Title

Credits

## **Mathematics & Statistics Curriculum Guides**

The following are only examples of four-year Mathematics degree programs and are subject to change without notice. Students should consult a Mathematics program advisor to ensure that they have the most accurate and up-to-date information available about a particular four-year degree option.

- Mathematics Emphasis
- · Statistics Emphasis

## **Mathematics**

Course

An example: Four year plan for **Mathematics Major with Mathematics Emphasis** 120 credits necessary to graduate.

Plan is a representation and categories of classes can be switched. Check with your advisor.

Feathers           Machine Sommer         Calcature and Analysic Connect of Connect	Course	Title	Credits
MATH 2021         Calcalus and Analysic Generial Ed         Secretal Ed         Se	Freshman		
Prior Year Seminar   3   3   3   3   3   3   3   3   3	Fall		
First Versilaminal         3           General Ecl         3           Selective         Tordits         16           Spring         1           MATH 2003         Calculus and Analysis         4           General Ecl         Intenductory Statistics         4           General Ecl         3         3           Bickby         7         3         3           General Ecl         5         3	MATH 202		4
General Ed         3           General Ed         3           Euchrye         3           Remail Ed         3           Euchrye         6           Nacht         6           MATH 203         Cardits and Analystic of General Ed         4           MATH 204         introductory Statistics         4           General Ed         1         3           General Ed         5         4           General Ed         5         4           General Ed         5         4           General Ed         1         3           General Ed         7         3           General Ed         7         3           MATH 314         Proofs in Number Theory and Topology         3           Marker         2         3           Bleiche         2         3           Bleiche         3         3           Bleiche         5         4           Bleiche         6		Geometry I	
General Ed         Section         condita         16           Spring         Calculus and Analytic Geometry II         4           MATH 200         Indicatory Statistics         4           General Ed         5         3           Bective         6         3         3           Bective         7         3         3           Bective         7         3         7         3			
Electric Spring         Certain and natural to Genome y II         An Th 1203         Certain and natural to Genome y II         An Th 2000         Introductory Statistics         4         4         Ceneral Ed         Go come y II II         An Th 2001         3	General Ed		
Spring         Cedialus and Analytic Geometry II         4           MATH 200         Introductory Statistics         4           General Ed         3         3           General Ed         3         3           Bickeitve         5         3           Credits         17           Sophomore           Tell         Multivariate Calculus         4           General Ed         5         3           General Ed         5         3           General Ed         5         3           Spring         2         3           Spring         2         3           Spring         2         3           General Ed         7         7         3           Spring         3	General Ed		3
Spring         Calculus and Analytic Geomery II         4           MATH 2020         Calculus and Analytic Geomery II         4           Mach 2021         Introductory Statistics         4           General Ed         Credits         17           Spring           MATH 209         Multivariate Calculus         4           General Ed         18         3           General Ed         2         3           General Ed         5         3           General Ed         7         3           Spring         8         3           Spring         8         4           MATH 314         Profis in Number Theory and and Topology         3           Silicetive         3         4           Gleichive         7         4           Bleichive         7         6           Bleichive         7         6           Bleichive         7         6           Bleichive         7         7         3           Bleichive         7         6         1         3           Bleichive         7         6         1         3         3           Bleichive         7	Elective		3
MATH 203         Gaustus and Analytic Goorder         4           MATH 260         Introductory Statesics         4           General Ed         3         3           General Ed         5         3           Betker         6         6         6         7           Betker         6         76         7         7           Spokene         8         7         8         7         8         4         4         6         6         6         7         6         7         6         7         6         7         6         7         6         7         6         7         6         7         6         7         6         7         6         7         6         6         7         6         7         6         1         6         6         7         6         6         7         6         6         7         6         6         7         6         7         7		Credits	16
MATH 260   Geometry II of Introductory Statistics   MATH 260   Interview Statistics	Spring		
MATH 260         Introductory Statistics         4           General EG         3           General EG         3           Elective         73           Ageneral EG         12           Sephemore         2           Foli           MATH 209         Multivariate Calculus         4           General EG         3         3           Elective         7         4           Spring         3         3           MATH 314         2         6         4           General EG         6         6         3         3           Bective         3	MATH 203	Calculus and Analytic	4
General Ed         3           General Ed         3           Elective         7           Sophomore           Fall           MATH 208         Muttivariate Calculus         4           General Ed         3           General Ed         6         3           Elective         6         7         4           MATH 314         Proofs in Number Theory and Topology         3         3           Blective         7         3		Geometry II	
General Ed         13           Elective         Credits         17           Sophomore           Fall         Will variate Calculus         4           AGnoral Ed         Multivariate Calculus         3           General Ed         5         6           Belective         7 credits         13           MATH 314         Proofs in Number Theory and Topology and Topology and Topology and Topology         3           Blective         3         3           Elective         5         3           Elective         5         3           Elective         7         3           MATH 305         2         4           MATH 326         2         4           Mark Theory         3         4           Elective         5         4           Mark Theory         4         4	MATH 260	Introductory Statistics	4
Elective         Credits         17           Sophomore           Fall           MATH 2096         Multivariate Calculus         4           General Ed         3         3           General Ed         10         3           Elective         Credits         13           Spring         Proofs in Number Theory and Topology         3           Elective         3         3           Elective         4         3           Elective         5         3           Elective         7         3           Elective         5         3           Elective         7         4           March         6         1           Suntor         8         1           Fall         1         1           MATH 305         Ordinary Differential Equations         2           MATH 326         A linear Agebra and Equations         3           Elective         1         3           Elective         1         4           MATH 326         A place Mathematical Quintinzation         3           Applied Mathematical Quintinzation         3	General Ed		3
Sophomore         Credits         17           Fall           MATH 209         Multivariate Calculus         4           General Ed         3         3           Specific         2         3           Spring         Credits         13           MATH 314         Proofs in Number Theory and Topology         3           Secretal Ed         5         3           Secretal Ed         7         4           MATH 305         Credits         15           MATH 305         Credits         4           MATH 320         Linear Algebra and Matrix Theory         3           Spring         5         4           MATH 328         Abstract Algebra         3           MATH 328         Applied Mathematical Oplinitization         3	General Ed		3
Sphomore           Fall         Additional Calculus         4           MATH 209         Multivariate Calculus         4           Generial Ed         :	Elective		3
Fall         Matt 209         Multivariat Calculus         4           General Ed         3         3           General Ed         5         3           Elective         Credits         13           Spring         Totalis         13           MATH 314         Proofs in Number Theory and Topology         3           Blective         3         3           Blective         5         3           Blective         6         7           Blective         7         3           Blective         7         3           Blective         7         3           MATH 305         Ordinary Differential Equations         4           Blective         2         4           MATH 326         Eneral Algebra and Matrix Theory         4           Blective         5         4           Blective         6         7           Blective         7         4           Blective         8 <td< td=""><td></td><td>Credits</td><td>17</td></td<>		Credits	17
MATH 209         Multivariate Calculus         4           General Ed         3           General Ed	Sophomore		
MATH 209         Multivariate Calculus         4           General Ed         3           General Ed	Fall		
General Ed         13           Elective         Credits         13           Spring           MATH 314         Proofs in Number Theory and Topology         3           General Ed         3         3           Elective         3         3           Elective         3         3           Elective         5         3           Elective         6         15           Tunior         7         3           Fall         4         Equations           MATH 305         Ordinary Differential Equations         4           Equations         4         4           General Ed         Linear Algebra and Matrix Theory         4           General Ed         1         3           Elective         5         3           Matrix Theory         3         3           Spring         5         4           MATH 326         Abstract Algebra         3           MATH 327         Applied Mathematical Optimization         0		Multivariate Calculus	4
General Ed         13           Elective         Credits         13           Spring           MATH 314         Proofs in Number Theory and Topology         3           General Ed         3         3           Elective         3         3           Elective         3         3           Elective         5         3           Elective         6         15           Tunior         7         3           Fall         4         Equations           MATH 305         Ordinary Differential Equations         4           Equations         4         4           General Ed         Linear Algebra and Matrix Theory         4           General Ed         1         3           Elective         5         3           Matrix Theory         3         3           Spring         5         4           MATH 326         Abstract Algebra         3           MATH 327         Applied Mathematical Optimization         0	General Ed		3
Elective         Credits         13           Spring         MATH 314         Proofs in Number Theory and Topology         3           General Ed         3         3           Elective         3         3           Elective         3         3           Elective         5         3           Elective         5         3           Junior         5         4           Fall         5         4           MATH 305         Ordinary Differential Equations         4           MATH 320         Linear Algebra and Matrix Theory         4           General Ed         Equations         3           Elective         5         3           General Ed         Engles and Matrix Theory         4           Spring         7         3           MATH 326         Abstract Algebra         3           MATH 327         Applied Mathematical Optimization         3	General Ed		
Spring         ATH 314         Proofs in Number Theory and Topology         3           General Ed         3         3           Elective         3         3           Elective         3         3           Elective         3         3           Elective         6         7         3         3           Elective         7         3         4			
Spring         Proofs in Number Theory and Topology         3           General Ed         3           Elective         3           Elective         7           Elective         6           Total Ed         7           MATH 305         Ordinary Differential Equations         4           Equations         1           MATH 320         Inear Algebra and Autrix Theory         4           Elective         5           Elective         7           Spring         1           MATH 328         Abstract Algebra         3           MATH 329         Applied Mathematical Optimization         3		Credits	
MATH 314         Proofs in Number Theory and Topology         3           General Ed         3           Elective         3           Elective         3           Elective         6           Lictive         7           Verdits         15           Junior         7           Fall         7           MATH 305         Ordinary Differential Equations         4           MATH 320         Linear Algebra and Matrix Theory         4           General Ed         1         3           Elective         5         3           Flocitye         7         4           MATH 326         Abstract Algebra         3           MATH 328         Abstract Algebra         3           MATH 355         Applied Mathematical Optimization         3	Spring		
General Ed         3           Elective         3           Elective         3           Elective         7         3           Elective         Credits         15           Junior         Totalts         15           Fall         Ordinary Differential Equations         4           MATH 305         Ordinary Differential Equations         4           MATH 320         Linear Algebra and Matrix Theory         4           General Ed         3         3           Elective         3         3           Spring         Applied Mathematical Optimization         3		Proofs in Number Theory	3
Elective         3           Elective         3           Elective         Credits         15           Junior           Fall           MATH 305         Ordinary Differential Equations         4           MATH 320         Linear Algebra and Matrix Theory         4           General Ed         3           Elective         3           Elective         Credits         14           Spring           MATH 328         Abstract Algebra         3           MATH 355         Applied Mathematical Optimization         3			
Elective         3           Elective         Credits         15           Junior           Fall           MATH 305         Ordinary Differential Equations         4           MATH 320         Linear Algebra and Matrix Theory         4           General Ed         To redits         3           Elective         Credits         14           Spring           MATH 328         Abstract Algebra         3           MATH 355         Applied Mathematical Optimization         3	General Ed		3
Elective         Credits         15           Junior           Fall           MATH 305         Ordinary Differential Equations         4           MATH 320         Linear Algebra and Matrix Theory         4           General Ed         3           Elective         3           Elective         Credits         14           Spring           MATH 328         Abstract Algebra         3           MATH 355         Applied Mathematical Optimization         3	Elective		3
Credits         15           Junior           Fall         MATH 305         Ordinary Differential Equations         4         Equations         4         MATH 320         Linear Algebra and Matrix Theory         4         MATH 320         Credits         3         Elective         3         Credits         14         Spring           MATH 328         Abstract Algebra         3         MATH 355         Applied Mathematical Optimization         3         Optimization         ***********************************	Elective		3
Credits         15           Junior           Fall         MATH 305         Ordinary Differential Equations         4         Equations         4         MATH 320         Linear Algebra and Matrix Theory         4         MATH 320         Credits         3         Elective         3         Credits         14         Spring           MATH 328         Abstract Algebra         3         MATH 355         Applied Mathematical Optimization         3         Optimization         ***********************************	Elective		3
Junior           Fall           MATH 305         Ordinary Differential Equations         4           MATH 320         Linear Algebra and Matrix Theory         4           General Ed         3           Elective         7           Spring         Abstract Algebra         3           MATH 328         Applied Mathematical Optimization         3           MATH 355         Applied Mathematical Optimization         3		Credits	
Fall         MATH 305         Ordinary Differential Equations         4 Equations           MATH 320         Linear Algebra and Matrix Theory         4           General Ed         3         3           Elective         7         3           Spring         Abstract Algebra         3           MATH 328         Applied Mathematical Optimization         3	Junior		
MATH 305       Ordinary Differential Equations       4 Equations         MATH 320       Linear Algebra and Matrix Theory       4 Matrix Theory         General Ed       3         Elective       3         Credits       14         Spring         MATH 328       Abstract Algebra       3         MATH 355       Applied Mathematical Optimization       3			
MATH 320         Equations           General Ed         3           Elective         3           Spring         Credits         14           MATH 328         Abstract Algebra         3           MATH 355         Applied Mathematical Optimization         3		Ordinary Differential	4
Matrix Theory           General Ed         3           Elective         5           Spring         Abstract Algebra         3           MATH 328         Applied Mathematical Optimization         3			
General Ed         3           Elective         3           Spring         Credits         14           MATH 328         Abstract Algebra         3           MATH 355         Applied Mathematical Optimization         3	MATH 320	Linear Algebra and	4
Elective         3           Credits         14           Spring         Abstract Algebra         3           MATH 328         Applied Mathematical Optimization         3			
Spring         Abstract Algebra         3           MATH 328         Applied Mathematical Optimization         3	General Ed		3
Spring         Abstract Algebra         3           MATH 328         Applied Mathematical Optimization         3	Elective		3
MATH 328  MATH 355  Applied Mathematical 3 Optimization		Credits	14
MATH 328  MATH 355  Applied Mathematical 3 Optimization	Spring		
MATH 355 Applied Mathematical 3 Optimization		Abstract Algebra	3
Optimization			
General Ed 3			
	General Ed		3

Elective		3
Elective		3
	Credits	15
Senior		
Fall		
MATH 323	Analysis	4
Elective		3
	Credits	16
Spring		
MATH 385	Foundations of Geometry	3
Math Upper Level Elective		3
Elective		3
Elective		3
Elective		3
	Credits	15
	Total Credits	121

## **Statistics**

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An example: Four year plan for Mathematics Major with Statistics Emphasis

120 credits necessary to graduate.

Plan is a representation and categories of classes can be switched. Check with your advisor.

Course	Title	Credits
Freshman		
Fall		
MATH 202	Calculus and Analytic Geometry I	4
First Year Seminar		3
General Ed		3
General Ed		3
General Ed		2
	Credits	15
Spring		
MATH 203	Calculus and Analytic Geometry II	4
MATH 260	Introductory Statistics	4
General Ed		3
General Ed		3
Elective		2
	Credits	16
Sophomore		
Fall		
MATH 209	Multivariate Calculus	4
MATH 320	Linear Algebra and Matrix Theory	4
General Ed		3
General Ed		3
Spring	Credits	14
MATH 314	Proofs in Number Theory and Topology	3
General Ed		3
Elective		3
Elective		3
Elective		3
	Credits	15
Junior		
Fall		
MATH 323	Analysis	4

MATH 360	Theory of Probability (if fall even; take a 3-credit elective otherwise)	3
General Ed		3
General Ed		3
Elective		3
	Credits	16
Spring		
MATH 355	Applied Mathematical Optimization	3
MATH 361	Mathematical Statistics (if spring odd; take a 3- credit elective otherwise)	3
General Ed		3
Elective		3
Elective		3
	Credits	15
Senior		
Fall		
MATH 329	Applied Regression Analysis	4
MATH 360	Theory of Probability (if fall even and not already taken; take a 3-credit elective otherwise)	3
Elective		3
Elective		3
Elective		3
	Credits	16
Spring		
MATH 361	Mathematical Statistics (if spring odd and not already taken; take a 3- credit elective otherwise)	3
Math Upper-level Elective (MATH 430: Design of Experiments or MATH 431: Multivariate Statistical Analysis)		4
Elective		3
Elective		3
	Credits	13
	Total Credits	120