CHEMISTRY + CHEMICAL ENGINEERING DUAL PROGRAM

Through an agreement between Clayton State University and Georgia Institute of Technology, students who wish to study engineering may begin their undergraduate program at Clayton State University and later transfer to Georgia Institute of Technology through the Dual Degree Engineering Program. By enrolling in the Dual Degree Program, a student may attend college close to home, which can decrease cost, in a college environment where classes are smaller. This can provide more individual attention and interaction with professors as the student is making the adjustment to college life.

Students who attend Clayton State University under the Dual Degree Engineering Program will complete a specified three-year chemistry curriculum at Clayton State and then attend Georgia Tech for approximately two years to complete the remaining Engineering Curriculum. After completion of the program of study at Georgia Tech, the student will receive a Bachelor of Science in Chemistry from Clayton State University and a Bachelor's degree in Chemical Engineering from Georgia Tech.

In order to be considered for admission to the College of Engineering at Georgia Tech as a dual degree transfer student, students must complete the prescribed program of study at the participating institution, students must meet the admissions requirements for the chemical engineering major and meet the Georgia Tech GPA requirements. For Georgia residents, a cumulative overall GPA of 3.3 is required, including a mathematics GPA of 3.3 and a science GPA of 3.3.

Program Requirements

No more than two grades of D in upper-division courses are allowed in the Chemistry major. Upper-division courses are all courses other than those of Areas A through F of the core curriculum. 1000- or 2000-level courses used in the upper division are included in this restriction.

Code	Title	Credit Hours
Core IMPACTS		**42**
All core curriculum recommendations are shown under the Core IMPACTS section of the Undergraduate Graduation Requirements. (https://catalog.clayton.edu/graduation-requirements/undergraduate-graduation-requirements/core-curriculum/#nonsciencemajorstext)		
Field of Study - Chemistry		**18**
CHEM 2411 & 2411L	Organic Chemistry I and Organic Chemistry Laboratory I	
CHEM 2412 & 2412L	Organic Chemistry II and Organic Chemistry Lab II	
MATH 1501	Calculus I [1]	
MATH 2502	Calculus II [1]	
PHYS 2211 & 2211L	Principles of Physics I and Principles of Physics Lab I	
PHYS 2212 & 2212L	Principles of Physics II and Principles of Physics Lab II	
Upper Division Core Requirements (CSU)		**14**
SCI 2900	Scientific Inquiry	2
CHEM 3411 & 3411L	Thermodynamics and Kinetics and Physical Chemistry Laboratory	4
CHEM 3412 & 3412L	Quantum Mechanics and Physical Chemistry Lab II	4
CHEM 3811	Analytical Chemistry	3
OR		
CHEM 2811 & 2811L	Quantitative Analysis and Quantitative Analysis Lab	4
CHEM 4202L	Biochemistry Laboratory	3
Required Courses Taken at GA Tech and Transferred Back to CSU		**14**
CHEM 3220	On-Campus Internship I (GA Tech CHBE 4300 Kinetics & Reactor Design (3 hours))	3
or CHEM 3230	Introductory Research I	
CHEM 3411	Thermodynamics and Kinetics (GA Tech CHBE 3130 Chemical Engineering Thermodynamics (3 hours))	3
Choose one from the following:		2
CHEM 4401L	Advanced Lab I: Organic Synth.	
CHEM 4402L	Advanced Lab II: Biochemistry	
CHEM 4403L	Advanced Lab III: Inorganic (GA Tech CHBE 4412 Process Control Lab (1 hour) OR GA Tech CHBE 4400 Chemical Process Control (4 hours – 1 hour counts here and 3 hours count in Chemistry electives below))	
CHEM 4500	Chemistry Seminar I (GA Tech CHBE 4520 Senior Capstone (2 hours))	
CHEM 4700	Special Topics in Chemistry (GA Tech CHBE 4411 Process Control OR accept credit from the CHBE 4400 Chemical Process Control (4 hour course; 3 hours count here and 1 hour counts above as the Advanced Chemistry Lab.))	
Courses Taken at CSU or GA Tech		**7**
CHEM 4200	Biochemistry I (GA Tech CHEM 4511 Survey of Biochemistry (3 hours))	3
CHEM 4811 & 4811L	Instrumental Analysis and Instrumental Analysis Lab (GA Tech CHEM 3281 Instrumental Analysis (4 hours))	
Chemistry Electives (Taken at CSU or GA Tech)		**6**
Choose two from the following:		
CHEM 4201	Advanced Organic Chemistry (GA Tech CHEM 4311 Advanced Organic Chemistry (3 hours))	
CHEM 4301	Inorganic Chemistry (GA Tech CHEM 3111 Inorganic Chemistry (3 hours))	
CHEM 4812	Spectroscopy (GA Tech CHEM 4341 Applied Spectroscopy or related CE elective (3 hours))	
CHEM 4700	Special Topics in Chemistry (GA Tech CHBE 3225 Separations or related CE elective (3 hours))	
Directed Electives (17 hours must be taken at CSU)		**17**
CSCI 1371	Computing for Engineers	3
BIOL 1107 & 1107L	Principles of Biology I and Principles of Biology Lab I	4
MATH 2140	Introductory Linear Algebra	3
MATH 2503	Calculus III	4
MATH 3303	Differential Equations	3

GA Tech CHBE 4515 Chemical Process Safety	1
Total Credit Hours	**120-121**

[1] If MATH 1501 and MATH 2502 are used in Core IMPACTS, one credit hour is applied to the Field of Study.