

CHEMISTRY B.S. WITH AN EDUCATION MINOR (VISTA)

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 Chemical and Environmental Sciences.

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-146C	Lifetime Fitness/Well Activity	1
Units		16
Year 1 Term 2		
CHEM-121	General Chemistry II	3
CHEM-121L	General Chemistry II Lab	1
MATH-181C	Calculus II	4
FINA-PLCR	Fine Arts Core Curriculum Requirement	3
THEO-101C	Foundations of Christian Life	3
KINE-145C	Lifetime Fitness/Wellness Lect	1
HIST-PLCR2	History Core Requirement (World Civ)	3
Units		18
Year 2 Term 1		
PSCI-PLGP1	Physics 1 Requirement	4
CHEM-456	Physical Chemistry: Thermodynamics	2
EDUC-315	Teaching in a Multicultural Setting	3
CHEM-304	Organic Chemistry I	3
CHEM-304L	Organic Chemistry Techniques I	1

ANTH-102C	Intro to Cultural Anthropology	3
Units		16
Year 2 Term 2		
PSCI-PLGP2	Physics 2 Requirement	4
CHEM-305	Organic Chemistry II	3
CHEM-305L	Organic Chemistry Technqs II	1
ENGL-220C	Researched Writing	3
OT-201C	Old Testament Survey	3
CHEM-456L	Physical Chemistry Technique Lab	1-2
Units		15-16
Year 3 Term 1		
CHEM-252	Analytical Chemistry	3
CHEM-252L	Analytical Chem Techniques	1
CHEM-430	Biochemistry	3
CHEM-430L	Experimental Tech/Biochemistry	1
COMM-201C	Speech Composition and Presentation	3
THEO-300C	Developing a Christian World View	3
SOC-PLCR	Social Science Core Curriculum Reqm't	3
Units		17
Year 3 Term 2		
CHEM-PLUD4A	Upper Division STEM Elective (4 units)	4
ENGL-230C	Literature and the Human Experience	3
ANTH-453	Language,Culture/Linguistics	3
CHIS-400C	Christian Heritage	3
CHEM-485	Undergraduate Research	1-4
POLS-155C	American Democracy	3
Units		17-20
Year 4 Term 1		
EDUC-424	Foundations in Teaching for Single Subject	2
EDUC-426	Instructional Design and Subject Specific Pedagogy for Single Subject	4
EDUC-435	Supervised Fieldwork for Single Subject	4
EDUC-444	Language Acquisition for Secondary Students	1
EDUC-447	Metacognition/Reading Strategies for Secondary Students	1
EDUC-452	Literacy in Content Areas for Secondary Students	1
EDUC-464	Use of Technology in the Classroom	1
EDUC-442	CalTPA Cycle 1	0.5
Units		14.5
Year 4 Term 2		
CHEM-499C	Chemistry Capstone Seminar	2
EDUC-434	Curriculum Unit Planning for Single Subject	2
EDUC-488	Clinical Practice Seminar for Single Subject	2
EDUC-489	Clinical Practice Fieldwork for Single Subject	8



EDUC-443	CalTPA Cycle 2	0.5
Units		14.5
Total Units		128-132

