

COLLEGE OF

TECHNOLOGY

2010 through 2011

CATALOG



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UNIVERSITY

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College of Technology

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)
- 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 internships and Professional Practice (co-op) 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

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
- 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.agriculture.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 within 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 clinical laboratory science (medical technology), environmental health science, general health sciences, 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 interdisciplinary science programs prepare students for

immediate careers or advanced study. Premedical, pre-dental, and pre-veterinary options; a Professional Practice (co-op) education 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.

College of Technology

Mission, Goals, and Programs

The College of Technology educates the future managers and leaders of technologies; accelerates technology transfer to business, industry, government, and education; and develops innovations in the application of emerging technology through learning, engagement, and discovery.

In fulfilling its mission, the College of Technology strives to:

- Provide a student-centered learning environment maintained to ensure that graduates are accomplished in the technical expertise, leadership, and collaboration skills necessary to excel in the global technological economy.
- Provide extended formal and continuing education and technology transfer throughout the state, region, and nation to enhance the economic competitiveness and welfare of business, industry, government, and education.
- Search for new and expanded uses of technologies; improve existing technologies; create new technologies; investigate the factors that shape technology innovation and integration and study their impacts.
- Disseminate the results of inquiry and scholarship generated by faculty and students with the goal of improving the expertise of the technological workforce.

Academic programs are offered as follows:

1. Associate of Science (A.S.)

- Aviation Technology (Administration, Flight, and Aeronautical)
- Building Construction Management Technology
- Computer Graphics Technology
- Electrical Engineering Technology
- Industrial Technology
- Manufacturing Engineering Technology
- Mechanical Engineering Technology
- Organizational Leadership and Supervision

2. Bachelor of Science (B.S.)

- Aviation Technology (Administration, Flight, and Aeronautical)
- Building Construction Management Technology
- Computer and Information Technology
- Computer Graphics Technology
- Electrical Engineering Technology
- Industrial Distribution
- Industrial Technology
- Mechanical Engineering Technology
- Manufacturing Engineering Technology
- Organizational Leadership and Supervision

3. Bachelor of Science in Technology Education (B.S.)

- Engineering/Technology Teacher Education

4. Master of Science (M.S.)

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

5. Doctorate (Ph.D.)

College of Technology Statewide

The Purdue College of Technology Statewide is a unique partnership between education and business, industry, and government. Statewide Technology was created to extend Purdue's existing technology programs across the state to meet Indiana's need for educated technologists, technicians, and innovators in communities where the demand for highly skilled workers with problem-solving skills is high. Statewide Technology also provides a mechanism for

training presently employed people in state-of-the-industry technology, as well as meeting the needs of recent high school graduates who, for whatever reason, don't enroll at West Lafayette or a regional campus. In cooperation with community, educational, and business/industrial leaders, Purdue is able to identify local educational needs and develop programs to meet these needs virtually anywhere in the state.

Through cooperative efforts, arrangements are made with local industries and other public and independent institutions to provide support courses, services, and facilities. Local business and industrial representatives are involved in the planning, development, and implementation of the program through business and industrial committees. All technical courses are taught by Purdue faculty.

Statewide Technology represents a direct academic and administrative extension of the College of Technology at the West Lafayette campus. Although usually located on the campus of another university, academic, administrative, and financial control rests with Purdue.

A technology advisory council, representative of key executives of business, industry, government, and education, counsels on the development of the overall program. This partnership assists in the identification of general needs.

Registration. Admitted students are enrolled at each Purdue location.

Fees. Fees are charged per credit hour and vary by location. Fees are either set to match West Lafayette fees or those of the host institution at the location.

Degrees. All course credits apply toward a Purdue University degree and are transferable to other Purdue locations.

Financial Aid. Financial aid information and applications are available at each Purdue location. All financial aid is handled through the West Lafayette campus Division of Financial Aid. See the "Financial Aid" section of this bulletin.

Counseling Services. Student counseling services are available at each Purdue program location.

Program Design. The programs are designed to prepare technologists for highly technical positions. All courses are offered to accommodate the work schedules of adult students as well as to serve the needs of full-time students. Both

part-time and full-time students are encouraged to enroll. All programs are of the highest quality and are operated in close cooperation with local business and industrial advisory committees. All programs follow the curricula offered at West Lafayette. Technical courses are similar to those on the West Lafayette campus, follow the same learning outcomes, and are taught by Purdue faculty members. See specific plans of study in this bulletin.

The Statewide Technology program includes locations in Anderson, Columbus, Greensburg, Indianapolis, Kokomo, Lafayette, New Albany, Richmond, South Bend, and Vincennes. Other communities in Indiana may be served as needs arise.

Program Listings and Locations

Programs at Statewide Technology locations are subject to change. Contact the specific location for current programs of study.

Anderson. Purdue University College of Technology at Anderson, (765) 648-2920; 2705 Enterprise Drive, Anderson, Indiana 46013. Location: Anderson University. www.tech.purdue.edu/anderson

- Computer and Information Technology — A.S.
- Electrical Engineering Technology
- Industrial Technology — Certificate and B.S.
- Mechanical Engineering Technology — A.S.
- Organizational Leadership and Supervision — A.S. and B.S.

Columbus. Purdue University College of Technology at Columbus, (812) 314-8527; 4555 Central Avenue, Columbus, Indiana 47203. Location: Indiana University-Purdue University Columbus. www.tech.purdue.edu/columbus

- Computer and Information Technology — A.S. and B.S.
- Industrial Technology — Certificate and B.S.
- Mechanical Engineering Technology — A.S. and B.S.
- Organizational Leadership and Supervision — Certificate, A.S., and B.S.

Greensburg. Purdue University College of Technology at Greensburg, (812) 622-8686; 422 E. Central Avenue, Greensburg, IN 47240-1834. Location: Greensburg Community Learning Center. www.tech.purdue.edu/greensburg

- Industrial Technology — B.S.

- Organizational Leadership and Supervision — Certificate, A.S., and B.S.

Indianapolis. Purdue University College of Technology at Indianapolis, (317) 484-1824; 2175 S. Hoffman Road, Indianapolis, IN 46241-3650. Location: Aviation Technology Center. www.tech.purdue.edu/indy

- Airline Management — Certificate
- Airport Management — Certificate
- Aviation Management — A.S. and B.S.
- Industrial Technology — Certificate

Kokomo. Purdue University College of Technology at Kokomo, (765) 455-9375; 2300 S. Washington Street, Kokomo, Indiana 46904-9003. Location: Indiana University at Kokomo. www.tech.purdue.edu/kokomo

- Computer and Information Technology — A.S. and B.S.
- Computer Graphics Technology — A.S.
- Electrical Engineering Technology — A.S. and B.S.
- Mechanical Engineering Technology — A.S.
- Organizational Leadership and Supervision — A.S. and B.S.

Lafayette. Purdue University College of Technology at Lafayette, (765) 269-9630; 5500 State Road 38 East, AD 2900, P.O. Box 5689, Lafayette, IN 47903-5689. Location: Subaru of Indiana Automotive Inc. www.tech.purdue.edu/lafayette

- Industrial Technology — Certificate and B.S.
- Organizational Leadership and Supervision — Certificate, A.S., and B.S.

New Albany. Purdue University College of Technology at New Albany, (812) 206-8379; New Albany, Indiana 47150. www.tech.purdue.edu/newalbany

- Computer Graphics Technology — A.S. and B.S.
- Electrical Engineering Technology — A.S. and B.S.
- Industrial Technology — Certificate and B.S.
- Mechanical Engineering Technology — A.S.
- Organizational Leadership and Supervision — Certificate, A.S., and B.S.

Richmond. Purdue University College of Technology at Richmond, (765) 973-8228; 2325 Chester Boulevard, Richmond, Indiana 47374-

1289. Location: Indiana University East. www.tech.purdue.edu/richmond

- Computer Graphics Technology — A.S.
- Industrial Technology — Certificate and B.S.
- Mechanical Engineering Technology — A.S.
- Organizational Leadership and Supervision — Certificate, A.S., and B.S.

South Bend. Purdue University College of Technology at South Bend, (574) 520-4169; 1733 Northside Blvd., P.O. Box 7111, South Bend, IN 46634-7111. Location: Indiana University at South Bend. www.tech.purdue.edu/southbend

- Computer Graphics Technology — A.S.
- Electrical Engineering Technology — A.S. and B.S.
- Industrial Technology – Certificate and B.S.
- Mechanical Engineering Technology — A.S.
- Organizational Leadership and Supervision — Certificate and B.S.

Vincennes. Purdue University College of Technology at Vincennes, (812) 888-4151; Technology Building 107A, Vincennes University, 1002 N. First Street, Vincennes, Indiana 47591. Location: Vincennes University. www.tech.purdue.edu/vincennes

- Industrial Technology — Certificate and B.S.

Teacher Education Program

Purdue University offers programs that prepare students for teaching in early childhood, middle childhood (elementary education), early adolescence (junior high/middle school), adolescence/young adulthood (secondary), and exceptional needs (special education). Program standards, curricula, and licensure are in accord with regulations promulgated by the Indiana Department of Education and authorized by the National Council for Accreditation of Teacher Education (NCATE). Descriptions of performance-based programs may vary by content areas. Official performance-based program guidelines are available via the College of Education Teacher Education Web site at www.teach.purdue.edu/licensure. Students seeking additional clarification and guidance should consult with an academic advisor.

A person who already holds a bachelor's degree may wish to complete a teacher education program as an “undergraduate or graduate for licensing only” student. If this option is chosen and a second baccalaureate degree is not desired, please contact the Office of Professional Preparation and Licensure for a transcript evaluation. Eligibility requirements do apply.

Title II Reporting Requirements. Purdue University is in compliance with Title II reporting requirements. Please visit www.education.purdue.edu/title2 to obtain complete details. If you are unable to access this Web site, please contact the Office of Professional Preparation and Licensure at Beering Hall of Liberal Arts and Education, Room 3229; 100 N. University Street; West Lafayette, IN 47907-2098 for a copy of the report.

Teacher Education Requirements

The following information outlines the assessment of students completing a teacher education program at Purdue University. For the most current information, visit www.education.purdue.edu/oppl/program.html. The candidate must:

- Attend the Office of Professional Preparation and Licensure Teacher Education Orientation during Block I or CDFS 10000;
- Submit the Application/Signature Form to the licensure office;
- Complete Gates A, B, and C (an application is not required for Gate B or C);
- Complete Gate D licensure requirements;
- Apply for the State of Indiana license application through the Office of Professional Preparation and Licensure upon successful completion of the program and other possible state requirements such as the cardiopulmonary resuscitation (CPR) certificate.

Required Criteria and Suggested Time Line

Remain flexible. The length of time to complete the Teacher Education Program is determined by academic progress and career planning. Additional time may be necessary if you are: **a)** changing your degree objective or transferring, **b)** overcoming a GPA below the required teacher education program standard, **c)** pursuing an additional major or licensure area, or **d)** encountering other unknown needs or circumstances.

Before the First Semester:

1. Admission to Purdue University.
2. Admission to the respective academic college, i.e., Agriculture, Consumer and Family Sciences, Education, Liberal Arts, Science, or Technology.
3. Assignment to and guidance by an academic advisor.

Consult with your academic advisor regularly to ensure that the required criteria are met and coursework is successfully completed in the sequence authorized by the Purdue University Teacher Education Council.

Requirements for Passing through Gate A

(A Teacher Education Program Application/Signature Form is required. See #7.)

1. Complete required courses for Gate A, with no grade lower than a “C”:
 - Most program areas—Block I (EDCI 20500, EDCI 28500)
 - Early Childhood Education—CDFS 21000
2. Maintain a minimum overall GPA as established by the program area.
3. Maintain a professional education GPA of 3.0/4.0 with no grade lower than a “C” and no Incomplete (“I”) for any professional education course. Courses include EDCI, EDPS, and EDST courses, in addition to courses designated by a program area as professional education courses.
4. Maintain a minimum content/major GPA as established by the program area.
5. Meet satisfactory assessment of the initial portfolio as defined by faculty. Early Childhood Education (ECE) majors, see Unit Assessment Component Chart for ECE.
6. Meet Praxis I: Pre-Professional Skills Tests (PPST) or Computerized PPST with the following scores:
 - Reading: 176 or above
 - Writing: 172 or above
 - Mathematics: 175 or above

All scores must be officially submitted by the Educational Testing Service to Purdue University; code RA #1631 or WLAF as a score recipient. For more details, please refer to the Teacher Education Program Testing Information sheets available in the Office of Professional Preparation and Licensure; Beering Hall, Room 3229; 1010 N. University Street; West Lafayette, IN 47907-2098.

7. Submit a completed and signed teacher education Application/Signature Form to the Office of Professional Preparation and Licensure if all of the above requirements have been met or will be met by the end of the semester (or summer session if enrolled in summer classes). The application may be marked to hold for current semester grades or test score reports. See application for due dates. A student must be enrolled in the college that houses the teacher education major in order to apply for Gate A.

The student’s signature on the Signature Form acknowledges that s/he will read the teacher education information at www.teach.purdue.edu/licensure, referring to it regularly in order to remain informed of standards and responsibilities to the Teacher Education Program process. The signature also confirms understanding of the following:

- Limited Criminal History Reports may be required throughout the Teacher Education Program for field experiences, and a report will be required for licensing.
 - Purdue University will check Zachary’s Law Registry periodically.
 - The Indiana Department of Education will review misdemeanor/felony convictions at the time of licensing.
 - Consent to release personal information and Social Security number to the State of Indiana and other state/federal departments of education as well as provide a signed and valid CPR certificate.
8. Receive written notification of status through Gate A from the Office of Professional Preparation and Licensure.
 9. If denied admission, reapplication is required.

Student Teaching Application Workshop

Information. If you plan to student teach during the fall semester, you must apply in October of the preceding academic year. If you plan to student teach during the spring semester, you must apply in November of the preceding academic year. You must visit the Office of Field Experiences (OFE) to sign up for an Application Workshop to receive a pass code in order to complete the online Student Teaching Application on the Internet.

Note: For student teaching information, see the Office of Field Experiences (OFE) Web site at www.education.purdue.edu/fieldexp or e-mail fieldexp@purdue.edu. This application serves as a “letter of intent” and does not imply automatic placement, as a student must successfully complete Gates A, B, and C requirements before student teaching.

Requirements for Passing through Gate B

Requirements for Passing through Gate B must be met in order to continue in the program, including eligibility for study abroad block courses. (No Teacher Education Program application is required for Gate B, although a Student Teacher Application must be submitted. See “Note” below.)

1. Complete required courses for Gate B, with no grade lower than a “C”:
 - Most program areas—Block II (EDPS 23500, EDPS 26500)
 - Early Childhood Education—CDFFS 21300 (grade of “B”), CDFFS 31000, CDFFS 31800, and EDPS 26000 or 26500
 - Special Education—Block II (EDPS 23500, EDPS 26500), EDPS 27000, and EDPS 46000
2. Maintain a minimum overall GPA as established by the program area.
3. Maintain a professional education GPA of 3.0/4.0 with no grade lower than a “C” and no Incomplete (“I”) for any professional education course. Courses include EDCI, EDPS, and EDST courses, in addition to courses designated by a program area as professional education courses.
4. Maintain a minimum content/major GPA as determined by the program area.
5. Meet satisfactory assessment of the beginning portfolio as defined by faculty. Early Childhood Education (ECE) majors, see Unit Assessment Component Chart for ECE.
6. Request a Limited Criminal History Report if required for field experiences throughout the Teacher Education Program. The Zachary’s Law Registry also will be checked periodically.
7. Failure to meet or comply with the above requirements will result in removal from methods courses.

8. Receive written notification of status through Gate B from the Office of Professional Preparation and Licensure.

Note: For student teaching information, see the Office of Field Experiences (OFE) Web site at www.education.purdue.edu/fieldexp or e-mail fieldexp@purdue.edu. A student must pass through Gates A and B before submitting the Student Teaching Application form to OFE. This application serves as a “letter of intent” and does not imply automatic placement.

Requirements for Passing through Gate C

(No Teacher Education Program application is required.)

1. Complete required courses for Gate C, with no grade lower than a “C”:
 - Most program areas—Specific methods courses
 - Early Childhood Education—CDFFS 40500, CDFFS 40600, and CDFFS 40800 with grades of “B”
 - Elementary Education—Block III (EDCI 36100 and EDCI 36200), Block IV (EDCI 36300 and EDCI 37000), and Block V (EDCI 36400, EDCI 36500, and EDPS 43000)
2. Pass Praxis II: Subject Assessments/Specialty Area Tests required by the Indiana Department of Education for licensing. For information on required tests and passing scores, please consult the Teacher Education Program Testing Information sheets and the Educational Testing Service Web site at www.ets.org/praxis.

Note: Praxis II must be passed before being allowed to student teach. Praxis II tests are only offered seven times a year and must be registered for in advance.

3. Maintain a minimum overall GPA as established by each program area.
4. Maintain a professional education GPA of 3.0/4.0 with no grade lower than a “C” and no Incomplete (“I”) for any professional education course. Courses include EDCI, EDPS, and EDST courses in addition to courses designated by a program area as professional education courses. All professional education coursework should be completed prior to student teaching.

5. Maintain a minimum content/major GPA as established by each program area. Most, if not all, content courses should be completed before student teaching.
6. Meet satisfactory assessment of the developing portfolio as defined by faculty.
7. Receive written notification of status through Gate C from the Office of Professional Preparation and Licensure.
8. Successful completion of requirements through Gate C of the Teacher Education Program allows the Office of Professional Preparation and Licensure to authorize the student to enter the student teaching semester. For information regarding student teaching placement, please see the Office of Field Experiences (OFE) Web site at www.education.purdue.edu/fieldexp or e-mail OFE at fieldexp@purdue.edu.
9. Student Teaching Information. To be eligible to student teach, a candidate must have applied and been admitted to the Teacher Education Program and have passed through Gate C. For information regarding student teaching placement, please see the Office of Field Experiences (OFE) Web site at www.education.purdue.edu/fieldexp or e-mail fieldexp@purdue.edu.
10. Request a Limited Criminal History Report if required for field experiences. The Zachary's Law Registry also will be checked periodically.
11. Begin job search through the Center for Career Opportunities at www.cco.purdue.edu/student.

Requirements for Passing through Gate D

(License application is required. See #9.)

1. Student teach.
 - Professional education courses, including methods courses, must be successfully completed before student teaching.
 - You may student teach only after passing through Gate C.
 - A grade of "C" or above must be earned in EDCI/EDPS 49600, 49800, 49900, or CDFS 45000 Supervised Teaching.

Note: For more information regarding student teaching, please see the Office of Field Experiences (OFE) Web site at www.education.purdue.edu/fieldexp or e-mail fieldexp@purdue.edu.

2. Maintain a minimum overall GPA as established by each program area.

3. Maintain a professional education GPA of 3.0/4.0 with no grade lower than a "C" and no Incomplete ("I") for any professional education course. Courses include EDCI, EDPS, and EDST courses, in addition to courses designated by a program area as professional education courses.
4. Maintain a minimum content/major GPA as established by each program area.
5. Meet satisfactory assessment of the proficient portfolio as defined by faculty.
6. Continue to meet all criteria for passing through Gates A, B, and C.
7. Request a Limited Criminal History Report for licensure. The Zachary's Law Registry also will be checked periodically.
8. Receive degree. Recommendation for licensure is contingent upon the posting of the degree on the transcript. All encumbrances must be paid.
9. Apply for an Indiana Teaching License, even if leaving the State of Indiana. For more details, consult the Indiana Licensure instruction packet provided by the Office of Professional Preparation and Licensure at the Student Teacher Orientation. The online license application may be submitted two months prior to the last day of required courses. Purdue University will make a recommendation for licensing upon completion of all licensure requirements.

Note: The following questions will be asked by the Indiana Department of Education Division of Professional Standards on the license application:

- Have you ever had a credential, certificate, or license to teach denied, revoked, or suspended in Indiana or in any other state?
- Have you ever been convicted of a felony?
- Have you been convicted of a misdemeanor other than minor traffic violations since January 15, 1994?

If a conviction of a misdemeanor or felony (including a suspended sentence) is documented, the applicant will be required to submit a written explanation and copies of court records with the license application. The Indiana Department of Education is solely responsible for the review of and response to misdemeanor or felony convictions.

10. Apply for licensure in other states, if desired. Contact the licensing office in the particular

state and request application materials. Consult the National Association of State Directors of Teacher Education and Certification at www.nasdtc.org/jurisdictions.php for Web sites, addresses, and telephone numbers.

Note: For additional licensing, apply for renewal or submit a request for an evaluation through the Office of Professional Preparation and Licensure if coursework is to be completed through Purdue University.

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, 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.

College of Technology Statewide Fees and Tuition

Statewide students pay tuition on a per-credit-hour basis and fees vary depending on the location. Additional fees may include student activity, recreation facilities, and health fees. Activity and other fees are assessed at each location in accordance with the services available. Rates are subject to change without published notice. Contact the specific statewide location for a list of tuition and fees.

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 regis-

trar, 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.

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.

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 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. Telephone 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. 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.purduegrees.com.

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 BoilerCopolyMaker 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 via 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.

Student Services

Counseling

Counseling is done in the various departments within the College of Technology. After being admitted, you will be assigned to an academic advisor who will work closely with you throughout your years on campus. The advisor will help you select courses and provide information about employment opportunities.

The counseling offices for the different College of Technology programs are located within the various departments. Aviation Technology advisors are located in the aviation facilities at the Purdue University Airport. Organizational Leadership advisors are located in Young Hall. All other advising offices are located in Knoy Hall.

College of Technology statewide advisors are located within administrative services at each location.

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.

College of Education Academic Services

The College of Education's Academic Services Unit offers several types of assistance important to students enrolled in teacher education programs. At Purdue, students in teacher education programs are academic majors in the colleges of Agriculture, Consumer and Family Sciences, Education, Liberal Arts, Science, and Technology. The College of Education offers majors in the fields of elementary education, social studies education, and special education. The Academic Services Unit within the College of Education assists all students in teacher education, regardless of the college in which their major is housed, by providing the following specialized services: admission and retention, field experiences, and licensure.

The Office of Professional Preparation and Licensure processes students' applications for all teacher education programs, provides information about programs available at Purdue, and monitors students' progress for retention within programs. As a student, you should be aware that admission to the Purdue University Teacher Education Programs is a separate and distinct step beyond admission to the University and that the standards for admission to, and retention in, teacher preparation programs are higher than those required to remain in good standing within the University. This office also provides explanation and interpretation of teacher licensing requirements. Students who have completed teacher education programs are evaluated and recommended for licenses. This office maintains licensing records and provides accreditation support.

See www.teach.purdue.edu for additional information.

The Office of Field Experiences coordinates all placements in area schools in order to provide students with the early field experiences and student teaching experiences required in all teacher education programs.

See www.education.purdue.edu/fieldexp for more information.

The Technology Resources Center

The Technology Resources Center (TRC) provides curricular materials, instructional resources, and technology support and service for educators. It assists students, pre-service teachers, faculty, and staff to ensure that they possess the necessary skills to use technology in support of their

professional goals. This includes a 24-workstation computing facility, software and equipment checkout, and an e-Portfolio development site. The TRC also serves as a textbook review site for annual state textbook adoption services. See www.trc.purdue.edu.

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.

College of Technology Degrees and Specialized Service Programs

Science and technology range from extremely simple to highly complex and abstract activities — at one extreme, the “professionals”; at the other, the mechanics, drafters, and service personnel. Within this broad spectrum, the educational backgrounds include doctoral degrees, master’s degrees, bachelor’s degrees, and associate degrees at the university level as well as certificates and diplomas from other post-high-school educational and training institutions.

Doctoral (Ph.D.) Degree

Ph.D. advisors, working with each degree applicant, will consider all prior graduate coursework accepted for transfer into the program while developing the plan of study.

In addition to a technology focus, each plan of study must include a solid discovery foundation sequence of cognate research courses to add depth and a second discipline’s perspective to the student’s research and/or professional goal-related field. A dissertation will serve as both a culminating synthesis experience and as a visible demonstration of performance and scholarship.

Master of Science (M.S.) Degree

Building on a tradition of excellence in graduate education, the College of Technology offers graduate instruction leading to master of science and doctoral degrees. Emphases encompassing each of the college’s departments and specializations are available to meet scholarly, professional, and personal goals. Graduate study options are available within all College of Technology disciplines.

The thesis master of science degree program provides educational opportunities in adult education, instructional development, curriculum design, and education administration, and advanced professional practice, with a major concentration in technology or technology education.

The non-thesis, directed project master’s degree program provides an opportunity for individualized professional development studies in technology, engineering technology, and technology education. The program prepares graduates for leadership positions in industry and education.

In addition, there are a number of 3+2 M.S. degree options available. The college also offers an innovative cohort-based Weekend Master’s Degree Program through the academic departments and through the Center for Professional Studies in Technology and Applied Research (ProSTAR). These programs have the same credit hour and core course requirements as the conventional master’s program, but the majority of instruction is delivered via distance education. Participating students take a predetermined set of courses over a specific time frame by attending special weekend sessions three times each semester.

Graduate students take general and professional courses in technology as well as courses from other schools and colleges at Purdue University, including the College of Engineering, College of Education, and Krannert School of Management. The programs offer the opportunity to pursue advanced work in the various disciplines offered by departments in the College of Technology. These include:

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

For additional details about the College of Technology’s graduate programs, contact the Graduate Office in the College of Technology or consult Purdue University’s Graduate School Web site at www.gradschool.purdue.edu.

Bachelor of Science (B.S.) Degree

The bachelor of science (B.S.) degree offered by Purdue’s College of Technology is awarded after four years of university-level study in an applied scientific field. A B.S. degree in technology prepares graduates for entry-level positions such as managers, supervisors, engineering technologists, administrators, graphics specialists, analysts, system developers, produc-

tion planners, and manufacturing specialists. Students possess excellent problem-solving abilities, highly developed communications skills, exceptional organizational skills, and the ability to understand complex systems. Thirteen B.S. options are available to qualified students:

- Aeronautical Engineering Technology
- Aviation Management
- Building Construction Management Technology
- Computer and Information Technology
- Computer Graphics Technology
- Electrical Engineering Technology
- Engineering/Technology Teacher Education
- Industrial Distribution
- Industrial Technology
- Manufacturing Engineering Technology
- Mechanical Engineering Technology
- Organizational Leadership and Supervision
- Professional Flight Technology

Associate of Science (A.S.) Degree

The associate of science (A.S.) degree offered by Purdue's College of Technology is awarded after two years of university-level study in an applied scientific field. Graduates of such programs are often called technicians. Ten two-year programs leading to an A.S. degree are offered at the West Lafayette campus. The programs are:

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

Admissions Requirements

Applicants for admission to the two-year, add-on programs leading to a B.S. degree in aviation, computer graphics, construction, electrical, and mechanical technologies must have earned an A.S. degree or equivalent in one of these fields. Additionally, students in computer graphics technology must be eligible for admission to the professional level of the curriculum. Transfer students will be admitted to Purdue University according to standard procedures.

Students transferring from other institutions must complete at least 32 semester credit hours of coursework in residence in the third and fourth year of the B.S. degree program

Specialized Service Programs

The College of Technology cooperates with individual industries or communities in the development and operation of specialized training programs. Such programs normally operate on a regular fee basis but frequently are organized at the request of a particular industry on a contract basis.

Since such specialized programs are usually restricted to a single location and serve a special need, they are not described in this general catalog and may differ to some extent in entrance requirements, fees, advanced standing provision, and other details from the general fields of study described in this catalog. Included in these specialized programs are industrial programs in cooperation with local industry, primarily designed for upgrading technical employees.

Inquiries should be sent to the director of the Continuing Education Administration or the dean of the College of Technology on the West Lafayette campus. At other College of Technology statewide locations, inquiries should be sent to the director of the respective location.

Abbreviations

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

AAE—Aeronautics and Astronautics
AGEC—Agricultural Economics
AT—Aviation Technology
BCM—Building Construction Management
CGT—Computer Graphics Technology
CHM—Chemistry
CIT—Computer and Information Technology
CNIT—Computer and Information Technology
COM—Communication
CS—Computer Sciences
EAS—Earth and Atmospheric Sciences
ECET—Electrical and Computer Engineering Technology
ECON—Economics
EDCI—Educational Curriculum and Instruction
EDPS—Psycho-Educational Studies
EDST—Educational Leadership and Cultural Foundations
ENGL—English
ENTM—Entomology
IET—Industrial Engineering Technology
IT—Industrial Technology

MA—Mathematics
MET—Mechanical Engineering Technology
MFET—Manufacturing Engineering Technology
MGMT—Management
OBHR—Organizational Behavior and Human Resource Management
OLS—Organizational Leadership and Supervision
PHIL—Philosophy
PHYS—Physics
PSY—Psychology
SOC—Sociology
STAT—Statistics

Definitions

Free Elective: any course for which the University gives academic credit. Plan may specify area in which elective must be taken rather than “free.”

Technical Elective: course related to student’s career goals.

Selective: specific courses in a discipline approved by the individual department.

Sequence: two or more courses in the same discipline, taken in sequence.

Plans of Study

Typical degree programs for students in the College of Technology are described under the departments on the following pages. Plans of study are listed for students in two-year programs leading to the associate of science (A.S.) degree, four-year programs leading

to the bachelor of science (B.S.) degree, and certificate programs.

In this section of the catalog, figures within parentheses, e.g., (3), are credit hours unless designated otherwise.

Department of Aviation Technology

The aviation and aerospace industries offer a multitude of dynamic and exciting careers for persons who have the required technical education. The Department of Aviation Technology provides students with the knowledge and skills required for successful and rewarding careers in aviation.

Career-oriented programs are available in aviation administration, flight, and aeronautical engineering technology areas of concentration. Students in each of these curricula begin their studies in an associate degree program and may continue work in a related specialty area that leads to the B.S. degree.

The B.S. program in aviation technology is open to students who have completed one of the aviation technology associate degree programs or who have equivalent technical education from another college or university. Because the aviation and aerospace industries are becoming increasingly complex and specialized, the aviation technology B.S. degree program combines in-depth instruction in technical specialties with a broad spectrum of interdisciplinary courses.

The baccalaureate degree programs in aeronautical engineering technology, aviation management, and flight technology are accredited by the Aviation Accreditation Board International.

During the B.S. program, students can prepare themselves for many aviation and aviation-related careers. The curriculum is flexible and allows the student to select an existing study option or build a plan of study in keeping with his or her career objectives. Ample time is provided for in-depth training in aviation core courses. In addition, 9-15 credit hours of specialty electives, much like a minor, can be devoted to aviation or non-aviation courses in an area selected by the student. Individualized plans of study and specialized sequences of courses must be approved by the Aviation Technology Curriculum Subcommittee.

College of Technology Statewide

The College of Technology statewide delivers programs in aviation technology at the Aviation Technology Center located at the Indianapolis International Airport.

Aeronautical Engineering Technology (A.S. and B.S.)

Aeronautical technologists are responsible for the development of manufacturing and repair strategies for modern aerospace vehicles. They help design, test, and build structures for new aircraft. They also are responsible for the manufacturer's support of production aircraft. This includes field modification, product support, and accident investigation. The aeronautical technology program is an academically-oriented plan

of study that includes laboratory classes in aircraft design, maintenance, and manufacturing. Course concentrations include fundamentals of aircraft science, electrical systems, aircraft materials and production processes, aircraft propulsion systems, and aircraft construction. In addition, students take courses such as algebra and trigonometry, calculus, physics, and English composition.

Aviation Technology (A.S.)

Credit Hours Required for Associate Degree: 63

Freshman Year

First Semester

- (1) **AT 10000** (Introduction to Aviation Technology)
- (3) **AT 10500** (Basic Aircraft Electrical Theory) **or**
(4) **ECET 10700** (Introduction To Circuit Analysis)
- (3) **AT 10600** (Basic Aircraft Science)
- (2) **CGT 16300** (Introduction to Graphics for Manufacturing)
- (5) **MA 15900** (Precalculus)

(14-15)

Second Semester

- (4) **AT 10800** (Aircraft Materials)
- (3) **AT 20700** (Introduction to Aircraft Systems)
- (4) **AT 26200** (Basic Aircraft Powerplant Technology)
- (4) **ENGL 10600** (First-Year Composition) **or**
(3) **ENGL 10800** (Accelerated First-Year Composition)
- (3) **MA 22100** (Calculus for Technology I)

(17-18)

Sophomore Year

Third Semester

- (3) **AT 20800** (Aircraft Materials II)
- (3) **AT 26700** (Fixed and Rotary Wing Assemblies)
- (3) **AT 27200** (Introduction To Composite Technology)
- (4) **PHYS 21800** (General Physics)
- (3) **ECON 21000** (Principles of Economics) **or**
ECON 25100 (Microeconomics)

(16)

Fourth Semester

- (4) **AT 26500** (Aircraft Electrical Systems) **or**
(3) **ECET 10900** (Digital Fundamentals)
- (3) **AT 27100** (Powerplant Propulsion Systems)
- (3) **AT 27800** (Nondestructive Testing For Aircraft)
- (3) **COM 11400** (Fundamentals of Speech Communication)
- (3) **PSY 12000** (Elementary Psychology)

(15-16)

Aviation Technology: Aeronautical Concentration (B.S.)

Credit Hours Required for Bachelor's Degree: 124

Junior Year

Fifth Semester

- (3) **AT 30000** (Global Aviation Systems)
- (3) **AT 30700** (Advanced Aircraft Systems)
- (3) **AT 36300** (Fundamentals of Powerplant Systems)
- (1) **AT 40000** (Aviation Professional Issues)
- (3) **STAT 30100** (Elementary Statistical Methods)
- (3) English selective

(16)

Sixth Semester

- (3) **AT 30800** (Aircraft Materials Processes)
- (4) **AT 33500** (Avionics Systems)
- (3) **AT 37000** (Advanced Aircraft Powerplants)
- (3) **AT 37600** (Aircraft Gas Turbine Engine Technology I)
- (3) **AT 38500** (Design Support Analysis)

(16)

Senior Year

Seventh Semester

- (3) **AT 37200** (Aircraft Maintenance Practices)
- (3) **AT 40800** (Advanced Aircraft Manufacturing Processes)
- (4) **AT 44500** (Aircraft Electronics)
- (3) **AT 47600** (Aircraft Gas Turbine Engine Technology II)
- (1) **AT 49600** (Applied Research Proposal)

(14)

Eighth Semester

- (3) **AT 40200** (Aircraft Airworthiness Assurance)
- (3) **AT 49700** (Applied Research Project)
- (3) **POL 10100** (American Government and Politics) **or** **POL 13000** (Introduction to International Relations)
- (3) Management or OLS selective
- (3) Technical communication selective
- (-) Globalization requirement*

(15)

* *Globalization: Due to the international nature of the aviation industry, all B.S. degree students must complete a globalization requirement using one of the following options: 1) Complete any University-sponsored study abroad program lasting at least seven days; 2) complete an internship or approved international research project that involves at least seven days of international travel; 3) provide documentation of having lived/traveled outside the United States for at least 15 days after a student's 12th birthday; or 4) complete or place out of the Level IV course in any foreign language.*

Aviation Management (A.S. and B.S.)

The aviation management program is designed for students who are seeking careers in air traffic control, airport management, or airline operations. Students in this curriculum study aircraft systems, principles of flight, and basic aircraft science. They also take courses in air traffic control, aviation law, airport management, and air transportation, in addition to a number of general education courses.

Graduates of the first two years of the aviation management program receive an associate of science degree and are qualified to assist in the operation of airports and airport service industries. This includes aircraft sales, passenger service, or airport operations.

Aviation Management Technology (A.S.)

Credit Hours Required for Associate Degree: 62

First Semester

- (1) **AT 10000** (Introduction to Aviation Technology)
- (3) **AT 10600** (Basic Aircraft Science)
- (5) **MA 15900** (Precalculus)
- (3) **ENGL 10600** (English Composition)
- (3) **POL 10100** (American Government and Politics) **or**
POL 13000 (Introduction to International Relations)

(15)

Sophomore Year

Third Semester

- (3) **AT 23300** (Ethics and Aviation)
- (3) **AT 25800** (Air Transportation)
- (3) **ECON 25100** (Microeconomics)
- (3) **OLS 25200** (Human Behavior in Organizations)
- (3) **PHYS 21400** (The Nature of Physics)

(15)

Second Semester

- (4) **AT 14400** (Fundamentals of Flight Lectures)
- (4) **AT 18700** (Aircraft Propulsion and Operating Systems)
- (3) **COM 11400** (Fundamentals of Speech Communication)
- (3) **MA 22100** (Calculus for Technology I) **or**
MA 22300 (Introductory Analysis I)
- (3) **PSY 12000** (Elementary Psychology)

(17)

Fourth Semester

- (3) **AT 28500** (ATC Procedures and Weather)
- (3) **ECON 25200** (Macroeconomics)
- (3) **MGMT 20000** (Introductory Accounting)
- (3) **OLS 27400** (Elements of Supervision)
- (3) Free elective

(15)

Upon completion of the first two years of this program, an associate of science degree in aviation management is awarded.

Graduates of the A.S. degree program in aviation management who wish to pursue a bachelor of science degree will receive additional specialized instruction in accounting, supervision, and economics.

The administration option is designed for students seeking a career in airline operations, airport administration, or aviation marketing. Students choosing this option continue their studies in accounting, industrial organization, marketing, business law, and aviation administration. They also take courses in business writing and communication.

Aviation Management Technology (B.S.)

Credit Hours Required for Bachelor's Degree: 124

Junior Year

Fifth Semester

- (3) **AT 30000** (Aviation Infrastructure)
 - (1) **AT 40000** (Aviation Professional Issues)
 - (3) **MGMT 20100** (Management Accounting I)
 - (3) **STAT 30100** (Elementary Statistical Methods)
 - (3) Aviation management selective
 - (3) English selective
-
- (16)

Sixth Semester

- (3) **AT 38100** (Aviation Security)
 - (3) **MGMT 32300** (Introduction To Market Analysis) **or** **MGMT 32400** (Marketing Management)
 - (3) **OLS 37500** (Training for Supervisors)
 - (6) Aviation management selectives
-
- (15)

Senior Year

Seventh Semester

- (3) **AT 41200** (Aviation Finance)
 - (3) **AT 48100** (Aviation Safety Problems)
 - (3) **MGMT 45500** (Legal Background for Business I)
 - (3) Aviation management selective
 - (3) Technical communication selective
 - (3) Free elective
-
- (16)

Eighth Semester

- (3) **AT 47500** (Aviation Law)
 - (3) **COM 32500** (Interviewing: Principles and Practice)
 - (3) Aviation management capstone (**AT 43800**, **AT 45100**, **or** **AT 47900**)
 - (3) Aviation management selective
 - (3) Free elective
 - (-) Globalization requirement*
-
- (15)

Aviation Flight Technology (A.S.)

General aviation pilots are responsible for the safe, efficient operation of their aircraft. Their responsibilities include flight planning, evaluating weather conditions, performing preflight systems checks, navigating, and providing for passenger needs, in addition to flying the aircraft. They may be involved in flying as a flight instructor, as a charter or air taxi pilot, or as an executive pilot for a corporation. The aviation flight technology curriculum is a progression of study directed toward training a student in primary, advanced, and instrument flight. This curriculum is integrated with two years of college general studies. A special fee is associated with each flight and ground pilot trainer course. At the conclusion of the program, students receive the A.S. degree.

Before final acceptance, applicants for this program must present evidence that they have satisfactorily completed a Federal Aviation Administration (FAA) first-class or second-class medical examination. Students who are contemplating continuing in the professional flight program are urged to obtain a first-class medical certificate.

Enrollment for this program is limited. Completed applications for freshman entry must be received by November 15 to be eligible for consideration for the following fall classes. Transfer applications for those at the junior-year level must be received by the first of June preceding the fall semester, during which an upper-division student would begin.

* *Globalization: Due to the international nature of the aviation industry, all B.S. degree students must complete a globalization requirement using one of the following options: 1) Complete any University-sponsored study abroad program lasting at least seven days; 2) complete an internship or approved international research project that involves at least seven days of international travel; 3) provide documentation of having lived/traveled outside the United States for at least 15 days after a student's 12th birthday; or 4) complete or place out of the Level IV course in any foreign language.*

Aviation Flight Technology (A.S.)

Credit Hours Required for Associate Degree: 62

Freshman Year

First Semester

- (1) **AT 10000** (Introduction to Aviation Technology)
- (4) **AT 14400** (Fundamentals of Flight Lectures)
- (2) **AT 14500** (Private Pilot Flight)
- (3) **ENGL 10600** (First-Year Composition) **or**
ENGL 10800 (Accelerated First-Year Composition)
- (5) **MA 15900** (Precalculus)

(15)

Second Semester

- (3) **AT 12100** (Aircraft Powerplants for Flight Crew)
- (2) **AT 23100** (Human Factors for Flight)
- (2) **AT 24300** (Commercial Flight I)
- (3) **COM 11400** (Fundamentals of Speech Communication)
- (3) **MA 22100** (Calculus For Technology I) **or**
MA 22300 (Introductory Analysis I)
- (3) **POL 10100** (American Government and Politics) **or**
POL 13000 (Introduction to International Relations)

(16)

Abbreviated Summer Session*

- (1) **AT 24500** (Cross-Country Flight)

Sophomore Year

Third Semester

- (1) **AT 21000** (Ground Trainer I)
- (3) **AT 24100** (Aircraft Systems for Flight Crews)
- (2) **AT 24800** (Commercial Flight II)
- (4) **AT 24900** (Instrument Flight Lectures)
- (3) **ECON 21000** (Principles Of Economics) **or**
ECON 25100 (Microeconomics)
- (3) **PSY 12000** (Elementary Psychology)

(16)

Fourth Semester

- (1) **AT 21100** (Ground Trainer II)
- (2) **AT 25300** (Instrument Flight)
- (4) **AT 25400** (Commercial Flight Lectures)
- (3) **STAT 31000** (Elementary Statistical Methods)
- (4) Physics selective

(14)

Students who have completed the A.S. curriculum in aviation flight technology or its equivalent may be admitted to the professional flight technology B.S. degree program.

Criteria Necessary to Become a Junior in Professional Flight

The flight faculty has established minimum standards for sophomores to continue into the junior year. In general, students:

- Must have at least **30 hours** of **non-aviation**, collegiate-level coursework applicable to the Professional Flight Plan of Study taken at Purdue or directly transferable to Purdue.
- An unrestricted U.S. FAA Commercial Pilot Certificate, single-engine land.
- An unrestricted U.S. FAA Instrument Rating-Airplane.

- An FAA medical certificate valid for at least second-class privileges.
- A minimum cumulative (not semester) grade point average of 2.5 out of 4.0 in all coursework.
- A minimum cumulative (not semester) grade point average of 2.5 out of 4.0 in all **AT** coursework.
- All AT coursework within the first two years of the flight curriculum must be taken as graded — the pass/not-pass option is not allowed.
- All U.S. citizens must have a valid U.S. Passport.

Note: Non-flight majors wishing to transfer into the professional flight option as juniors must also meet these requirements and are accepted on a space available, academically competitive basis.

* All students who enter without a private pilot certificate must attend one abbreviated summer session in the aviation flight technology program. AT 24500 typically is taken during a summer session or independently with departmental permission.

Aviation Technology: Professional Flight Technology Option (B.S.)

Credit Hours Required for Bachelor's Degree: 124

Junior Year

Fifth Semester

- (3) **AT 30000** (Aviation Infrastructure)
- (2) **AT 32100** (Transport Aircraft Operations Lecture I)
- (1) **AT 32300** (Transport Aircraft Operations Lab I)
- (1) **AT 35300** (Multi-Engine Flight)
- (2) **AT 35400** (Turbine Flight Operations Lecture)
- (4) **AT 35500** (Transport Aircraft Systems and Operations I)
- (4) Physics selective

(17)

Sixth Semester

- (2) **AT 30100** (Crew Resource Management)
- (2) **AT 32200** (Transport Aircraft Operations Lecture II)
- (1) **AT 32400** (Transport Aircraft Operations Lab II)
- (3) **AT 32700** (Advanced Transport Flight Operations)
- (2) **AT 35600** (Turbine Flight Operations Lab I)
- (2) **AT 38400** (Transport Aircraft Systems and Operations II)
- (3) **EAS 32500** (Aviation Meteorology)

(15)

Senior Year

Seventh Semester

- (1) **AT 40000** (Aviation Professional Issues)
- (2) **AT 41600** (Airline Indoctrination)
- (1) **AT 46500** (Transport Aircraft Operations Lecture III)
- (1) **AT 46700** (Transport Aircraft Operations Lab III)
- (1) **AT 49600** (Applied Research Proposal)
- (3) Organizational leadership/management selective
- (3) Professional flight selective
- (3) Technical communications selective

(15)

Eighth Semester

- (1) **AT 46600** (Transport Aircraft Operations Lecture IV)
- (1) **AT 46800** (Transport Aircraft Operations Lab IV)
- (3) **AT 49700** (Applied Research Project)
- (3) English/communication selective
- (6) Professional flight selectives
- (1) Elective
- (-) Globalization requirement*

(15)

Flight Instruction Courses

The Department of Aviation Technology offers a number of flight and ground support courses at the West Lafayette campus. Students in the University, with the approval of their advisors and the aviation flight technology section, are eligible to enroll in these courses. University staff members also are eligible for enrollment. Registration in these courses is subject to limitations imposed by the availability of flight and simulator equipment and will be conducted on a first-come, first-served basis.

Physical Examination. A beginning student must make arrangements for a flight physical examination. This examination must be administered by an approved FAA medical examiner. A listing of approved examiners is available in the flight instruction office at the Purdue University Airport. Students in advanced courses offering flight training must possess a second-class medical certificate dated within the preceding 12 calendar months; students taking private pilot courses are required to hold a third-class medical certificate (or higher) issued within the preceding 24 calendar months. These physical examinations must be completed before enrollment.

* *Globalization: Due to the international nature of the aviation industry, all B.S. degree students must complete a globalization requirement using one of the following options: 1) Complete any University-sponsored study abroad program lasting at least seven days; 2) complete an internship or approved international research project that involves at least seven days of international travel; 3) provide documentation of having lived/traveled outside the United States for at least 15 days after a student's 12th birthday; or 4) complete or place out of the Level IV course in any foreign language.*

Undergraduate Courses

(Contact the Office of the Bursar for current fee information)

<i>Credits</i>	<i>2009–10 Fees</i>	<i>2010–11 Fees</i>
(2) AT 14500 (Private Pilot Flight)	\$6,655	\$6,975
(1) AT 24300 (Commercial Flight I)	\$6,850	\$7,195
(1) AT 24500 (Cross-Country Flight)	\$2,075	\$2,180
(2) AT 24800 (Commercial Flight II)	\$6,900	\$7,250
(2) AT 25300 (Instrument Flight)	\$6,650	\$6,990
(2) AT 35100 (Flight Instructor)	\$2,050	\$2,175
(1) AT 35300 (Multi-Engine Flight)	\$2,850	\$2,990
(1) AT 35700 (High Altitude Operation)	\$1,600	\$1,680
(1) AT 36500 (Instrument Flight Instructor)	\$1,750	\$1,850
(2) AT 36600 (Multi-Engine Flight Instructor)	\$2,030	\$2,140
(2) AT 36800 (Aerobatic Flight)	\$715	\$735
(1) AT 45000 (Airline Transport Pilot)	\$2,875	\$3,020

Simulator Courses

<i>Credits</i>	<i>2009–10 Fees</i>	<i>2010–11 Fees</i>
(1) AT 21000 (Ground Trainer I)	\$1,019	\$1,070
(1) AT 21100 (Ground Trainer II)	\$1,019	\$1,070
(1) AT 32300 (Transport Aircraft Operations Lab I)	\$2,168	\$2,276
(1) AT 32400 (Transport Aircraft Operations Lab II)	\$2,168	\$2,276
(2) AT 33300 (Introduction to Transport Aircraft Systems and Procedures Lab)	\$2,168	\$2,276
(2) AT 33400 (Advanced Transport Aircraft Systems and Procedures Lab)	\$2,168	\$2,276
(2) AT 44000 (Aircraft Procedures Lab I)	\$2,168	\$2,276
(2) AT 44100 (Aircraft Procedures Lab II)	\$2,168	\$2,276
(1) AT 46700 (Transport Aircraft Operations Lab III)	\$2,168	\$2,276
(1) AT 46800 (Transport Aircraft Operations Lab IV)	\$2,168	\$2,276

Note: Flight and simulator course fees are related to actual operating costs and are subject to change.

Department of Building Construction Management Technology

The Department of Building Construction Management Technology mission focuses on the preparation of students for a lifelong, challenging, and rewarding career in the construction industry. The department offers a program that prepares students to become professional managers of the construction process. The program emphasizes the management of people, the construction process, and the machines, materials, and financial assets with which structures are built. It stresses production rather than design, and management skills rather than craft skills.

Project managers are familiar with both the technical and management aspects of construction. They determine the appropriate construction methods, estimate the projected cost, and schedule all required construction activities in a logical sequence. Computers and other technolo-

gies are used to evaluate various construction methods and determine the most cost-efficient and time-saving plan. Project managers must communicate with owners, other construction managers, and design professionals on a regular basis to synchronize all phases of the construction project.

Large and small general construction firms, specialty construction firms, users of construction services (owners), government agencies, and architectural and engineering firms often employ graduates. Experienced graduates fill positions such as project manager, estimator, scheduler, cost analyst, resource controller, safety director, procurement officer, project controls manager, project superintendent, field engineer, and other executive positions.

Construction Work Experience

A minimum of 800 hours of construction work experience in any segment of the construction industry are required before graduation. Summer jobs, full-time employment during the academic year, part-time work, or cooperative (co-op) education may be used to satisfy this requirement. The purpose of this work experience is to expose the student to the construction industry.

Students may elect to satisfy this requirement with the five-year cooperative education program. Through this program, the student has the

opportunity to work in the construction industry as well as attend the University. Alternating periods of study with periods of work will provide the student with a variety of experiences related to, and integrated with, the field of study. As experience and demonstrated abilities grow, so do responsibilities and salary. Those who successfully complete the co-op program and qualify for a degree from Purdue University are awarded a co-op certificate of completion by the Purdue Board of Trustees.

Building Construction Management (A.S. and B.S.)

Accredited by the American Council for Construction Education (ACCE)

The BCM curriculum is based on general commercial construction practices and has construction classes throughout the four-year plan of study. Principles of ethics, profitability, responsibility, decision-making, and leadership are core to the courses. Upon successfully completing the required courses, students will receive the bachelor of science degree. In addition to the general commercial construction management core program, students may elect to take specialized courses in the areas such as demolition and reconstruction, electrical construction management, healthcare construction management, mechanical con-

struction management, residential construction management, or disaster restoration and reconstruction management. During the last two years of study, electives permit the student to orient his or her program toward a variety of specific segments of the construction industry. Professional certifications are also offered as part of the curricula.

The Department of Building Construction Management offers an associate of science degree. Students in the associate of science program are required to successfully complete the courses marked with an asterisk (*) in the following plan of study.

Credit Hours Required for Associate Degree: 64

Credit Hours Required for Bachelor’s Degree: 128

Freshman Year

First Semester

- (2) **BCM 10000** (Introduction to Construction)*
- (2) **CGT 16400** (Graphics for Civil Engineering and Construction)*
- (4) **ENGL 10600** (First-Year Composition)*
- (5) **MA 15900** (Precalculus)*
- (3) Human relations selective†

(16)

Second Semester

- (4) **BCM 17500** (Construction Materials and Methods)*
- (3) **BCM 11200** (Construction Surveying Fundamentals)*
- (3) **COM 11400** (Fundamentals of Speech Communication)*
- (3) **MA 22100** (Calculus for Technology I)*
- (3) **OLS 27400** (Applied Leadership)*

(16)

* Courses required for associate degree.

† Human relations selective: *PSY 12000, SOC 10000, OLS 25200, or equivalent.*

Note: BCM majors must earn a grade of “C” or better for all BCM courses and all courses that are prerequisite to a BCM course. The “C” grade must be earned before registering in subsequent courses. BCM courses can be repeated only once.

Sophomore Year

Third Semester

- (3) **BCM 21200** (Construction Layout)
 - (3) **BCM 21500** (Mechanical Construction)*
 - (3) **BCM 27500** (Construction Plans and Measurements)*
 - (4) **PHYS 21800** (General Physics)*
 - (3) Communication selective†
-
- (16)

Fourth Semester

- (3) **BCM 21600** (Electrical Construction)*
 - (3) **BCM 25000** (Construction Contracts)*
 - (4) **BCM 28500** (Construction Mechanics)*
 - (3) **ECON 21000** (Principles of Economics)*
 - (4) Science selective‡
-
- (17)

Junior Year

Fifth Semester

- (3) **BCM 34500** (Scheduling)
 - (3) **BCM 37500** (Estimating)*
 - (3) **BCM 38000** (Concrete Construction)
 - (3) **MGMT 20000** (Introductory Accounting)*
 - (3) BCM elective
-
- (15)

Sixth Semester

- (3) **BCM 30100** (Construction Accounting and Financial Management)*
 - (3) **BCM 35000** (Construction Site Planning)
 - (3) **BCM 38500** (Soils and Foundations)
 - (3) BCM elective
 - (3) General education elective
 - (2) Technical electivell
-
- (17)

Senior Year

Seventh Semester

- (3) **BCM 35500** (Construction Supervision)
 - (2) **BCM 43500** (Design/Build)
 - (3) **BCM 47500** (Construction Costs)
 - (2) **BCM 48700** (Construction Industry Practices)
 - (3) **ENGL 42000** (Business Writing) **or**
 - ENGL 42100** (Technical Writing:
Engineering and Science Applications)
 - (3) Technical electivell
-
- (16)

Eighth Semester

- (3) **BCM 45500** (Construction Company Management)
 - (3) **BCM 45700** (Construction Safety)
 - (3) **STAT 30100** (Elementary Statistical Methods) **or**
 - IT 34200** (Introduction to Statistical Quality)
 - (3) **MGMT 45500** (Legal Background for Business I)
 - (3) Elective
-
- (15)

* Courses required for associate degree.

† Human relations selective: *PSY 12000, SOC 10000, OLS 25200, or equivalent.*

‡ Science selective: *PHYS 21900 or CHM 11500.*

§ General education elective: *a course in the liberal arts or communication areas.*

|| Technical elective: *a course in a construction management concentration, a College of Technology course, a management or engineering course, or an approved course related to the student's career goal.*

Note: *BCM majors must earn a grade of "C" or better for all BCM courses and all courses that are prerequisite to a BCM course. The "C" grade must be earned before registering in subsequent courses. BCM courses can be repeated only once.*

Building Construction Management Concentrations

Students desiring to have a concentration designated on their transcripts should consult with the appropriate concentration coordinator. Students may be limited to one concentration depending on space availability. BCM concentrations are listed below.

Demolition and Reconstruction Management (DEMRR) Concentration

- (3) **BCM 33000** (Introduction to Demolition and Reconstruction Management)
- (3) **BCM 33100** (Advanced Demolition and Construction Management)

Disaster Restoration and Reconstruction Management (DRRM) Concentration

- (3) **BCM 32000** (Introduction to Disaster Restoration and Reconstruction Management)
- (3) **BCM 32100** (Disaster Restoration and Reconstruction Project Management)
- (2) **BCM 42100** (Disaster Restoration and Reconstruction Industrial Problems)

Electrical Construction Management (ECLM) Concentration

- (3) **BCM 31600** (Electrical Construction Estimating)
- (3) **BCM 31700** (Mechanical and Electrical Construction Management)
- (3) **BCM 41700** (Design/Build for MEP Contractors)
- (3) **BCM 41900** (Sustainable Construction) (optional)

Healthcare Construction Management (HLCM) Concentration

- (3) **BCM 34000** (Introduction to Healthcare Construction Management)
- (3) **BCM 34100** (Advanced Healthcare Construction Management)

Mechanical Construction Management (MCNM) Concentration

- (3) **BCM 31500** (Mechanical Construction Estimating)
- (3) **BCM 31700** (Mechanical and Electrical Construction Management)
- (3) **BCM 41700** (Design/Build for MEP Contractors)
- (3) **BCM 41900** (Sustainable Construction) (optional)

Residential Construction Management (RSCM) Concentration

- (3) **BCM 36000** or (3) **BCM 48400** (Residential Construction)
- (3) **BCM 36100** (Residential Field Management)
- (2) **BCM 36200** (Construction Competition) (optional)
- (2) **BCM 46000** (Residential Project Management)
- (2) **BCM 46100** (Residential Design Build)

Department of Computer and Information Technology

Success in business and industry is dependent upon information systems that provide timely and correct information, support efficient business processes, and promote effective communication across the enterprise. Information technology professionals are responsible for meeting this need.

What is an information system? Every day we come in contact with various information systems, such as course registration systems, hospital patient records systems, inventory control systems, automatic bank teller machines, smart phones, and e-mail systems.

What is information technology? Information technology provides the “engine” used to drive

useful information systems. This technology includes computers, software, and computer networks. CIT students learn to harness the power of information technology to create information systems and networks that solve business problems and create a competitive advantage.

CIT graduates are recruited by companies such as Allstate, Cerner, Crowe Horwath, Discover Financial Services, Eli Lilly, Exxon Mobil, IBM, Interactive Intelligence, John Deere, Lockheed Martin, State Farm, and U.S. Steel.

The Department of Computer and Information Technology is accredited by the Computing Accreditation Commission of ABET.

College of Technology Statewide

The College of Technology statewide provides programs in computer and information technology at several Indiana locations. See “College of Technology statewide” in the index.

Bachelor of Science Degrees

The Department of Computer and Information Technology (CIT) offers the bachelor of science degree in computer and information technology at West Lafayette, Columbus, and Kokomo. The B.S. degree program in West Lafayette offers the choice of two concentrations: (1) information systems technology and (2) networking engineering technology. The plan of study for each concentration is included in this catalog.

Curriculum Currency and Changes

Degree requirements in a dynamic discipline such as CIT are constantly changing. See the department’s Web site at www.purdue.edu/tech/cit or visit a department counselor for the latest curriculum requirements and concentrations. Appointments are recommended.

A student is bound by the curriculum that was in effect at the time of their last admission or CODO into computer and information technology. In some cases, a student may elect to change from their original curriculum into the most recent curriculum; however, when a student elects to do so, he or she is bound to fulfill all of the requirements of the new curriculum.

Coursework

The requirements of the CIT curriculum and faculty is that all new CIT students possess basic proficiencies with personal computing applications. These proficiencies are described on the department Web site. The faculty expects that all students are able to use and demonstrate these skills in any CNIT course. Students can develop or refresh these skills by completing a personal computing applications literacy course such as CNIT 136 or an equivalent. These courses do not carry credit toward any CIT degree requirement but can be very useful for learning and/or refreshing your PC skills and proficiencies.

CIT students must earn a grade of “C” or better in all prerequisite CNIT courses in order

to enroll in a CNIT postrequisite course and must maintain a minimum grade point average of 2.0 in all CNIT courses.

Database management courses teach students how to analyze, design, construct, and implement database and data warehousing systems for business transaction processing and operations, management information, and decision support.

Software development and computer programming courses prepare students to develop and maintain small, medium, and large application software, including mobile applications. The computing courses focus on using programming languages to construct these software applications for a variety of hardware and software platforms and networks.

Systems analysis, design, and integration courses teach students how to analyze, design, develop, and/or integrate unique information technology solutions such as e-business applications, enterprise resource applications, and all types of information systems. Emphasis is placed on systems thinking and problem solving.

Computational life sciences courses prepare students to learn to investigate and explore the tools and objectives of research in the life sciences industry relevant to the skills of information technology, and to understand the methods inherent to bioinformatics and computational life sciences and their role in commercialism and discovery.

Computer forensics courses introduce students to computer forensics and cyber-crime scene analysis and various laws and regulations dealing with computer forensic analysis. The focus is on emerging international standards for computer forensic analysis as well as a formal methodology for conducting computer forensic investigations.

Technical courses emphasize systems analysis, systems design, IT hardware and software procurement, outsourcing, prototyping, application development, systems integration, and systems implementation.

Information Systems Technology Concentration (B.S.)

In this program, students complete four semesters of core courses and then have the flexibility to design a degree program to match individual course selection to personal career objectives. Information technology course selection includes courses in database management systems, software development and computer programming, systems analysis, systems design

and integration, high performance computing, biomedical informatics, computational life sciences, and computer forensics.

B.S. graduates typically are employed as application developers, consultants, database administrators, IT analysts, programmer/analysts, project managers, software developers, software engineers, and Web developers.

Network Engineering Technology Concentration (B.S.)

In this program, students learn how to design, construct, troubleshoot, and manage sophisticated voice, video, and data networks. This unique curriculum emphasizes data, image, and voice communications using networking technology. The networking courses focus on subjects such as computer forensics, digital communications, local- and wide-area network design, wireless networks, system administration, network security, and network planning and management. The ability of graduates to communicate with application and database professionals is enhanced with courses in application development, database design and administration, and systems analysis.

B.S. graduates typically are employed as network analysts, network engineers, network

support specialists, and Local Area Network (LAN) administrators or consultants. Future advancement can lead to positions in management, or as advanced technical specialists. Some students continue their studies to pursue graduate degrees.

To complement the computing and networking courses, classes in interpersonal communications, business, economics, and liberal arts are required. To complete assignments, students work in state-of-the-art computing laboratories dedicated to instruction and research in the following areas: computer forensics, high-performance computing, indoor and outdoor wireless, LAN and WAN, software development for mobile devices, network security, steganography/malware, telemedicine/telecare, and wet biomedical informatics.

Information Systems and Technology Concentration (B.S.)

Credit Hours Required for Bachelor's Degree: 122

Freshman Year

First Semester

- (3) **CNIT 14100** (Internet Foundations, Technologies, and Development)
 - (3) **CNIT 17600** (Information Technology Architectures)
 - (3) **CNIT 18000** (Introduction to Systems Development)
 - (4) **ENGL 10600** (First-Year Composition)
 - (3) **MA 22300** (Introductory Analysis I)
- (16)

Second Semester

- (3) **CNIT 15500** (Introduction to Object-Oriented Programming)
 - (3) **COM 11400** (Fundamentals of Speech Communication)
 - (3) **IT 10400** (Industrial Organization)
 - (3) **MA 22400** (Introductory Analysis II)
 - (3) **OLS 25200** (Human Relations in Organizations)
- (15)

Sophomore Year**Third Semester**

- (3) **CNIT 25500** (Programming for the Internet)
- (3) **CNIT 27200** (Database Fundamentals)
- (3) **CNIT 27600** (Systems Software and Networking)
- (3) Economics selective
- (3) Problem-solving selective

(15)

Fourth Semester

- (3) **CNIT 28000** (Systems Analysis and Design Methods)
- (3) **CNIT 29500** (Object-Oriented Programming)
- (3) Accounting selective
- (3) Communications selective
- (3) Statistics selective

(15)

Junior Year**Fifth Semester**

- (3) **CNIT 37200** (Database Programming I) **or**
CNIT 39200 (Enterprise Data Management)
- (4) **CNIT 38000** (Advanced Analysis and Design)
- (3) Interdisciplinary selective
- (3) Professional speaking selective
- (3) Free elective

(16)

Sixth Semester

- (6) Information systems selectives
- (3) Interdisciplinary selective
- (3) Liberal arts selective
- (3) Professional writing selective

(15)

Senior Year**Seventh Semester**

- (6) Information systems selectives
- (6) Interdisciplinary selectives
- (3) Liberal arts selective

(15)

Eighth Semester

- (3) **CNIT 48000** (Managing Information Technology Projects)
- (3) Information systems selective
- (6) Interdisciplinary selectives
- (3) Liberal arts selectives

(15)

Definitions:

Accounting selective: MGMT 20000, MGMT 20000-T01(Introductory Accounting for Technology Students)

Communications selective: COM 21000, COM 31400, COM 31500, COM 32000, OLS 32500

Economics selective: AGECE 21700, ECON 21000, ECON 25100, ECON 25200

Free elective: Any non-remedial course

Information systems selective: Any 30000 level or higher CNIT course or participation in EPCS (up to 3 credits)

Interdisciplinary selectives: One from each category

Finance: IT 45000, IET 45100, MGMT 20100, MGMT 31000

Marketing: MGMT 32300, MGMT 32400, ENTR 20000, ENTR 20100

Business law: MGMT 35400, MGMT 45500

Quality control: OLS 48400, IT 34200, MFET 45100, MET 45100, EPCS

Organizational behavior and human resources: OBHR 30000, OBHR 33000, PSY 27200, COM 32400, OLS 37600, OLS 38600, OLS 47700, EPCS, ENTR 20000, ENTR 20100

Manufacturing: MFET 40000, MFET 24300, MET 45100, IT 34500

Liberal arts selective: ANTH, AD, BAND, CLASSICS, COM, ECON, EDCI, EDPS, EDST, ENGL, FLL, HIST, HONR, IDIS, LING, MOD. LANG, MUSIC, PHIL, POL SCI, PSY, SOC, THTR, CDFS 20100, 20800, 21100, 25500, 30100, 43000, 43100, 43200

Problem solving selective: CHM 11100, CHM 11500, PHIL 12000, PHIL 15000, PHYS 17200, PHYS 21800, PHYS 21900, PHYS 22000 or 22100

Professional speaking selective: COM 31500, COM 32000, COM 32500, COM 41500

Statistics selective: STAT 22500, STAT 30100, STAT 50100, STAT 51100

Professional writing selective: ENGL 42000, ENGL 42100

Network Engineering Technology Concentration*

Credit Hours Required for Bachelor's Degree: 124

Freshman Year

First Semester

- (3) **CNIT 14100** (Internet Foundations, Technologies, and Development)
 - (3) **CNIT 17600** (Information Technology Architectures)
 - (3) **CNIT 18000** (Introduction to Systems Development)
 - (3) **ENGL 10600** (First-Year Composition)
 - (3) **MA 22300** (Introductory Analysis I)
-
- (16)

Second Semester

- (3) **CNIT 15500** (Introduction to Object-Oriented Programming)
 - (3) **COM 11400** (Fundamentals of Speech Communication)
 - (3) **IT 10400** (Industrial Organization)
 - (3) **MA 22400** (Introductory Analysis II)
 - (3) **OLS 25200** (Human Relations in Organizations)
-
- (15)

Sophomore Year

Third Semester

- (3) **CNIT 24000** (Data Communications and Networking)
 - (3) **CNIT 25500** (Programming for the Internet)
 - (3) **CNIT 27200** (Database Fundamentals)
 - (3) **ECET 21400** (Electricity Fundamentals)
 - (4) **PHYS 22000** (General Physics)
-
- (16)

Fourth Semester

- (3) **CNIT 24200** (System Administration)
 - (3) **CNIT 28000** (Systems Analysis and Design Methods)
 - (3) **ECET 23300** (Electronics and Industrial Controls)
 - (4) **PHYS 22100** (General Physics)
 - (3) **STAT 22500** (Introduction to Probability Models)
-
- (16)

Junior Year

Fifth Semester

- (3) **CNIT 34000** (UNIX Administration)
 - (3) **CNIT 34500** (Internetwork Design and Implementation)
 - (4) **ECET 37400** (Digital Telecommunications)
 - (3) Communications selective
 - (3) Professional speaking selective
-
- (16)

Sixth Semester

- (3) **CNIT 34200** (Advanced System and Network Administration)
 - (3) **CNIT 34600** (Wireless Local Area Networks)
 - (3) Information systems selective
 - (3) Liberal arts selective
 - (3) Professional writing selective
-
- (15)

Senior Year

Seventh Semester

- (3) **CNIT 45500** (Network Security)
 - (3) Business and economics selective
 - (3) Information systems selective
 - (3) Liberal arts selective
 - (3) Network engineering technology selectives
-
- (15)

Eighth Semester

- (3) **CNIT 480** (Managing Information Technology Projects)
 - (3) Business and economics selective
 - (3) Liberal arts selective
 - (6) Network engineering technology selectives
-
- (15)

* The faculty updates approved selectives and exclusions annually. See the CIT Web site for the latest approved selectives, exclusions, and substitutions.

Definitions:

Business and economics selective: Select any two courses, except as indicated with “or”: these courses are equivalents.

Finance: IT 45000, IET 45100, MGMT 31000

Accounting: MGMT 20000 or MGMT 20000-T01, MGMT 20100

Business law: MGMT 35400, MGMT 45500

Economics: ECON 21000 or AGECE 21700, ECON 25100, ECON 25200

Organizational behavior and human resources: COM 32400, ENTR 20000, ENTR 20100, OLS 37500, OLS 37600, OLS 38600, OLS 47700, PSY 27200

Communications selective: COM 21000, COM 31400, COM 31500, COM 32000, OLS 32500

Information systems selective: CNIT 29500 and any 300-level and higher courses not required as a NET selective (NO NET courses will fulfill the NET Information Systems Selective); CNIT 39900 and 49900 as approved by the NET faculty on a per offering basis; EPCS (per NET faculty approval: up to 3 credit hours)

Liberal arts selective: ANTH, AD, BAND, CLASSICS, COM, ECON, EDCI, EDPS, EDST, ENGL, FLL, HIST, HONR, IDIS, LING, MOD. LANG, MUSIC, PHIL, POL SCI, PSY, SOC, THTR, CDFS 20100, 20800, 21100, 25500, 30100, 43000, 43100, 43200

NET selective: CNIT 42000, CNIT 42100, CNIT 43500, CNIT 44500, CNIT 44600, CNIT 45600, CNIT 55600, IT 34500, IT 54500 (with faculty approval); CNIT 39900 and 49900 as approved by the NET faculty on a per offering basis

Professional speaking selective: COM 31500, COM 32000, COM 32500, COM 41500

Professional writing selective: ENGL 42000, ENGL 42100

Department of Computer Graphics Technology

The Department of Computer Graphics Technology prepares visually-oriented students for careers in creating and managing the production of computer graphics within a wide range of industries. Students work collaboratively in computer labs to master graphic techniques, concepts, and management skills.

Students begin their study in the Freshman CGT Experience that serves as a foundation for the computer graphics technology baccalaureate program. Before applying for admission into the professional program, a student must successfully complete all courses in the Freshman CGT Experience with a minimum Graphics Admission Index (GAI) of 2.5. Admission is not guaranteed by the grade point average of 2.5; rather, it is

the minimum standard for consideration of admission.

After successful completion of the Freshman CGT Experience, students continue mastering generalized concepts and skills in applied computer graphics technology or develop more in-depth competencies in areas such as computer animation; construction graphics; interactive multimedia development; or virtual product integration.

College of Technology Statewide

The College of Technology statewide provides programs in computer graphics technology at a number of Indiana locations. See “College of Technology statewide” in the Index.

Computer Graphics Technology (A.S)

The Department of Computer Graphics Technology offers an associate of science (A.S.) degree (63 credit hours) at West Lafayette and several statewide locations. Students in the A.S. program will follow the plan of study for the first

four semesters of the four-year plan of study, with some exceptions. For more information about the A.S. plan of study, see any counselor in the department. We recommend that you make an appointment.

Computer Graphics Technology (B.S)

With the advent of the information age and main-stream adoption of computer graphics and digital technology, there is a need for highly educated people to apply emerging computer graphics technologies to many industries. The seemingly limitless applications of computer graphics are creating the need for individuals who are both highly skilled in the technology of computer graphics and broadly educated in related interdisciplinary skills, including technical problem solving; graphic database management; applied graphic programming; graphic design; interactive media design and development; 2D and 3D modeling; and animation and motion-based computer graphics. The computer graphics technologist coordinates the production, application, and evaluation of visual information. Computer graphics specialists differ from visual artists, engineering designers, managers, and computer programmers by combining elements of all these disciplines.

Graduates of both the A.S. and the B.S. degree programs are employed by firms such as Rhythm and Hues, DreamWorks, Boeing, Holder Construction, John Deere, Trial Graphx, Honda of America, Rand Worldwide, Pharos Press, Butler International, eTapestry, Oxygen

Education, Black Lantern Studios, AllScripts, and RM Design Studio.

Honors Program

The goal of the Honors Program in Computer Graphics Technology is to introduce, enlighten, nurture, and motivate top students in this emerging technology in a unique and interesting way. Students who qualify may participate in the program their first semester at Purdue. To participate as a first-semester freshman, a student must have earned a combined verbal and math SAT score of 1200 or above (or equivalent ACT score). Students may enter the program at any time, provided they have maintained a minimum overall GPA of 3.5.

Requirements for graduating with honors include completion of two seminars of CGT 29000H (1 credit each) and 2 seminars of CGT 49000H (3 credits each), in addition to the degree requirements. Students who successfully complete the senior year honors seminars will receive a certificate of recognition from Purdue University and will be listed in the commencement program as having participated in an honors program. Also, a statement of achievement will be included on their academic transcript.

Computer Graphics Technology

Credit Hours Required for Bachelor's Degree: 123

Freshman Year

First Semester

- (3) **CGT 10100** (Introduction to Computer Graphics Technology)*
 - (3) **CGT 11100** (Design for Visualization and Communication)*
 - (3) **CGT 11200** (Sketching for Visualization and Communication)*
 - (5) **MA 15900** (Precalculus)*
 - (3) English selective*
- (17)

Second Semester

- (3) **CGT 11600** (Geometric Modeling for Visualization and Communication)*
 - (3) **CGT 14100** (Internet Foundations, Technologies, and Development)*
 - (3) **COM 11400** (Speech Communication)*
 - (3) **MA 22100** (Calculus for Technology I)*
 - (3) **PSY 12000** (Elementary Psychology)
- (15)

Professional Program for Computer Graphics Technology

Sophomore Year

Third Semester

- (3) **CGT 21100** (Raster Imaging for Computer Graphics)
 - (3) **CGT 21500** (Computer Graphics Programming I)
 - (4) **PHYS 21800** (General Physics)
 - (3) Globalization and ethics selective
 - (3) Liberal arts elective
- (16)

Fourth Semester

- (3) **CGT 21600** (Vector Imaging for Computer Graphics)
 - (3) **ECON 21000** (Principles of Economics)
 - (3) CGT selective
 - (3) Science elective
 - (3) Elective
- (15)

* Indicates courses included in Freshman Graphics Admission Index (GAI).

Junior Year**Fifth Semester**

- (3) Communication selective
- (6) CGT selectives
- (3) English selective
- (3) Technical elective

(15)

Sixth Semester

- (3) **OBHR 30000** (Management of Human Resources)
- (3) CGT selective (300-level)
- (3) Statistics selective
- (3) Liberal arts elective
- (3) Elective

(15)

Senior Year**Seventh Semester**

- (3) **CGT 41100** (Contemporary Problems in Applied Computer Graphics)
- (3) **CGT 45000** (Professional Practices)
- (3) **MGMT 45500** (Legal Background for Business I)
- (3) Technical elective
- (3) Elective

(15)

Eighth Semester

- (3) CGT selective (400-level)
- (3) Liberal arts elective
- (3) Management elective
- (3) Technical elective
- (3) Elective

(15)

Definitions:

Communication selective: COM 31200, 31400, 31500, 31800, 32000, 33000, or 41500.

English selective: Select one from ENGL 10600 or 10800; and select one from ENGL 20500, 41900, 42000, or 42100.

Globalization and ethics selective: See an academic advisor or the CGT Web site for an approved list.

Liberal arts elective: Any course with one of these prefixes: ANTH, AD, COM, ECON, ENGL, FLL, HIST, IDIS, MUS, PHIL, POL, PSY, THTR, or SOC.

Management elective: Any course in organizational leadership and supervision or management.

Science elective: See an academic counselor or the CGT Web site for an approved list.

Statistics selective: STAT 22500 or 30100T; PSY 20100, or IT 34200.

Technology elective: Any course from engineering, technology, science, or management.

Manufacturing Graphics Minor

A manufacturing graphics minor is offered by the Department of Computer Graphics Technology at Purdue to students in select majors outside the department. Students have the opportunity to develop manufacturing graphics expertise in their chosen academic major and subject specializations. Those who complete the minor will be equipped with applied knowledge in current and emerging graphics theories and computer graphics technologies associated with the design, documentation, and manufacturing of products and related services.

Availability

The minor in manufacturing graphics is open only to the following majors:

- Aeronautics and Astronautics Engineering (AAE)
- Agricultural and Biological Engineering (ABE)
- Aviation Technology (AT)

- Computer Programming (CPT)
- Industrial Design (ID)
- Industrial Engineering (IE)
- Industrial Management
- Industrial Technology (IT)
- Interdisciplinary Engineering (IDE)
- Manufacturing Engineering Technology (MFET)
- Mechanical Engineering (ME)
- Mechanical Engineering Technology (MET)

Additional Information

Other courses outside of manufacturing graphics offered by the Department of Computer Graphics Technology will not be available for enrollment by non-computer graphics technology majors who are accepted in the computer graphics technology manufacturing graphics minor.

Prerequisite Courses. The following prerequisite courses (one in each area) are required before enrolling in CGT 22600:

- MA 16100, 22100, 22300; or an approved substitution;
- CNIT 26700; CS 15600, 15800, or 15900; or an approved substitution;
- PHYS 15200, 21800, or 22000; or an approved substitution.

Requirements

- All courses in the minor must be taken for a grade. Pass/Not Pass is not an option.
- A grade of “C” or better must be obtained in all computer graphics technology manufacturing graphics minor classes.
- Only students pursuing four-year degrees are eligible for the minor. Students must complete 14 or more credit hours selected from the following list of courses:

Credit Hours Required for Minor: 14

At least 14 credit hours selected from:

- (3) **CGT 11000** (Computer Graphics Communications) **or**
 - (3) **CGT 11600** (Geometric Modeling for Visualization and Communication) **or**
 - (2) **CGT 16300** (Introduction to Graphics for Manufacturing) **or**
 - (2) **CGT 16400** (Introduction to Graphics for Civil Engineering and Construction)
 - (3) **CGT 22600** (Introduction to Constraint-Based Modeling, which is co-listed as CIMT 211)
 - (3) **CGT 32300** (Introduction to Surface Modeling)
 - (3) **CGT 32600** (Graphics Standards for Product Definition)
- Select one of the following:
- (3) **CGT 42300** (Product Data Management) **or**
 - (3) **CGT 42600** (Industry Applications of Simulation and Visualization)

Department of Electrical and Computer Engineering Technology

The Department of Electrical and Computer Engineering Technology (ECET) offers the electrical engineering technology (EET) program with a wide variety of elective courses so a student may emphasize certain specialty areas such as electronics and electrical technologies, process and machine control, computers, microprocessors, embedded microcontrollers and systems, analog and digital communications, telecommunications, local area networks, power systems, digital electronics, and instrumentation. Project management and development, professional development, and teamwork are threads throughout the EET program.

ECET graduates conceive, design, develop, test, and implement technologies that impact humanity and society. Electronics are the cornerstone technology in a modern, high-tech society. Just imagine the technology that electronics make possible: computers, the Internet, ATMs, automobiles, airplanes, trains, gas pumps, water pumps, televisions, radios, electric lights, air conditioning, electronically-controlled heating systems, pacemakers, medical equipment, and the list goes on and on. Electronics technology is interwoven in a civilized world. ECET graduates have a tremendous impact on the technical world that is embedded in our civilization and our culture. ECET graduates make a difference.

The bachelor of science program in EET is highly structured during the first two years of study to provide a strong foundation, and relatively flexible during the last two years to allow students to specialize or generalize. The program provides a laboratory-based curriculum that combines hands-on practice with the appropriate basic electrical and electronic theory. It is applications-oriented and is designed to prepare well-rounded graduates who will complete the program and succeed in one or more of the fields related to electrical engineering technology.

The educational objective of the EET bachelor of science program at Purdue is to produce graduates who:

- Have technical and professional skills that prepare them for immediate employment in an electrical or electronics engineering-related capacity and who add value to their company shortly after they are employed.
- Analyze, design, and implement control systems, communications systems, computer systems, or power systems utilizing mathematical methods, including statistics/probability, transform methods, discrete mathematics, or applied differential equations.
- Communicate effectively in oral, written, and graphical forms at a level appropriate to an electrical or electronics technologist.

- Work effectively individually and as a member or leader of a multidisciplinary team.
- Demonstrate a high standard of professional ethics and are cognizant of social concerns as they relate to the practice of engineering technology.
- Continue their education through short courses, industrial training, and/or participation in a graduate program.
- Apply project management techniques to EET projects.

Students working toward the B.S. degree choose electives in the ECET department as well as technical courses from other departments to support their areas of interest. Students may choose technical electives such as fluid power, statics and dynamics, manufacturing operations, theatre audio technology, or human anatomy and physiology. Many others are available as well.

The ECET department also offers an opportunity to specialize in computer engineering technology (CpET) in the upper division of the B.S. EET program. Students who wish to focus their education on technical aspects of computers and computer networking and applications of these technologies will be interested in this opportunity.

The computer is undoubtedly the most pervasive electronic device available today. Computers affect our lives in many ways that we take for granted. One example is the automobile, which has several computers called “embedded microcontrollers” that work together as a network to make the car run smoothly and efficiently. The rapidly expanding use of computers has created a huge need for knowledgeable professionals who can work with these devices. The

computer engineering technology concentration is a direct answer to this exploding need.

Electrical engineering technology is a field well suited to anyone who wishes to enter a fast-paced, progressive technology with unlimited growth potential. The lecture/laboratory format of the courses makes the material easier to digest, whether the student is more comfortable learning from a hands-on, application-oriented perspective or from a theoretical perspective.

Graduates of the EET program and the EET program with the CpET concentration are in great demand by firms such as Stryker Medical, American Electric Power, Indiana Michigan Power, General Electric, Delphi Electronics, Ford Motor Company, Cinergy, Siemens, CTS Microelectronics, Square D, Boeing, IBM, Rockwell International, Hewlett-Packard, Republic Steel, Sundstrand, AdTran, Motorola, and Northern Telecom. The average starting salary for graduates of the ECET department ranks near the top when compared to starting salaries for other Purdue B.S. graduates.

Cooperative Education

A cooperative education program is available. Students combine on-the-job work experience with classroom studies and have the opportunity to earn credits toward graduation while earning money to help pay for college expenses.

College of Technology Statewide

The College of Technology statewide provides programs in electrical engineering technology at a number of Indiana locations. See “College of Technology statewide” in the Index.

Electrical Engineering Technology (B.S.)

The B.S. degree in EET prepares students for positions as professionals in a variety of industries such as electrical power and energy management, biomedical systems and devices, high-tech transportation systems, microcomputers and embedded controller-based systems, computer systems, audio-visual and entertainment media, electronics communications, technical automation, and manufacturing systems. The plan of study provides coursework in electrical engineering technology as well as in related areas that provide background informa-

tion in both technical and non-technical subjects. It provides a strong technical education in concentrations such as analog electronics, digital systems, microcomputer systems, electronics (including wireless) communications, industrial automation, or electrical power. With a solid underpinning in the first two years, a student may then specialize in a concentration area or be a generalist selecting from several electives in the upper division.

Most electrical engineering technology graduates are ordinarily involved with techni-

cal aspects of components, subsystems, and overall systems. In many circumstances, they are involved in system design. Oftentimes EET graduates move from technical work to management, and progress to senior-level positions such as vice president, executive vice president, president, and CEO. Some EET program graduates elect to continue their studies through graduate education, while others pursue their careers as entrepreneurs.

Accreditation

The B.S. EET programs at the West Lafayette, Kokomo, and South Bend locations and the A.S. EET program at the New Albany location are accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET), 111 Market Place, Suite 1050, Baltimore, Maryland 21202-4012. Telephone (410) 347-7700; E-mail accreditation@abet.org; Web site www.abet.org.

Electrical Engineering Technology (B.S.)

Credit Hours Required for Bachelor's Degree: 127

Freshman Year

First Semester

- (4) **ECET 10700** (Introduction to Circuit Analysis)
 - (3) **ECET 10900** (Digital Fundamentals)
 - (2) **ECET 19600** (Introduction to ECET and Projects)
 - (4) **ENGL 10600** (First-Year Composition) **or**
 - (3) **ENGL 10800** (Accelerated First-Year Composition)
 - (3) **MA 15300** (Algebra and Trigonometry I)
-
- (15–16)

Second Semester

- (3) **CNIT 10500** (Introduction to C Programming)
 - (3) **COM 11400** (Fundamentals of Speech Communication)
 - (4) **ECET 15700** (Electronics Circuit Analysis)
 - (4) **ECET 15900** (Digital Applications)
 - (3) **MA 15400** (Algebra and Trigonometry II)
-
- (17)

Sophomore Year

Third Semester

- (4) **ECET 20700** (AC Electronics Circuit Analysis)
 - (4) **ECET 20900** (Introduction to Microcontrollers)
 - (3) **MA 22100** (Calculus for Technology I)
 - (4) **PHYS 21800** (General Physics)
 - (3) Humanities or social science elective
-
- (18)

Fourth Semester

- (4) **ECET 23100** (Electrical Power and Controls)
 - (4) **ECET 25700** (Power and RF Electronics)
 - (4) **ECET 29700** (Electronic Prototype Development)
 - (3) **MA 22200** (Calculus for Technology II)
-
- (15)

Junior Year

Fifth Semester

- (4) **ECET 30400** (Introduction to Communication Systems)*
 - (4) **ECET 30700** (Analog Network Signal Processing)*
 - (3) **ENGL 42100** (Technical Writing)
 - (3) **STAT 30100T** (Elementary Statistical Methods)
 - (4) ECET elective
-
- (18)

Sixth Semester

- (4) **ECET 39600** (Project Development and Management)
 - (8) ECET electives
 - (3) Humanities or social science elective
-
- (15)

* The computer engineering technology (CpET) concentration requires ECET 32500 (Computer Architecture Analysis) and CNIT 24000 (Data Communications and Networking) in the upper division and does not include ECET 30400 (Introduction to Communication Systems) or ECET 30700 (Analog Signal Processing). See ECET academic advisor for further details.

Note: An associate of science (A.S.) degree is available. See the ECET academic advisor for more information.

Senior Year***Seventh Semester***

- (1) ECET 48000 (Professional Issues in EET)
 - (1) ECET 49600 (Project Design and Development, Phase I)
 - (4) ECET elective
 - (3) Communication selective
 - (3) Science selective
 - (3) Selective
- (15)

Eighth Semester

- (1) ECET 49700 (Project Design and Development, Phase II)
 - (3) Selective
 - (6) Humanities or social science electives
 - (3) Free elective
- (13)

Department of Industrial Technology

The Department of Industrial Technology offers bachelor's (B.S.) degrees with majors in industrial technology, industrial distribution, and engineering/technology teacher education. The department also offers a minor in biotechnology. The degrees are technology-based and interdisciplinary, with a large number of courses that provide experiences in state-of-the-art laboratories. Degree programs are designed to prepare technical and/or management oriented professionals for entrance into a wide range of positions in business, industry, education, and government.

The department's mission is to provide world-class integrated curricula that are relevant to students' lives and careers, valuable in terms of content and competencies, and connected to the needs of business and industry. Our vision is to be the nation's premier department, preparing graduates to excel in our programs. The department has set goals to meet the commitments of the mission and vision.

Industrial technology and industrial distribution graduates, and those with a dual degree in both, have maintained very high placement rates in recent years. They work in major corporations as well as in small- to medium-sized companies. The Big Three automakers, Caterpillar, IBM, Rockwell, Texas Instruments, Boeing, Grainger, and Emerson are among the companies that employ Purdue IT graduates. The department has student-oriented faculty who are experts in their fields, and they continuously pursue scholarship and professional development.

In addition to the formal academic offerings, the department sponsors student organizations, field trips, participation in academic and industrial conferences, and other extracurricular activities supportive of students' academic and professional development. Co-op and internship opportunities are also available.

The industrial technology and industrial distribution degrees are accredited by the Association for Technology, Management and Applied Engineering (ATMAE) and the Technology Accreditation Commission of ABET. The engineering/technology teacher education degree program is accredited by the National Council for Accreditation of Teacher Education (NCATE).

College of Technology Statewide

The College of Technology statewide provides programs in industrial technology at a number of Indiana locations. See "College of Technology statewide" in the Index.

Certificate Program. A certificate program (18 credit hours) in industrial technology is available at all College of Technology statewide locations through distance education. This program, which is designed for full-time employees, prepares an individual for a leadership position.

Bachelor of Science. A bachelor of science degree is available in industrial technology at the Anderson, Lafayette, Richmond, South Bend, and Vincennes locations.

Associate of Science. An associate of science degree is available in industrial technology at the Anderson location.

Biotechnology Minor

Biotechnology refers to harnessing the properties of a living organism to develop and manufacture products that benefit human life. The combination of biological sciences with high-technology applications is predicted to provide solutions to major national problems by creating new generations of industrial biotechnology with great potential for economic impact. There are current and projected shortages of graduates with the knowledge needed in the growing biotechnology

industry; this minor in biotechnology will help meet these demands. The minor is an interdisciplinary partnership among the schools/colleges of Agriculture, Pharmacy and Pharmaceutical

Sciences, Science, and Technology. Requiring 22 credit hours to complete, the biotechnology minor is open to all Purdue undergraduate students regardless of major.

Industrial Technology (B.S.)

The industrial technology (IT) major is primarily involved with the management, operation, and maintenance of complex technological systems. Students are prepared to work in a broad range of technical and/or managerial positions in technical manufacturing or commercial environments. Industrial technology students are exposed to a wide variety of manufacturing and operations coursework, providing knowledge in industrial

technology, manufacturing technology, managerial operations, and quality and plant supervision. IT provides a high degree of flexibility for students desiring to add a specialization to their degree with elective coursework. Core coursework includes production planning, industrial ergonomics, engineering economy, and facilities planning for lean manufacturing.

Industrial Technology (B.S.)

Credit Hours Required for Bachelor’s Degree: 124

Freshman Year

First Semester

- (3) **CNIT 13600** (Personal Computing Technology and Applications)
 - (4) **ENGL 10600** (First-Year Composition)
 - (3) **IT 10400** (Industrial Organization)
 - (5) **MA 15900** (Precalculus) **or**
 - (3) **MA 15300** (Algebra and Trigonometry I) **and**
 - (3) **MA 15400** (Algebra and Trigonometry II)
- (15-16)

Second Semester

- (3) **CGT 11000** (Technical Graphics Communications)
 - (3) **COM 11400** (Fundamentals of Speech Communication)
 - (3) **IT 21400** (Introduction to Lean Manufacturing)
 - (3) **MET 14300** (Materials and Processes I)
 - (3) **PSY 12000** (Elementary Psychology)
- (15)

Sophomore Year

Third Semester

- (3) **AT 26300** (Fluid Power Systems)
 - (3) **CNIT 17500** (Visual Programming)
 - (3) **IT 23000** (Industrial Supply Chain Management)
 - (3) **MET 14400** (Materials and Processes II)
 - (3) Science selective
- (15)

Fourth Semester

- (3) **ECET 21400** (Electricity Fundamentals)
 - (3) **ECON 21000** (Principles of Economics) **or**
 - AGEC 21700** (Economics)
 - (3) **MET 24500** (Manufacturing Systems)
 - (4) **PHYS 21800** (General Physics)
 - (3) Free elective
- (16)

Junior Year

Fifth Semester

- (3) **IT 34200** (Introduction to Statistical Quality)
 - (3) **IT 35100** (Advanced Industrial Safety and Health Management)
 - (3) **MFET 30000** (Applications of Automation in Manufacturing)
 - (3) Communication elective (30000-level or above)
 - (3) Technical elective
 - (3) Free elective
- (18)

Sixth Semester

- (3) **IT 34500** (Automatic Identification and Data Capture)
- (3) **IT 38500** (Industrial Ergonomics)
- (3) **STAT 30100** (Elementary Statistical Methods)
- (3) Science selective
- (3) Technical elective (30000-level or above)

(15)

Senior Year**Seventh Semester**

- (3) **COM 31500** (Speech Communication of Technical Information) **or**
 - ENGL 42000** (Business Writing)
 - (3) **IT 38100** (Total Productive Maintenance)
 - (3) **IT 44200** (Production Planning)
 - (3) **IT 44600** (Six Sigma Quality)
 - (3) Free elective
-
- (15)

Eighth Semester

- (3) **IT 48300** (Facility Design for Lean Manufacturing)
 - (3) Technical elective (30000-level or above)
 - (9) Free electives
-
- (15)

Industrial Distribution (B.S.)

Industrial distribution (ID) is a technology and business major that prepares students for careers that are industrial technology oriented and have a supply chain and product management focus. The ID curriculum provides students with a valuable blend of courses in industrial technology, distribution operations and management, and business management including financial analy-

sis, supply chain and business, communication and selling skills, and leadership. The program is designed to produce technical problem solvers with business and supply chain knowledge tailored specifically for the management and distribution of industrial/technical products. Graduates work effectively in all aspects of distribution and in a wide variety of industries.

Industrial Technology/Industrial Distribution Double Major (B.S.)

It is common for students to combine the industrial technology and industrial distribution majors to get a double major in IT/ID that is highly valued by employers. The industrial distribution industry consists of manufacturers and distributor partners that produce and distribute industrial/technical products for sale to industrial, commercial, and construction enterprises.

The majority of manufacturers market their products to the manufacturing segment through wholesale distribution partners. The knowledge of manufacturing and distribution concepts provides valuable expertise in this market. Some of the highest salaries paid by employers are to IT/ID double majors.

Industrial Distribution (B.S.)**Credit Hours Required for Bachelor's Degree: 121****Freshman Year****First Semester**

- (3) **CNIT 13600** (Personal Computing Technology and Applications)
 - (4) **ENGL 10600** (First-Year Composition)
 - (3) **IT 10400** (Industrial Organization)
 - (5) **MA 15900** (Precalculus) **or**
 - (3) **MA 15300** (Algebra and Trigonometry I) **and**
 - (3) **MA 15400** (Algebra and Trigonometry II)
-
- (15-16)

Second Semester

- (3) **CGT 11000** (Technical Graphics Communications)
 - (3) **COM 11400** (Fundamentals of Speech Communication)
 - (3) **IT 21400** (Introduction to Lean Manufacturing)
 - (3) **MET 14300** (Materials and Processes I)
 - (3) **PSY 12000** (Elementary Psychology)
-
- (15)

Sophomore Year

Third Semester

- (3) **AT 26300** (Fluid Power Systems)
- (3) **ECET 21400** (Electricity Fundamentals)
- (3) **IT 23000** (Industrial Supply Chain Management)
- (3) **MET 14400** (Materials And Processes II)
- (3) Science selective

(15)**Fourth Semester**

- (3) **ECON 21000** (Principles of Economics) **or**
AGEC 21700 (Economics)
- (3) **MET 24500** (Manufacturing Systems)
- (3) **OLS 25200** (Human Relations in Organizations)
- (4) **PHYS 21800** (General Physics)
- (3) Free elective

(16)**Junior Year****Fifth Semester**

- (3) **IT 34200** (Introduction to Statistical Quality)
- (3) **IT 35100** (Advanced Industrial Safety and Health Management)
- (3) **MFET 30000** (Applications of Automation in Manufacturing)
- (3) **MGMT 20000T** (Introductory Accounting)
- (3) **MGMT 32300** (Introduction to Marketing Analysis)
- (3) Free elective

(18)**Sixth Semester**

- (3) **IT 33000** (Industrial Sales and Sales Management)
- (3) **IT 33200** (Purchasing, Inventory, and Warehouse Management)
- (3) **IT 34500** (Automatic Identification and Data Capture)
- (3) **STAT 30100** (Elementary Statistical Methods)
- (3) Technical elective

(15)**Senior Year****Seventh Semester**

- (3) **ENGL 42000** (Business Writing)
- (3) **IT 38100** (Total Productive Maintenance)
- (3) **IT 43200** (Financial Transactions in Distribution)
- (3) **IT 43400** (Global Transportation and Logistics Management)
- (3) **IT 44600** (Six Sigma Quality)

(15)**Eighth Semester**

- (3) **IT 43500** (Distribution Management Policy)
- (3) Communication selective (30000-level or higher)
- (3) Science selective
- (6) Free electives

(15)

Engineering/Technology Teacher Education (B.S.)

The Engineering/Technology Teacher Education Program prepares graduates to teach in middle school and high school engineering/technology education classrooms. The curriculum develops professional educators with the strong pedagogical and technical skills needed for success in today's high-performance workplace.

The undergraduate curriculum is based on the Scholar-Practitioner Model, National Council for the Accreditation of Teacher Education standards, Standards for Technological Literacy, Advancing Excellence in Technological Literacy, Indiana Department of Education Division of Professional Standards, and Project Lead the Way competencies. This solid foundation emphasizes the blending of practical experiences, technical expertise, and academic rigor. Students complete coursework in general education, professional education, and engineering/technology education. This preparation is capstoned

by a supervised full-semester student teaching experience. Graduates receive Project Lead the Way engineering teaching certificates with their Purdue University diploma. This provides them with the competencies to teach the Project Lead the Way courses of Gateway to Technology, Introduction to Engineering Design, Principles of Engineering, Computer Integrated Manufacturing, Civil Engineering and Architecture, and Engineering Design and Development.

The Engineering/Technology Teacher Education Program is accredited by the National Council for the Accreditation of Teacher Education and the Indiana Professional Standards Board. There is a very high demand for engineering/technology education teachers nationwide; Indiana has reciprocal licensing agreements with 40 states, giving engineering/technology teacher education graduates teaching opportunities across the country.

Engineering/Technology Teacher Education (B.S.)

Credit Hours Required for Bachelor's Degree: 122

Freshman Year

First Semester

- (3) **COM 11400** (Fundamentals of Speech Communication)
- (4) **ENGL 10600** (First-Year Composition)
- (3) **IT 27200** (Foundations of Technology Education)
- (3) **IT 27600** (Teaching Design and Communications Technology)
- (3) **MA 15300** (Algebra and Trigonometry I)

(16)

Second Semester

- (2) **EDCI 27000** (Introduction to Educational Technology and Computing)
- (1) **EDCI 27100** (Classroom Applications of Educational Technology)
- (3) **IT 27500** (Teaching Power, Energy, and Transportation Technology)
- (3) **MA 15400** (Algebra and Trigonometry II)
- (3) **PSY 12000** (Elementary Psychology)
- (3) Technical elective

(15)

Sophomore Year

Third Semester

- (3) **EDCI 20500** (Exploring Teaching as a Career)*
- (3) **EDCI 28500** (Multiculturalism and Education)*
- (3) **EDST 20000** (History and Philosophy of Education)
- (3) **IT 27800** (Teaching Construction Technology)
- (3) Technical elective

(15)

Fourth Semester

- (3) **CGT 11000** (Computer Graphics Communications)
- (3) **IT 27700** (Teaching Manufacturing Technology)
- (3) **SOC 10000** (Introductory Sociology)
- (3) Science selective
- (3) Technical elective

(15)

Junior Year

Fifth Semester

- (3) **ECET 21400** (Electricity Fundamentals)
- (3) **EDPS 23500** (Learning and Motivation)†
- (3) **EDPS 26500** (The Inclusive Classroom)†
- (3) **IT 37200** (Teaching Civil Engineering and Architecture)
- (3) International understanding selective

(15)

Sixth Semester

- (3) **COM 31500** (Speech Communication of Technical Information)
- (2) **EDCI 45000** (Techniques of Coordination in Cooperative Vocational Education)
- (3) **IT 37100** (Instructional Planning and Evaluation)
- (3) **MFET 40000** (Computer Integrated Manufacturing)
- (4) **PHYS 21800** (General Physics)

(15)

Senior Year

Seventh Semester

- (3) **ENGL 42100** (Technical Writing) or **ENGL 42000** (Business Writing)
- (3) **IT 47100** (Managing the Technology Education Laboratory)
- (3) **IT 47200** (Methods of Teaching Technology Education)
- (3) Science selective
- (3) Technical selective

(15)

Eighth Semester

- (16) **EDCI 49800G** (Supervised Teaching in Technology Education)‡

(16)

* These courses are Block I courses and must be taken together.

† These courses are Block II courses and must be taken together.

‡ No undergraduate may be enrolled in this course until he or she has been admitted to teacher education and a copy of this acceptance is on file with the advisor.

Vocational-Industrial Teaching (B.S.)

The vocational-industrial teaching curriculum is a part of the total Indiana program of vocational education. Vocational-industrial teachers must be occupationally competent in one of many skilled and technical crafts found in industry in the United States. In order to qualify for the vocational teaching license, the student must have completed at least three years of work above the learner level in a craft, skilled trade, or some other type of industrial occupation, plus

the general and professional education courses specified by the Indiana Department of Education Division of Professional Standards. The plan of study, when completed, qualifies the student for a provisional trade and industrial education teacher license.

Individuals interested in pursuing the vocational-industrial teaching curriculum should consult the department for a full explanation of details and procedures.

Department of Mechanical Engineering Technology

The Department of Mechanical Engineering Technology offers distinctive engineering technology programs that are designed specifically to meet the needs of today's most demanding industrial environments. These programs include mechanical engineering technology (MET) and manufacturing engineering technology (MFET). The vision of the department is to be the national leader in mechanical and manufacturing engineering technology education through excellence in teaching, applied research and scholarship, and professional service. Students develop problem-solving and functional skills that prepare them to become engineering technicians and technologists proficient in the fundamental principles of science and engineering and in their practical applications in industry to meet the needs of Indiana, the nation, and the world.

Engineering technology programs stress the application and implementation of technology using a hands-on approach with a solid foundation in mathematics and physical sciences. Engineering technology education focuses primarily on the applied aspects of science and engineering aimed at preparing graduates for careers in product improvement, industrial processes, and plant operations. The Department of Mechanical

Engineering Technology faculty members have advanced degrees as well as significant industrial experience in their areas of expertise. Students have the opportunity to learn from these well-educated practicing professionals.

Applied research drives the design and content of undergraduate courses. Focus areas of excellence include energy systems, advanced manufacturing systems and controls, engineered materials, applied nanotechnology systems, and mechanical/electronic (mechatronic) systems.

The educational objectives of the degree programs in mechanical engineering technology and manufacturing engineering technology are to produce graduates who:

- Deliver services and support to industry by applying technical knowledge, problem-solving techniques, and hands-on skills in traditional and emerging areas of the mechanical and manufacturing disciplines.
- Are active participants in ongoing professional development, professional growth, and increasing professional responsibility.
- Communicate ideas to technical and non-technical people.
- Work in industrial teams.
- Work within the accepted standards of professional integrity.

Mechanical Engineering Technology (A.S. and B.S.)

The MET program focuses on the methods, materials, machinery, and manpower needed to solve real-world problems. The program is focused on providing graduates with skills to develop and implement technological solutions in the areas of product design and development, manufacturing, manufacturing processes, quality control,

materials, fluid power, heat power, mechanics, and cost analysis.

Mechanical engineering technicians work with scientists and engineers as valuable members of professional teams. Engineering technicians have practical skills and often begin their careers with assignments in simple design, prod-

uct testing, computer-aided drafting, or customer service. Graduates accept jobs with titles such as laboratory technicians, engineering aides, plant maintenance personnel, designers/CAD specialists, production assistants, and technical salespeople. With additional experience, promotion is possible into positions such as industrial supervisors, machine and tool designers, technical buyers, production expeditors, and cost estimators.

The MET program provides additional study in mechanical engineering technology plus courses that provide background in related technical and nontechnical topics essential in modern industry. Graduates fill a variety of technical positions, i.e., product design/development, process design/development, plant operations, facilities management, quality assurance, field technical service, production supervision, technical sales, marketing, research, etc.

The department provides programs in mechanical engineering technology at a number of statewide locations. The MET bachelor's degree is offered at Columbus and New Albany.

The MET associate's degree is offered at South Bend, Kokomo, and Richmond.

Many students transfer into MET from other programs at Purdue and from other institutions as well. Graduates of both the A.S. and B.S. degree programs are in great demand by such firms as Babcock & Wilcox, American Axle Manufacturing, Cessna Aircraft, Cummins, General Electric, Johnson Controls, Caterpillar, Motorola, TRW Automotive, U.S. Steel, Honda, Wabash National, and other companies.

Accreditation

The B.S. mechanical engineering technology programs at the West Lafayette, New Albany, and Columbus locations and the A.S. MET program at the Columbus location are accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET), 111 Market Place, Suite 1050, Baltimore, Maryland 21202-4012. Telephone (410) 347-7700; fax (410) 625-2238; e-mail tac@abet.org; Web site www.abet.org.

Mechanical Engineering Technology (B.S.)

Credit Hours Required for Bachelor's Degree: 127

Freshman Year

First Semester

- (3) **CGT 11000** (Technical Graphics Communications)
- (4) **ENGL 10600** (First-Year Composition)
- (5) **MA 15900** (Precalculus)
- (3) **MET 14300** (Materials And Processes I)
- (1) **MET 16200** (Computational Analysis Tools in MET)
- (2) **MET 16300** (Computer Application Tools in MET)

(18)

Second Semester

- (3) **MA 22100** (Calculus for Technology I)
- (3) **MET 10200** (Production Design and Specifications)
- (3) **MET 11100** (Applied Statics)
- (3) **MET 14400** (Materials And Processes II)
- (4) **PHYS 22000** (General Physics)

(16)

Sophomore Year

Third Semester

- (3) **ECET 21400** (Electricity Fundamentals)
- (4) **MET 21100** (Applied Strength of Materials)
- (3) **MET 21300** (Dynamics)
- (3) **MET 24500** (Manufacturing Systems)
- (4) **PHYS 22100** (General Physics)

(17)

Fourth Semester

- (3) **COM 11400** (Fundamentals of Speech Communication)
- (3) **MET 21400** (Machine Elements)
- (3) **MET 22000** (Heat/Power)
- (3) **MET 23000** (Fluid Power)
- (2-3) Technical selective
- (3) Humanities and social science elective

(17-18)

Junior Year***Fifth Semester***

- (3) **CHM 11100** (General Chemistry)
- (3) **CNIT 17500** (Visual Programming)
- (3) **MA 22200** (Calculus for Technology II)
- (3) **MET 32000** (Applied Thermodynamics)
- (3) Global elective

(15)

Sixth Semester

- (3) **ECON 21000** (Principles of Economics)
- (3) **MET 31300** (Applied Fluid Mechanics)
- (3) **MET 34600** (Advanced Materials in Manufacturing)
- (3) **MET 38200** (Controls and Instrumentation for Automation)
- (3) **STAT 30100T** (Elementary Statistical Methods)

(15)

Senior Year***Seventh Semester***

- (3) **IET 45100** (Monetary Analysis for Industrial Decisions)
- (3) Interdisciplinary or basic science elective
- (6) MET electives
- (3) OLS/MGMT elective

(15)

Eighth Semester

- (3) **COM 32000** (Small Group Communication)
- (3) **ENGL 42100** (Technical Writing)
- (3) Humanities and social science elective
- (6) MET electives

(15)

Manufacturing Engineering Technology

The MFET program focuses on the dynamic fields of automated manufacturing, systems integration, materials handling, and manufacturing operations. The plan of study blends courses in mechanical engineering technology, electrical and computer engineering technology, computer graphics technology, and information systems with program-specific courses in automated manufacturing, operations planning, and systems integration. Graduates are uniquely qualified to meet the automation challenges experienced by today's most demanding industries. MFET accomplishes this through experienced-based study in the application of computers in design, operations planning, manufacturing processes, process control, quality, project management, and machine and system integration.

A manufacturing system can encompass all operations from the design and order entry of a product to the shipment and billing of the product. If implemented effectively, the system can lead to significant cost reductions and better quality. The MFET curriculum concentrates on the study of individual subsystems including control systems, materials handling systems, planning systems, robotic systems, computer-aided processing systems, automated inspection and identification systems, business systems, and their integration.

The B.S. degree program prepares graduates for employment opportunities in a multitude of

industries and service areas that apply computer automation. Graduates of this degree program are better able to understand the relationships of the various manufacturing subsystems studied in the A.S. degree program and additionally possess the ability and understanding necessary to further integrate these subsystems into a fully functional integrated manufacturing system.

Purdue operates a unique, nationally recognized automated manufacturing laboratory with many state-of-the-practice capabilities. The facility is equipped with a fully functional, 1,400-square-foot integrated manufacturing system complete with industrial grade robots, CNC machine tools, programmable logic controllers, conveyor system, and various supporting peripheral technologies. This equipment and software enables students to gain first-hand experience with everything from the fundamentals of programming an individual piece of equipment or software, to the more complex tasks associated with planning, programming, and implementing a fully integrated system. The facility supports the educational objectives of the program and promotes interdisciplinary manufacturing development and discovery.

The MFET program provides graduates with the solid technical foundation necessary to ensure their success in a wide variety of employment opportunities. Program graduates are able to fill a wide variety of positions, rang-

ing from the application of computer automated manufacturing equipment and software to the programming and development of a fully integrated manufacturing system. Graduates excel in positions related to manufacturing engineering, process/control systems design, automated equipment engineering, layout and material handling, automated systems engineering and development, production engineering, manufacturing systems implementation, manufacturing systems integration, and technical sales.

Graduates of the MFET program are in great demand by such firms as CIM Systems, CTA Integration, Cornerstone Controls, Caterpillar,

Dell Computers, Depuy, Eli Lilly, Ethicon, Ford Motor Company, Guide Corporation, General Motors, Honda of America, TRW, Rockwell Automation, Saturn, Shuttleworth, and other companies.

Accreditation

The B.S. manufacturing engineering technology programs at West Lafayette are accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET), 111 Market Place, Suite 1050, Baltimore, Maryland 21202-4012. Telephone (410) 347-7700; Fax (410) 625-2238; e-mail tac@abet.org; Web site www.abet.org.

Manufacturing Engineering Technology (B.S.)

Credit Hours Required for Bachelor’s Degree: 125

Freshman Year

First Semester

- (3) **CHM 11100** (General Chemistry)
- (5) **MA 15900** (Precalculus)
- (3) **MET 14300** (Materials and Processes I)
- (1) **MFET 10000** (Introduction to Computer Integrated Manufacturing Technology)
- (2) Computer graphics selective

(14)

Second Semester

- (3) **ECET 21400** (Electricity Fundamentals)
- (3) **MET 10200** (Production Design and Specifications)
- (3) **MET 14400** (Materials And Processes II)
- (1) **MET 16200** (Computational Analysis Tools in MET)
- (3) English composition selective
- (3) Humanities or social science selective

(16)

Sophomore Year

Third Semester

- (3) **COM 11400** (Speech Communications)
- (3) **MA 22100** (Calculus I)
- (4) **MET 21200** (Applications of Engineering Mechanics)
- (3) **MET 24500** (Manufacturing Systems)
- (3) **MFET 24300** (Automated Manufacturing I)

(16)

Fourth Semester

- (3) **CNIT 17500** (Visual Programming)
- (3) **MFET 24400** (Automated Manufacturing II)
- (3) **MFET 24600** (High Performance Manufacturing)
- (3) **MFET 24800** (Automated Manufacturing III)
- (3) Science selective
- (3) Humanities/social science elective

(18)

Junior Year

Fifth Semester

- (3) **CNIT 18000** (Introduction to Systems Development)
- (3) **ENGL 42100** (Technical Writing)
- (3) **MFET 34200** (Advanced Manufacturing Processes and Practices)
- (3) Manufacturing graphics selective
- (4) Physics selective

(16)

Sixth Semester

- (3) **ECET 23300** (Electronics and Industrial Controls)
- (3) **MET 23000** (Fluid Power)
- (3) **MFET 37400** (Manufacturing Integration I)
- (3) CNIT selective
- (3) Statistics or quality selective

(15)

Senior Year

Seventh Semester

- (3) **IET 45100** (Monetary Analysis for Industrial Decisions)
 - (3) **MFET 47400** (Manufacturing Integration II)
 - (3) **MFET 48000** (Project Planning for Integration)
 - (3) OLS selective
 - (3) Technical elective
- (15)

Eighth Semester

- (3) **MFET 48100** (Integration of Manufacturing Systems)
 - (3) English/communications selective
 - (3) Global selective
 - (3) Humanities/social science elective
 - (3) Free elective
- (15)

Department of Organizational Leadership and Supervision

The Department of Organizational Leadership and Supervision (OLS) at Purdue is the leading bachelor-degree-granting program in the country that prepares students for their first professional-level position in leadership.

OLS offers a highly individualized, practical, “real world” approach to leadership, emphasizing quality, interpersonal skills, and change implementation with a flexible curriculum that allows students to specialize in their areas of interest and talent. The courses in human relations, leadership, management of change, conflict resolution, entrepreneurship, quality and productivity, self-directed teams, interpersonal and organizational communication, and training and development help create a well-rounded student.

The OLS program also offers a pragmatic, innovative, and flexible approach to the student’s education, with opportunities for interaction between students, faculty, and the outside world of work. The relatively small classes, taught primarily by full-time faculty with a variety of professional backgrounds, emphasize the well-rounded structure of the OLS department. Also, individualized, personalized counseling is stressed.

Purdue University’s OLS program is a source of professional talent for leadership positions in business, industry, government, and many other organizations. Graduates with a B.S. degree find

employment in general management, customer service, human resources management, sales, and financial services. The manufacturing sector hires OLS graduates in the areas of production control, production supervision, and quality control. Some graduates choose careers in military service, sports management, or hospital administration, while others choose to continue their education in advanced degree programs.

The OLS department offers programs at College of Technology statewide locations in Anderson, Columbus, Kokomo, Lafayette, New Albany, Richmond, and South Bend. An OLS certificate (27 credit hours) is available at several of these locations, where the program targets full-time employees who want to equip themselves for upward mobility into leadership positions.

An associate of science degree (63 credit hours) is available in OLS at West Lafayette and at College of Technology statewide locations. This program primarily serves as an entry-level avenue for individuals who are currently employed and who wish to prepare themselves for future leadership/supervisory programs; or as a dual-degree program option for non-OLS majors who seek to augment their primary program area by preparing themselves for leadership positions in their respective disciplines.

For more information about the Department of Organizational Leadership and Supervision, visit www.purdue.edu/tech/ols.

Organizational and Leadership Supervision (B.S.)

Credits Required for Bachelor's Degree: 123

Freshman Year

First Semester

- (3) **COM 11400** (Fundamentals of Speech Communication)
 - (5) **MA 15900** (Precalculus)*
 - (1) **OLS 10000** (Introduction to Organizational Leadership)†
 - (3) **OLS 25200** (Human Relations in Organizations)
 - (3) English composition selective‡
- (15)

Second Semester

- (3) **CNIT 13600** (Personal Computing Technology and Applications)
 - (3) **OLS 27400** (Applied Leadership)
 - (3) **OLS 28400** (Leadership Principles)
 - (3) **OLS 32500** (Meeting Management)
 - (3) **PSY 12000** (Elementary Psychology)
 - (3) Free elective
- (18)

Sophomore Year

Third Semester

- (3) **ACEG 21700** (Economics) **or**
ECON 21000 (Principles of Economics)
 - (3) **OLS 38600** (Leadership for Organizational Change)
 - (3) **OLS 38800** (Leadership through Teams)
 - (3) **SOC 10000** (Introductory Sociology)
 - (3) Laboratory science elective
- (15)

Fourth Semester

- (3) **OLS 34500** (Critical Thinking in Organizations)
 - (3) **OLS 37600** (Human Resource Issues)
 - (3) **STAT 30100** (Elementary Statistical Methods) **or** **IT 34200** (Introduction to Statistical Quality)
 - (3) Technical elective
 - (3) Free elective
- (15)

Junior Year

Fifth Semester

- (3) **MGMT 20000T** (Introductory Accounting)
 - (3) **OLS 47700** (Conflict Management)
 - (3) OLS experiential requirement§
 - (3) OLS selective
 - (3) Technical elective
- (15)

Sixth Semester

- (3) **IT 45000** (Production Cost Analysis) **or**
MGMT 20100 (Management Accounting I)
 - (3) **OLS 48400** (Leadership Strategies for Quality and Productivity)
 - (3) COM selective
 - (3) OLS selective
 - (3) Technical elective
- (15)

Senior Year

Seventh Semester

- (3) **ENGL 42000** (Business Writing) **or**
ENGL 42100 (Technical Writing)
 - (3) **OLS 45000** (Project Management for Organizational and Human Resource Development)
 - (3) **OLS 45600** (Leadership in a Global Environment)
 - (3) **PHIL 12000** (Critical Thinking) **or**
HIST or POL selective
 - (3) Free elective
- (15)

Eighth Semester

- (3) **OLS 44000** (Leading with Integrity)
 - (3) English selective
 - (3) OLS selective
 - (6) Technical electives
- (15)

* Students may substitute MA 15300 and 15400.

† Course required of incoming freshmen, when offered.

‡ Credit hours shown are a minimum. Actual credit hours may be higher for some courses.

§ Experiential courses are OLS 36200 (Cooperative Education), OLS 46700 (Supervised Practicum), OLS 49100 (Internship Program), or OLS 49000 (Individual Research Problems).

Notes: All students must complete a minimum of 32 hours of 30000-level or higher courses on the West Lafayette campus in order to graduate. Responsibility for completing graduation requirements is solely that of the student. Students must be registered for CAND 99100 the semester of graduation.

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.

College of Technology Administration, Faculty, and Teaching Staff

Administration

Dennis R. Depew, *Ph.D.*, Dean of the College of Technology

Gary R. Bertoline, *Ph.D.*, Associate Dean for Graduate Studies

Melissa J. Dark, *M.S.*, Associate Dean for Research and Strategic Planning

Duane D. Dunlap, *Ed.D.*, Associate Dean for Statewide Technology

Mary A. Sadowski, *Ph.D.*, Associate Dean for Undergraduate Programs and Instruction

Heads of Instructional Departments

Lonnie D. Bentley, *M.S.*, Head of the Department of Computer and Information Technology

Michael M. Beyerlein, *Ph.D.*, Head of the Department of Organizational Leadership and Supervision

Brent D. Bowen, *Ph.D.*, Head of the Department of Aviation Technology

Robert F. Cox, *Ph.D.*, Head of the Department of Building Construction Technology

Robert J. Herrick, *M.S.E.E.*, Head of the Department of Electrical and Computer Engineering Technology

Vahid Motevalli, *Ph.D.*, Head of the Department of Mechanical Engineering Technology

Kathryne A. Newton, *Ph.D.*, Head of the Department of Industrial Technology

Marvin I. Sarapin, *Ph.D.*, Head of the Department of Computer Graphics Technology

Aviation Technology

B. D. Bowen, Head of the Department

Professors: B. D. Bowen, *Ed.D.*; T. Q. Carney, *Ph.D.*; T. K. Eismin, *M.S.*; D. W. Lopp, *M.S.*; M. S. Nolan, *M.S.*; T. W. Wild, *M.S.*; J. P. Young, *M.S.*

Professors Emeriti: W. P. Duncan, *M.S.*; C. F. Holleman, *B.S.*; D. R. James, *B.S.*; D. C. Latia, *M.S.*; J. A. Marchand, *B.S.*; S. J. Rans, *M.B.A.*; I. E. Treager, *M.S.*

Associate Professors: B. J. Dillman, *M.S.*; R. O. Fanjoy, *Ph.D.*; L. W. Gross, *M.S.*; T. C. Hagovsky, *Ph.D.*; M. L. Leasure, *M.S.*; C. T. Lu, *Ph.D.*; M. E. Johnson, *Ph.D.*; D. B. Oderman, *Ph.D.*; D. A. Petrin, *M.S.*; D. L. Stanley, *M.S.*; R. L. Sterkenburg, *M.S.*; J. M. Thom, *M.S.*; B. W. Wulle, *M.S.*

Assistant Professors: S. Dubikovsky, *M.S.*; R. M. Grundman, *B.S.*; P. J. Mick, *M.S.*; T. D. Ropp, *M.S.*

Visiting Associate Professor: S. W. Schreckengast, *Ph.D.*

Clinical Associate Professor: M. W. Suckow, *M.S.*

Clinical Assistant Professor: J. M. Davis, *M.S.*

Continuing Lecturer (in Indianapolis): J. H. Mott, *M.S.*

Advanced Aviation Continuing Lecturer: J. B. Oyler, *M.S.*

Simulator Continuing Lecturers: B. K. Jasiak, *B.S.*; L. Martin, *B.S.*; J. Oyler, *M.S.*; D. Terry, *A.S.*

Aviation Education Specialists: L. E. Bourguignon, *B.S.*; R. E. Cassens, *B.S.*; J. E. Cevela, *M.S.*; R. P. Gamble, *B.S.*; A. J. Janneck, *B.S.*; S. A. Kreissler, *A.S.*; B. S. May, *B.S.*; P. G. Nguyen, *B.S.*; J. W. Poppe, *M.S.*

Building Construction Management Technology

R. F. Cox, Head of the Department

Professors: Z. Baha, *Ph.D.*; W. G. Crawford, *M.S.*; J. J. Lew, *M.S.C.E.*; S. D. Schuette, *M.S.*

Professors Emeriti: P. D. Achor, *M.A.*; P. L. Glon, *M.S.C.E.*; M. May, *M.S.C.E.*

Associate Professors: A. Alexander, *M.S.C.E.*; K. D. Alter, *M.S.*; J. L. Jenkins, *M.S.*; Y. Jiang, *Ph.D.*; D. J. Koehler, *M.A.*; F. B. Muehlhausen, *Ph.D.*; J. J. Orczyk, *Ph.D.*; R. R. Rapp, *D.Mgt.*

Assistant Professors: B. J. Hubbard, *Ph.D.*; D. C. Koch, *Ph.D.*; G. O. Lasker, *M.B.A.*; M. E. Shaurette, *Ph.D.*

Assistant Clinical Professors: B. L. Benhart, *M.B.A.*; D. P. Keith, *M.S.*

Education Specialist: J. L. Brown, *M.S.*

Computer and Information Technology

L. D. Bentley, Head of the Department

Professors: L. D. Bentley, *M.S.*; J. E. Goldman, *M.B.A.*; A. R. Harriger, *M.S.*; J. L. Whitten, *M.S.*

Professors Emeriti: J. E. Boggess, *M.S.*; J. K. Gotwals, *Ph.D.*; M. M. Koleski, *Ph.D.*; S. K. Lisack, *M.S.*

Associate Professors: M. J. Dark, *Ph.D.*; K. C. Dittman, *M.S.*; K. D. Lutes, *M.S.*; J. R. Mariga, *M.S.*; J. A. Mendonca, *M.B.A.*; K. Moidu, *Ph.D.*; P. T. Rawles, *M.S.*; M. K. Rogers, *Ph.D.*; (at Anderson) D. O. Owen, *M.A.*; G. B. Randolph, *M.S.*; (at Columbus) K. Maharjan, *M.S.*; D. A. Swanson, *M.S.*; (at Kokomo) J. A. Griffin, *M.S.*; R. L. Homkes, *M.S.*; (at South Bend) G. W. Laware, *M.B.A.*

Assistant Professors: V. M. Barlow, *M.B.A.*; J. L. Brewer, *M.S.*; L. C. Hassan, *M.S.*; M. D. Kane, *Ph.D.*; R. L. Mislán, *M.S.*; A. H. Smith, *M.S.*; J. A. Springer, *M.S.*; A. J. Walters, *Ph.D.*; (at Columbus) J. J. Purdum, *Ph.D.*

Educational Specialists: G. Ravai, *M.S.*; K. E. Rowe, *B.S.*

Computer Graphics Technology

M. I. Sarapin, Head of the Department

Professors: G. R. Bertoline, *Ph.D.*; S. Cooper, *Ph.D.*; C. L. Miller, *Ph.D.*; J. L. Mohler, *Ph.D.*; M. A. Sadowski, *Ph.D.*; M. I. Sarapin, *Ph.D.*; D. R. Short, *M.S.*

Professors Emeriti: R. R. Leavitt, *M.S.*; J. E. O'Neal, *M.S.I.Ed.*; W. A. Ross, *M.Ed.*; J. V. Smith, *M.S.I.Ed.*

Associate Professors: N. Adamo-Villani, *M.S.*; J. A. Birchman, *M.A.*; T. L. Burton, *M.S.I.Ed.*; P. E. Connolly, *Ph.D.*; C. E. Corey, *M.S.*; M. G. Gabel, *M.A.*; R. J. Glotzbach, *M.S.*; L. V. Harris, *Ph.D.*; N. W. Hartman, *Ed.D.*; C. R. Morales, *M.S.*; (at New Albany) J. C. Finnegan, *M.F.A.*; R. D. Kopp, *M.F.A.*

Assistant Professors: B. Benes, *Ph.D.*; H. Dib, *Ph.D.*; K. R. Maicher, *M.S.*; M. Vorvoreanu, *Ph.D.*; C. W. White, *M.S.I.Ed.*; D. Whittinghill, *Ph.D.*; (at South Bend) C. M. Augustine, *M.Ed.*; (at Kokomo) L. A. VanZee, *M.S.*

Clinical Assistant Professors: R. Hassan, *M.S.*; (at New Albany) A. Sriraman, *M.S.*

Continuing Lecturer: (at Richmond) S. George, *M.S.*

Electrical and Computer Engineering Technology

R. J. Herrick, Head of the Department

Professors: R. H. Barnett, *Ph.D.*; W. E. DeWitt, *M.S.E.E.*; R. J. Herrick, *M.S.E.E.*, *Robert A. Hoffer Distinguished Professor of Electrical Engineering Technology*; J. M. Jacob, *M.S.E.E.*, *George W. McNelly Professor of Technology*; G. L. Moss, *M.A.*; S. Panigrahi, *Ph.D.*; T. L. Skvarenina, *Ph.D.*; N. S. Widmer, *M.S.*; (at Kokomo) M. T. O'Hair, *Ed.D.*

Professors Emeriti: R. A. Aubrey, *Ph.D.*; J. O. Beasley, *M.B.A.*; G. E. Harland Jr., *Ph.D.*; V. W. Hoeche, *M.Ed.*; L. D. Hoffman, *Ph.D.*; M. L. Holcombe, *M.S.E.E.*; R. C. Hubele, *M.S.*; C. E. Lentz, *M.S.*; W. R. Naylor, *M.S.*; R. E. Nix, *M.S.E.E.*; J. A. Parker, *M.S.E.E.*; W. F. Reeve, *M.S.*; T. W. Schultz, *M.S.E.E.*; W. J. Sensing, *M.S.*; T. B. Snow, *M.S.E.E.*; M. R. Taber, *Ed.D.*

Associate Professors: G. R. Blackwell, *M.S.E.E.*; J. P. Denton, *Ph.D.*; J. J. Evans, *Ph.D.*; J. W. Honchell, *M.S.C.S.*; N. A. Kulatunga, *Ph.D.*; A. J. A. Oxtoby, *M.S.E.E.*; T. L. Robertson, *Ph.D.*; R. Sundararajan, *Ph.D.*; (at Columbus) R. J. Hofinger, *M.S.E.E.*; (at Kokomo) G. N. Foster, *M.S.E.E.*; W. H. Hubbard, *M.S.*; K. D. Taylor, *M.S.E.E.*; (at New Albany) N. T. Le, *M.S.E.E.*; T. P. O'Connor, *M.S.E.T.*; (at South Bend) G. L. Harding, *M.S.E.E.*; K. A. Perusich, *Ph.D.*

Assistant Professors: T. E. Fahlsing, *M.S.Ed.*; H. A. McNally, *Ph.D.*; J. J. Richardson, *M.S.*

Industrial Technology

K. A. Newton, Head of the Department

Professors: D. R. Depew, *Ph.D.*; D. D. Dunlap, *Ed.D.*; M. J. Dyrenfurth, *Ph.D.*; D. K. Gentry, *Ed.D.*; K. A. Newton, *Ph.D.*; G. E. Rogers, *Ed.D.*; M. P. Stephens, *Ph.D.*

Professors Emeriti: H. E. McVicker, *Ed.D.*; L. D. Neher, *Ed.D.*; P. J. Odendahl, *M.S.*; D. Sams, *Ed.D.*

Associate Professors: D. D. Buskirk, *Ed.D.*; S. J. Elliott, *Ph.D.*; E. K. Schmidt, *Ph.D.*; M. J. Sutton, *Ph.D.*

Assistant Professors: K. L. Clase, *Ph.D.*; T. R. Kelley, *Ph.D.*; C. M. Laux, *Ph.D.*; N. J. Mentzer, *Ph.D.*

Manufacturing Engineering Technology

B. C. Harriger, Director of the College of Technology Manufacturing Center

Mechanical Engineering Technology

V. Motevalli, Head of the Department

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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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