

# MATHEMATICS B.S. WITH AN EDUCATION MINOR (VISTA)

## Requirements

Students seeking the Bachelor of Science degree in Mathematics with a minor in Education must complete the academic program requirements as listed below. This program is associated with the Integrated Teacher Education Program (ITEP/VISTA).

Code	Title	Units
Core Curriculum Requirements ( <a href="https://catalog.vanguard.edu/college/core-curriculum/">https://catalog.vanguard.edu/college/core-curriculum/</a> )		54-52
Major Core Requirements		21
Integrated Teacher Education Program Requirements (p. 1)		27
Mathematics Minor (p. 1)		21
<b>Total Units</b>		<b>123-121</b>

## Mathematics Major Core Requirements

Code	Title	Units
MATH-315	Teaching/Tutoring	3
MATH-330	Number Theory	3
MATH-380	Elementary Analysis I	3
MATH-410	Abstract Algebra	3
MATH-420	Higher Geometry	3
POLS-155C	American Democracy	3
ANTH/ENGL-453	Language,Culture/Linguistics	3
<b>Total Units</b>		<b>21</b>

## Integrated Teacher Education Program Requirements

Code	Title	Units
EDUC-424	Foundations in Teaching for Single Subject	2
EDUC-426	Instructional Design and Subject Specific Pedagogy for Single Subject	4
EDUC-434	Curriculum Unit Planning for Single Subject	2
EDUC-435	Supervised Fieldwork for Single Subject	4
EDUC-442	CalTPA Cycle 1	0.5
EDUC-443	CalTPA Cycle 2	0.5
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-488	Clinical Practice Seminar for Single Subject	2
EDUC-489	Clinical Practice Fieldwork for Single Subject	8
<b>Total Units</b>		<b>27</b>

## Mathematics Minor

Code	Title	Units
MATH-180C	Calculus 1	4
MATH-181C	Calculus II	4
MATH-265C	Intro to Statistical Methods	3
MATH-281	Multivariable Calculus	4
MATH-285	Intro to Adv Mathematics	3
Select one course from either the MATH, CSCI, or DSCI disciplines.		3
<b>Total Units</b>		<b>21</b>

## 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 Science and 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](mailto: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](mailto:veteranscertifyingofficial@vanguard.edu)) for more information regarding how benefits can be applied.

Course	Title	Units
<b>Year 1 Term 1</b>		
CORE-100C	Cornerstone	1
ENGL-120C	Persuasive Writing	3
KINE-145C	Lifetime Fitness/Wellness Lect	1
NT-101C	New Testament Survey	3
MATH-285	Intro to Adv Mathematics	3
MATH-180C	Calculus 1	4
<b>Units</b>		<b>15</b>
<b>Year 1 Term 2</b>		
KINE-146C	Lifetime Fitness/Well Activity	1
CSCI-100C	Introduction to Computer Science	3
CSCI-100CL	Introduction to Computer Science Lab	1
POLS-155C	American Democracy	3
THEO-PLHD	Theology Core Requirement	3
COMM-201C	Speech Composition and Presentation	3
<b>Units</b>		<b>14</b>
<b>Year 2 Term 1</b>		
MATH-281	Multivariable Calculus	4

MATH-300	Linear Algebra	3	EDUC-443	CalTPA Cycle 2	0.5
SOC-PLCR	Social Science Core Curriculum Req'm't	3		<b>Units</b>	<b>14.5</b>
ENGL-220	Researched Writing	3		<b>Total Units</b>	<b>127</b>
OT-201C	Old Testament Survey	3			
	<b>Units</b>	<b>16</b>			
<b>Year 2 Term 2</b>					
MATH-265C	Intro to Statistical Methods	3			
MATH-330	Number Theory	3			
FINA-PLCR	Fine Arts Core Curriculum Requirement	3			
SOC-PLCR	Social Science Core Curriculum Req'm't	3			
THEO-300C	Developing a Christian World View	3			
MATH-380	Elementary Analysis I	3			
	<b>Units</b>	<b>18</b>			
<b>Year 3 Term 1</b>					
MATH-390	Numerical Analysis	3			
EDUC-315	Teaching in a Multicultural Setting	3			
ENGL-230C	Literature and the Human Experience	3			
CHIS-400C	Christian Heritage	3			
HIST-PLHD	History Core Requirement	3			
MATH-410	Abstract Algebra	3			
	<b>Units</b>	<b>18</b>			
<b>Year 3 Term 2</b>					
MATH-207	Computer Programming	3			
MATH-310	Differential Equations	3			
MATH-365	Probability and Statistics	3			
MATH-485	Undergraduate Research	2			
ANTH-453	Language,Culture/Linguistics	3			
MATH-420	Higher Geometry	3			
	<b>Units</b>	<b>17</b>			
<b>Year 4 Term 1</b>					
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			
	<b>Units</b>	<b>14.5</b>			
<b>Year 4 Term 2</b>					
MATH-499C	Mathematics Capstone	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			