

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 / December 2019

UIUC Course	UIUC Title	BHC Course	BHC Title
CHEM 102 + CHEM 103	General Chemistry I + General Chemistry Lab I (<i>take both</i>)	CHEM 101	General Chemistry I
CHEM 104 + CHEM 105	General Chemistry II + General Chemistry Lab II (<i>take both</i>)	CHEM 102	General Chemistry II
CS 101	Intro Computing: Engrg & Sci	CIP 250	Java Programming Fundamentals
CS 125	Intro to Computer Science	CS 121 + CS 225 (<i>take both</i>)	Intro to Computer Science + Advanced Programming
CS 173	Discrete Structures	<i>No equivalent; take as MATH 161</i>	
ECE 110	Introduction to Electronics	<i>No equivalent</i>	
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	<i>No equivalent</i>	
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	<i>No equivalent</i>	
MATH 286	Intro to Differential Eq Plus	<i>No equivalent</i>	
MATH 415	Applied Linear Algebra (<i>available after transfer</i>)	<i>No equivalent</i>	
ME 170	Computer-Aided Design	<i>Contact College of Engineering for possible equivalency or substitution of GE 101 Analytical Mechanics Statics</i>	
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	<i>No equivalent (see combined PHYS articulation)</i>	
PHYS 214	University Physics: Quantum Physics	PHYS 214	Modern Physics
PHYS 211 + PHYS 212 + PHYS 213 + PHYS 214	<i>PHYS Combined articulation</i>	PHYS 201 + PHYS 202 + PHYS 214 <i>(take three courses)</i>	Mechanics and Thermal Physics + Electricity and Magnetism + Modern Physics
RHET 105	Writing and Research	ENG 101 + ENG 102 <i>(take both)</i>	Composition I + Composition II
SE 101	Engineering Graphics and Design	GE 101	Engineering Graphics and Geometry
TAM 210	Introduction to Statics	GE 201	Analytical Mechanics Statics
TAM 211	Statics	<i>No equivalent</i>	
TAM 212	Introductory Dynamics	GE 202	Analytical Mechanics Dynamics
TAM 251	Intro to Solid Mechanics	GE 205	Elementary Mechanics of Deformable Bodies

**SEE NEXT PAGE FOR DETAILED PROGRAM INFORMATION
FOR ALL ENGINEERING SPECIALIZATIONS**



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

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

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

Qualified students are invited to apply for transfer admission to The Grainger College of Engineering. 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.

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

Average GPA by Major, 2019 Admitted Transfer Students	
Aerospace Engineering	3.77
Agricultural and Biological Engineering	3.87
Civil Engineering	3.86
Computer Engineering	3.88
Computer Science	3.84
Electrical Engineering	3.86
Engineering Mechanics	3.81
Engineering Physics	3.77
Industrial Engineering	3.85
Materials Science and Engineering	3.78
Mechanical Engineering	3.91
Nuclear, Plasma, and Radiological Engineering	3.98
Systems Engineering and Design	3.74

Transfer students are NOT accepted to the Bioengineering Program of Study.

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

Admission to the College of Engineering is competitive, and not all qualified applicants are accepted. Each application is evaluated utilizing a holistic review process with consideration given to overall GPA, performance in technical coursework, academic rigor, essay(s), relevant activities and work experience. For students with fewer than 30 graded hours of coursework, high school transcripts and ACT/SAT scores are also used in the review process. **Courses being completed during the summer prior to fall admission will not be considered as part of the application review.** Second-degree applications are accepted; however, students applying for first degrees receive priority in limited-capacity majors.

The College of Engineering looks for academic rigor in a student's schedule. Competitive applicants will typically complete 2-3 technical courses in their first semester and 3-4 technical courses each semester thereafter. Applicants should demonstrate mastery of subject matter by earning a B or better (3.00/4.00) in all required courses. If not able to complete a required course (e.g., the course is not available at your current institution), this should be addressed in the Q & A section of the application.

The application allows for selection of a first and second choice major. **Computer Science and Mechanical Engineering are currently not available as second choice options.** Additionally, applicants are discouraged from selecting both Computer Engineering and Electrical Engineering as first and second choice options since admission is to the same department and equally competitive. An applicant interested in admission to Electrical and Computer Engineering should select the major in which they are most interested (EE or CompE) and then a second choice major, if desired, outside of the department.

Transfer students who are offered, and accept, admission are expected to complete the major to which they were admitted; major changes within the The Grainger College of Engineering are becoming increasingly limited. After admission, no dual-degree requests or major changes to Computer Science, Mechanical Engineering, or Electrical and Computer Engineering will be permitted. Students admitted to Electrical & Computer Engineering, **and** with limited exposure to introductory coursework at their previous institution, may be considered for a major change within the department (EE -> CompE, CompE -> EE) by following the Inter-Departmental Transfer (IDT) requirements established by the college.

At this time, the highly-requested majors of Computer Engineering, Computer Science, Electrical Engineering, and Mechanical Engineering are closed to sophomore-level transfer. Applicants applying to highly-requested majors are encouraged to do so by the priority application deadline.

Admission is not guaranteed and depends upon the strength of the applicant pool and space available.

For sophomore-level transfer: to be eligible for sophomore-level admission, applicants are required to complete transfer coursework equivalent to the following University of Illinois courses noted in *bold, red italics* below.

Required Courses:

RHET 105, Writing and Research¹
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 II²
MATH 220, Calculus OR MATH 221, Calculus I
MATH 231, Calculus II
PHYS 211, University Physics: Mechanics

Recommended Course:

ECON 102, Microeconomic Principles or ECON 103, Macroeconomic Principles
One technical course as recommended by the program of study (CS 101, SE 101, CS 125 OR ME 170, as required for junior-level transfer in the chart below)³

¹ At most institutions the equivalent requires a two-course English composition sequence transferring as RHET 105 or UCI and UCII

² Required only for the following Programs of Study: Agricultural & Biological Engineering, Civil Engineering, Engineering Mechanics, and Materials Science and Engineering. However, a full year of chemistry may be required, regardless of major, depending on course transferability from your current institution.

³This will be a requirement for fall 2021 admission.

Applicants planning to use test-based credit, such as AP or IB, to fulfill requirements should refer to cutoffs established by the University of Illinois at Urbana-Champaign as a guideline. Please note, AP Chemistry awards credit for the lecture only. Applicants are responsible for completing the full lecture and lab sequence(s). Test-based credit policies are subject to change.

For junior-level transfer: to be eligible for junior-level admission, applicants must have **all sophomore level requirements completed** and as much additional transfer coursework, equivalent to the University of Illinois courses noted in the transfer chart, as possible. Applicants with all required courses completed will be given priority.

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.

Course articulation information is available at <http://www.transferology.com/>.

For junior level transfer: to be eligible for junior level admission, applicants must have all **sophomore level prerequisites completed** and as much additional transfer coursework, equivalent to the University of Illinois courses noted below, as possible. **Please refer to the previous pages for the list of courses required for sophomore level transfer.** Applicants with all required courses completed will be given priority.

X = required courses
R = strongly recommended fall 2020 and required for fall 2021 admission

	Calculus III (MATH 241)	Applied Linear Algebra (MATH 225 or MATH 415)	Intro Differential Systems (MATH 284, 285 or 286) ¹	Univ Physics: Elec & Mag (PHYS 212)	Univ Physics: Thermal Physics (PHYS 213)	Statics (TAM 211) ²	Introductory Dynamics (PHYS 214)	Intro to Solid Mechanics (TAM 212)	Intro Computing or Intro Comp Sci (CS 101 or CS 125)	Intro to Computing: Engrg & Sci (CS 101)	Discrete Structures (CS 125)	Engineering Graphics and Design (SE 101)	Computer-Aided Design (ME 170)	Introduction to Electronics (ECE 110)
Aerospace Engineering ³	X	X	X	X	X	X	X	R						
Agricultural & Biological Engineering	X	X	X	X	X	X	X		X		R			
Civil Engineering	X	X	X	X	X	X	X	X	X		R			
Computer Engineering	X		X	X	X	X			X	X				X
Computer Science ⁴	X	X	X						X	X				
Electrical Engineering	X		X	X	X				X	X				X
Engineering Mechanics	X		X	X	X	X	X	X	X			R		
Engineering Physics	X		X	X	X				X					
Industrial Engineering	X		X	X	X	X	X	X	X		R			
Material Science and Engineering	X	X	X	X	X				X					
Mechanical Engineering ⁵	X		X	X		X	X	X	X			R		
Nuclear, Plasma, & Radiological Engineering	X		X	X	X	X	X		X					
Systems Engineering and Design	X		X	X	X	X	X	X	X		R			

¹ Electrical and Computer Engineering: If MATH 284 or 285, students must also complete MATH 225 or 415. If MATH 286, no additional course required.

² Aerospace Engineering, Agricultural & Biological Engineering, Mechanical Engineering and Nuclear, Plasma & Radiological Engineering: students may elect to take TAM 210 or 211.

³ Competitive applicants to Aerospace Engineering will complete one of CS 101 or CS 125. Completion of SE 101 or ME 170 is highly recommended.

⁴ Students interested in Computer Science are expected to have formal coursework covering the following programming languages: Java and C++. This may require completion of an additional course(s) not specifically noted in the chart above.

⁵ 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.

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/>

Agricultural and Biological Engineering:

<http://catalog.illinois.edu/undergraduate/engineering/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/>