www.education.purdue.edu.

College of Engineering

The College of Engineering is internationally known for the quality and scope of its programs. Students launch their careers with a common first-year program in the School of Engineering Education. Once they have completed that program, they choose from undergraduate curricula in aeronautics and astronautics, agricultural, biological, biomedical, chemical, civil, computer, construction engineering and management, electrical, industrial, interdisciplinary, materials, mechanical, or nuclear engineering. Every school in engineering offers graduate degree programs. See www.engineering.purdue.edu.

School of Health Sciences

The school offers a variety of human health-related study areas. Undergraduate programs include environmental health science, general health sciences, medical laboratory science (medical technology), occupational health science (industrial hygiene), and radiological health science (health physics). The general health sciences major requires the selection of a concentration area in pre-medical, pre-dental, pre-occupational therapy, pre-physical therapy, pre-chiropractic, pre-optometry, pre-physician's assistant, or public health. Students completing these programs are prepared to enter the health-related job market or apply to the professional or graduate program of their choosing. At the graduate level, programs of study include health physics, medical physics, occupational and environmental health sciences, radiation biology, and toxicology. See www.healthsciences.purdue.edu.

College of Liberal Arts

The college offers essentially all of the traditional disciplines of the humanities, social and behavioral sciences, and creative arts. Majors and minors are available in the departments of anthropology, audiology and speech sciences, communication, English, foreign languages and literatures, health and kinesiology, history, philosophy, political science, psychological sciences, and sociology; and in the School of Visual and Performing Arts. Students can prepare themselves in more than 50 majors, including 16 undergraduate interdisciplinary programs. See www.cla.purdue.edu.

Krannert School of Management

Degree programs include accounting, management, industrial management, and economics. Accounting and management programs focus on finance, marketing, operations, human resources, and strategic planning. The industrial management program combines management and technical education with a manufacturing management, engineering, or science minor. The accounting program combines a management background with extensive education in accounting principles and practices. All programs include coursework in the arts, humanities, and international and cross-cultural aspects of modern business. See www.krannert.purdue.edu.

School of Nursing

The School of Nursing prepares students from diverse backgrounds for careers as professional nurses. The nationally accredited undergraduate program prepares a student for licensure as a registered nurse (R.N.). A diverse mix of liberal arts, science, and nursing courses gives students a scientific, multidisciplinary education. Small clinical classes give students practical experience in health assessment, maternal child care, mental health, acute care, and community health nursing. This program admits nursing majors at the freshman year and offers early, hands-on clinical courses. The R.N.-to-B.S. program allows registered nurses to complete their baccalaureate requirements. The Second Degree Baccalaureate Program allows students who hold a degree in another field to pursue a B.S. in Nursing. The master's degree program prepares pediatric nurse practitioners and adult nurse practitioners, and offers a post-master's oncology certification. A graduate nursing consortium with the Purdue Schools of Nursing at Calumet and Fort Wayne offers various specializations. The Doctor of Nursing Practice (D.N.P.) delivers a post-baccalaureate to practice doctorate curriculum. See www.nursing.purdue.edu.

School of Pharmacy and Pharmaceutical Sciences

The school offers an accredited professional program leading to the Doctor of Pharmacy degree. This program combines a basic and applied science background as well as clinical experience allowing students to function as licensed pharmacists to provide pharmaceutical care. The prepharmacy curriculum can be taken either through Purdue's prepharmacy program or at another institution. It typically takes a minimum of two to three years of academic study to meet the pre-pharmacy course requirements. The school also has a four-year, non-licensure-eligible B.S. in Pharmaceutical Sciences degree designed for entry-level pharmaceutical industry positions or as a foundation for advanced education. See www.pharmacy.purdue.edu.

College of Science

Actuarial science, biological sciences, chemistry, computer science, earth and atmospheric sciences, mathematics, physics, statistics, math and science secondary school teaching, and inter-

disciplinary science programs prepare students for immediate careers or advanced study. Pre-medical, pre-dental, and pre-veterinary options; a Professional Practice (co-op) program; study abroad; and honors programs are available. Students may pursue official minors in other areas outside their major. Enrollment in sciences while deciding on a major in any field is encouraged. A highly qualified faculty, state-of-the-art facilities, and ongoing research keep teaching up to date. See www.science.purdue.edu.

College of Technology

The eight departments and 23 concentrations in the College of Technology prepare students to meet the technological needs of business, industry, and government. Technology students begin taking courses in their majors as early as their freshman year. Courses and other opportunities allow students to experience a variety of hands-on, real-world applications. The college awards associate's, bachelor's, and graduate degrees. See www.purdue.edu/technology.

School of Veterinary Medicine

This professional school has assumed a leading position nationally and internationally in educating the veterinary medical team. The school is fully accredited and is one of only 28 in the

United States that grant the Doctor of Veterinary Medicine (D.V.M.) degree. The Veterinary Technology Program is accredited by the American Veterinary Medical Association (AVMA) and awards Associate of Science and Bachelor of Science degrees. The Associate of Science degree is also offered via distance learning. The Veterinary Technology Program at Purdue is one of only three AVMA-accredited programs administered by a school of veterinary medicine. See www.vet.purdue.edu.

The Graduate School

The Graduate School oversees more than 70 programs of graduate study and research that lead to advanced degrees. Purdue graduate students engage in relevant coursework and cutting-edge research that lead to master's and doctoral degrees in agriculture, consumer and family sciences, education, engineering, health sciences, liberal arts, management, nursing, pharmacy, science, technology, veterinary medicine, and a variety of exciting interdisciplinary programs. The Graduate School also offers several graduate-level, academic credit certificate programs and combined (undergraduate/graduate) degree programs. For details about the Graduate School at Purdue, visit www.gradschool.purdue.edu.

The College of Pharmacy, Nursing, and Health Sciences

The College of Pharmacy, Nursing, and Health Sciences brings together, in one interdisciplinary organization, the various academic units on campus directly concerned with education in human health-care services. These schools provide the state with qualified graduates in the respective health fields and accommodate anticipated growth in the diversified areas related to health-care services.

Each of the three schools — Pharmacy and Pharmaceutical Sciences, Nursing, and Health Sciences — operates as a self-managed school. The dean of the combined college is Prof. Craig Svensson, who is also the dean of the School of Pharmacy and Pharmaceutical Sciences. Prof. Jane M. Kirkpatrick is the head of the School of Nursing, and Prof. Wei Zheng is the head of the School of Health Sciences.

School of Health Sciences

“Health Sciences” is a designation used at Purdue University to identify a group of professional programs directed toward people concerned with improving the population’s health and environment. The school’s primary purpose is to provide quality education and preparation of students at both the undergraduate and graduate levels.

The School of Health Sciences evolved from several interdisciplinary activities relating to public, radiological, and occupational health and to the control of environmental hazards. The school has grown to include a wide variety of pre-allied and clinical health areas as well as the environmental, radiological, and occupational fields that were the foundation of the school.

Promotion of acceptable levels of health within the workplace, the community, and the environment now depends upon the development of skills and knowledge involving several different disciplines. The role of the School of Health Sciences is to provide the individuals responsible for solving future health and environmental problems. An interdisciplinary approach is used to educate and prepare students for various fields associated with a large variety of health-related problems in our society.

Many long-term gains in human health have resulted from advances in environmental control and sanitation, improved diagnostic procedures, and advances in the life sciences. The emphasis on the prevention of illness is taking on new dimensions, especially in terms of reducing hazards in the public environment, in the workplace, and in the home. Prevention will continue to have a high priority within the health industry.

Rapid industrialization, accelerated technological changes, and an increased population concentrated in urban areas have contributed to the complexity of maintaining a healthful environment. As we continue to identify, evaluate, and modify the toxic agents and other environmental factors that affect human health, we can expect to make substantial achievements in the prevention of disease.

The School of Health Sciences provides the personnel needed to cope with today’s health problems. The curriculum is interdisciplinary

to take advantage of University-wide expertise and facilities. The school responds to public needs in Indiana and the nation as well as to professional standards, student interests, research opportunities, governmental requirements, and intellectual stimuli.

Goals

The programs of the school are designed to achieve three major goals. The first goal is to achieve excellence in teaching. We seek to provide a quality education that will prepare students to meet the needs of society as professionals in the health sciences, with emphasis on environmental, occupational, and radiological health sciences, medical laboratory science (medical technology), and pre-allied (clinical) health. As part of this education, we want to assure that health sciences students develop an interdisciplinary knowledge base related to their career objectives. To strengthen classroom experiences, an internship program is a highly desirable component of the academic program. In all of these activities, we strive for teaching that is current, stimulating, and essential to student academic needs.

The second goal of the school is to foster excellence in research. We strive to conduct high-quality, innovative research and other scholarly activities that will lead to new knowledge relating to human health and to train qualified students in research methodology and the scientific method. Students pursuing advanced degrees in health sciences will be involved in faculty-directed research in areas including radiation biology, medical physics, health physics, radiobiology), occupational and environmental health (industrial hygiene, ergonomics, environmental health), and toxicology. Such research is critical to a more complete understanding of society’s complex health problems.

A third goal of the school is to demonstrate excellence in service to students and to our constituents. Our primary focus is our students, and we seek to provide them with excellent counseling services, including academic counseling, career counseling, and related services. When appropriate, we endeavor to assist the

University, the community, the state of Indiana, and the nation in serving the health needs of our citizens. This is accomplished through sponsoring or providing continuing education or other special courses and through participation of our faculty and professional staff on task forces, committees, professional organizations, and other groups that can benefit from their expertise and knowledge.

Areas of Study

The various curricula in the school are designed around a common core of courses in mathematics, physics, biology, and chemistry. During the first year and in most cases the second, the school's programs are similar enough that switching to another major can be done without loss of progress toward your degree objective.

Decisions on options within the various areas usually need not be made until the sophomore year or, in some cases, not until the junior year. Students may choose to pursue a broad health sciences education as undergraduates and then specialize in an area of major interest at the graduate level. Choosing a major area of interest and the specific course option is often difficult, but help is available. You will have an academic advisor who will provide the information needed to make your decision. Faculty in each area of study are also available and interested in assisting you in making these sometimes difficult career decisions.

Areas of study in the school include:

Environmental Health Sciences. A broad science curriculum with community/public health emphasis, including studies of the injurious effects of chemical, physical, and biological agents on living organisms and strategies to reduce human exposure to disease-producing agents in the environment. Page 24.

Radiological Health Science (Health Physics and Medical Physics). Radiological health science is the field of study concerned with science and engineering practices that form the basis for the efficacious and safe use of radiation in industry, research, and medicine. Students who successfully complete the undergraduate radiological health science program are eligible to apply for the school's accelerated (one-year)

M.S. or (three-year) Ph.D. program in Health Physics and Medical Physics. Students are also eligible to apply for admission to the accelerated M.S. program in Nuclear Engineering and Radiological Health Science. Page 41.

Occupational Health Science (Industrial Hygiene). The study of hazardous chemical, physical, and biological agents, and conditions in the occupational environment, with emphasis on the anticipation, recognition, evaluation, and control of factors that affect worker and community health. Students who successfully complete the undergraduate occupational health science program are eligible to apply for the school's M.S. or Ph.D. program in Occupational and Environmental Health Sciences. Page 37.

Medical Laboratory Sciences (Medical Technology). A branch of medicine concerned with the performance of clinical laboratory tests that provide information to aid physicians and pathologists in the diagnosis and treatment of disease. Page 35.

General Health Sciences. A broad health sciences-based program for students desiring a strong background in the basic sciences and health-related courses. This curriculum prepares students for careers in government, health-care settings, industry, research, and for entrance into the professional schools of medicine, chiropractic, physician's assistant, dentistry, optometry, occupational/physical therapy, or public health. Page 26.

- Pre-medicine. A track of coursework that is formally structured as a concentration within three existing curricula: general health sciences, occupational health science, and radiological health science. Medical schools seek to admit students with diverse backgrounds that include a strong foundation in the natural sciences (biology, chemistry, mathematics, and physics) and solid coursework in the social sciences and humanities. Pages 29, 40, and 43.
- Minors. Currently the School of Health Sciences offers two minors: occupational health, and radiological health. The school also allows its students to minor in over 30 diverse areas such as occupational leadership, communication, and Spanish, to name a few.

Additional Career Information

Prospective students, their parents, teachers, directors, and advisors who would like additional information about specific areas in health sciences should go to the School of Health Sciences Web site at www.healthsciences.purdue.edu for the appropriate descriptive literature. For further information, call the school's main office at (765) 494-1419 or the Office of Student Services at (765) 494-8102.

Internship Programs

The School of Health Sciences encourages internship experiences with industrial, governmental, academic, medical, research, and consulting agencies. This is an excellent way to expand on classroom knowledge and learn firsthand from practical, real-world experience. In the medical laboratory sciences (medical technology) program, a one-year clinical program at an approved hospital is required. Students majoring in occupational, environmental, and radiological health sciences are strongly encouraged to participate in a structured practice experience at an approved site during the summer. Most of these opportunities are paid positions.

The Office of Student Services and the school faculty will assist students in locating appropriate internship sites.

Research

The major research interests in the health sciences include the broad areas of occupational and environmental health (industrial hygiene, ergonomics, environmental health), radiological health (health physics, medical physics, radiation biology), and toxicology. Broad faculty expertise, excellent facilities, and extensive equipment combine to enhance opportunities for creative, scholarly research experiences for advanced students.

Purdue Research Foundation

A nonprofit corporation affiliated with Purdue University, the foundation serves as a fundraising and development agency providing for educational and research needs of Purdue beyond state-appropriated resources. Research and training grants and contracts from industry and government are administered by the foundation. Patent policy and development also are Purdue Research Foundation responsibilities.

Admissions

Admissions Inquiries and Procedures

The information that follows is a basic overview of the undergraduate admission process. For the most current information regarding admission procedures, deadlines, and criteria, visit www.admissions.purdue.edu or contact the Office of Admissions; Purdue University; Schleman Hall; 475 Stadium Mall Drive; West Lafayette, IN 47907-2050; admissions@purdue.edu; (765) 494-1776. Prospective students also are encouraged to visit the Web site to sign up for the Office of Admissions contact list to receive mail and e-mail from Purdue.

Application Deadlines

High school students are strongly encouraged to apply for admission very early in their senior year, and some programs have specific deadlines. There also are specific deadlines for **transfer students**. Current application and scholarship deadlines are posted on the undergraduate admissions Web site.

Freshman Admissions Criteria

Applications are reviewed on an individual and holistic basis. First and foremost, applicants must be prepared academically for the rigors of college and the academic demands of the major to which they are seeking admission. In its review of each applicant, Purdue considers the following factors: high school coursework, grades, strength of curriculum, academic trends,

class rank, core and overall grade point average, SAT or ACT test score, personal statement, personal background and experiences, and space availability in the intended major.

Transfer Admissions Criteria

College students who want to transfer must have completed minimums of 12 to 24 semester credit hours of college-level coursework prior to enrollment at Purdue. Minimum credit-hour requirements will vary based on each student's high school and/or college academic credentials. Criteria for transfer admission vary widely based on the major to which the student is applying. All programs have minimum GPA requirements, and some have college coursework prerequisites. The Office of Admissions Web site has the most current information about admission criteria and processes as well as about transferring credit.

Early Registration — STAR

Student Access, Transition and Success Programs (SATS) invites you to campus for one day of early registration during the summer before your first semester as a new student. Summer Transition, Advising, and Registration (STAR) is a day set aside for you to meet with your academic counselor and register for first-semester classes. The University will mail you a fee statement.

Student Orientation and Support Programs

Student Access, Transition and Success Programs (SATS) is responsible for the coordination of initiatives that help you prepare for, transition into, and succeed as a student in Purdue University's academically rigorous environment.

SATS, a division of the Office of Enrollment Management, offers several programs to help beginning and transfer students adjust to Purdue. Boiler Gold Rush is organized for new, beginning students and transfer students, and it includes a variety of activities designed to help you make a smooth transition into Purdue. Students who begin their studies at other times of the year also have the opportunity to participate in orientation. Invitations to those different programs are mailed to you at the appropriate times.

SATS programs include Summer Transition, Advising, and Registration (STAR); Common Reading; Learning Communities; Orientation Programs (such as Boiler Gold Rush and Welcome Programs); Parent and Family Programs; the Purdue Promise program; and the West Central Indiana Regional Twenty-first Century Scholars site. For more information on any of these programs, please visit www.purdue.edu/sats, e-mail sats@purdue.edu, or phone (765) 494-9328. The SATS address is Stewart Center, Room G77A; 128 Memorial Mall Drive; West Lafayette, IN 47907.

International Students

If you are an applicant from another country, your application and supporting documents will be evaluated by the staff in the Office of International Students and Scholars. You will be admitted on the basis of credentials certifying the completion of preparatory studies comparable to requirements for United States citizens applying at the same entry level. Guidelines for determining admissibility are specified in the "Admissions Criteria" section of this publication. English translations must accompany transcripts and other credentials. You also must submit satisfactory evidence of your ability to comprehend English as shown by a TOEFL (Test of English as a Foreign Language) score of at least 550 (213 computer-based score, 79 Internet-based score). The minimum score for First-Year Engineering applicants is 567 (233 computer-based score, 88 Internet-based score).

You must furnish sufficient evidence of adequate financial support for your studies at Purdue.

The Office of International Students and Scholars will assist you in entering the United States and the University. The office also will provide other services such as orientation programs, immigration advising, and personal and cross-cultural counseling. See the Web site at www.iss.purdue.edu.

Military Training

Reserve Officers' Training Corps (ROTC) is available for all men and women who are full-time students. You can pursue military courses in conjunction with the academic curriculum and receive academic credits. If you complete

the program, you will receive a commission as an officer in the Army, Navy, Marine Corps, or Air Force. You do not incur a commitment until you are accepted into the program and enroll in the third-year course or accept an ROTC scholarship. Scholarships that assist with tuition, incidental fees, and textbooks are available through all four services. A monthly allowance is available for students who sign a contract. Additional information is available in the College of Liberal Arts catalog, or you can contact any of the military departments directly. All ROTC offices are located in the Armory.

Proof of Immunization

Indiana state law requires proof of immunization for the following vaccine-preventable diseases as condition of enrollment on residential campuses of state universities: measles, mumps, rubella, diphtheria, and tetanus. In addition, international students must provide documentation that they have been tested for tuberculosis after arriving in the United States. Information regarding compliance will be forwarded to all admitted students.

Purdue Across Indiana

The Purdue academic system extends across the state with academic programs at four system campuses and several College of Technology locations.

System Campuses

Admission to these system campuses is administered by the admissions department at each campus. These campuses include:

- Indiana University-Purdue University Indianapolis (IUPUI) — Indianapolis, Indiana
- Indiana University-Purdue University Fort Wayne (IPFW) — Fort Wayne, Indiana
- Purdue North Central — Westville, Indiana
- Purdue Calumet — Hammond, Indiana

College of Technology Statewide

Admission to College of Technology Statewide locations is administered by the Office of Admissions at Purdue's West Lafayette campus. College of Technology Statewide locations include:

- Anderson
- Columbus
- Greensburg
- Indianapolis

- Kokomo
- Lafayette
- New Albany
- Richmond
- South Bend
- Vincennes

For more information about The Purdue System-wide campuses and College of Technology Statewide locations, visit www.purdue.edu and click on "Purdue Across Indiana."

Nondiscrimination Policy Statement

Purdue University is committed to maintaining a community which recognizes and values the inherent worth and dignity of every person; fosters tolerance, sensitivity, understanding, and mutual respect among its members; and encourages each individual to strive to reach his or her own potential. In pursuit of its goal of academic excellence, the University seeks to develop and nurture diversity. The University believes that diversity among its many members strengthens the institution, stimulates creativity, promotes the exchange of ideas, and enriches campus life.

Purdue University views, evaluates, and treats all persons in any University related activity or circumstance in which they may be involved, solely as individuals on the basis of their own personal abilities, qualifications, and other relevant characteristics.

Purdue University prohibits discrimination against any member of the University community on the basis of race, religion, color, sex, age, national origin or ancestry, marital status, parental status, sexual orientation, disability, or status as a veteran. The University will conduct its programs, services and activities consistent with applicable federal, state and local laws, regulations and orders and in conformance with the procedures and limitations as set forth in Executive Memorandum No. D-1 which provides specific contractual rights and remedies. Additionally, the University promotes the full realization of equal employment opportunity for women, minorities, persons with disabilities and veterans through its affirmative action program.

Any questions or concerns regarding the Nondiscrimination Policy Statement shall be referred to the Vice President for Ethics and Compliance for final determination.

Expenses

The cost of attending Purdue University varies, depending on a variety of factors, including where a student chooses to live; travel expenses; food costs; enrollment in a special program; date of entry; the college or school in which you are enrolled; etc. Basic minimum costs for the two-semester 2009–10 school year on the West Lafayette campus are shown in the following table. Some academic programs may have additional fees. Contact the department if you have questions.

Full-time students are charged a general service fee, a technology fee, and a repair and rehabilitation fee. The general service fee provides students with access to a variety of services and privileges such as access to the Recreational Sports Center and the Boilermaker Aquatic Center for recreational sports activities. It also allows deep-discount ticket prices for most Convocations-sponsored events and for Intercollegiate Athletics contests with presentation of a student ID card.

With payment of full fees, students have access to the Purdue Student Health Center that

covers medical clinical office visits, nutrition consultations, health education services, and a limited number of sessions for psychological counseling. Additional fees are charged for lab, x-ray, urgent care, physical therapy, and other services.

The technology fee is used to enhance student access to the campus networks, computer laboratories, and electronic access to information and databases. Technology fee funds are used to equip classrooms with computer and video projection equipment.

The Repair and Rehabilitation fee is assessed to address maintenance funding for buildings and infrastructure on campus, and funds received from the fee will be dedicated to building and infrastructural needs. The establishment of the fee is a result of growing unfunded needs to address critical building and infrastructural upkeep.

Miscellaneous personal expenses include such items as clothing, transportation, telephone, newspapers and magazines, dry cleaning and laundry, entertainment, etc.

2009–10 Estimated Costs West Lafayette Campus (Fall and Spring Semesters)

Items	Indiana Resident	Nonresident
Tuition/Fees	\$8,638*†	\$25,118*†
Room/Board	8,710	8,710
Books/Supplies	1,220	1,220
Travel	310	480
Miscellaneous	1,760	1,760
Total	\$20,638	\$37,288

* First-time students enrolled at the West Lafayette campus beginning in the Summer 2009 Session and thereafter pay these fees. Undergraduate, graduate, and professional students who were enrolled as degree-seeking students prior to the Summer 2009 Session may be eligible for lower fees based upon continuous enrollment. Please see the University Bursar's Web site at www.purdue.edu/bursar for more information regarding rates.

† Your budget can vary, depending on your state of residence and the type of housing and academic program you select. Some programs have additional fees: Engineering, \$1,000; Management, \$1,274; Technology, \$500; Flight, individual courses in the program have additional fees that can be reviewed at www.purdue.edu/bursar or by contacting the Department of Aviation Technology. International students pay an additional \$60 per semester.

Rates and refund schedules are subject to change without published notice.

Refunding of Fees and Tuition

Registered students who find it necessary to cancel their registration before the beginning of classes, upon the recommendation of the registrar, will receive a 100 percent refund of all fees and tuition.

Non-Title IV Aid

Students who withdraw during the first six weeks of a semester, with the recommendation of the registrar, will receive a partial refund of the general service fee and tuition. More specifically, the percentage of refund is determined as follows:

Fall or Spring Semester

1. Withdrawal during the first or second week, 80 percent refund

2. Withdrawal during the third or fourth week, 60 percent refund
3. Withdrawal during the fifth or sixth week, 40 percent refund

No portion of the technology fees, repair and rehabilitation fees, or academic building facilities fee will be refunded once classes begin.

Title IV Aid

Once classes begin, refunds are prorated based on the date of withdrawal from class(es). Refunds are based on a diminishing scale through 60 percent of the semester. Refunds are calculated on all fees and tuition.

Summer Modules

Refunds for summer modules are proportionate on the same basis as semester refunds.

Financial Aid

To ensure that all students have an opportunity to obtain a college education regardless of their financial circumstances, Purdue University, through the Division of Financial Aid, administers a fourfold program of scholarships, grants, employment opportunities, and loans.

The Purdue University Division of Financial Aid administers federal, state, and University financial assistance programs. These programs require students to have a high school diploma or GED. Most types of aid also are based upon financial need and satisfactory academic progress. Students must submit a Free Application for Federal Student Aid (FAFSA) online at www.fafsa.ed.gov to be considered for all types of financial aid. Students should apply early for Purdue University financial aid. Eligible FAFSAs submitted by March 1 will receive preference in the awarding of aid.

Families are welcome to visit the campus to discuss the types of available aid and the application procedure. Walk-in counselors are avail-

able from 9:00 a.m. to 5:00 p.m. on Monday, Tuesday, Wednesday, and Friday, and from 1:00 to 5:00 p.m. on Thursday. Phone counselors are available from 8:00 a.m. to 5:00 p.m. Monday through Friday at (765) 494-0998. Computer access to student aid status is available at mypurdue.purdue.edu.

Resident Assistants

University Residences has a plan whereby graduate and undergraduate students who are at least 21 years of age can be hired as a resident assistant (RA). An RA devotes approximately 20 hours each week to his or her duties in this capacity, with most of the time scheduled during evenings and weekends. Compensation for an RA position includes reduced tuition, room and board, and a small stipend. Applications and additional information for those interested in becoming a resident assistant can be found at www.housing.purdue.edu.

Living Accommodations

University housing facilities and programs are available to all students based on Purdue's policy of equal opportunity regardless of national origin, race, religion, color, or sexual orientation. It is the University's desire and expectation that all others providing housing or services to Purdue students will do so in a manner consistent with this policy. However, the University does not approve or disapprove specific housing accommodations since it believes that the choice of housing rests with you, the student.

As a Purdue student, you have a variety of choices when it comes to choosing your new home while attending school. You can live in one of 15 University Residences, a fraternity or sorority house, cooperative housing, or in a privately operated facility within the local community.

Apply for on-campus housing as soon as you have a confirmed interest in attending Purdue. You will need to pay a \$100 nonrefundable housing application processing fee (not a deposit).

Apply online at www.housing.purdue.edu, where you can fill out your housing application, choose your preferences, and sign your housing contract. The site also will prompt you to fill out an online preference form, which will be used to assign your residence and match you with a compatible roommate. If you want to live with a friend, both you and your friend must rank your residence preferences in the same order and request the other as a roommate.

May 1 is the housing application deadline. Because the University does not guarantee on-campus housing, it is important that students meet this deadline. Students who apply for housing after the May 1 deadline will be assigned to a residence if space is available. First-year students are not required to live on campus.

Students who apply and sign a housing contract by May 1 will be assigned a random number that will be used to establish priority for hall choice in the housing assignment process. Changes to, or cancellation of, your housing contract may be made until 11:59 p.m., April 30. (Please remember to re-sign the contract if you have made a change to your housing preferences.) Your housing contract becomes binding on May 1. As of that time, your contract can only be cancelled if you do not attend Purdue University during the contract period.

Students requiring special accommodations should contact the University Residences Director's Office at (765) 494-1000 to discuss their particular needs when their housing application is submitted.

The Office of the Dean of Students offers assistance to students seeking off-campus housing. After being admitted, students should contact the Office of the Dean of Students as early as possible to begin their search for off-campus housing: visit www.purdue.edu/odos, e-mail offcampushousing@purdue.edu, or call (765) 494-7663.

University Residences for Undergraduate Men and Women

University Residences provides accommodations for approximately 10,541 single undergraduate men and women.

The all-male residences include Cary Quadrangle, providing accommodations for 1,166 students, and Tarkington, providing space for about 706 students.

Seven University Residences — Earhart, Harrison, Hillenbrand, McCutcheon, Owen, Shreve, and Wiley — house approximately 800 students each, and Meredith Hall accommodates 620 students. These are coeducational units with male and female students assigned to separate areas of each building.

Duhme, Warren, Wood, and Vawter halls comprise the all-women's residences for the 2009–10 academic year and are referred to as Windsor Halls. Windsor Halls provide accommodations for 595 students.

First Street Towers opened to Purdue sophomores, juniors, and seniors for the Fall 2009 Semester. Each of the main residential floors of First Street Towers contains two clusters of 22 single rooms with private baths, for 356 residents.

All University Residences contain generous lounge space, recreation areas, kitchenettes, study spaces, and post office facilities.

As a student, you may choose from four meal plans consisting of 10, 12, 15, or 20 meal swipes a week, as suits your lifestyle. University Residences offers students who are 19 years of age or older by August 21, 2009, the Boiler Block Plan, consisting of a block of 246 meal swipes.

With this plan, you may use your meal swipes as often as you wish. All meal plans include Dining Dollars, which may be used to buy additional food items at University Residences' Dining Services retail operations, such as grills and mini-marts. You may eat at any University Residences' Dining Services facility by using your University ID card.

Computer labs are available in McCutcheon, Meredith, and Tarkington halls. In addition, two computers and a public printer are available in every residence that does not have a computer lab so residents are able to check e-mail and print documents as needed. Residents will have ResNet, a high-speed Internet service, in their room without paying an additional fee.

Room and board rates for the 2009–10 academic year vary from \$6,906 to \$14,204, depending on your chosen meal plan option, residence, and room size.

Approximately 550 spaces in Hawkins Hall are reserved for assignment to older undergraduate students. Meal plans are not available for residents of Hawkins Hall. Residents of Hawkins may purchase either the Open Dining Card or use BoilerExpress for dining in any University Residences dining facility. Accommodations in Hawkins Hall are on a room-only basis. The cost for a room in Hawkins Hall for the 2009–10 academic year ranges from \$375 to \$696 a month depending on the type of room selected.

More than 1,000 spaces for single undergraduate students are available in Hilltop Apartments. The apartments house two or three students and are available for both single male and female students. All normal policies and regulations of University Residences apply to the apartments. Students living in the apartments may choose a meal plan that allows access to any University Residences Dining Services facility, or they may choose a room-only option. The room and board rate for the 2009–10 academic year in Hilltop Apartments ranges from \$8,940 to \$10,866 a year depending upon the apartment and meal plan selected.

Rates quoted are subject to change as approved by the Board of Trustees and undoubtedly will be somewhat higher during the 2010–11 period of this publication.

Visit www.housing.purdue.edu for additional information.

Accommodations for Married Students/Families

Purdue Village provides students with families convenient housing within a one-mile walking distance of campus and is convenient to shopping and bus routes. The family apartments, operated by University Residences, are unfurnished and equipped with a stove and refrigerator. There are one-bedroom and two-bedroom apartments for families; the two-bedroom apartments include washers and dryers.

One-bedroom family apartment costs range from \$582 to \$597 a month. Two-bedroom units range from \$717 to \$732 a month. Your rent payment covers all utilities, including local telephone service and Boiler TV (cable). These rates are effective during the 2009–10 academic year and are subject to change as approved by the Board of Trustees.

Each apartment is equipped with a connection for the campus cable TV system as well as for the campus computing network. The apartments are not air-conditioned, but tenants may bring or purchase their own air-conditioning unit as long as it meets specified criteria, has compatible voltage ratings, and the apartment's maintenance staff does the installation.

With more than 60 countries represented among the residents, Purdue Village is a global community. Families have the benefit of plenty of yard space and playgrounds, and they can take advantage of Purdue Village Preschool and the English for Speakers of Other Languages (ESOL) Program.

Visit www.housing.purdue.edu for more information about Purdue Village.

Cooperatives

Cooperative houses also provide housing for students. These houses are large residences that are owned and operated by 20 to 50 students. Seven women's houses and five men's houses have been recognized officially by the Office of the Dean of Students, and each house has a live-out faculty or staff advisor.

Students in cooperative houses significantly decrease their housing costs by contributing three to four hours of house duties a week. Residents of cooperatives pay an average of \$3,000 per academic year for room and board.

New members are selected by current members through a rush process each January.

To obtain information about becoming a cooperative member, contact the Office of the Dean of Students at (765) 494-1231 or at Schleman Hall, Room 250; 475 Stadium Mall Drive; West Lafayette, IN 47907-2050. Details are also available at www.purduecooperatives.org.

Students are expected to complete and return application information by February 1 or earlier for membership the following fall semester.

Fraternities and Sororities

Purdue has 46 fraternities and 24 sororities. Most members live in chapter houses, and membership is by invitation.

Sororities provide an opportunity in the fall for interested women students to join a chapter.

Student Services

Office of Student Services

The Office of Student Services consists of a professional staff that responds to the needs of undergraduate health sciences students during their stay at Purdue, as well as to the needs of prospective students interested in health-related careers.

The staff provides recruitment, counseling, and scheduling services for all students interested in the health sciences. The office is located in the Civil Engineering Building, Room 1163. The staff welcomes the opportunity to talk with you and your family when you visit the Purdue campus.

Recruitment. Staff members in the Office of Student Services respond to requests for information about programs of study in the health sciences. They participate in several campus-wide programs designed especially to assist you in finding out about various academic offerings at Purdue. Recruitment programs for the health sciences include Fall Preview Days, Introducing Purdue, Purdue Scholars Day, Destination Purdue, Purdue's for Me, Saturday with the Boilermakers, and Explore Purdue.

Academic Counseling. Academic counseling is an integral part of your education in the School of Health Sciences. Students and faculty

Yearly costs for sororities range from \$3,300 to \$4,380. The average number of women living in a sorority is 88.

In the fall, the Interfraternity Council provides recruitment information through which interested men can become acquainted with the fraternity system. Open recruitment is conducted throughout the academic year. The average number of men belonging to a fraternity is 72, and costs range from \$2,000 to \$3,500 a semester.

For additional information, contact the Office of the Dean of Students; Purdue University; Schleman Hall, Room 250; 475 Stadium Mall Drive; West Lafayette, IN 47907-2050; or call (765) 494-1232. Online information is available at www.purduegreeks.com.

in the school vary widely in their interests, training, and background. The faculty of the school permits flexibility in course selection to allow for differences in levels of education and academic goals of individual students.

You will be assigned an academic advisor who will help you select courses consistent with your academic preparation and suitable for your educational program. In addition, you will have an opportunity to consult with faculty members who can assist in the development of an individualized plan of study designed to meet your particular career interests.

Scheduling. Staff members in the Office of Student Services process course requests for students in the health sciences. Advisors and other staff members are available throughout the school year to assist you in the selection of courses.

The Office of Student Services is open weekdays from 8:30 a.m. to noon and from 1:00 to 4:30 p.m. For more information about programs of study and career opportunities in the health sciences, contact: Supervisor; Office of Student Services; School of Health Sciences; Purdue University; Civil Engineering Building, Room 1163; 550 Stadium Mall Drive; West Lafayette, IN 47907-2051, or phone (765) 494-8102.

Counseling

Each college or school has a general counseling office and academic advisors who can answer questions about degree requirements, registration, dropping and adding courses, and withdrawal from school.

Mature and qualified faculty and staff, graduate students, and older undergraduate students are employed on the University Residences counseling staffs and live in the halls to assist students with personal and scholastic problems.

The Office of the Dean of Students is staffed by professionally trained counselors who provide personal, educational, and career counseling. They can, for example, offer assistance or refer you to specialized help in such areas as vocational choice, campus activities, scholastic concerns, multicultural programs, assistance for students with disabilities, home and community relationships, and coping strategies.

Other campus services for students include the Counseling and Guidance Center, Counseling and Psychological Services, Financial Advising Service, International Students and Scholars, Learning Center, Marriage and Family Therapy Center, Steer Audiology and Speech-Language Center, Student Health Center, and Writing Lab.

Services for Students with Disabilities

Services for students with disabilities (physical, mental, and learning disabilities) are provided through the Disability Resource Center of the Office of the Dean of Students. Services vary according to the needs of students. They include interpreters, readers, note-taking assistance, accessible class scheduling, parking permits, and help working with professors. For further information, contact the Office of the Dean of Students. The Web site is www.purdue.edu/odos.drc. The general office number is (765) 494-1747, and the TDD number for people with hearing or speech impairments is (765) 494-1247.

Center for Career Opportunities

The staff of the campus-wide Center for Career Opportunities assists students and alumni with their career-related employment search. Counseling, guidance, and a wide variety of job search services related to internships and full-time employment are available.

The center maintains contacts with many industrial and business organizations as well as with governmental and nonprofit agencies. Interviews with employer representatives can be requested, and current openings for internships or full-time positions can be explored. For more information, refer to the center's home page at www.cco.purdue.edu.

For Further Information

University Regulations. The *University Regulations* publication will provide details about academic, conduct, and student organization policies and procedures. You can access the Web site at www.purdue.edu/univregs. Printed copies are available from Purdue Marketing and Media; South Campus Courts, Building D; 507 Harrison Street; West Lafayette, IN 47907-2025; (765) 494-2034.

Graduation Rates. Graduation rates for the West Lafayette campus are available by contacting the Office of Enrollment Management, Analysis, and Reporting; Schleman Hall; 475 Stadium Mall Drive; West Lafayette, IN 47907-2050; (765) 494-0292; enrollmentmanagement@purdue.edu. These rates are calculated and made available as required by the Student Right-to-Know and Campus Security Act.

Safety. The University strives to provide a safe and secure environment for students, staff, and visitors. The University distributes an annual security report containing campus crime statistics and information relating to campus safety and security policies and programs. The report is available on the Web at www.purdue.edu/police. A paper copy may be requested by calling (765) 494-8221 or contacting the Purdue University Police Department; Terry House; 205 S. Intramural Drive; Purdue University; West Lafayette, IN 47907-1971.

Information Technology

The Office of the Vice President for Information Technology is in charge of the integrated computing and telecommunications services on the West Lafayette campus. The information technology (IT) program, formally known by the acronym ITaP, serves Purdue students, faculty, staff, and visitors to campus.

Computing services range from the very visible computing laboratories that are located throughout campus to the unseen but essential enterprise applications that facilitate the business of the University. Computing staff install, maintain, operate, and repair computer equipment. They provide such services as career accounts, e-mail, calendaring, directories, and database administration.

In addition to ITaP's laboratory facilities, its instructional services include:

1. The Blackboard and Banner course management system.
2. Technology in the Classroom (TIC) sites.
3. Help in preparing multimedia materials to enhance instruction.
4. Help in training students in particular software applications for classroom assignments.
5. Grants for innovative instructional projects including developing courses online using information technology.
6. The Digital Learning Collaboratory, a joint project with the Purdue University Libraries.
7. The Assistive Technology Center for those with special needs.
8. Web-based access to many software applications through Software Remote.

ITaP also provides high-performance research computing equipment and services for faculty through its Rosen Center for Advanced Computing. Multiple Linux clusters, an SGI Altix 4700, and a SiCortex 5832 serve intensive computational needs ranging from engineering and physics simulations and models to computational biology and chemistry. Support for researchers includes partnership on grant proposals; consulting and collaboration on solutions for projects needing advanced computations; management and storage of large data sets; and development of scientific applications, community tools, and science gateways. The HUBzero platform provides Web-based cyberinfrastructure for education and research and supports simulation and modeling in a variety of disciplines, including

nanotechnology, pharmaceuticals, and health-care.

Distributed computing and grid computing are basic elements in the research computing program. ITaP manages DiaGrid, which harnesses tens of thousands of idle processors on and off campus for research and education purposes. Through ITaP, Purdue also has access to resources nationwide on the TeraGrid, the National Science Foundation's comprehensive cyberinfrastructure for open scientific research, education, and innovation. The optical fiber network known as I-Light links Purdue's West Lafayette campus to Indiana University and Indiana University-Purdue University Indianapolis (IUPUI) and joins computers at Purdue and Indiana into a virtual machine room with teraflop capabilities.

The Envision Center for Data Perceptualization provides scientific visualization and multimedia production services, including animation creation and rendering and virtual environment creation, along with computer-aided design, haptic (touch and feel) interaction capabilities, large-scale data handling, and motion capture. The center provides access to, and training for, many popular commercial applications in those areas and can work with faculty members on grant applications and project management needs. The center's collaboration facilities accommodate on-site and remote participation from multiple locations using technologies such as Polycom, Access Grid, and Web 2.0 technologies.

ITaP also makes video production and audiovisual duplication facilities available as well as satellite uplink and downlink capabilities and broadcast and network services.

ITaP implements and manages campus-wide networks for data and voice communication, improves the security of the data that crosses these networks, and promotes the preservation of personal information security and privacy for all people at Purdue. Telecommunications services provided by ITaP range from basic phone services for campus offices and student residences to telephone operator services and wireless connectivity in the common areas of buildings throughout the campus. ITaP supports the infrastructure that links campus buildings by optical fiber and provides Internet access.

ITaP negotiates contracts and licenses for mass purchases of informational technology equipment and licenses for software used by University personnel. As an additional service, ITaP has negotiated significant discounts for faculty, staff, and students on personal purchases of hardware available through the Web and also for software media sold on campus. The hardware discounts also are available to Purdue alumni. Demonstration computer hardware is displayed at ITaP Shopping Offline in Stewart Center, Room G65. Software is sold at the BoilerCopy-Maker in the Purdue Memorial Union, Room

157. Information also is available from www.itap.purdue.edu/shopping.

ITaP offers courses and one-on-one consulting on computing and telecommunications, from selecting phone systems to basic use of Microsoft office applications, programming, visualization, instructional media, e-learning, and research techniques.

For additional information, please consult www.itap.purdue.edu, call (765) 494-4000, or visit the ITaP Customer Service Center in Stewart Center, Room G65; 128 Memorial Mall; West Lafayette, IN 47907-2034.

Libraries

The University Libraries system on the West Lafayette Campus includes 11 subject-oriented libraries, the Hicks Undergraduate Library, and the Karnes Archives and Special Collections Research Center. The Libraries Web site at www.lib.purdue.edu is the Libraries gateway to information services. Libraries faculty and staff provide assistance in person and through www.lib.purdue.edu/askalib; this includes help in gaining access to national and international information. Information about individual libraries can be found under "Libraries and Units" at www.lib.purdue.edu/libraries.

The Libraries offer 2.8 million printed volumes and electronic books, 40,000 electronic and print journals, more than 500 electronic databases, 3.1 million microforms, and access to federal government publications and patents that are received on a depository basis. Local library resources are supplemented by the 4 million items of research materials held by the Center for Research Libraries in Chicago, which includes 7,000 rarely held serial titles. Through Purdue's membership in the center, faculty and graduate students are assured of fast access to this material through the Interlibrary Loan Office in the Humanities, Social Science, and Education (HSSE) Library in Stewart Center.

The library collections and services of the Big Ten libraries, the University of Chicago,

Ball State University, and Indiana State University also are available to Purdue students and faculty under cooperative agreements. Individuals who wish to use these facilities are encouraged to contact Circulation Services by e-mail to circservices@purdue.edu or by phone, (765) 494-0369.

The John W. Hicks Undergraduate Library may serve many of a student's library needs, particularly during the first two years at Purdue. Here students will find assistance in locating information needed for papers and speeches along with an extensive collection of reserve books for course assignments. A 24-hour study lounge and the "Undergrounds Coffee Shop" are located in the Hicks Undergraduate Library.

The Digital Learning Collaboratory (DLC) is located in Hicks Undergraduate Library. It is a joint initiative of the Purdue Libraries and Information Technology at Purdue. The DLC supports student learning through access to state-of-the-art hardware and software for creating multimedia projects in individual, group work, and instructional settings. It facilitates the integration of information and technology literacy into the undergraduate curriculum.

Additional Libraries facts and figures can be found within Purdue's Data Digest available at www.purdue.edu/DataDigest.

Study Abroad

The Office of Programs for Study Abroad is dedicated to internationalizing Purdue by helping as many students as possible have overseas experiences that enrich lives, enhance academic experiences, and increase career potential. The office helps students overcome academic, financial, or personal concerns that might prevent them from going abroad, and is especially devoted to removing obstacles for first-time travelers.

Purdue offers more than 200 study abroad and internship programs in dozens of countries, lasting from a week to a year, for all majors. Most programs do not require foreign language skills. Program costs vary, but many are comparable to the cost of studying at Purdue (with the exception of the travel expense).

Participants earn Purdue grades and credits, so those who study abroad can graduate in the normal length of time. Most of the financial aid that covers Purdue expenses can also be applied to study abroad, and more financial aid specifically for study abroad has been available in recent years.

Students who have taken part in study abroad often describe their experiences as “life changing,” “eye opening,” and “the best choice I ever made.”

Students should begin their international exploration either online at www.studyabroad.purdue.edu, by calling (765) 494-2383, or by contacting The Office of Programs for Study Abroad; Young Hall, Room 105; 302 Wood Street; West Lafayette, IN 47907-2108.

Graduation Requirements

Academic Standards Policies and Scholastic Index Requirements

The scholastic standing and probation standards of all regular students enrolled in health sciences programs are the same as those for the University as a whole. In addition to the University requirements, students enrolled in the School of Health Sciences must maintain a minimum cumulative grade point average (GPA) of 2.0. Students majoring in radiological health, occupational health, and environmental health science must receive a grade of “C” or higher in selected courses in order to graduate with the major.

Students enrolled in the professional program in medical technology also have specific scholastic requirements as indicated in the table on page 23. In accordance with the admission requirements of the clinical affiliated programs, students must maintain a minimum cumulative GPA index of 2.75 by the end of the spring semester prior to applying to the clinical year the subsequent fall semester (typically at the end of the sophomore year) and should maintain a minimum cumulative GPA of 2.75 through semester 6 as well as a 2.5 science GPA. In addition, matriculation to the clinical component requires completion of a minimum of 96 credits prior to the clinical phase.

Pass/Not-Pass Option

This option is available to encourage students to broaden their educational horizons. Students may pursue certain elective (excluding technical) courses on this basis if they have a class standing of sophomore three or higher and a graduation index of 2.0 or greater at the end of the preceding semester.

Degrees Offered

The School of Health Sciences offers the Bachelor of Science (B.S.) degree. All programs leading to this degree have the following requirements in common:

1. Satisfaction of various University-wide graduation requirements: academic, scholastic, residence, fee payments, etc.
2. Completion of an appropriate plan of study meeting the requirements indicated in this catalog.
3. Specific courses used to satisfy these requirements depend on your area of study and career objectives. Specific courses for major areas within the school are listed in the appropriate plan of study. Certain majors may have requirements that exceed the minimum requirements shown in the table on page 23.

4. Minors. The School of Health Sciences, in conjunction with other departments, offers minors in more than 30 areas. Additional minors may be added in the future. For more information about minors offered throughout the University, consult the counseling staff in the Office of Student Services.

5. Pre-medicine curriculum. The School of Health Sciences majors are flexible enough to allow pre-medicine curricular requirements to be met within them. Formal pre-medicine concentrations are available in the radiological health science and occupational health science majors in addition to the general health sciences major.

Minimum Degree Requirements

Core Requirements*	Credit Hours
English Composition and Speech	9
Chemistry†	16
Mathematics† and Statistics	9
Biology	14
Physics	8
Humanities	9
Core total	67
Major requirements†	43–47
Electives	17–21

Minimum total credits required for graduation is 128, which must include at least 32 credits at or above the 30000-level. Certain majors may have requirements that exceed these minimums.

Abbreviations

The following abbreviations of subject fields and curricula are used in the “Plans of Study” section of this catalog. Alphabetization is according to abbreviation.

AGRY—Agronomy

BCHM—Biochemistry

BIOL—Biological Sciences

CDFS—Child Development and Family Studies

CE—Civil Engineering

CHM—Chemistry

COM—Communication

CS—Computer Sciences

ECON—Economics

ENGL—English

ENTM—Entomology

HK—Health and Kinesiology

HSCI—Health Sciences

IE—Industrial Engineering

MA—Mathematics

MCMP—Medicinal Chemistry and Molecular Pharmacology

NRES—Natural Resources and Environmental Science

NUCL—Nuclear Engineering

OLS—Organizational Leadership and Supervision

PHYS—Physics

POL—Political Science

SOC—Sociology

STAT—Statistics

* A higher-level course may be substituted for any core course in the plans of study shown elsewhere in this catalog. For transfer students, a transferred course may not be substituted unless that course is evaluated to be equivalent by the Office of Admissions transfer credit evaluation.

† CHM 10000 is not available for credit toward graduation. MA 15100, or 15300 and 15400 are available for credit toward graduation.

Major Areas of Study

The School of Health Sciences curricula and graduation requirements as presented in this catalog are those that were in effect in December 2009. Please be aware that curricular changes can change so for current information, see the School's Web site, www.healthsciences.purdue.edu, or call (765) 494-1419.

Some flexibility in academic curricula is provided in order to make allowances for individual differences in students' backgrounds and academic goals. It is the student's responsibility to consult with his or her academic advisor about using this flexibility to design a program to fit his or her particular needs.

The traditional length of a college degree program is four academic years. For this reason, this catalog presents all curricula as four-year

programs. Well-qualified students with excellent high school preparation can complete the program in the four-year period — or even less time. However, the University recognizes that other students may require four and one-half or five years to complete all requirements. For example, a student may be deficient in basic math or science courses, or a student may have transferred or changed majors.

An insufficient high school background usually is most noticeable during the first and second year of a student's program in health sciences. Students who lack strong math and science backgrounds but who meet admission requirements will take courses during their first and second semesters of study to strengthen their knowledge in these areas and to prepare for coursework in the health sciences.

Environmental Health Sciences

The Demand

During the past four decades, public concern about the quality of the environment has increased. This concern has resulted in several major environmental policy decisions, including the creation of the Environmental Protection Agency (EPA) and passage of legislation including the National Environmental Policy Act (NEPA), the Toxic Substances Control Act (TSCA), the Safe Drinking Water Act, the Clean Air Act, the Federal Environmental Pesticide Control Act, and the Resource Conservation Recovery Act (RCRA). The development of such agencies and policies has created a demand for professionals trained to evaluate environmental problems and provide feasible solutions.

The Purpose

The purpose of the environmental health sciences program is to develop individuals who have the education and training required to deal with the complex environmental problems and issues of today and tomorrow.

The Curriculum

The curriculum is designed to provide a sound scientific base while allowing flexibility in the choice of advanced courses. Through selection of electives during the junior and senior years, students can develop programs that emphasize one of several areas of environmental health, with coursework in toxicology, environmental assessment, ecology, or environmental engineering. The four-year environmental health science curriculum may qualify the graduate for employment by governmental agencies and industries. However, additional coursework and specialization, through the M.S. degree, is recommended for capable students.

All students working toward the B.S.E.H. (Bachelor of Science, Environmental Health) degree must complete the degree requirements presented in the environmental health science plan of study.

Plan of Study: Environmental Health Sciences*

Freshman Year

First Semester

- (4) **BIOL 11000** (Fundamentals of Biology)
 - (4) **CHM 11500** (General Chemistry)
 - (4) **ENGL 10600** (First-Year Composition)
 - (2) **HSCI 10100** (Introduction to the Health Science Professions)
 - (3) **MA 22300** (Introductory Analysis I)
-
- (17)

Second Semester

- (4) **BIOL 11100** (Fundamentals of Biology)
 - (4) **CHM 11600** (General Chemistry)
 - (3) **COM 11400** (Fundamentals of Speech Communication)
 - (3) **MA 22400** (Introductory Analysis II)
 - (3) Elective
-
- (17)

Sophomore Year

Third Semester

- (4) **BIOL 20300** (Human Anatomy and Physiology)
 - (4) **CHM 25700** (Organic Chemistry)
 - (1) **CHM 25701** (Organic Chemistry Laboratory)
 - (3) **HSCI 20200** (Essentials of Environmental, Occupational, and Radiological Health Sciences)
 - (4) **PHYS 22000** (General Physics)
-
- (16)

Fourth Semester

- (4) **BIOL 20400** (Human Anatomy and Physiology)
 - (4) **CHM 22400** (Introductory Quantitative Analysis)
 - (3) **HSCI 20100** (Principles of Public Health Science)
 - (4) **PHYS 22100** (General Physics)
-
- (15)

Junior Year

Fifth Semester

- (3) **CHM 33300** (Principles of Biochemistry)
 - (3) **HSCI 34500** (Introduction to Occupational and Environmental Health Sciences)
 - (3) **POL 22300** (Introduction to Environmental Policy)
 - (3) **STAT 30100** (Elementary Statistical Methods)
 - (5) Humanities electives
-
- (17)

Sixth Semester

- (4) **BIOL 22100** (Introduction to Microbiology)
 - (3) **NRES 29000** (Introduction to Environmental Science)
 - (3) English elective
 - (6) Electives
-
- (16)

Senior Year

Seventh Semester

- (3) **CE 35000** (Environmental Engineering)
 - (3) **HSCI 56000** (Toxicology)
 - (3) **OLS 25200** (Human Relations in Organizations) or **OLS 27400** (Applied Leadership)
 - (6) Electives
-
- (15)

Eighth Semester

- (3) **HK 44500** (Principles of Epidemiology)
 - (3) **POL 42500** (Environmental Law and Politics)
 - (3) Humanities elective
 - (6) Electives
-
- (15)

* Student must earn a grade of "C" or higher in HSCI 34500 for graduation with a major in environmental health sciences.

General Health Sciences

The Curriculum

The most outstanding feature of the general health sciences curriculum is its interdisciplinary nature. It is flexible and allows students to prepare for many kinds of careers related to human health. In fact, this is one of the greatest advantages of applying to the School of Health Sciences. Since all majors in health sciences have very similar course requirements during the first two years of study, students are easily able to change majors if their career goals and professional interests change.

The core curriculum provides a sound academic base in biology, chemistry, liberal arts, mathematics, and physics. The requirements for the major include a combination of advanced-level science courses with laboratories, foundation courses offered by the school, and courses specifically related to the postgraduate employment area.

Why Is there a General Health Sciences Undergraduate Major?

The school recognizes that the plans of study suggested for students majoring in medical laboratory science (medical technology), occupational health science (industrial hygiene), radiological health science (medical physics, health physics) or environmental health science may not meet the academic and career goals of some students. Additionally, entering freshmen may be undecided about career choices. To satisfy the individual requirements of these students, the school offers a general health sciences major. Advisors and faculty work closely with every student to design the major requirements for each career path. Students in this major are required to select an area of concentration with the assistance of the advising staff. The plans of study presented in this section include the base plan for general health sciences, plus the following general health sciences plans of study with a specific concentration:

- Pre-chiropractic concentration
- Pre-dentistry concentration
- Pre-medicine concentration
- Pre-occupational therapy concentration
- Pre-optometry concentration
- Pre-physical therapy concentration
- Pre-physician's assistant
- Public health

Which Students Should Major in General Health Sciences?

For distinguished students in health sciences, the major provides excellent preparation for entry into professional schools of dentistry, medicine, physician's assistant, chiropractic, or optometry. It is the major of choice for students planning to enter graduate programs in such allied health areas as occupational therapy or physical therapy. Students also may choose the general health sciences as preparation for entry into graduate programs in public health.

Specifically, with regard to medical school, there is no preferred or required background for pre-medicine. Medical schools seek to admit students with diverse backgrounds that include a strong foundation in the natural sciences (biology, chemistry, physics, and mathematics) together with solid coursework in the social sciences and humanities. The School of Health Sciences provides an excellent avenue toward a career in medicine, and the ability to major in one of the school's environmental, occupational, or radiological health science majors with a concentration in pre-medicine can provide the student with an added advantage in presenting a diverse background when applying to medical schools.

Since different medical school admission requirements may vary somewhat, it is essential that the student check the specific requirements of each school to which application is being considered. The School of Health Sciences advising staff will assist in preparing a suitable plan of study that will fulfill both the school's B.S. requirements and medical school admission requirements.

The Medical College Admission Test (MCAT) is a standardized test required by most medical schools for admission. This test is designed to assess understanding of science principles and basic analytical abilities. Generally, this test will be taken in the spring semester of the junior year. Your advisor will have information about the test.

Students already in one of the other health sciences majors may also choose to change to general health sciences with a concentration. They are encouraged to identify their career goals as early as possible and to select the appropriate interdisciplinary courses with the advice and approval of their academic advisors.

Is Academic Counseling Available?

For those general health sciences majors planning graduate or professional program education, the counseling staff provides extensive assistance and information pertaining to pro-

grams, prerequisites, application procedures, and preprofessional counseling.

All students in the general health sciences major must complete the minimum degree requirements of 128 credit hours presented in the general health sciences plan of study.

Plan of Study: General Health Sciences/Pre-Chiropractic Concentration**Freshman Year****First Semester**

- (4) **BIOL 11000** (Fundamentals of Biology)
 - (4) **CHM 11500** (General Chemistry) or
CHM 11100 (General Chemistry) — for Logan
Chiropractic
 - (4) **ENGL 10600** (First-Year Composition)
 - (2) **HSCI 10100** (Introduction to the Health Sciences
Professions)
 - (3) **MA 22300** (Introductory Analysis I)
-
- (17)

Second Semester

- (4) **BIOL 11100** (Fundamentals of Biology)
 - (4) **CHM 11600** (General Chemistry)
 - (3) **COM 11400** (Fundamentals of Speech
Communication)
 - (3) **MA 22400** (Introductory Analysis II)
 - (3) Elective
-
- (17)

Sophomore Year**Third Semester**

- (4) **BIOL 20300** (Human Anatomy and Physiology)
 - (3) **CHM 25500** (Organic Chemistry)
 - (1) **CHM 25501** (Organic Chemistry Laboratory)
 - (3) **HSCI 20200** (Essentials of Environmental,
Occupational, and Radiological Health Sciences)
 - (4) **PHYS 22000** (General Physics)
-
- (15)

Fourth Semester

- (4) **BIOL 20400** (Human Anatomy and Physiology)
 - (3) **CHM 25600** (Organic Chemistry)
 - (1) **CHM 25601** (Organic Chemistry Laboratory)
 - (3) **HSCI 20100** (Principles of Public Health
Science)
 - (4) **PHYS 22100** (General Physics)
-
- (15)

Junior Year**Fifth Semester**

- (3) **CHM 33300** (Principles of Biochemistry)
 - (3) **PSY 12000** (Elementary Psychology)
 - (3) **STAT 30100** (Elementary Statistical Methods)
 - (6) Electives
-
- (15)

Sixth Semester

- (3) **HK 46300** (Analysis of Human Motion)
 - (3) English elective
 - (3) Humanities elective
 - (7) Electives
-
- (16)

Senior Year**Seventh Semester**

- (3) **HK 36800** (Exercise Physiology I)
 - (3) **HSCI 58000** (Occupational Ergonomics)
 - (3) Humanities elective
 - (8) Elective
-
- (17)

Eighth Semester

- (1) **HSCI 13100** (Medical Terminology)
 - (3) **HSCI 25200** (Human Relations in Organizations)
or **OLS 274** (Applied Leadership)
 - (3) Humanities elective
 - (9) Electives
-
- (16)

Plan of Study: General Health Sciences/Pre-Dentistry Concentration

Freshman Year

First Semester

- (4) **BIOL 11000** (Fundamentals of Biology)
 - (4) **CHM 11500** (General Chemistry)
 - (4) **ENGL 10600** (First-Year Composition)
 - (2) **HSCI 10100** (Introduction to the Health Sciences Professions)
 - (3) **MA 22300** (Introductory Analysis I)
-
- (17)

Second Semester

- (4) **BIOL 11100** (Fundamentals of Biology)
 - (4) **CHM 11600** (General Chemistry)
 - (3) **COM 11400** (Fundamentals of Speech Communication)
 - (3) **MA 22400** (Introductory Analysis II)
 - (3) Elective
-
- (17)

Sophomore Year

Third Semester

- (4) **CHM 25700** (Organic Chemistry)
 - (1) **CHM 25701** (Organic Chemistry Laboratory)
 - (4) **PHYS 22000** (General Physics)
 - (3) **STAT 30100** (Elementary Statistical Methods) **or**
STAT 50300 (Statistical Methods for Biology)
 - (3) **HSCI 20200** (Essentials of Environmental, Occupational, and Radiological Health Sciences)
-
- (15)

Fourth Semester

- (3) **HSCI 20100** (Principles of Public Health Science)
 - (3) **OLS 25200** (Human Relations in Organizations) **or**
OLS 27400 (Applied Leadership)
 - (4) **PHYS 22100** (General Physics)
 - (3) Humanities elective
 - (3) Elective
-
- (16)

Junior Year

Fifth Semester

- (4) **BIOL 20300** (Human Anatomy and Physiology)
 - (3) **CHM 33300** (Principles of Biochemistry)
 - (3) **PSY 12000** (Elementary Psychology)
 - (3) Humanities elective
 - (3) Elective
-
- (16)

Sixth Semester

- (4) **BIOL 20400** (Human Anatomy and Physiology)
 - (3) English elective
 - (9) Electives
-
- (16)

Senior Year

Seventh Semester

- (4) **BIOL 221** (Introduction to Microbiology)
 - (3) **HSCI 580** (Occupational Ergonomics)
 - (9) Electives
-
- (16)

Eighth Semester

- (1) **HSCI 13100** (Medical Terminology)
 - (3) **NURS 21400** (Introduction to Pathophysiology)
 - (3) Humanities elective
 - (8) Electives
-
- (15)

Plan of Study: General Health Sciences/Pre-Medicine Concentration

Freshman Year

First Semester

- (4) **BIOL 11000** (Fundamentals of Biology)
 - (4) **CHM 11500** (General Chemistry)
 - (4) **ENGL 10600** (First-Year Composition)
 - (2) **HSCI 10100** (Introduction to Health Sciences Professions)
 - (3) **MA 22300** (Introductory Analysis I)
-
- (17)

Second Semester

- (4) **BIOL 11100** (Fundamentals of Biology)
 - (4) **CHM 11600** (General Chemistry)
 - (3) **COM 11400** (Fundamentals of Speech Communication)
 - (3) **MA 22400** (Introductory Analysis II)
 - (3) Elective
-
- (17)

Sophomore Year

Third Semester

- (3) **BIOL 23100** (Biology III: Cell Structure and Function)
 - (2) **BIOL 23200** (Laboratory in Biology III: Cell Structure and Function)
 - (3) **CHM 25500** (Organic Chemistry)
 - (3) **CHM 25501** (Organic Chemistry Laboratory)
 - (3) **HSCI 20200** (Essentials of Environmental, Occupational, and Radiological Health Sciences)
 - (4) **PHYS 22000** (General Physics)
-
- (16)

Fourth Semester

- (3) **BIOL 24100** (Biology IV: Genetics and Molecular Biology)
 - (2) **BIOL 24200** (Laboratory in Biology IV: Genetics and Molecular Biology)
 - (3) **CHM 25600** (Organic Chemistry)
 - (1) **CHM 25601** (Organic Chemistry Laboratory)
 - (3) **HSCI 20100** (Principles of Public Health Science)
 - (4) **PHYS 22100** (General Physics)
-
- (16)

Junior Year

Fifth Semester

- (4) **BIOL 20300** (Human Anatomy and Physiology)
 - (3) **CHM 33300** (Principles of Biochemistry) **or** **BCHM 56100** (General Biochemistry I)
 - (3) **STAT 30100** (Elementary Statistical Methods) **or** **STAT 50300** (Statistical Methods for Biology)
 - (3) English elective
 - (3) Elective
-
- (16)

Sixth Semester

- (4) **BIOL 20400** (Human Anatomy and Physiology)
 - (1) **HSCI 13100** (Medical Terminology)
 - (3) Humanities elective
 - (7) Electives
-
- (15)

Senior Year

Seventh Semester

- (4) **BIOL 22100** (Introduction to Microbiology)
 - (3) **HSCI 58000** (Occupational Ergonomics)
 - (3) Humanities elective
 - (6) Elective
-
- (16)

Eighth Semester

- (3) **OLS 25200** (Human Relations in Organizations) **or** **OLS 27400** (Applied Leadership)
 - (3) Humanities elective
 - (9) Electives
-
- (15)

Plan of Study: General Health Sciences/Pre-Occupational Therapy Concentration

Freshman Year*First Semester*

- (4) **BIOL 11000** (Fundamentals of Biology)
 - (4) **CHM 11500** (General Chemistry)
 - (4) **ENGL 10600** (First-Year Composition)
 - (2) **HSCI 10100** (Introduction to the Health Sciences Professions)
 - (3) **MA 22300** (Introductory Analysis I)
-
- (17)

Second Semester

- (4) **BIOL 11100** (Fundamentals of Biology)
 - (4) **CHM 11600** (General Chemistry)
 - (3) **COM 11400** (Fundamentals of Speech Communication)
 - (3) **MA 22400** (Introductory Analysis II)
 - (3) **PSY 12000** (Elementary Psychology)
-
- (17)

Sophomore Year*Third Semester*

- (4) **BIOL 20300** (Human Anatomy and Physiology)
 - (4) **CHM 25700** (Organic Chemistry)
 - (1) **CHM 25701** (Organic Chemistry Laboratory)
 - (3) **HSCI 20200** (Essentials of Environment, Occupational, and Radiological Health Sciences)
 - (4) **PHYS 22000** (General Physics)
-
- (16)

Fourth Semester

- (4) **BIOL 20400** (Human Anatomy and Physiology)
 - (3) **HSCI 20100** (Principles of Public Health Science)
 - (4) **PHYS 22100** (General Physics)
 - (3) **STAT 30100** (Elementary Statistical Methods)
 - (3) Elective
-
- (17)

Junior Year*Fifth Semester*

- (3) **CHM 33300** (Principles of Biochemistry)
 - (3) **HK 25800** (Foundations of Motor Skill Learning)
 - (3) **OLS 25200** (Human Relations in Organizations) or **OLS 27400** (Applied Leadership)
 - (3) Psychology elective
 - (3) Elective
-
- (15)

Sixth Semester

- (3) **CDFS 21000** (Introduction to Human Development)
 - (3) **HK 26100** (Applied Anatomy and Kinesiology)
 - (3) **PSY 35000** (Abnormal Psychology)
 - (3) **SOC 10000** (Introductory Sociology)
 - (3) Humanities elective
-
- (15)

Senior Year*Seventh Semester*

- (1) **HSCI 13100** (Medical Terminology)
 - (3) **HSCI 58000** (Occupational Ergonomics)
 - (3) Humanities elective
 - (9) Electives
-
- (16)

Eighth Semester

- (3) English elective
 - (3) Humanities elective
 - (9) Electives
-
- (15)

Plan of Study: General Health Sciences/Pre-Optometry Concentration

Freshman Year

First Semester

- (4) **BIOL 11000** (Fundamentals of Biology)
 - (4) **CHM 11500** (General Chemistry)
 - (4) **ENGL 10600** (First-Year Composition)
 - (2) **HSCI 10100** (Introduction to the Health Sciences Professions)
 - (3) **MA 22300** (Introductory Analysis I)
-
- (17)

Second Semester

- (4) **BIOL 11100** (Fundamentals of Biology)
 - (4) **CHM 11600** (General Chemistry)
 - (3) **COM 11400** (Fundamentals of Speech Communication)
 - (3) **MA 22400** (Introductory Analysis II)
 - (3) Elective
-
- (17)

Sophomore Year

Third Semester

- (3) **CHM 25500** (Organic Chemistry)
 - (1) **CHM 25501** (Organic Chemistry Laboratory)
 - (3) **HSCI 20200** (Essentials of Environmental, Occupational, and Radiological Health Sciences)
 - (4) **PHYS 22000** (General Physics)
 - (5) Electives
-
- (16)

Fourth Semester

- (3) **CHM 25600** (Organic Chemistry)
 - (1) **CHM 25601** (Organic Chemistry Laboratory)
 - (3) **HSCI 20100** (Principles of Public Health Science)
 - (4) **PHYS 22100** (General Physics)
 - (6) Electives
-
- (17)

Junior Year

Fifth Semester

- (4) **BIOL 20300** (Human Anatomy and Physiology)
 - (3) **CHM 33300** (Principles of Biochemistry)
 - (3) **OLS 25200** (Human Relations in Organizations) or **OLS 274** (Applied Leadership)
 - (3) **STAT 30100** (Elementary Statistical Methods) or **STAT 50300** (Statistical Methods for Biology)
 - (3) Elective
-
- (16)

Sixth Semester

- (4) **BIOL 20400** (Human Anatomy and Physiology)
 - (1) **HSCI 13100** (Medical Terminology)
 - (3) **PSY 12000** (Elementary Psychology)
 - (3) English elective
 - (3) Humanities elective
-
- (14)

Senior Year

Seventh Semester

- (4) **BIOL 22100** (Introduction to Microbiology)
 - (3) Humanities elective
 - (9) Electives
-
- (16)

Eighth Semester

- (3) Humanities elective
 - (12) Electives
-
- (15)

Plan of Study: General Health Sciences/Pre-Physical Therapy Concentration

Freshman Year*First Semester*

- (4) **BIOL 11000** (Fundamentals of Biology)
 - (4) **CHM 11500** (General Chemistry)
 - (4) **ENGL 10600** (First-Year Composition)
 - (2) **HSCI 10100** (Introduction to the Health Sciences Professions)
 - (3) **MA 22300** (Introductory Analysis I)
-
- (17)

Second Semester

- (4) **BIOL 11100** (Fundamentals of Biology)
 - (4) **CHM 11600** (General Chemistry)
 - (3) **COM 11400** (Fundamentals of Speech Communication)
 - (3) **MA 22400** (Introductory Analysis II)
 - (3) Elective
-
- (17)

Sophomore Year*Third Semester*

- (4) **BIOL 20300** (Human Anatomy and Physiology)
 - (4) **CHM 25700** (Organic Chemistry)
 - (1) **CHM 25701** (Organic Chemistry Laboratory)
 - (3) **HSCI 20200** (Essentials of Environmental, Occupational, and Radiological Health Sciences)
 - (4) **PHYS 22000** (General Physics)
-
- (16)

Fourth Semester

- (4) **BIOL 20400** (Human Anatomy and Physiology)
 - (3) **HSCI 20100** (Principles of Public Health Science)
 - (4) **PHYS 22100** (General Physics)
 - (3) **STAT 30100** (Elementary Statistical Methods)
 - (3) Elective
-
- (17)

Junior Year*Fifth Semester*

- (3) **CHM 33300** (Principles of Biochemistry)
 - (3) **PSY 12000** (Elementary Psychology)
 - (3) **SOC 10000** (Introductory Sociology)
 - (3) Health and kinesiology elective
 - (3) Elective
-
- (15)

Sixth Semester

- (3) **CDFS 21000** (Introduction to Human Development)
 - (3) **OLS 25200** (Human Relations in Organizations) or **OLS 27400** (Applied Leadership)
 - (3) **SOC 57300** (The Human Side of Medicine) or **SOC 57400** (The Social Organization of Health Care)
 - (3) English elective
 - (3) Elective
-
- (15)

Senior Year*Seventh Semester*

- (1) **HSCI 13100** (Medical Terminology)
 - (3) **HSCI 58000** (Occupational Ergonomics)
 - (3) Humanities elective
 - (9) Electives
-
- (16)

Eighth Semester

- (3) Humanities elective
 - (12) Electives
-
- (15)

Plan of Study: General Health Sciences/Pre-Physician's Assistant Concentration

Freshman Year

First Semester

- (4) **BIOL 11000** (Fundamentals of Biology)
 - (3) **CHM 11500** (General Chemistry)
 - (4) **ENGL 10600** (First-Year Composition)
 - (2) **HSCI 10100** (Introduction to the Health Sciences Professions)
 - (3) **MA 22300** (Introductory Analysis I)
-
- (17)

Second Semester

- (4) **BIOL 11100** (Fundamentals of Biology)
 - (4) **CHM 11600** (General Chemistry)
 - (3) **COM 11400** (Fundamentals of Speech Communication)
 - (3) **MA 22400** (Introductory Analysis II)
 - (3) Elective
-
- (17)

Sophomore Year

Third Semester

- (4) **BIOL 20300** (Human Anatomy and Physiology I)
 - (4) **CHM 25700** (Organic Chemistry)
 - (1) **CHM 25701** (Organic Chemistry Laboratory)
 - (3) **HSCI 20200** (Essentials of Environment, Occupational, and Radiological Health Sciences)
 - (4) **PHYS 22000** (General Physics I)
-
- (16)

Fourth Semester

- (4) **BIOL 20400** (Human Anatomy and Physiology)
 - (3) **HSCI 20100** (Principles of Public Health Science)
 - (4) **PHYS 22100** (General Physics II)
 - (3) **PSY 12000** (Elementary Psychology)
 - (3) **STAT 30100** (Elementary Statistical Methods)
-
- (17)

Junior Year

Fifth Semester

- (3) **CHM 33300** (Principles of Biochemistry)
 - (3) **OLS 25200** (Human Relations in Organizations) **or**
OLS 27400 (Applied Leadership)
 - (3) Humanities elective
 - (6) Electives
-
- (15)

Sixth Semester

- (4) **BIOL 22100** (Introduction to Microbiology)
 - (3) **CDFS 21000** (Introduction to Human Development)
 - (1) **HSCI 13100** (Medical Terminology)
 - (3) Humanities elective
 - (5) Electives
-
- (16)

Senior Year

Seventh Semester

- (3) **HSCI 58000** (Occupational Ergonomics)
 - (3) Humanities elective
 - (9) Electives
-
- (15)

Eighth Semester

- (3) English elective
 - (3) Psychology elective
 - (9) Electives
-
- (15)

Plan of Study: General Health Sciences/Public Health Concentration

Freshman Year**First Semester**

- (4) **BIOL 11000** (Fundamentals of Biology)
 - (4) **CHM 11500** (General Chemistry)
 - (4) **ENGL 10600** (First-Year Composition)
 - (2) **HSCI 10100** (Introduction to the Health Sciences Professions)
 - (3) **MA 22300** (Introductory Analysis I)
-
- (17)

Second Semester

- (4) **BIOL 11100** (Fundamentals of Biology)
 - (4) **CHM 11600** (General Chemistry)
 - (3) **COM 11400** (Fundamentals of Speech Communication)
 - (3) **MA 22400** (Introductory Analysis II)
 - (3) Elective
-
- (17)

Sophomore Year**Third Semester**

- (4) **BIOL 20300** (Human Anatomy and Physiology)
 - (4) **CHM 25700** (Organic Chemistry)
 - (1) **CHM 25701** (Organic Chemistry Laboratory)
 - (3) **HSCI 20200** (Essentials of Environmental, Occupational, and Radiological Health Sciences)
 - (4) **PHYS 22000** (General Physics)
-
- (16)

Fourth Semester

- (4) **BIOL 20400** (Human Anatomy and Physiology)
 - (3) **HSCI 20100** (Principles of Public Health Science)
 - (4) **PHYS 22100** (General Physics)
 - (3) **STAT 30100** (Introductory Quantitative Analysis)
 - (3) Humanities elective
-
- (17)

Junior Year**Fifth Semester**

- (3) **CHM 33300** (Principles of Biochemistry)
 - (3) **HSCI 34500** (Introduction to Occupational and Environmental Health Sciences)
 - (3) English elective
 - (6) Public health electives*
-
- (15)

Sixth Semester

- (3) **OLS 25200** (Human Relations in Organizations) or **OLS 27400** (Applied Leadership)
 - (3) **HK 44500** (Principles of Epidemiology)
 - (6) Public health electives*
 - (4) Elective
-
- (16)

Senior Year**Seventh Semester**

- (6) Public health electives*
 - (3) Humanities elective
 - (6) Electives
-
- (15)

Eighth Semester

- (6) Public health electives*
 - (3) Humanities elective
 - (6) Electives
-
- (15)

Medical Laboratory Sciences (Medical Technology)

About Medical Laboratory Sciences

Medical laboratory sciences or medical technology is a branch of medicine concerned with the performance of clinical tests that provide information to aid physicians in the diagnosis and treatment of disease and the maintenance of wellness.

What Do Medical Technologists Do?

Medical technologists perform laboratory procedures that reveal normal and abnormal conditions in the blood and other body fluids and tissues of medical patients. Medical technologists become adept in the operation and maintenance of sophisticated types of laboratory equipment, including chemical analyzers and electronic cell counters. Personal qualifications for a career in medical technology include interest and ability in the sciences, sound judgment, and good powers of observation.

The Medical Laboratory Sciences Curriculum

The medical technology curriculum is structured so that you study for three years at Purdue and one year at an affiliated school of medical technology. Known as the "3 + 1" program, this plan of study allows you to complete, by the end of your junior year, the coursework required for admission to a hospital-based training program during your senior year. The first three years provide a broadly based background in the sciences and mathematics. Major emphasis will be placed on biological sciences and chemistry. The fourth year consists of combined classroom and laboratory studies that provide experience in clinical chemistry, hematology, microbiology, serology, histology, urinalysis, parasitology, and instrumentation. Purdue's medical technology curriculum meets the requirements adopted by the American Medical Association Council on Medical Education and the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS).

Completion of prerequisite courses at Purdue does not guarantee admission to an affiliated hospital program. In general, acceptance is based on your academic performance, biographical information, letters of recommendation, motivation, aptitude, work experience, and your performance during admission interviews conducted by the respective hospital's admission staff.

You should consult with your academic advisor early in your academic program to plan for an alternative four-year major in case you are not accepted for admission to a hospital program at the end of your junior year. A student who is not accepted to a hospital school at the end of the junior year may be able to complete a bachelor's degree with a major in another area within the School of Health Sciences.

Some students complete a four-year B.S. program before entering the year of training at a school of medical technology. Successful completion of the "3 + 1" program meets the requirements for the B.S. degree from Purdue University. Upon completion of the medical technology program, you become eligible to take the national registry examination in medical technology for certification by the American Society of Clinical Pathologists (ASCP) and other certifying agencies. Medical technology also provides a good background for an M.S. degree in areas such as microbiology, clinical chemistry, pathology, immunology, physician's assistant, or forensic sciences.

Note: For students who decide on a career in medicine, the medical technology degree is excellent preparation. Specific pre-medical school requirements are discussed on page 26. The senior year spent in the hospital provides the student with an understanding of clinical diagnostic skills that is not available through any other degree program.

All students working toward the B.S. degree must complete the degree requirements of 128 credit hours indicated on page 23 and presented in the medical technology plan of study. The professional (senior) year of the medical technology program consists of 12 months of clinical training at an approved hospital program. Fourth-year clinical students will register as full-time Purdue students and upon successful completion of their clinical training will receive 32 credit hours through the School of Health Sciences.

Hospitals affiliated with Purdue's School of Health Sciences clinical program include:

Clarian Health/Methodist Hospital
350 W. 11th Street
Indianapolis, IN 46202

Good Samaritan Hospital
520 S. Seventh Street
Vincennes, IN 47591

Indiana University Medical Center
350 350 W. 11th Street
Indianapolis, IN 46202

NorthShore University Health System—
Evanston Hospital
2650 Ridge Avenue
Evanston, IL 60201

Parkview Memorial Hospital
2200 Randallia Drive
Fort Wayne, IN 46805

OSF Saint Francis Medical Center
530 NE Glen Oak Avenue
Peoria, IL 61637

St. Francis Hospital and Health Center
1600 Albany Street
Beech Grove, IN 46107

St. Margaret Mercy Health Care Center
5454 Hohman Avenue
Hammond, IN 46320

VA Hines Hospital
P.O. Box 5000-113-School
Hines, IL 60141-5113

Plan of Study: Medical Laboratory Sciences (Medical Technology)*

Freshman Year

First Semester

- (4) **BIOL 11000** (Fundamentals of Biology)
- (4) **CHM 11500** (General Chemistry)
- (4) **ENGL 10600** (First-Year Composition)
- (2) **HSCI 10100** (Introduction to the Health Science Professions)
- (3) **MA 22300** (Introductory Analysis I)

(17)

Second Semester

- (4) **BIOL 11100** (Fundamentals of Biology)
- (4) **CHM 11600** (General Chemistry)
- (3) **COM 11400** (Fundamentals of Speech Communication)
- (1) **HSCI 13000** (Introduction to Medical Technology)
- (3) **MA 22400** (Introductory Analysis II)

(15)

Sophomore Year

Third Semester

- (4) **BIOL 20300** (Human Anatomy and Physiology)
- (4) **CHM 25700** (Organic Chemistry)
- (1) **CHM 25701** (Organic Chemistry Laboratory)
- (3) **STAT 30100** (Elementary Statistical Methods)
- (3) **HSCI 20200** (Essentials of Environmental, Occupational, and Radiological Health Sciences)
- (3) Humanities elective

(18)

Fourth Semester

- (4) **BIOL 20400** (Human Anatomy and Physiology)
- (4) **BIOL 22100** (Introduction to Microbiology)
- (4) **CHM 22400** (Introductory Quantitative Analysis)
- (3) **HSCI 20100** (Principles of Public Health Science)
- (3) Humanities elective

(18)

Junior Year

Fifth Semester

- (3) **AGRY 32000** (Introduction to Genetics)
- (3) **HK 44000** (Human Diseases and Disorders)
- (1) **HSCI 13100** (Medical Terminology)
- (1) **HSCI 33000** (Aspects of the Medical Technology Laboratory)
- (2) **HSCI 33200** (Introduction to Hematology)
- (4) **PHYS 22000** (General Physics)

(14)

Sixth Semester

- (3) **CHM 33300** (Principles of Biochemistry)
- (2) **HSCI 33300** (Introduction to Immunology)
- (4) **PHYS 22100** (General Physics)
- (3) English elective
- (3) Humanities elective

(15)

* Note: Students in the Medical Technology 3+1 program must obtain a minimum science index of 2.50/4.00 and an accumulative index of 2.75/4.00 at the end of the spring semester prior to applying to the clinical year the subsequent fall semester (typically at the end of the sophomore year). Students not qualifying must elect to choose one of the other school programs and, if having met the grade stipulations at a later date, may still apply for the clinical year.

Senior Year (Typical clinical year plan of study)

Seventh Semester

- (4) **HSCI 45200** (Clinical Chemistry)
- (2) **HSCI 45300** (Clinical Hematology)
- (2) **HSCI 45400** (Clinical Immunohematology)
- (4) **HSCI 45500** (Clinical Microbiology)
- (2) **HSCI 45800** (Clinical Serology)
- (1) **HSCI 46000** (Clinical Urinalysis)
- (1) **HSCI 49000** (Special Topics)

(16)

Eighth Semester

- (4) **HSCI 45200** (Clinical Chemistry)
- (2) **HSCI 45300** (Clinical Hematology)
- (2) **HSCI 45400** (Clinical Immunohematology)
- (4) **HSCI 45500** (Clinical Microbiology)
- (1) **HSCI 45800** (Clinical Serology)
- (1) **HSCI 46000** (Clinical Urinalysis)
- (1) **HSCI 46500** (Introduction to Laboratory Education and Management)
- (1) **HSCI 49000** (Special Topics)

(16)

The hospital program consists of a 52-week, 40-hours-per-week intensive curriculum that includes lectures, independent study, and supervised clinical laboratory experience. Students rotate through clinical departments. In general,

they receive classroom and clinical experience in chemistry, microbiology, hematology, urinalysis, histology, and blood banking. Some programs also include mycology, parasitology, serology, nuclear medicine, cytology, and virology.

Occupational Health Science (Industrial Hygiene)

About Occupational Health Science

Occupational health science is the broad term that describes the profession of industrial hygiene. Industrial hygiene is the science and art of identifying, evaluating, and controlling workplace hazards. Such hazards may be due to human exposure to chemical, physical, and biological agents as well as to faulty work practices related to ergonomic issues. Millions of injuries and thousands of deaths every year are related to these hazards in the workplace. In fact, it is estimated that more people in the United States alone die due to their jobs each year than the total number of U.S. soldiers killed in the entire Vietnam War. This is the second-leading non-disease cause of death in the U.S.

In addition to safeguarding the workplace, industrial hygienists apply their skills to community issues such as hazardous waste, indoor air quality, and air and noise pollution. In the past three decades, activity and employment in the field of industrial hygiene have greatly expanded due to the passage of landmark federal legislation such as the Occupational Safety and Health Act (OSHA), the Toxic Substances Control Act (TSCA), and the Superfund Amendment and Reauthorization Act (SARA), along with an increasing public awareness of the need for a clean and safe environment, both in the workplace and in the surrounding community.

Purdue's industrial hygiene programs (undergraduate and M.S. level) have been accredited by the Accreditation Board for Engineering and Technology (ABET). In fact, Purdue's B.S. program was the first undergraduate industrial hygiene program in the United States to be accredited, and Purdue is still the only university in the country to have both an undergraduate and a graduate accredited program in industrial hygiene.

What Do Occupational Health Science/Industrial Hygiene Graduates Do?

The B.S. degree with a major in occupational health prepares the student for entry-level positions in industry, medical centers, government, consulting, and academia. Currently, more than 12,000 industrial hygienists nationwide work toward promoting health in the work and community environments. To investigate health hazards, industrial hygienists combine technical skills with "people" skills – basically, they are "disease detectives of the workplace." As the number of potentially hazardous chemicals and work situations increase and the world's global economy continues to expand, more people will be needed in this exciting and rewarding profession. Industrial hygienists are truly "technology enablers." Without their expertise, most products could not be made safely or economically.

Industrial hygienists typically advance in their careers by taking on more responsibilities such as environmental issues, safety issues, wellness and health insurance, workers' compensation, homeland security issues, and quality control/quality assurance.

How Do Purdue Graduates Attain Professional Competency?

Although the basic four-year degree qualifies the graduate for many entry-level positions, additional coursework at least through the M.S. degree is highly recommended to reach full professional status.

Although not required, an optional summer industrial hygiene internship is highly recommended as a way for the student to learn firsthand from practical, real-world experience. Faculty and staff provide assistance and direction to the student in arranging an internship, and an elective internship course can be taken the semester following such an experience.

Professional competence in the field is acknowledged with certification by the American Board of Industrial Hygiene. The title

“certified industrial hygienist” requires passing a rigorous written examination and four years of work experience that can include credit for education at an ABET-accredited university (one-half year for a B.S., one year for an M.S., and two years for a Ph.D.).

Plans of Study

- Occupational health science
- Occupational health science/pre-medicine concentration

The pre-medicine track is recommended for students who plan to apply to medical school.

Some students may find that their career goals can be best met by pursuing both a major in occupational as well as in either radiological or environmental health science. To graduate with two majors, the student must satisfy the graduation requirements for both of these majors.

All students working toward the bachelor's degree must complete the degree requirements indicated on page 23 and presented in one of the following plans of study. Note that the pre-medicine plan of study requires 130 credit hours.

Plan of Study: Occupational Health Science (Industrial Hygiene)*

Freshman Year

First Semester

- (4) **BIOL 11000** (Fundamentals of Biology)
- (4) **CHM 11500** (General Chemistry)
- (4) **ENGL 10600** (First-Year Composition)
- (2) **HSCI 10100** (Introduction to the Health Science Professions)
- (3) **MA 22300** (Introductory Analysis I)

 (17)

Second Semester

- (4) **BIOL 11100** (Fundamentals of Biology)
- (4) **CHM 11600** (General Chemistry)
- (3) **COM 11400** (Fundamentals of Speech Communication)
- (3) **MA 22400** (Introductory Analysis II)
- (3) **OLS 25200** (Human Relations in Organizations) or **OLS 27400** (Applied Leadership)

 (17)

Sophomore Year

Third Semester

- (4) **BIOL 20300** (Human Anatomy and Physiology)
- (4) **CHM 25700** (Organic Chemistry)
- (1) **CHM 25701** (Organic Chemistry Laboratory)
- (3) **HSCI 20200** (Essentials of Environmental, Occupational, and Radiological Health Sciences)
- (4) **PHYS 22000** (General Physics)

 (16)

Fourth Semester

- (4) **BIOL 20400** (Human Anatomy and Physiology)
- (4) **CHM 22400** (Introductory Quantitative Analysis)
- (3) **HSCI 20100** (Principles of Public Health Science)
- (3) **IT 35100** (Advanced Industrial Safety and Health Management)
- (4) **PHYS 22100** (General Physics)

 (18)

Junior Year

Fifth Semester

- (3) **CHM 33300** (Principles of Biochemistry)
- (3) **HSCI 34500** (Introduction to Occupational and Environmental Health Sciences)
- (3) **POL 22300** (Introduction to Environmental Policy)
- (3) **STAT 30100** (Elementary Statistical Methods)
- (3) Elective

 (15)

Sixth Semester

- (4) **HSCI 34600** (Industrial Hygiene Engineering Control)
- (3) **HSCI 34800** (Industrial Hygiene Instrumentation Techniques)
- (3) English elective
- (6) Electives

 (16)

Senior Year

Seventh Semester

- (3) **HK 44500** (Principles of Epidemiology)
- (3) **HSCI 44600** (Applied Industrial Hygiene)
- (3) **HSCI 56000** (Toxicology)
- (3) **HSCI 58000** (Occupational Ergonomics)
- (3) Humanities elective

 (15)

Eighth Semester

- (3) **CE 35000** (Environmental Engineering)
- (6) Humanities electives
- (5) Electives†

 (14)

* Student must earn a grade of "C" or higher in HSCI 34500, 34600, 34800, 44600, and 58000 for graduation with a major in occupational health science.

† An internship is strongly recommended, but it is not required. HSCI 44500 can be taken as an elective if the student has or will have an acceptable work experience.

Plan of Study: Occupational Health Science/Pre-Medicine Concentration*

Freshman Year

First Semester

- (4) **BIOL 11000** (Fundamentals of Biology)
- (4) **CHM 11500** (General Chemistry)
- (4) **ENGL 10600** (First-Year Composition)
- (2) **HSCI 10100** (Introduction to the Health Sciences Professions)
- (3) **MA 22300** (Introductory Analysis I)

(17)

Second Semester

- (4) **BIOL 11100** (Fundamentals of Biology)
- (4) **CHM 11600** (General Chemistry)
- (3) **COM 11400** (Fundamentals of Speech Communication)
- (3) **MA 22400** (Introductory Analysis II)
- (3) **OLS 25200** (Human Relations in Organizations) or **OLS 27400** (Applied Leadership)

(17)

Sophomore Year

Third Semester

- (3) **BIOL 23100** (Biology III: Cell Structure and Function)
- (2) **BIOL 23200** (Laboratory in Biology III: Cell Structure and Function)
- (3) **CHM 25500** (Organic Chemistry)
- (1) **CHM 25501** (Organic Chemistry Laboratory)
- (3) **HSCI 20200** (Essentials of Environmental, Occupational, and Radiological Health Sciences)
- (4) **PHYS 22000** (General Physics)

(16)

Fourth Semester

- (3) **BIOL 24100** (Biology IV: Genetics and Molecular Biology)
- (3) **CHM 25600** (Organic Chemistry)
- (1) **CHM 25601** (Organic Chemistry Laboratory)
- (3) **HSCI 20100** (Principles of Public Health Science)
- (4) **PHYS 22100** (General Physics)
- (3) Humanities elective

(17)

Junior Year

Fifth Semester

- (4) **BIOL 20300** (Human Anatomy and Physiology)
- (3) **CHM 33300** (Principles of Biochemistry) or **BCHM 56100** (General Biochemistry I)
- (3) **HSCI 34500** (Introduction to Occupation and Environmental Health Sciences)
- (3) **IT 35100** (Advanced Industrial Safety and Health Management)
- (3) **STAT 30100** (Elementary Statistical Methods) or **STAT 50300** (Statistical Methods for Biology)

(16)

Sixth Semester

- (4) **BIOL 20400** (Human Anatomy and Physiology)
- (4) **CHM 22400** (Introductory Quantitative Analysis)
- (4) **HSCI 34600** (Industrial Hygiene Engineering Control)
- (3) **HSCI 34800** (Industrial Hygiene Instrumentation Techniques)

(15)

Senior Year

Seventh Semester

- (1) **HSCI 13100** (Medical Terminology)
- (3) **HK 44500** (Principles of Epidemiology)
- (3) **HSCI 44600** (Applied Industrial Hygiene)
- (3) **HSCI 56000** (Toxicology)
- (3) **HSCI 58000** (Occupational Ergonomics)
- (3) **POL 22300** (Introduction to Environmental Policy)

(16)

Eighth Semester

- (4) **BIOL 22100** (Introduction to Microbiology)
- (3) **CE 35000** (Environmental Engineering)
- (3) English elective
- (6) Humanities electives†

(16)

* Student must earn a grade of "C" or higher in HSCI 34500, 34600, 34800, 44600, and 58000 for graduation with a major in occupational health science.

† An internship is strongly recommended, but it is not required. HSCI 44500 can be taken as an elective if the student has or will have an acceptable work experience.

Radiological Health Science (Health Physics)

About Radiological Health Science

Radiological health science (RHS) is the field of study concerned with science and engineering practices that form the basis for the efficacious and safe use of radiation in industry, research, and medicine. The B.S. degree with a major in radiological health prepares the student for entry-level positions in industry, medical centers, government, and education. The pre-medicine track is recommended for students who plan to apply to medical school, or for students who intend to pursue M.S. or Ph.D. studies in medical physics, health physics, or other radiation sciences.

All students working toward the bachelor's degree must complete the degree requirements of a minimum of 128 credit hours indicated on page 23 and presented in one of the following plans of study.

Plans of Study

Health Physics

The RHS plan of study with a concentration in health physics is designed to prepare students for entry-level positions in radiation safety as well as graduate studies in health physics and closely allied fields, such as nuclear engineering. In addition to a core science curriculum and introductory and fundamental radiological science courses, students are able to tailor their plan of study to their areas of interest through the selection of electives in physics, mathematics, statistics, chemistry, biology, and the radiological sciences. Students who successfully complete the health physics plan of study and meet the admission criteria of the Graduate School (see www.gradschool.purdue.edu) are eligible to apply for admission into the School of Health Science's accelerated M.S. program or the Ph.D.

in Health Physics. Acceptance into the health physics graduate program is competitive.

Pre-Medicine Concentration

The RHS plan of study with a pre-medicine concentration is designed to prepare students for a post-graduate (M.S. or Ph.D.) degree in medical physics and radiation biology. The RHS pre-medicine plan of study is also an excellent choice for students aiming to enter medical school and who are interested in medical specialty areas such as radiation oncology, nuclear medicine, and radiology. In addition to a core science curriculum and introductory and fundamental radiological science courses, students are able to tailor their plan of study to their areas of interest through the selection of approved electives in physics, mathematics, statistics, chemistry, biology, and the radiological sciences. Students who successfully complete the RHS plan of study with a pre-medicine concentration and meet the admission criteria are eligible to apply for admission into the School of Health Science's accelerated Master of Science (M.S.) or Ph.D. in Medical Physics. Acceptance into the +1 (M.S.) year or Ph.D. program in Medical Physics, as well as medical school, is competitive.

Students interested in this curriculum should discuss this with their counselor prior to registering for the freshman year fall semester since higher-level science and math courses are included in this curriculum.

Students interested in the accelerated M.S. and Ph.D. programs in health physics and medical physics can find additional information about the graduate requirements of these programs on the school's Web site: <http://healthsciences.purdue.edu>.

Plan of Study: Radiological Health Science/Health Physics*

Freshman Year**First Semester**

- (4) **BIOL 11000** (Fundamentals of Biology)
 - (4) **CHM 11500** (General Chemistry)
 - (3) **COM 11400** (Fundamentals of Speech Communication)
 - (2) **HSCI 10100** (Introduction to the Health Science Professions)
 - (5) **MA 16100** (Plane Analytic Geometry and Calculus I) **or**
 - (4) **MA 16500** (Analytic Geometry and Calculus I)
-
- (17–18)

Second Semester

- (4) **BIOL 11100** (Fundamentals of Biology)
 - (4) **CHM 11600** (General Chemistry)
 - (4) **ENGL 10600** (First-Year Composition)
 - (5) **MA 16200** (Plane Analytic Geometry and Calculus II) **or**
 - (4) **MA 16600** (Analytic Geometry and Calculus)
-
- (16–17)

Sophomore Year**Third Semester**

- (4) **BIOL 20300** (Human Anatomy and Physiology)
 - (3) **HSCI 20200** (Essentials of Environmental, Occupational, and Radiological Health Sciences)
 - (4) **MA 26100** (Multivariate Calculus)
 - (4) **PHYS 17200** (Modern Mechanics)
-
- (15)

Fourth Semester

- (4) **BIOL 20400** (Human Anatomy and Physiology)
 - (3) **NUCL 20000** (Introduction to Nuclear Engineering)
 - (2) **NUCL 20500** (Nuclear Engineering Undergraduate Laboratory I)
 - (4) General science **or** mathematical/computational science elective
 - (3) Humanities elective
-
- (16)

Junior Year**Fifth Semester**

- (3) **HSCI 31200** (Radiation Science Fundamentals)
 - (2) **NUCL 30500** (Nuclear Engineering Undergraduate Laboratory II)
 - (3) **PHYS 24100** (Electricity and Optics)
 - (3) **STAT 30100** (Elementary Statistical Methods)
 - (3) Humanities elective
 - (3) Mathematical and computational science elective
-
- (17)

Sixth Semester

- (2) **HSCI 31300** (Principles of Radiation Detection and Measurement)
 - (2) **HSCI 51400** (Radiation Instrumentation Laboratory)
 - (3) **HSCI 54000** (Radiation Biology)
 - (3) **PHYS 34200** (Modern Physics)
 - (3) English elective
 - (3) Humanities elective
-
- (16)

Senior Year**Seventh Semester**

- (3) **HSCI 52600** (Principles of Health Physics and Dosimetry)
 - (3) **HSCI 53400** (Applied Health Physics)
 - (2) **HSCI 57400** (Medical Health Physics)
 - (1) **PHYS 34000** (Modern Physics Laboratory)
 - (3) Health physics elective
 - (4) Elective
-
- (16)

Eighth Semester

- (3) Elective
 - (6) Health physics electives
 - (3) General science **or** radiological health science elective
 - (3) Mathematical and computational science elective
-
- (15)

* Student must earn a grade of "C" or higher in HSCI 31200, 31300, 51400, 52600, 53400, 54000, and 57400 for graduation with a major in radiological health science.

Plan of Study: Radiological Health Science/Pre-Medicine Concentration*

Freshman Year

First Semester

- (4) **BIOL 11000** (Fundamentals of Biology)
- (4) **CHM 11500** (General Chemistry)
- (3) **COM 11400** (Fundamentals of Speech Communication)
- (2) **HSCI 10100** (Introduction to the Health Sciences Professions)
- (5) **MA 16100** (Plane Analytic Geometry and Calculus I) **or**
- (4) **MA 16500** (Analytic Geometry and Calculus I)

(17–18)

Second Semester

- (4) **BIOL 11100** (Fundamentals of Biology)
- (4) **CHM 11600** (General Chemistry)
- (4) **ENGL 10600** (First-Year Composition)
- (5) **MA 16200** (Plane Analytic Geometry and Calculus II) **or**
- (4) **MA 16600** (Analytic Geometry and Calculus II)

(16–17)

Sophomore Year

Third Semester

- (3) **CHM 25500** (Organic Chemistry)
- (1) **CHM 25501** (Organic Chemistry Laboratory)
- (3) **HSCI 20200** (Essentials of Environmental, Occupational, and Radiological Health)
- (4) **MA 26100** (Multivariate Calculus)
- (4) **PHYS 17200** (Modern Physics)

(15)

Fourth Semester

- (3) **CHM 25600** (Organic Chemistry)
- (1) **CHM 25601** (Organic Chemistry Laboratory)
- (3) **PHYS 24100** (Electricity and Optics)
- (4) General science **or** mathematical/computational science elective
- (3) Humanities elective

(14)

Junior Year

Fifth Semester

- (4) **BIOL 20300** (Human Anatomy and Physiology)
- (3) **CHM 33300** (Principles of Biochemistry)
- (3) **HSCI 31200** (Radiation Science Fundamentals)
- (3) **STAT 30100** (Elementary Statistical Methods)
- (3) Mathematical and computational science elective

(16)

Sixth Semester

- (4) **BIOL 20400** (Human Anatomy and Physiology)
- (2) **HSCI 31300** (Principles of Radiation Detection and Measurement)
- (2) **HSCI 51400** (Radiation Instrumentation Laboratory)
- (3) **HSCI 54000** (Radiation Biology)
- (3) **PHYS 34200** (Modern Physics)
- (3) Radiological Health Science elective

(17)

Senior Year

Seventh Semester

- (2) **HSCI 57400** (Medical Health Physics)
- (3) **HSCI 58000** (Occupational Ergonomics)
- (1) **PHYS 34000** (Modern Physics Laboratory)
- (3) Humanities elective
- (3) Mathematical and computational science elective
- (3) Radiological health science elective

(15)

Eighth Semester

- (3) **HSCI 57000** (Introduction to Medical Diagnostic Imaging)
- (3) **HSCI 57200** (Radiation Oncology Physics)
- (3) English elective
- (3) Humanities elective
- (3) Radiological health science elective
- (3) Elective

(18)

* Student must earn a grade of "C" or higher in HSCI 31200, 31300, 51400, 54000, 57000, 57200, and 57400 for graduation with a major in radiological health science.

Graduate Study

The School of Health Sciences, under the direction of the Graduate School, offers graduate study and research leading to the M.S. and Ph.D. degrees. Major areas of study are:

- Radiological health science
 - health physics
 - medical physics
 - radiation biology
- Occupational and environmental health sciences
 - industrial hygiene
 - ergonomics
 - environmental health
- Toxicology

Graduate students can major in one specific area, or they can elect an interdisciplinary course of study between major areas within the School of Health Sciences or other disciplines at Purdue University. All graduate students complete a research project under the guidance of the faculty.

Career paths and opportunities for **occupational and environmental health sciences and health physics** professionals were discussed in a previous section of this catalog. Graduate-level training in these areas prepares students for advanced careers in practice and research. This may include responsibilities for assessing and controlling workplace hazards, directing research investigations, administering programs, and developing policies and regulations.

Medical physics is an applied branch of physics concerned with the applications of physical energy to the diagnosis and treatment of disease. It is closely allied with medical electronics, bioengineering, and health physics (radiation protection and control). Medical physicists are involved in three main areas of activity: clinical service and consultation, research, and teaching.

- **Clinical service.** Many medical physicists are involved with the areas of diagnosis and treatment of disease. Typically this includes consulting with physicians on such matters as planning of radiation treatments for cancer patients, collaborating with physicians on procedures utilizing radionuclides and radiation for imaging internal organs, or designing radiation installations.

- **Research.** Medical physicists often play a leading role in medical research on cancer, heart

disease, and other disorders. This may involve working on radiation problems such as the basic mechanisms of biological change following irradiation, or the development of new techniques for the precise measurement of radiation. They may also be involved in developing improved techniques for imaging organs, including applications of digital computers to medical diagnosis.

- **Teaching.** Many medical physicists are involved in teaching and training activities to prepare future medical physicists, resident physicians, medical students, and medical technologists in appropriate aspects of the use of radiation in diagnosis and therapy.

Toxicology is the basic science of poisons. As such, it focuses on understanding the adverse effects of chemicals on living organisms by applying knowledge and techniques from biochemistry, chemistry, physiology, molecular biology, and other disciplines. Toxicologists are concerned with the hazards associated with chemicals encountered through occupational and environmental exposure, including their occurrence as air and water pollutants. In modern toxicology, emphasis is placed on understanding the mechanisms involved in the actions of toxicants in order to determine the relevance to human health. Upon completion of graduate education, toxicologists assume a variety of roles in academia, industry, and government, including teaching, research, safety evaluations, and risk analysis.

The Ph.D. degree is offered in all major areas within the School of Health Sciences.

See the Web site at <http://healthsciences.purdue.edu> for the curricular requirements for the individual programs available from the School of Health Sciences.

Graduate Assistantships and Fellowships

Several half-time graduate assistantships, with stipends comparable to other graduate programs, are available to graduate students in health sciences. Assistantships include the remission of nonresident tuition and certain fees.

Graduate teaching assistants are required to help in the laboratory and the classroom. How-

ever, the amount of service required does not exceed 20 hours a week, so an assistant can carry approximately two-thirds of the normal graduate program course load.

Through the Purdue Research Foundation, a limited number of research assistantships in health sciences have been made available for intensive, scientific training of capable, creative graduate students in health sciences. Appointments are made on an annual basis and are subject to renewal. Stipends vary, and all awards include remission of nonresident tuition and certain fees. For further information about health

sciences research assistantships, write to the head of the School of Health Sciences.

Other fellowships are available from time to time from agencies such as the National Institute for Occupational Safety and Health, the National Science Foundation, the Environmental Protection Agency, the Department of Energy, the National Institutes of Health, and certain industries and private foundations.

Application forms and further information about graduate study at Purdue are available from the Graduate School's Web site at www.gradschool.purdue.edu.

Information about Courses

Official Purdue University course information is available on the Web at www.courses.purdue.edu. Click on the "Search by term" link at the top of the page.

The Official Purdue University Course Repository is maintained by the Office of the Registrar and is updated instantaneously. It contains a multitude of information, including course descriptions and requisites for retired, current, and future courses offered at the West Lafayette campus as well as at Purdue Calumet,

Purdue North Central, Indiana University-Purdue University Fort Wayne, Indiana University-Purdue University Indianapolis, and the College of Technology locations around the state.

The course information available online is organized by term, subject area, and course number, which enables you to tailor your search. You also may want to consult your academic advisor if you have questions about the courses required for your plan of study.

School of Health Sciences Administration, Faculty, and Staff

Administration

Craig Svensson, Ph.D., Dean of the College of Pharmacy, Nursing, and Health Sciences

Wei Zheng, Ph.D., Head of the School of Health Sciences

Faculty

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Instructional Units

Agriculture

Agricultural and Biological Engineering
Agricultural Economics
Agronomy
Animal Sciences
Biochemistry
Botany and Plant Pathology
Entomology
Food Science
Forestry and Natural Resources
Horticulture and Landscape Architecture
Youth Development and Agricultural Education

Consumer and Family Sciences

Child Development and Family Studies
Consumer Sciences and Retailing
Foods and Nutrition
Hospitality and Tourism Management

Education

Curriculum and Instruction
Educational Studies

Engineering

Aeronautics and Astronautics
Agricultural and Biological Engineering
Biomedical Engineering
Chemical Engineering
Civil Engineering
Construction Engineering and Management
Electrical and Computer Engineering
Engineering Education
Industrial Engineering
Interdisciplinary Engineering
Materials Engineering
Mechanical Engineering
Nuclear Engineering

Health Sciences

Liberal Arts

Aerospace Studies
Anthropology
Bands
Communication
English
Foreign Languages and Literatures
General Studies
Health and Kinesiology
History

Interdisciplinary Studies

Military Science
Naval Science
Philosophy
Political Science
Psychological Sciences
Sociology
Speech, Language, and Hearing Sciences
Visual and Performing Arts

Management

Economics
Management

Nursing

Pharmacy and Pharmaceutical Sciences

Industrial and Physical Pharmacy
Medicinal Chemistry and Molecular
Pharmacology
Pharmacy Practice

Science

Biological Sciences
Chemistry
Computer Science
Earth and Atmospheric Sciences
Mathematics
Physics
Statistics

Technology

Aviation Technology
Building Construction Management
Technology
Computer Graphics Technology
Computer and Information Technology
Electrical and Computer Engineering
Technology
Industrial Technology
Manufacturing Engineering Technology
Mechanical Engineering Technology
Organizational Leadership and Supervision

Veterinary Medicine

Basic Medical Sciences
Comparative Pathobiology
Veterinary Clinical Sciences
Veterinary Medicine

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