

UNIVERSITY OF ILLINOIS **The Grainger College of Engineering**

The Transfer Handbook is intended as a guide for students transferring to Illinois from another institution. To prepare the strongest application possible, review the information provided carefully. Follow up questions may then be directed to Transfer Programs in The Grainger College of Engineering.

Please note: Any transfer student interested in completing a major, including a dual degree, in The Grainger College of Engineering must apply and be admitted directly into the college at time of transfer. Transfer students entering other colleges on campus are not eligible for later admission/on-campus transfer to the Pre-Engineering Program (PREP) or Grainger Engineering. No exceptions will be granted.

Overview

The Grainger College of Engineering invites qualified students to apply for transfer admission.

Transfer applicants are considered, **for fall term admission only**, for the following Programs of Study:

May be listed as first or second choice

Aerospace Engineering
Agricultural and Biological Engineering
Bioengineering
Civil Engineering
Engineering Mechanics
Industrial Engineering
Materials Science and Engineering
Nuclear, Plasma, and Radiological Engineering
Physics
Systems Engineering and Design

May be listed as first choice only

Computer Engineering
Computer Science
Electrical Engineering
Mechanical Engineering

The College of Liberal Arts & Sciences (LAS) administers the Chemical Engineering Program of Study.

Admission to Grainger Engineering is competitive, and not all qualified applicants are accepted. Each application is evaluated utilizing a holistic review process with consideration given to:

- overall and technical GPAs
- prerequisite/technical coursework completed
- academic rigor
- essay(s)
- activities and work experience
- high school transcripts and test scores¹ – for applicants with fewer than 30 graded hours of college coursework at the time of application

Applications for second bachelor's degree are accepted; however, applicants seeking a first bachelor's degree receive priority in limited-capacity majors.

¹ UIUC is a test-optional institution. You are not required to submit ACT/SAT scores, but are welcome to do so if you choose.

Academic Expectations and Required Coursework

All applicants must have transfer coursework equivalent to the University of Illinois courses listed below **completed prior to application**. Courses in progress do not satisfy this requirement. Courses being completed the summer after application will not be considered as part of the review.

- CHEM 102 and CHEM 103**, General Chemistry I and General Chemistry Lab I
CHEM 104 and CHEM 105, General Chemistry II and General Chemistry Lab II (if required)¹
MATH 220, Calculus **or** **MATH 221**, Calculus I
MATH 231, Calculus II
MATH 241, Calculus III
PHYS 211, University Physics: Mechanics
PHYS 212, University Physics: Electricity & Magnetism
One of the following, as recommended by the Program of Study (see transfer chart):
- **CS 101**, Intro Computing: Engineering & Science, **or**
 - **CS 124**, Intro to Computer Science I, **or**
 - **CS 125**, Intro to Computer Science, **or**
 - **ECE 110**, Introduction to Electronics, **or**
 - **MCB 150**, Molecular and Cellular Basis of Life, **or**
 - **SE 101**, Engineering Graphics and Design, **or**
 - **ME 170**, Computer-Aided Design

The most up-to-date course articulation information is available on www.transferology.com.

Completion of the following courses is strongly recommended:

- RHET 105**, Writing and Research²
ECON 102, Microeconomic Principles **or** **ECON 103**, Macroeconomic Principles³
Language Other Than English (LOTE)⁴

Schedule planning is important. The courses listed above are the minimum requirements for admission consideration. Successful applicants will demonstrate course progression and rigor consistent with the suggested sequences for the major(s) selected. This includes ensuring prerequisite courses are completed in the appropriate terms and taking a minimum number of technical courses (3-4) and credit hours (15+) each semester. Applicants should have all required coursework and at least one semester with 4 technical courses and 15+ credit hours completed prior to applying.

All applicants are expected to demonstrate mastery of subject matter by earning a B or better (3.0/4.0) in each required/technical course. Grades lower than a B should be repeated prior to application. It is generally expected that applicants will have a minimum of **3.00 (A = 4.00)** overall GPA, but admission to specific majors may be significantly more competitive during any given admission cycle. For fall 2022, the average transfer GPA for admitted students was 3.86 with the middle 50% of GPAs ranging from 3.78–4.00.

¹ CHEM 104/105 is required for applicants to Agricultural & Biological Engineering, Bioengineering, Civil Engineering, Engineering Mechanics, and Materials and Science Engineering. It serves as a technical, science, or free elective for other majors. A full year of chemistry may be required, regardless of major, depending on course transferability from your current institution. AP Chemistry awards credit for lecture only; applicants are responsible for completing the full lecture and lab sequence(s).

² At most institutions the equivalent requires a two-course sequence transferring as RHET 105 or UCI and UCII.

³ Students applying to Bioengineering or interested in Pre-Med should complete PSYC 100, Introduction to Psychology.

⁴ To meet graduation requirements, students in the College of Engineering must complete a Language Other Than English (LOTE), either in high school or college, through the third level. While there is no longer a language requirement for transfer admission, it is strongly recommended that students fulfill LOTE prior to their first term of enrollment at Illinois. Not doing so may result in an increase in time to degree completion.

Transfer Chart																	
<p>Applicants entering with 50+ credit hours who have not fulfilled the requirements noted in this chart should anticipate extended time to graduation.</p> <p>Applicants with all required and recommended courses completed will be given priority for admission.</p> <p>X = strongly recommended course</p>																	
	<i>Intro Differential Systems (MATH 284, 285, or 286)</i>	<i>Applied Linear Algebra (see Additional Major Info)</i>	<i>Univ Physics: Thermal Physics (PHYS 213)</i>	<i>Univ Physics: Quantum Physics (PHYS 214)</i>	<i>Thermodynamics (ME 200)</i>	<i>Statics (TAM 211)¹</i>	<i>Introductory Dynamics (TAM 212)</i>	<i>Intro to Solid Mechanics (TAM 251)</i>	<i>Intro to Computing, Intro to CS or Intro to CS I (CS 101 or CS 125 or CS 124)</i>	<i>Intro to Computer Science I or Intro to Computer Science (CS 124 or CS 125)</i>	<i>Intro to Computer Science II (CS 128)</i>	<i>Data Structures (CS 173 or MATH 213)</i>	<i>Engineering Graphics/CAD Design (ME 170 or SE 101)</i>	<i>Electrical and Electronics (ECE 110)</i>	<i>Molecular & Electronic Circuits (ECE 205)</i>	<i>Elementary Organic Basis of Life (MCB 150)</i>	<i>Chem I (CHEM 232 or CHEM 236)</i>
Aerospace Engineering	X	X		X	X	X	X					X		X			
Agricultural & Biological Engineering	X	X					X					X		X			
Bioengineering ²	X														X	X	
Civil Engineering	X	X	X			X	X	X				X					
Computer Engineering	X	X	X	X					X	X	X	X		X			
Computer Science ³		X							X	X	X	X					
Electrical Engineering	X	X	X	X					X	X	X	X		X			
Engineering Mechanics	X	X	X	X	X	X	X	X				X		X			
Industrial Engineering	X	X	X				X	X				X	X				
Material Science and Engineering	X	X		X				X						X			
Mechanical Engineering ⁴	X	X		X	X	X	X	X				X		X			
Nuclear, Plasma, & Radiological Engineering	X	X		X	X	X		X						X			
Physics, Engineering	X	X	X	X				X									
Systems Engineering and Design	X	X	X			X	X	X				X	X				

¹ Aerospace Engineering, Mechanical Engineering and Nuclear, Plasma & Radiological Engineering: students may elect to take TAM 210 or 211.
² Students applying to Bioengineering are strongly encouraged to complete MCB 150 prior to admission to ensure progress towards graduation.
³ Students interested in Computer Science are expected to have formal coursework covering at least 2 out of 3 of the following programming languages: Java, C++, Python. This may require completion of an additional course(s) not specifically noted in the chart above.
⁴ In addition to the specific courses noted in the chart, students must complete one of the following as a science elective: CHEM 104 and 105 or PHYS 213 and 214. If Chemistry is selected, it needs to be completed prior to application.

Additional Major Information

In addition to the courses noted in the Transfer Chart, applicants should review the information below and are strongly encouraged to make additional progress toward degree completion by taking other courses required by their desired Program(s) of Study.

Aerospace Engineering

<http://catalog.illinois.edu/undergraduate/engineering/aerospace-engineering-bs/>

Linear Algebra: MATH 225, MATH 257, or MATH 415 may be used to satisfy the requirement.

Skills: Familiarity with Python and MATLAB recommended.

Courses: ECE 110 may be substituted for ECE 205, if the course is not available.

Agricultural and Biological Engineering

http://catalog.illinois.edu/undergraduate/eng_aces/agricultural-biological-engineering-bs/

Linear Algebra: MATH 257 may be used to satisfy the requirement.

Skills: Familiarity with Python recommended.

Concentrations: After transfer, students will declare a concentration within the major in either Agricultural Engineering or Biological Engineering.

Bioengineering

<http://catalog.illinois.edu/undergraduate/engineering/bioengineering-bs/>

Skills: Familiarity with MATLAB recommended.

Courses: Due to the specialized nature of the curriculum, a minimum of six semesters of enrollment (fall/spring terms) at UIUC is required. Students enrolling without credit for MCB 150, Molecular & Cellular Basis of Life should anticipate eight semesters on campus due to course sequencing.

Track Electives: After transfer, students will declare a track area within the major. Current options include Biomechanics, Cell and Tissue Engineering, Therapeutics Engineering, Computational and Systems Biology, or Imaging and Sensing.

Civil Engineering

<http://catalog.illinois.edu/undergraduate/engineering/civil-engineering-bs/>

Linear Algebra: MATH 225, MATH 257, or MATH 415 may be used to satisfy the requirement.

Skills: Familiarity with Python and MATLAB recommended.

Primary and Secondary Fields: After transfer, students will declare either a primary and secondary field or the General Civil Engineering Option within the major. Current primary field options include Construction Engineering and Management, Construction Materials Engineering, Environmental Engineering, Geotechnical Engineering, Structural Engineering, Transportation Engineering, Water Resources Engineering and Science, Energy-Water-Environment Sustainability, Societal Risk and Hazard Mitigation, or Sustainable and Resilient Infrastructure Systems.

Computer Engineering

<http://catalog.illinois.edu/undergraduate/engineering/computer-engineering-bs/>

Linear Algebra: MATH 257 or MATH 416 may be used to satisfy the requirement.

Skills: Familiarity with Python recommended.

Courses: ECE 205 may be substituted for ECE 110, if the course is not available. CS 124 + CS 128 may be substituted for ECE 220 if the full sequence of CS 124 + CS 128 + CS 173/MATH 213 + CS 225 is completed prior to transfer. Beginning Fall 2024, MATH 284 will be permitted as a substitution for MATH 285 only when a grade of B or higher is earned in ECE 210 at UIUC.

Computer Science

<http://catalog.illinois.edu/undergraduate/engineering/computer-science-bs/>

Linear Algebra: MATH 225, MATH 257, MATH 415, or MATH 416 may be used to satisfy the requirement.

Skills: Familiarity with Python, Java, and C++ recommended.

Courses: Students are expected to have formal coursework covering at least two out of three of the recommended programming languages. This may require completion of an additional course(s) not specifically noted in the Transfer Chart. If your course titles do not display the programming languages covered, you should address how the requirement has been satisfied in the application essays. Self-study is difficult to gauge on the application and is not accepted as formal coursework.

If you have not earned credit for the science/math foundation courses required for Grainger Engineering, you are encouraged to explore CS+X options in other UIUC colleges instead.

Electrical Engineering

<http://catalog.illinois.edu/undergraduate/engineering/electrical-engineering-bs/>

Linear Algebra: MATH 257 or MATH 416 may be used to satisfy the requirement.

Skills: Familiarity with Python recommended.

Courses: ECE 205 may be substituted for ECE 110, if the course is not available. CS 124 + CS 128 may be substituted for ECE 220 if the full sequence of CS 124 + CS 128 + CS 173/MATH 213 + CS 225 is completed prior to transfer. Beginning Fall 2024, MATH 284 will be permitted as a substitution for MATH 285 only when a grade of B or higher is earned in ECE 210 at UIUC.

Engineering Mechanics

<http://catalog.illinois.edu/undergraduate/engineering/engineering-mechanics-bs/>

Linear Algebra: MATH 257 may be used to satisfy the requirement.

Skills: Familiarity with Python, Fusion 360, and Microsoft Office (Word, Excel, PowerPoint) recommended.

Courses: MATH 284, 285, or 286 may be substituted for MATH 441 if a grade of A is earned.

Secondary Field Option Electives: After transfer, students will declare a secondary field within the major. Current options include Biomechanics, Computational Mechanics, Engineering Science and Applied Mathematics, Experimental Mechanics, Fluid Mechanics, Mechanics of Materials, or Solid Mechanics.

Industrial Engineering

<http://catalog.illinois.edu/undergraduate/engineering/industrial-engineering-bs/>

Linear Algebra: MATH 257 or MATH 415 may be used to satisfy the requirement.

Skills: Familiarity with Python recommended.

Track Option Electives: After transfer, students will declare a track option within the major. Current options include Computational Methods in IE, Economics and Finance, Human Factors, Industrial Engineering Fundamentals, Operations Research, Quality Engineering, or Supply Chain, Manufacturing and Logistics.

Materials Science and Engineering

<http://catalog.illinois.edu/undergraduate/engineering/materials-science-engineering-bs/>

Linear Algebra: MATH 257 may be used to satisfy the requirement. MATH 225 or MATH 415 may be considered if MATH 257 is not available at your current institution.

Skills: Familiarity with Python recommended.

Courses: ECE 110 may be substituted for ECE 205, if the course is not available. MSE 182 is satisfied by completing two hours of technical electives not applied to another requirement. TAM 210/211 + TAM 251 may be substituted for MSE 206.

Technical Elective Areas: After transfer, students will declare an elective area within the major in either Biomaterials or All Other Areas. Laboratory Studies and Topical Lecture selections permit further customization.

Mechanical Engineering

<http://catalog.illinois.edu/undergraduate/engineering/mechanical-engineering-bs/>

Linear Algebra: MATH 257 may be used to satisfy the requirement.

Skills: Familiarity with Python, Fusion 360, and Microsoft Office (Word, Excel, PowerPoint) recommended.

Courses: Completion of a science elective is required prior to transfer: CHEM 104/105 or PHYS 213/214. If Chemistry is selected, the course needs to be completed prior to application.

Physics

<http://catalog.illinois.edu/undergraduate/engineering/physics-bs/>

Linear Algebra: MATH 257, MATH 415, or MATH 416 may be used to satisfy the requirement.

Skills: Familiarity with Python recommended.

Program Tracks: After transfer, students will declare a track within the major. Current options include Astrophysics, Business, Computational Physics, Nuclear Physics, or Graduate Study. Students may also devise an alternative, custom track with a set of courses approved by the department.

Nuclear, Plasma, and Radiological Engineering

<http://catalog.illinois.edu/undergraduate/engineering/nuclear-plasma-radiological-engineering-bs/>

Linear Algebra: MATH 257 or MATH 415 may be used to satisfy the requirement.

Skills: Familiarity with Python recommended.

Courses: MATH 284 will be permitted as a substitution for MATH 285 upon successful completion of a 1-credit hour UIUC bridge course, NPRE 397.

Concentrations: After transfer, students will declare a concentration within the major in one of Power, Safety & Environment; Plasma & Fusion Science and Engineering; or Radiological, Medical & Instrumentation Applications.

Systems Engineering and Design

<http://catalog.illinois.edu/undergraduate/engineering/systems-engineering-design-bs/>

Linear Algebra: MATH 257 or MATH 415 may be used to satisfy the requirement.

Skills: Familiarity with Python recommended.

Secondary Field Option Electives: After transfer, students will declare a secondary field within the major. Current options include Theoretical and Applied Mechanics, Rehabilitation Engineering, Operations Research, Nondestructive Testing and Evaluation, Manufacturing Engineering, Environmental Quality, Engineering Marketing, Engineering Administration, Digital Prototyping, Control Systems, Construction, Computer Science, Civil Engineering Structures, Business Systems Integration and Consulting, Bioengineering, Autonomous Systems and Robotics, or Automotive Engineering.

Frequently Asked Questions (FAQs)

Is there someone who can assist me with schedule planning?

Yes! It is recommended that potential applicants work with a Transfer Programs advisor in Grainger Engineering for schedule planning, including selection of general education coursework. Admission is competitive; students are welcome and encouraged to contact us as early in their college careers as possible to discuss transfer requirements and preparation. Navigating the transfer process can be challenging; our program staff are here to help. For the quickest response, please email engineeringtransfers@illinois.edu and include the name of your current college/university, major(s) of interest, intended transfer semester (fall terms only), and attach an unofficial transcript of any college coursework completed or in progress.

Is there a limit to how many credit hours I can transfer?

Grainger Engineering does not limit the number of credit hours a student may transfer nor does a high number of credit hours earned negatively impact the transfer admissions process – please note, this policy varies by college. Regardless of number of credit hours transferred, all students are required to complete the campus residency requirement, which specifies that each candidate for a bachelor's degree from the University of Illinois at Urbana-Champaign must earn at least 60 semester hours of University of Illinois at Urbana-Champaign credit, of which 21 hours must be 300 or 400 level courses.

As a transfer student, am I eligible for the James Scholar Honors Program?

Transfer students may apply to the James Scholar Honors Program after completing an initial full-time semester on campus (fall or spring). Current requirements for admission are an Illinois GPA of 3.5 or higher.

Can I change majors after being admitted as a transfer student to Grainger Engineering?

It depends. Major change requests within the college must be approved by Transfer Programs staff. Due to space constraints, no dual-degree petitions or major change requests to Computer Engineering, Computer Science, Electrical Engineering, or Mechanical Engineering are permitted. A student admitted to Electrical or Computer Engineering, with limited exposure to the introductory courses at their previous institution (e.g. ECE 110, 120, 210, 220), may be considered for a major change within the department. Requests for all other majors will be evaluated on a case-by-case basis. Questions about declaring a major outside of Grainger Engineering should be directed to the respective college or department.

I already earned a bachelor's degree. Am I eligible to apply for a second bachelor's degree?

Grainger Engineering does accept second bachelor's degree applications for consideration; however, applicants seeking a first bachelor's degree receive priority in limited-capacity majors. Regarding the application: If the first bachelor's degree was earned from another institution, then proceed as a transfer applicant through the Office of Undergraduate Admissions. If the first bachelor's degree was earned from the University of Illinois at Urbana-Champaign, please contact Transfer Programs in Grainger Engineering for additional information on how to proceed. The guidelines and course requirements established in the Transfer Handbook apply to all applicants, as do the transfer admissions dates and deadlines.

Can I use test-based credit (AP, IB, etc.) to fulfill transfer requirements?

All students are subject to the test-based credit policies in effect at time of matriculation to the University of Illinois at Urbana-Champaign. For incoming students, these policies are not finalized until after the admissions cycle is complete. Test-based credit policies can and do change. As such, transfer students are strongly encouraged to fulfill admissions requirements by earning graded, transferable credit.

Additional questions? Contact us.