Grainger College of Engineering

University of Illinois Urbana-Champaign

DETAILED PROGRAM INFORMATION FOR ALL ENGINEERING SPECIALIZATIONS IS LOCATED AFTER THE ARTICULATION CHART

Course Articulation Source: Transferology / October 2021

UIUC Course	UIUC Title	**BHC Course**	**BHC Title**
CHEM 102 + CHEM 103	General Chemistry I + General Chemistry Lab I *(take both)*	CHEM 101	General Chemistry I
CHEM 104 + CHEM 105	General Chemistry II + General Chemistry Lab II *(take both)*	CHEM 102	General Chemistry II
CHEM 232	Organic Chem I	CHEM 203 + CHEM 204 *(take both)*	Organic Chemistry I + Organic Chemistry II
CHEM 236	Fundamental Organic Chem I	*No equivalent*	
CS 101	Intro Computing: Engineering & Science	CIP 250	Java Programming Fundamentals
CS 124	Intro to Computer Science I	*No equivalent*	
CS 125	Intro to Computer Science	CS 121 + CS 225 *(take both)*	Intro to Computer Science + Advanced Programming
CS 173	Discrete Structures	*No equivalent*	
CS 225	Data Structures	CS 252	Data Structures
ECE 110	Introduction to Electronics	*No equivalent*	
ECE 205	Electrical and Electronic Circuits	*No equivalent*	
ECON 102	Microeconomics Principles	ECON 222	Principles of Microeconomics
ECON 103	Macroeconomics Principles	ECON 221	Principles of Macroeconomics
MATH 213	Basic Discrete Mathematics	MATH 161	Discrete Mathematics
MATH 220	Calculus	MATH 124	Calculus I with Analytic Geometry
MATH 221	Calculus I	*No equivalent; take MATH 124*	
MATH 225	Introductory Matrix Theory	MATH 230	Linear Algebra
MATH 231	Calculus II	MATH 225	Calculus II with Analytic Geometry
MATH 241	Calculus III	MATH 226	Calculus III with Analytic Geometry
MATH 284	Intro Differential Systems	MATH 235	Differential Equations
MATH 285	Intro Differential Equations	*No equivalent*	
MATH 286	Intro to Differential Eq Plus	*No equivalent*	

MATH 415	Applied Linear Algebra *(available after transfer)*	*No equivalent*	
MCB 150	Molecular and Cellular Basis of Life	BIOL 105	General Biology I
ME 170	Computer-Aided Design	GE 101	Engineering Graphics and Geometry
ME 200	Thermodynamics	*No equivalent*	
PHYS 211	University Physics: Mechanics	PHYS 201	Mechanics and Thermal Physics
PHYS 212	University Physics: Elec & Mag	PHYS 202	Electricity and Magnetism
PHYS 213	University Physics: Thermal Physics	*No equivalent (see combined PHYS articulation)*	
PHYS 214	University Physics: Quantum Physics	PHYS 214	Modern Physics
PHYS 211 + PHYS 212 + PHYS 213 + PHYS 214	*PHYS Combined articulation*	PHYS 201 + PHYS 202 + PHYS 214 *(take three courses)*	Mechanics and Thermal Physics + Electricity and Magnetism + Modern Physics
RHET 105	Writing and Research	ENG 101 + ENG 102 *(take both)*	Composition I + Composition II
SE 101	Engineering Graphics and Design	GE 101	Engineering Graphics and Geometry
TAM 210	Introduction to Statics	*No equivalent*	
TAM 211	Statics	GE 201	Analytical Mechanics Statics
TAM 212	Introductory Dynamics	GE 202	Analytical Mechanics Dynamics
TAM 251	Intro to Solid Mechanics	GE 205	Elementary Mechanics of Deformable Bodies
Language Other Than English (LOTE)	To meet graduation requirements complete LOTE, in high school or college, through the third level	Through SPAN 201 or FREN 201	Intermediate Spanish I, or Intermediate French I

SEE NEXT PAGE FOR DETAILED PROGRAM INFORMATION

FOR ALL ENGINEERING SPECIALIZATIONS

UNIVERSITY OF ILLINOIS
The Grainger College of Engineering

The Transfer Handbook is intended as a guide for students transferring to Illinois from another institution. Students who entered the university as first-year and are seeking transfer to or within the college should follow instructions and requirements posted on the DGS PREP and Grainger Engineering websites.

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[1]
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 GPA
- technical coursework
- academic rigor
- essay(s)
- activities and work experience
- high school transcripts and ACT/SAT scores – 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] Due to the specialized nature of the curriculum, transfer students admitted to Bioengineering will require a minimum of six (6) semesters of enrollment at UIUC to complete graduation requirements. Students enrolling at UIUC without credit for a transfer course equivalent to the UIUC course MCB 150, *Molecular and Cellular Basis of Life* should anticipate eight (8) semesters on campus due to course sequencing.

CONTACT INFORMATION Transfer Programs, The Grainger College of Engineering, 210 Engineering Hall, 1308 West Green Street, Urbana, IL 61801 Phone: (217) 333-2280 Email: engineeringtransfers@illinois.edu

Academic Expectations and Required Coursework

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 2021, the average transfer GPA for admitted students was 3.80 with the middle 50% of GPAs ranging from 3.67–4.00.

Academic rigor: competitive applicants will typically complete 2-3 technical courses in their first semester and a minimum of 3-4 technical courses, preferably 4, each semester thereafter while maintaining a full-time schedule of 15+ credit hours. Applicants should demonstrate mastery of subject matter by earning a B or better **(3.00/4.00)** in all prerequisite courses. **If an applicant is not able to complete a listed course or maintain a full-time schedule, this should be addressed in the Other Academic Information – Academic Challenges section of the application.**

All applicants must have transfer coursework equivalent to the University of Illinois courses listed below **completed prior to application**:

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[1]
MATH 220, Calculus **or MATH 221**, Calculus I
MATH 231, Calculus II
MATH 241, Calculus III[2]
PHYS 211, University Physics: Mechanics
PHYS 212, University Physics: Elec & Mag[2]
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

Computer Science, Electrical and Computer Engineering, and Mechanical Engineering are limited-capacity majors. To be most competitive, applicants to these majors are encouraged to complete as much additional transfer coursework equivalent to the University of Illinois courses noted in the transfer chart as possible.

Completion of the following courses is strongly recommended:

RHET 105, Writing and Research[3]
ECON 102, Microeconomic Principles **or ECON 103,** Macroeconomic Principles[4]
Language Other Than English (LOTE)[5]

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[1] Specifically required only for the following Programs of Study: Agricultural & Biological Engineering, Bioengineering, Civil Engineering, Engineering Mechanics, and Materials Science and Engineering. **A full year of chemistry may be required, regardless of major, depending on course transferability from your current institution.** Please note, AP Chemistry awards credit for the lecture only. Applicants are responsible for completing the full lecture and lab sequence(s).
[2] Fall 2022 applicants to all majors in Grainger College of Engineering are strongly encouraged to have these courses completed or in-progress at the time of application. These courses will be required for Fall 2023 admission.
[3] At most institutions the equivalent requires a two-course sequence transferring as RHET 105 or UCI and UCII.
[4] Students applying to Bioengineering or interested in Pre-Med should complete PSYC 100, Introduction to Psychology
[5] 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.

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Courses being completed during the summer prior to fall admission will not be considered as part of the application review.

Please note that the courses listed above are a **minimum** requirement for admission consideration, and applicants are encouraged to make additional progress toward degree requirements whenever possible.

Current course articulation information is available at www.transferology.com.

Transfer Chart

Applicants entering with 50+ credit hours who have not fulfilled the requirements noted in this chart should anticipate extended time to graduation.

Applicants with all required and recommended courses completed will be given priority for admission.

X = strongly recommended course

	Intro Differential Systems (MATH 284, 285, or 286)	Applied Linear Algebra (MATH 225 or MATH 415)	Univ Physics: Thermal Physics (PHYS 213)	Univ Physics: Quantum Physics (PHYS 214)	Thermodynamics (ME 200)	Statics (TAM 211)[1]	Introductory Dynamics (TAM 212)	Intro to Solid Mechanics (TAM 251)	Intro to Computing, Intro to CS or Intro to CS I (CS 101 or CS 125 or CS 124)	Intro to Computer Science I or Intro to Computer Science (CS 124 or CS 125)	Discrete Structures (CS 173 or MATH 213)	Data Structures (CS 225)	Engineering Graphics and Design (SE 101)	Computer-Aided Design (ME 170)	Introduction to Electronics (ECE 110)	Electrical and Electronic Circuits (ECE 205)[2]	Molecular & Cellular Basis of Life (MCB 150)	Elementary Organic Chem I or Fundamental Organic Chem I (CHEM 232 or CHEM 236)
Aerospace Engineering[3]	X	X			X	X	X		X						X			
Agricultural & Biological Engineering	X	X	X			X	X		X				X			X		
Bioengineering[4]	X								X								X	X
Civil Engineering	X	X	X			X	X	X	X				X					
Computer Engineering	X		X	X					X		X	X			X			
Computer Science[5]										X	X	X						
Electrical Engineering	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		X			
Material Science and Engineering	X	X		X					X							X		
Mechanical Engineering[6]	X				X	X	X	X	X					X		X		
Nuclear, Plasma, & Radiological Engineering	X				X	X	X		X							X		
Physics, Engineering	X		X	X					X									
Systems Engineering and Design	X		X			X	X	X	X				X		X			

[1] Aerospace Engineering, Agricultural & Biological Engineering, Mechanical Engineering and Nuclear, Plasma & Radiological Engineering: students may elect to take TAM 210 or 211.

[2] Students applying to Electrical and Computer Engineering, without access to ECE 110, may complete ECE 205.

[3] Students applying to Aerospace Engineering may complete either SE 101 or ME 170.

[4] Students applying to Bioengineering are strongly encouraged to complete MCB 150 prior to admission to ensure progress towards graduation.

[5] 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.

[6] 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.

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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.

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 if the request is made prior to completion of their second semester of enrollment at Illinois. 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.

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Applicants 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/

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

Agricultural and Biological Engineering:
http://catalog.illinois.edu/undergraduate/eng_aces/agricultural-biological-engineering-bs/

Civil Engineering:
http://catalog.illinois.edu/undergraduate/engineering/civil-engineering-bs/

Computer Engineering:
http://catalog.illinois.edu/undergraduate/engineering/computer-engineering-bs/

Computer Science:
http://catalog.illinois.edu/undergraduate/engineering/computer-science-bs/

Electrical Engineering:
http://catalog.illinois.edu/undergraduate/engineering/electrical-engineering-bs/

Engineering Mechanics:
http://catalog.illinois.edu/undergraduate/engineering/engineering-mechanics-bs/

Engineering Physics:
http://catalog.illinois.edu/undergraduate/engineering/engineering-physics-bs/

Industrial Engineering:
http://catalog.illinois.edu/undergraduate/engineering/industrial-engineering-bs/

Materials Science and Engineering:
http://catalog.illinois.edu/undergraduate/engineering/materials-science-engineering-bs/

Mechanical Engineering:
http://catalog.illinois.edu/undergraduate/engineering/mechanical-engineering-bs/

Nuclear, Plasma, and Radiological Engineering:
http://catalog.illinois.edu/undergraduate/engineering/nuclear-plasma-radiological-engineering-bs/

Systems Engineering and Design:
http://catalog.illinois.edu/undergraduate/engineering/systems-engineering-design-bs/