

Informatyka – kształcenie na przykładzie Uniwersytetu Kansaskiego

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and

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Standards for Admission, I

To be considered for admission to the School of Engineering, beginning first-year students must meet or exceed the following minimum standards:

- Have a 3.0 grade-point average on a 4.0 scale,
- Be in the top 50 percent of the graduating class of an accredited high school or the equivalent,
- Have a mathematics ACT score of 22 (or math SAT score of 540). Four engineering degree programs require a minimum math ACT score of 28 before applicants will be considered:
 - architectural engineering,
 - computer engineering,
 - computer science and
 - electrical engineering.

Standards for Admission, II

Important: Simply meeting these requirements won't guarantee admission to a School of Engineering degree program.

Students who perform beyond these minimums will have a better probability of being admitted.

Transfer Admission Standards

Applications from all transfer students, whether from other institutions or from other academic schools at the University of Kansas, are evaluated on a case-by-case basis.

Transfer students must have a college grade-point average of 2.5 or higher to be considered.

Students must submit mathematics ACT or SAT scores or proof of competence in calculus (grade of C or higher).

No upper-level engineering credits from non-ABET-accredited engineering programs are acceptable as transfer credit for engineering programs.

New Student Orientation

Attending a New Student Orientation session will help you and your parents learn about the expectations at KU and the services here to help you succeed.

It's also your first chance to enroll in courses for the coming semester.

Engineering faculty work with incoming students from the outset to ensure freshmen enroll in classes that meet their interests and count toward their degree.

Engineering Learning Communities

The School of Engineering offers engineering learning communities (ELC) for freshmen students.

This voluntary program brings together the best students on campus the engineering and computer science students for social and enrichment opportunities.

Students participating in the ELC will enroll in ENGR 101: Engineering Student Success, a weekly seminar offered for 0-1 academic credits.

Computer Science

Computer scientist focus on the theory and practice of computing.

They may pursue the design, analysis, and implementation of **computer algorithms**, study the theory of **programming methods and languages**, or design and develop **software systems**.

Computer scientists may also work in the areas of **artificial intelligence**, **database systems**, **parallel and distributed computing**, **human-computer interaction**, **computer graphics**, **operating systems**, or **computer system analysis and administration**.

Computer Engineering

Computer engineers focus on all aspects of computational devices and systems, including both hardware and software.

Wherever computers can be found, computer engineers are needed.

In addition to the **computer system** aspects of the electrical engineering and computer science, computer engineers may work in the areas of **computer elements and architectures, very large scale integrated (VLSI) circuits** for data processing and storage, **embedded and real-time computer systems**, or **computer networking**.

Computer Science—Objectives

As Computer Scientists, BSCS graduates of the University of Kansas within three to five years following graduation:

- Have will have demonstrated success in the practice of computer science based on the ability to apply mathematical and scientific principles in the **design, implementation, evaluation, and maintenance of complex software systems, and to use modern computing tools and techniques,**
- will have demonstrated **teaming skills** to function in multidisciplinary environments, made technical contributions to and/or provided technical leadership in a **diverse and changing global society,** demonstrated **proficiency in technical communication,** and utilized **ethical and professional principles in all career decisions.**

Computer Science—Requirements

A total of 128 credit hours is required for the BSCS degree, as follows:

- Computer Science (65 credit hours),
- Mathematics (22 credit hours),
- Basic Science (11 credit hours),
- Professional Electives (3 credit hours),
- Communication (3 credit hours),
- English (6 credit hours),
- Humanities (9 credit hours),
- Social Science (9 credit hours).

Freshman-Sophomore Requirements

Eligibility

- ENGL 101 and ENGL 102,
- PHSX 211 (4) and PHSX 212 (4),
- MATH 121 (5), MATH 122 (5), MATH 223 and MATH 290 (2),
- EECS 210 (4) (discrete math),
- EECS 140 (4) (digital logic design),
- EECS 168 (4) and EECS 268 (4) (programming I and II).

Remaining Required CS Courses

- EECS 368 Programming Language Paradigms,
- EECS 388 (4) Computer Systems and Assembly Language,
- EECS 448 (4) Software Engineering,
- EECS 510 Intro to the Theory of Computing,
- EECS 560 (4) Data Structures,
- **EECS 581 CS Design I, EECS 582 CS Design II,**
- EECS 645 Computer Architecture,
- EECS 660 Fundamentals of Computer Algorithms,
- EECS 662 Programming Languages,
- EECS 665 (4) Compiler Construction,
- EECS 678 (4) Intro to Operating Systems.

CS Electives: 4 out of 12

- EECS 563 Intro to Communication Networks,
- EECS 638 Fundamentals of Expert Systems,
- EECS 647 Intro to Database Systems,
- EECS 648 Software Engineering Tools,
- EECS 649 Intro to AI,
- EECS 672 Intro to Computer Graphics,
- EECS 700 Special Topics,
- EECS 710 Information Security & Assurance,
- EECS 716 Formal Language Theory,
- EECS 718 Graph Algorithms,
- EECS 735 Automated Theorem Proving,
- EECS 781 Numerical Analysis I.

Other Required Courses

- MATH 526 Applied Mathematical Statistics I,
- Natural Science Elective (Basic Science),
- Professional Elective,
- COMS 130 Speaker-Audience Communication.

Natural Science Elective

- ASTR 391,
- BIOL 150 or BIOL 152,
- CHEM 150 or CHEM 184 or CHEM 188,
- (GEOG 104 and GEOG 105) or GEOG 304,
- GEOL 101.

Excess natural science hours count as Professional Elective hours.

Professional Elective

- EECS course (many restrictions),
- any Engineering Department course (many restrictions),
- Natural Science (many restrictions),
- and MATH course numbered 500 or above, except MATH 701,
- any course from the School of Business, except for Statistics and Computing courses.

Job Search Assistance, I

The **Engineering Career Center** offers a comprehensive array of services to graduating students seeking permanent employment and to undergraduates seeking career-related summer employment.

These services include

- on campus interviewing program,
- a career fair each February and September,
- individual counseling and group workshops on resumes,
- interviewing and job search strategies,

Job Search Assistance, II

- resume-writing software,
- job postings from employers,
- a library of employer and career literature,
- mailing of student resumes to employers with job vacancies.

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