## Grand Rapids Community Collect Articulation Agreement

## **BIOLOGY MAJOR**

Bachelor of Science As of Fall 2021

Major Requirements: 57 semester hours. At least 20 semester hours of Biology must be taken at Ac least 12 science division presentations, complete 6 hours of biology-related service learning, and ta at least 2.0 must be maintained in Biology courses taken at Aquinas. Only courses with a grade of C major and only grades of C or better will count toward certification as a teacher.

Bil 152 Biologic	AQUINAS REQUIREMENTS	٦	TRANSFER EQUIVALE
BY 171 Introduction to Cells	Biology Requirements		BI 152 Biologic
BY 171 Introduction to Cells	BY 170 Introduction to Organisms	4.0	BI 153 AND BI
BY 328 Genetics		4.0	BI 151 Intro to
BY 499   Senior Seminar   3.0	BY 328 Genetics		
BY 499   Senior Seminar   3.0	BY 350 Evolution	4.0	
BY 241 Ornithology   BY 264 Plant Taxonomy   BY 275 Aquatic Field Biology   BY 352 Ecology   BY 221 Anatomy & Histology of Vertebrates   4.0		_	
BY 241 Ornithology   BY 264 Plant Taxonomy   BY 275 Aquatic Field Biology   BY 352 Ecology   BY 221 Anatomy & Histology of Vertebrates   4.0	6 semester hours of Field Biology from the following		
BY 275   Aquatic Field Biology   3.0   BI 215		3.0	
BY 275   Aquatic Field Biology   3.0   BI 215	BY 264 Plant Taxonomy	3.0	
Biology Electives (10 semester hours, may include field courses in excess of the 6 required I BY 221 Anatomy & Histology of Vertebrates		3.0	
BY 221 Anatomy & Histology of Vertebrates   4.0		_	BI 215
BY 221 Anatomy & Histology of Vertebrates   4.0	Biology Electives (10 semester hours, may include field	l courses in exc	ess of the 6 required
BY 231 Microbiology			•
BY 324   Neuroscience		_	BI 127
BY 326 Cell Biology		_	
BY 341   Parasitology   2.0		_	
BY 361   Immunology		_	
BY 372 Physiology   4.0		_	
BY 375 Advanced Human Genetics		_	
CS 152 Spreadsheets  Chemistry Requirements  CY 111 General Inorganic Chemistry 4.0 CHM 130 & 13 CY 112 General Inorganic Chemistry 4.0 CHM 260 & 26 CY 211 General Organic Chemistry 4.0 CHM 260 & 26 CY 212 General Organic Chemistry 4.0 CHM 270 & 27  Mathematics Requirement  MS 114 College Algebra & Trigonometry or a higher level course  Recommended Courses  CY 325 Biochemistry 4.0 MS 121 Calculus with Analytical Geom. MS 252 Statistics 3.0 MA 215 PC 201 Mechanics, Sound and Heat Or PC 213 Mechanics, Sound, Heat w/calc  PH 245		_	
CS 152 Spreadsheets  Chemistry Requirements  CY 111 General Inorganic Chemistry 4.0 CHM 130 & 13 CY 112 General Inorganic Chemistry 4.0 CHM 260 & 26 CY 211 General Organic Chemistry 4.0 CHM 260 & 26 CY 212 General Organic Chemistry 4.0 CHM 270 & 27  Mathematics Requirement  MS 114 College Algebra & Trigonometry or a higher level course  Recommended Courses  CY 325 Biochemistry 4.0 MS 121 Calculus with Analytical Geom. MS 252 Statistics 3.0 MA 215 PC 201 Mechanics, Sound and Heat Or PC 213 Mechanics, Sound, Heat w/calc  PH 245	Computer Science Requirement		
CY 111 General Inorganic Chemistry  CY 112 General Inorganic Chemistry  CY 211 General Organic Chemistry  CY 211 General Organic Chemistry  4.0 CHM 140 & 14  CY 211 General Organic Chemistry  4.0 CHM 260 & 26  CY 212 General Organic Chemistry  Mathematics Requirement  MS 114 College Algebra & Trigonometry  or a higher level course  Recommended Courses  CY 325 Biochemistry  MS 121 Calculus with Analytical Geom.  MS 252 Statistics  MS 252 Statistics  PC 201 Mechanics, Sound and Heat  PC 202 Electricity, Magnetism & Light  or  PC 213 Mechanics, Sound, Heat w/calc  4.0 CHM 130 & 14  MA 131 Precal  A.0  MA 135  PH 125  PC 207 PH 126		1.0	CIS 156
CY 111 General Inorganic Chemistry  CY 112 General Inorganic Chemistry  CY 211 General Organic Chemistry  CY 211 General Organic Chemistry  4.0 CHM 140 & 14  CY 211 General Organic Chemistry  4.0 CHM 260 & 26  CY 212 General Organic Chemistry  Mathematics Requirement  MS 114 College Algebra & Trigonometry  or a higher level course  Recommended Courses  CY 325 Biochemistry  MS 121 Calculus with Analytical Geom.  MS 252 Statistics  MS 252 Statistics  PC 201 Mechanics, Sound and Heat  PC 202 Electricity, Magnetism & Light  or  PC 213 Mechanics, Sound, Heat w/calc  4.0 CHM 130 & 14  MA 131 Precal  A.0  MA 135  PH 125  PC 207 PH 126	Chemistry Requirements		
CY 112 General Inorganic Chemistry  CY 211 General Organic Chemistry  4.0 CHM 140 & 14  CY 211 General Organic Chemistry  4.0 CHM 260 & 26  CY 212 General Organic Chemistry  4.0 CHM 270 & 27   Mathematics Requirement  MS 114 College Algebra & Trigonometry or a higher level course  Recommended Courses  CY 325 Biochemistry  MS 121 Calculus with Analytical Geom. MS 252 Statistics 3.0 MA 215  PC 201 Mechanics, Sound and Heat PC 202 Electricity, Magnetism & Light or PC 213 Mechanics, Sound, Heat w/calc  4.0 PH 126  PH 245		4.0	CHM 130 & 13
CY 211 General Organic Chemistry 4.0 CHM 260 & 26 CY 212 General Organic Chemistry 4.0 CHM 270 & 27   Mathematics Requirement  MS 114 College Algebra & Trigonometry or a higher level course  Recommended Courses  CY 325 Biochemistry 4.0  MS 121 Calculus with Analytical Geom. 4.0  MS 252 Statistics 3.0  MS 252 Statistics 3.0  MA 215  PC 201 Mechanics, Sound and Heat 4.0  PC 202 Electricity, Magnetism & Light or PC 213 Mechanics, Sound, Heat w/calc 4.0  PH 245		_	
Mathematics Requirement  MS 114 College Algebra & Trigonometry or a higher level course  Recommended Courses  CY 325 Biochemistry  MS 121 Calculus with Analytical Geom.  MS 252 Statistics  PC 201 Mechanics, Sound and Heat OR PC 202 Electricity, Magnetism & Light Or PC 213 Mechanics, Sound, Heat w/calc  MA 131 Precal  4.0  MA 131 Precal  4.0  MA 133  MA 215  PH 125  PH 126  PH 126		_	
MS 114 College Algebra & Trigonometry or a higher level course  Recommended Courses  CY 325 Biochemistry  MS 121 Calculus with Analytical Geom.  MS 252 Statistics  PC 201 Mechanics, Sound and Heat  PC 202 Electricity, Magnetism & Light or  PC 213 Mechanics, Sound, Heat w/calc  4.0  MA 131 Precal  4.0  MA 132  MA 215  PH 125  PH 126  Or  PH 245		_	
MS 114 College Algebra & Trigonometry or a higher level course  Recommended Courses  CY 325 Biochemistry  MS 121 Calculus with Analytical Geom.  MS 252 Statistics  PC 201 Mechanics, Sound and Heat  PC 202 Electricity, Magnetism & Light or  PC 213 Mechanics, Sound, Heat w/calc  4.0  MA 131 Precal  4.0  MA 132  MA 215  PH 125  PH 126  Or  PH 245	Mathematics Requirement		
or a higher level course  Recommended Courses  CY 325 Biochemistry 4.0  MS 121 Calculus with Analytical Geom. 4.0 MA133  MS 252 Statistics 3.0 MA 215  PC 201 Mechanics, Sound and Heat 4.0 PH 125  PC 202 Electricity, Magnetism & Light or  PC 213 Mechanics, Sound, Heat w/calc 4.0 PH 245		4.0	MA 131 Precal
CY 325 Biochemistry       4.0         MS 121 Calculus with Analytical Geom.       4.0       MA133         MS 252 Statistics       3.0       MA 215         PC 201 Mechanics, Sound and Heat       4.0       PH 125         PC 202 Electricity, Magnetism & Light or       4.0       PH 126         PC 213 Mechanics, Sound, Heat w/calc       4.0       PH 245		_	
MS 121 Calculus with Analytical Geom.  MS 252 Statistics 3.0  PC 201 Mechanics, Sound and Heat 4.0  PH 125  PC 202 Electricity, Magnetism & Light or  PC 213 Mechanics, Sound, Heat w/calc  4.0  PH 245	Recommended Courses		
MS 252 Statistics       3.0       MA 215         PC 201 Mechanics, Sound and Heat       4.0       PH 125         PC 202 Electricity, Magnetism & Light or       4.0       PH 126         PC 213 Mechanics, Sound, Heat w/calc       4.0       PH 245	CY 325 Biochemistry	4.0	
MS 252 Statistics       3.0       MA 215         PC 201 Mechanics, Sound and Heat       4.0       PH 125         PC 202 Electricity, Magnetism & Light or       4.0       PH 126         PC 213 Mechanics, Sound, Heat w/calc       4.0       PH 245		4.0	MA133
PC 201 Mechanics, Sound and Heat 4.0 PH 125 PC 202 Electricity, Magnetism & Light 4.0 PH 126 or PC 213 Mechanics, Sound, Heat w/calc 4.0 PH 245	·	3.0	
PC 202 Electricity, Magnetism & Light 4.0 PH 126 or PC 213 Mechanics, Sound, Heat w/calc 4.0 PH 245	PC 201 Mechanics, Sound and Heat	_	
PC 213 Mechanics, Sound, Heat w/calc 4.0 PH 245	PC 202 Electricity, Magnetism & Light	_	
		4.0	PH 245
		_	

Please Note: Aquinas College reserves the right to change, modify or amend the above-stated requinate in its sole discretion and without prior notice.

## ge - Aquinas College

quinas. All majors must attend at ke the Major Field Test. A GPA of 2- or better will count toward the
INTS  al Diversity OR  154 Plant/Animal Biology  Cells, Molecules, Genes
Conoral Ecology
General Ecology
hours)
Microbiology
Microsoft Excel
1 (combined) Gen Chem 1 & Lab
1 (combined) Gen Chem 2 & Lab
1 (combined) Organic Chem 1 & Lab 1 (combined) Organic Chem 2 & Lab
, , ,
culus
Calculus with Analytic Geometry 1
Statistics College Physics 1
College Physics 1 College Physics 2
Calculus Physics 1 Calculus Physics 2

