

CHEMISTRY B.S.

Four Year Plan

Disclaimer: This *sample* Four Year Plan is provided as a guide for the recommended sequencing of courses. Vanguard University requires that students complete a minimum of 120 units of required course work as outlined on the Requirements tab in order to receive a Bachelor of Arts, Bachelor of Music, Bachelor of Science, or Bachelor of Science in Nursing degree. It is the student's responsibility to confirm with the department the course rotation before enrolling in courses. If applicable, please note the footnotes at the bottom of the page for additional information related to courses listed in a particular year and term. Questions, contact the Department of Physical Sciences and Applied Mathematics.

Study Abroad Participation: Students interested in participating in the university's Study Abroad programs are encouraged to reach out to the Global Education and Outreach Office (studyabroad@vanguard.edu) for more information and collaboration in their academic course planning. Students using Education and Training Benefits through the U.S. Department of Veteran Affairs are encouraged to also reach out to the School Certifying Official (veteranscertifyingofficial@vanguard.edu) for more information regarding how benefits can be applied.

Course	Title	Units
Year 1 Term 1		
CORE-100C	Cornerstone	1
CHEM-120	General Chemistry I	3
CHEM-120L	General Chemistry I Lab	1
MATH-180C	Calculus 1	4
ENGL-120C	Persuasive Writing	3
NT-101C	New Testament Survey	3
KINE-148C	Lifetime Fitness and Wellness Lecture	3
Units		18
Year 1 Term 2		
CHEM-121	General Chemistry II	3
CHEM-121L	General Chemistry II Lab	1
FINA-PLCR	Fine Arts Core Curriculum Requirement	3
MATH-181C	Calculus II	4
HIST-PLCR1	History Core Req (US Hist Or Democracy)	3
Units		14
Year 2 Term 1		
PSCI-223C	Mechanics of Solids and Fluids	3
PSCI-223CL	Mechanics of Solids and Fluids Lab	1
MATH-281	Multivariable Calculus	4
CHEM-252	Analytical Chemistry	3
CHEM-252L	Analytical Chem Techniques	1
CHEM-304	Organic Chemistry I	3
CHEM-304L	Organic Chemistry Techniques I	1
THEO-101C	Foundations of Christian Life	3
Units		19

Year 2 Term 2		
PSCI-225	Electricity and Magnetism	3
PSCI-225L	Electricity and Magnetism Lab	1
OT-201C	Old Testament Survey	3
CHEM-305	Organic Chemistry II	3
CHEM-305L	Organic Chemistry Technqs II	1
CHEM-PLHD34	3-4 Units from MATH, CSCI, PSCI	3-4
Units		14-15

Year 3 Term 1		
CHEM-456	Physical Chemistry: Thermodynamics	2
CHEM-440	Instrumental Analysis	2
CHEM-440L	Instrumental Analysis Lab	2
THEO-300C	Developing a Christian World View	3
ENGL-220C	Researched Writing	3
CHEM-PLHD34	3-4 Units from MATH, CSCI, PSCI	3-4
Units		15-16

Year 3 Term 2		
CHEM-457	Physical Chemistry: Kinetics	2
CHEM-458	Physical Chemistry: Quantum Mechanics	2
PSYC-103C	Introduction to Psychology	3
CHEM-PLHDL2	Physical Chemistry Technique Lab	1
CHEM-PLHD34U	3-4 Ud Units From Math, Csci, Psci	3-4
CHEM-PLHDRCH	Undergraduate Research	2-4
Units		13-16

Year 4 Term 1		
ENGL-230C	Literature and the Human Experience	3
COMM-201C	Speech Composition and Presentation	3
CHEM-430	Biochemistry	3
CHEM-430L	Experimental Tech/Biochemistry	1
HIST-PLCR2	History Core Requirement (World Civ)	3
Units		13

Year 4 Term 2		
CHEM-499C	Chemistry Capstone Seminar	2
CHEM-435	Advanced Biochemistry	3
CHIS-400C	Christian Heritage	3
SOC-PLCR	Social Science Core Curriculum Reqm't	3
CHEM-PLHD34U	3-4 Ud Units From Math, Csci, Psci	3-4
Units		14-15
Total Units		120-126

