CHEMICAL ENGINEERING - BACHELOR OF SCIENCE IN CHEMICAL ENGINEERING

A Suggested Plan of Study for Students

This roadmap assumes student placement in MATH 1511G Calculus and Analytic Geometry I and ENGL 1110G Composition I. The contents and order of this roadmap may vary depending on initial student placement in mathematics and english. It is only a suggested plan of study for students and is not intended as a contract. Course availability may vary from fall to spring semester and may be subject to modification or change.

First Year		
Fall		**Credits**
CHME 101	Introduction to Chemical Engineering Calculations	2
CHEM 1215G or CHEM 1216	General Chemistry I Lecture and Laboratory for STEM Majors or General Chemistry I Lecture and Laboratory for CHEM Majors	4
MATH 1511G	Calculus and Analytic Geometry I [1]	4
ENGL 1110G	Composition I	4
Area VI: Creative and Fine Arts Course [2]		3
	Credits	**17**
Spring		
CHME 102	Material Balances	2
CHEM 1225G or CHEM 1226	General Chemistry II Lecture and Laboratory for STEM Majors or General Chemistry II Lecture and Laboratory for CHEM Majors	4
MATH 1521G	Calculus and Analytic Geometry II	4
PHYS 1310G & PHYS 1310L	Calculus -Based Physics I and Calculus -Based Physics I Lab	4
COMM 1115G	Introduction to Communication	3
	Credits	**17**
Second Year		
Fall		
CHME 201	Energy Balances & Basic Thermodynamics	3
CHEM 313	Organic Chemistry I	3
MATH 2530G	Calculus III	3
PHYS 1320G & PHYS 1320L	Calculus -Based Physics II and Calculus -Based Physics II Lab	4
ENGL 2210G	Professional and Technical Communication Honors	3
	Credits	**16**
Spring		
CHME 303	Chemical Engineering Thermodynamics	4
CHME 305	Transport Operations I: Fluid Flow	3
I E 311	Engineering Data Analysis	3
CHEM 314	Organic Chemistry II	3
MATH 3160	Introduction to Ordinary Differential Equations	3
	Credits	**16**
Third Year		
Fall		
CHME 306	Transport Operations II: Heat and Mass Transfer	4
CHME 323 L	Transport Operations and Instrumentation Laboratory [5]	2
CHME 361	Engineering Materials	3
CHME 392	Numerical Methods in Engineering	3
CHEM 433	Physical Chemistry I	3
CHEM 315	Organic Chemistry Laboratory	2
	Credits	**17**
Spring		
CHME 307	Transport Operations III: Staged Operations	3
CHME 352 L	Simulation of Unit Operations	2
CHME 441	Chemical Kinetics and Reactor Engineering	3
Area IV: Social/Behavioral Sciences Course [2]		3
CHME Elective [4]		3
	Credits	**14**
Fourth Year		
Fall		
CHME 412	Process Dynamics and Control	3
CHME 423 L	Unit Operations Laboratory [5]	2
CHME 448	Industrial Safety	3
CHME 452	Chemical Process Design & Economic Evaluation	3
I E 365	Quality Control	3
	Credits	**14**
Spring		
CHME 455	Chemical Plant Design	3
CHME 455 L	Chemical Plant Simulation	1
CHME Elective [4]		3
Area V: Humanitites Course [2]		3
Viewing a Wider World Course [3]		3
	Credits	**13**
	Total Credits	**124**

1. MATH 1511G Calculus and Analytic Geometry I is required for the degree but students may need to take any prerequisites needed to enter MATH 1511G Calculus and Analytic Geometry I first.
2. See the General Education (https://catalogs.nmsu.edu/nmsu/general-education-viewing-wider-world/) section of the catalog for a full list of courses. For Area IV,V, and VI courses, students may take them at any time their schedule allows.
3. See the Viewing a Wider World (https://catalogs.nmsu.edu/nmsu/general-education-viewing-wider-world/#viewingawiderworldtext) section of the catalog for a full list of courses
   Also see the 9-credit hour rule at the bottom of the page. CHMEs meet the 9-credit hour rule through the sequence CHEM 313/314/433, and thus only need to complete 3 credits of VWW.
4. chme.nmsu.edu/academics/syllabi/#CHME_Elective_Courses (https://chme.nmsu.edu/academics/Syllabi.html#CHME_Elective_Courses)
5. CHME 323L and CHME 423L are generally offered fall and spring semesters. Students can take them either semester.