

ARTICULATION AGREEMENT

between

Washtenaw Community College

SCIENCE

and

Concordia University

PHYSICAL SCIENCE (Minor)

Transfer Guide

PHYSICAL SCIENCE MINOR-All Programs					
CONCORDIA UNIVERSITY			WASHTENAW COMMUNITY COLLEGE		
COURSE#	TITLE	CRS	COURSE#	TITLE	CRS
CHE205 OR CHE321	Chemistry of Living Systems Organic Chemistry I	4 4	CEM140 OR CEM211	Organic Biochemistry Organic Chemistry I	4 4
CHE211	Chemistry I	4	CEM111	General Chemistry I	4
CHE212	Chemistry II	4	CEM122	General Chemistry II	4
ESC201	Physical Geology	3	GLG100 OR GLG103 OR GLG104 OR GLG109 OR GLG110 OR GLG114	Introduction to Earth Science Field Geology Weather Common Rocks Geology of the National Parks & Monuments Physical Geology	4 3 3 3 2 4
PHY211	Physics I	4	PHY111	General Physics I	4
PHY212	Physics II	4	PHY122	General Physics II	4

Concordia University

Physical Science Minor

—Liberal Arts, Pre-Law, Pre-Seminary Programs

Required Courses		23 credits
CHE211	Chemistry I	4
CHE212	Chemistry II	4
PHY211	Physics I	4
PHY212	Physics II	4
Select one of the following courses.		
CHE205	Chemistry of Living Systems	4
CHE321	Organic Chemistry I	4
Select one of the following courses.		
ESC201	Physical Geology	3
ESC310	Meteorology	3

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INTEGRATED SCIENCE

Transfer Guide

INTEGRATED SCIENCE MAJOR-All Programs					
CONCORDIA UNIVERSITY			WASHTENAW COMMUNITY COLLEGE		
COURSE#	TITLE	CRS	COURSE#	TITLE	CRS
BIO201	General Biology	4	BIO101	Concepts of Biology	4
BIO332	Human Anatomy & Physiology I	4	BIO111	Anatomy & Physiology-Normal Structure & Function	5
CHE211	Chemistry I	4	CEM111	General Chemistry I	4
CHE205 OR CHE212	Chemistry of Living Systems	4	CEM140 OR CEM122	Organic Biochemistry I	4
ESC201	Chemistry II	4	CEM122	General Chemistry II	4
	Physical Geology	3	GLG100	Introduction to Earth Science	4
			OR GLG103	Field Geology	3
			OR GLG104	Weather	3
			OR GLG109	Common Rocks	3
			OR GLG110	Geology of the National Parks & Monuments	2
			OR GLG114	Physical Geology	4
ESC211	Principles of Physical Geology	3	GEO101	World Regional Geography	3
PHY211	Physics I	4	PHY111	General Physics I	4
PHY212	Physics II	4	PHY122	General Physics II	4

INTEGRATED SCIENCE MINOR-All Programs					
CONCORDIA UNIVERSITY			WASHTENAW COMMUNITY COLLEGE		
COURSE#	TITLE	CRS	COURSE#	TITLE	CRS
BIO201	General Biology	4	BIO101	Concepts of Biology	4
BIO332	Human Anatomy & Physiology I	4	BIO111	Anatomy & Physiology-Normal Structure & Function	5
CHE211	Chemistry I	4	CEM111	General Chemistry I	4
ESC211	Principles of Physical Geology	3	GEO101	World Regional Geography	3
PHY211	Physics I	4	PHY111	General Physics I	4
PHY212	Physics II	4	PHY122	General Physics II	4

Concordia University

Integrated Science

Science is a dynamic process which strives to reach the “best” answer to questions concerned with the world around us; that is, science as a way of knowing. In the sciences we explore the created handiworks of God and our human relationships to them. The following programs provide opportunities for broad experiences, specifically incorporating biology, chemistry, physics, and earth science.

Integrated Science Major**41*-42 credits***—Elementary Education, Liberal Arts, Pre-Law, Pre-Seminary Programs*

Required Courses		41*-42 credits
BIO201*	General Biology (or 2 years high school biology*)	4*
BIO332	Human Anatomy & Physiology I	4
BIO342	General Ecology	3
BIO344	Evolution (w)	3
CHE211	Chemistry I	4
ESC201	Physical Geology	3
ESC211	Principles of Physical Geography	3
ESC310	Meteorology	3
PHY211	Physics I	4
PHY212	Physics II	4
HER383	History of Science (w)	3
<i>Select one of the following courses.</i>		
CHE205	Chemistry of Living Systems	4
CHE212	Chemistry II	4
*Students with sufficient grades in two years of high school biology may be exempted from BIO201. A Science Placement Prerequisite Report must be completed. Only 3 of the 4 credits need to be made up with one of the BIO courses listed below. These students need only 41 credits to complete the major.		
BIO211	Botany: Flowering Plants	3
BIO221	Zoology: Vertebrates	3
BIO321	Zoology: Invertebrates	3

Integrated Science Minor**28*-29 credits***—Elementary Education, Liberal Arts, Pre-Law, Pre-Seminary Programs*

Required Courses		28*-29 credits
BIO201*	General Biology (or 2 years high school biology*)	4*
BIO332	Human Anatomy & Physiology I	4
BIO342	General Ecology	3
BIO344	Evolution (w)	3
CHE211	Chemistry I	4
ESC211	Principles of Physical Geography	3
PHY211	Physics I	4
PHY212	Physics II	4
*Students with sufficient grades in two years of high school biology may be exempted from BIO201. A Science Placement Prerequisite Report must be completed. Only 3 of the 4 credits need to be made up with one of the BIO courses listed below. These students need only 28 credits to complete the minor.		
BIO211	Botany: Flowering Plants	3
BIO221	Zoology: Vertebrates	3
BIO321	Zoology: Invertebrates	3

ARTICULATION AGREEMENT

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Washtenaw Community College

MATHEMATICS

and

Concordia University

MATHEMATICS

Transfer Guide

MATHEMATICS MAJOR-Liberal Arts, Pre-Law, Pre-Seminary Programs					
CONCORDIA UNIVERSITY			WASHTENAW COMMUNITY COLLEGE		
COURSE#	TITLE	CRS	COURSE#	TITLE	CRS
CSC351	Computer Science I	3	CPS171	Introduction to Programming with C++	4
MAT221	Calculus I & Analytic Geometry	4	MTH191	Calculus I	5
MAT222	Calculus II & Analytic Geometry	4	MTH192	Calculus II	4
MAT231	Linear Algebra	3	MTH197	Linear Algebra	4
MAT323	Calculus III & Analytic Geometry	4	MTH293	Calculus III	4
MAT341	Differential Equations	3	MTH295	Differential Equations	4

MATHEMATICS MINOR-All Programs					
CONCORDIA UNIVERSITY			WASHTENAW COMMUNITY COLLEGE		
COURSE#	TITLE	CRS	COURSE#	TITLE	CRS
CSC351	Computer Science I	3	CPS171	Introduction to Programming with C++	4
MAT221	Calculus I & Analytic Geometry	4	MTH191	Calculus I	5
MAT222	Calculus II & Analytic Geometry	4	MTH192	Calculus II	4
MAT231	Linear Algebra	3	MTH197	Linear Algebra	4
MAT261	Elementary Statistics	3	MTH160	Basic Statistics	4
MAT323 OR	Calculus III & Analytic Geometry	4	MTH293 OR	Calculus III	4
MAT341	Differential Equations	3	MTH295	Differential Equations	4

Concordia University

Mathematics

Mathematics is an aspect of our everyday lives and an important part of our culture. Applications of mathematics are found in many disciplines today, including the physical sciences, biological sciences, business, economics, computer science and psychology. Concordia students may select one of two mathematics majors and a mathematics minor based on their career goals.

Mathematics Major

—Liberal Arts, Pre-Law, Pre-Seminary, Secondary Education Programs

Required Courses		33 credits
CSC351	Computer Science I	3
MAT221	Calculus I & Analytical Geometry	4
MAT222	Calculus II & Analytic Geometry	4
MAT231	Linear Algebra	3

MAT323	Calculus III & Analytic Geometry	4
MAT351	Modern Algebra	3
MAT371	Modern Geometry	3
MAT461	Probability & Statistics	3

Select from the following courses to obtain 33 credits.*

MAT311	Quantitative Methods in Decision Making	3
MAT341	Differential Equations	3

**Other 300+ level math courses, including a history of mathematics course, taken at CUAA or other institutions may be substituted for these courses. An approved Petition for Substitution is required.*

Mathematics Minor

23 credits

—Elementary Education, Liberal Arts, Pre-Law, Pre-Seminary, Secondary Education Programs

Required Courses		23 credits
CSC351	Computer Science I	3
MAT221	Calculus I & Analytic Geometry	4
MAT222	Calculus II & Analytic Geometry	4
MAT231	Linear Algebra	3
MAT261	Elementary Statistics	3
MAT351	Modern Algebra	3

Select one of the following courses to obtain a minimum of 23 credits.*

MAT311	Quantitative Methods in Decision Making	3
MAT323	Calculus III & Analytic Geometry	4
MAT341	Differential Equations	3
MAT371	Modern Geometry	3
MAT461	Probability & Statistics	3

**Other 300+ level math courses, including a history of mathematics course, taken at CUAA or other institutions may be substituted for these courses. An approved Petition for Substitution is required.*