ARTICULATION AGREEMENT
BETWEEN SUNY CORTLAND
MATHEMATICS, BS DEGREE
AND
SUNY BROOME COMMUNITY COLLEGE
MATHEMATICS, AS DEGREE

I. **General State of Purpose:**

This document establishes a formal transfer agreement between SUNY Broome, Mathematics, AS Degree, Program and SUNY Cortland's Mathematics, BS Degree Program.

II. **Objectives:**

A. To create a seamless transfer process for students from SUNY Broome to SUNY Cortland;

B. To attract highly qualified students to both colleges.

III. **Eligibility/Admission Requirements:**

A. SUNY Broome students must complete an associate's degree in mathematics before entrance into the SUNY Cortland mathematics program;

B. SUNY Broome students must meet the academic requirements for admission to SUNY Cortland, including specific course work as outlined in this proposal;

C. SUNY Broome students must complete the SUNY Cortland application process.

IV. **Benefits/Advantages:**

A. Junior status for degree and financial aid purposes;

B. Waiver of the Cortland General Education requirements (not SUNY GE requirements);

C. Guidelines for completion of program at SUNY Cortland and direct contact for advisement to promote an easier transition for qualified students.

V. Terms of Agreement

A. Admission requirement: A minimum overall grade point average of 2.5 is required for admission. It must be noted, however, that program admissions standards may be significantly higher;

B. The maximum number of credits completed at SUNY Broome that can be applied toward the Cortland degree is 64;

C. SUNY Broome students must provide a final transcript with their degree designated;

D. This articulation agreement will be monitored on an annual basis by contact between department chairpersons;

E. Each institution will be responsible for making this agreement viable and workable for interested students;

F. Each institution may engage in publication and marketing of this agreement;

G. SUNY Cortland and SUNY Broome agree that future changes in the SUNY Cortland mathematics program will create necessary commensurate changes in this agreement.

H. Half of the credits in the major and a minimum of 30 hours of course work must be completed in residency at SUNY Cortland.

I. The SUNY Broome transfer student will complete at least 4 semesters of course work at SUNY Cortland.

VI. Effective Date, Duration, Revisions

A. The duration of this agreement is for three years beginning November 1, 2023 through November 1, 2026 with a re-evaluation each year before November 1st of each year.

B. Minor changes to the programs will be carried out by the department chairs designated as contact persons or their successors. Major changes, that is, changes to the conditions for the agreement will be communicated to all parties, and the agreement will be amended to reflect these changes.

Articulation Agreement
SUNY Broome /SUNY Cortland
A.S. Mathematics/B.S. Mathematics

Approved as to form
BY CDS
BROOME COUNTY
ATTORNEY'S OFFICE

SIGNATURES:

SUNY CORTLAND

Dr. Erik J. Bitterbaum
President
SUNY Cortland

Signature 11/8/23 Date

Dr. Ann McClellan
Provost & Vice President for Academic Affairs
SUNY Cortland

Signature 11/7/23 Date

Dr. Bruce Mattingly
Dean, School of Arts and Sciences
SUNY Cortland

Signature 11/1/23 Date

Dr. David Dickerson
Chair, Mathematics Department
SUNY Cortland

Signature Oct 27, 2023 Date

TRANSFER COLLEGE

Dr. Tony D. Hawkins
President
SUNY Broome Community College

Signature 12/20/23 Date

Dr. Penny A. Kelly
Vice President for Academic Affairs
SUNY Broome Community College

Signature 12/20/23 Date

Dr. Christine Martey-Ochola
Interim Dean of STEM
SUNY Broome Community College

Signature 12/19/2023 Date

Timmy G. Bremer
Chair, Mathematics Department
SUNY Broome Community College

Signature 18 Dec 2023 Date

SUNY TRANSFER COURSE EQUIVALENCY TABLE

SUNY Broome Community College A.S. Mathematics						SUNY Cortland B.S. Mathematics				
Course #	**Course Title**	**SUNY GER**	**Major**	**Credits Granted**		**Course #**	**Equivalent Course Title**	**SUNY GER**	**Major**	**Credits Accepted**
MAT 181	Calculus I	M	Major	4		MAT 135	Calculus I	M		4
MAT 182	Calculus II	M	Major	4		MAT 236	Calculus II	M		4
MAT 281	Calculus III		Major	4		MAT 237	Calculus III			4
MAT 264	Linear Algebra		Major	4		MAT 272	Linear Algebra			4
MAT 282	Differential Equations with Linear Algebra		Major	4		MAT 336	Differential Equations			4
MAT 260	Applied Probability and Statistics		Major	4		MAT 201	Statistical Methods			3
MAT 250	Discrete Mathematics		Major	4		MAT 2xx	MAT elective			4
ENG 110	College Writing I	COM		3		CPN 100	Writing Studies I	W		3
ENG 220	Communicating About Values	HUM/Cr TH		3		ENG 2xx	English elective	HUM		3
		Credits this section:		34				Credits this section:		33
Choose one pair:						Choose one pair:				
CHM 145	General Chemistry I with Lab	NS		4		CHE 227 and 277	General Chemistry I Lecture and Lab	SC		4
CHM 146	General Chemistry II with Lab	NS		4		CHE 228 and 278	General Chemistry II Lecture and Lab	SC		4
OR						OR				
PHY 181	Physics for Engineers and Scientists I: Mechanics and Thermodynamics (with Lab)	NS		4		PHY 201	Principles of Physics I	SC		4
PHY 182	Physics for Engineers and Scientists II: Sound, Light, Electricity and Magnetism (with Lab)	NS		4		PHY 202	Principles of Physics II	SC		4
		Credits this section:		8				Credits this section:		8
Choose one course:						Choose one course:				
MUS 104	Fundamentals of Music	ARTS		3		MUS 111	Fundamentals of Music	ART		3
ART 105	Introduction to Two-Dimensional Design	ARTS		3		ATS 102	Design I	ART		3
ART 106	Introduction to Three-Dimensional Design	ARTS		3		ATS 106	Sculpture I	ART		3
ART 110	Modern Art	ARTS		3		ATS 357	Modern Art	ART		3
		Credits this section:		3				Credits this section:		3
Choose one course:						Choose one course:				
HIS 130	United States History I	DEI		3		HIS 200	United States History I	US		3
HIS 131	United States History II	DEI		3		HIS 201	United States History II	US		3
HIS 187	The United States Civil War Causes and Effects	DEI		3		HIS 1xx	History Elective	US		3
		Credits this section:		3				Credits this section:		3
Choose one pair:						Choose one pair:				

ASL 120	American Sign Language I	WL		3		ASL 101	Beginning American Sign Language I	WL		3
ASL 220	American Sign Language II	WL		3		ASL 102	Beginning American Sign Language II	WL		3
OR						OR				
SPA 101	Beginning Spanish I	WL		4		SPA 101	Beginning Spanish I	WL		3
SPA 102	Beginning Spanish II	WL		4		SPA 102	Beginning Spanish II	WL		3
		Credits this section:		6-8				Credits this section:		6
Choose one course:						Choose one course:				
PED 103	Backpacking			1		REC 102	Backpacking			1
PED 110	Basic Ice Skating			1		PED 137	Skating			0.5
PED 141	Yoga			1		PED 246	Introductory Yoga			1
PED 150	Personal Nutrition			1		HLH 1xx	Health elective			1
		Credits this section:		1				Credits this section:		1
	General Education Electives			9			General Education Electives			9
		Total Credits		64-66				**Total Credits Transferred**		63
								Remaining Credits Needed for Graduation after Transfer		57

2023

SUNY Cortland
General Education and Degree Requirements for the B.S. Mathematics

Transfer Coursework from Broome Community College A.S. Math

General Education and Degree Requirements

SUNY Cortland Course	Credit Hours	Transfer College Course	Credit Hours
Communication: CPN 100 Writing Studies I AND CPN 101 Writing Studies II	 3 3	ENG 110 College Writing I	3
Presentation Skills	3		
Diversity: Equity, Inclusion and Social Justice	3	HIS 130 United States History I OR HIS 131 United States History II OR HIS 187 The United States Civil War Causes and Effects	3
Mathematics (and Quantitative Reasoning)	3	MAT 181 Calculus I MAT 182 Calculus II	4
Natural Sciences (and Scientific Reasoning)	4	PHY 181 / PHY 182 (Physics for Engineers and Scientists I: Mechanics and Thermodynamics / Physics for Engineers and Scientists II: Sound, Light, Electricity and Magnetism) OR CHM 145 / CHM 146 (General Chemistry I / General Chemistry II)	4
Humanities	3	ENG 220 Communicating About Values	3
Social Sciences	3		
The Arts	3	ART 105 Introduction to Two-Dimensional Design OR ART 106 Introduction to Three-Dimensional Design OR ART 110 Modern Art OR MUS 104 Fundamentals of Music	3
US History and Civic Engagement	3		
World History and Global Awareness	3		
World Language	3	ASL 120 / ASL 220 (American Sign Language I / American Sign Language II) OR SPA 101 / SPA 102 (Beginning Spanish I / Beginning Spanish II)	3
Science, Technology, Values & Society	3	Waived for Transfer Students with 20+ transfer credits	------
		Broome requires 3 additional Gen Ed electives that could fill other categories.	9
AS or AA degree - GE requirements complete	**30**		32
Writing Intensive course	3	No equivalent allowed- one course to be	------

		completed through degree requirements in MAT major	
Writing Intensive course	3	No equivalent allowed	
	56-65		
		Credits to complete at Cortland	6

Mathematics Core Courses

SUNY Cortland Course	Credit Hours	Transfer College Course	Credit Hours
MAT 135 Calculus I	4	MAT 181 Calculus I	4
MAT 224 Mathematical Reasoning and Proof	3		
MAT 236 Calculus II	4	MAT 182 Calculus II	4
MAT 237 Calculus III	4	MAT 281 Calculus III	4
MAT 272 Linear Algebra	3	MAT 264 Linear Algebra	4
MAT 370 Algebraic Structures I	3		
MAT 420 Real Analysis I	3		
MCS/PHY 186 Introductory Programming	3		
Additional MAT electives for BS (15 credits): Excludes MAT 101, 102, 105, 105, 111, 115, 201 or 499			
MAT elective 1	3	MAT 250 Discrete Mathematics	4
MAT elective 2	3	MAT 282 Differential Equations with Linear Algebra	4
MAT elective 3 (300 level or above)	3		
MAT elective 4 (300 level or above)	3		
MAT elective 5 (300 level or above)	3		
	42		24
		Credits to complete at Cortland	18

Additional B.S. Requirements – Physical Science

SUNY Cortland Course	Credit Hours	Transfer College Course	Credit Hours
Choose 7-8 credits (at least one course from Category A)	7-11		
Category A:			
CHE 277 General Chemistry I Lab (1 cr)		CHM 145 General Chemistry I and Lab	4
CHE 278 General Chemistry II Lab (1 cr)		CHM 146 General Chemistry II and Lab	4
GLY 261 Physical Geology (4 cr)			
GLY 262 Historical Geology (4 cr)			
PHY 151 Introductory Astronomy Lab (1 cr)			
PHY 155 Introductory Astronomy with Lab (4 cr.)		PHY 181 Physics for Engineers and	4
PHY 201 Principles of Physics I (4 cr)		Scientists I: Mechanics and	
PHY 202 Principles of Physics II (4 cr)		Thermodynamics	4
Category B:		PHY 182 Physics for Engineers and	
CHE 227 General Chemistry I Lecture (3 cr.)		Scientists II: Sound, Light, Electricity and	
CHE 228 General Chemistry II Lecture (3 cr.)		Magnetism	
PHY 150 Introductory Astronomy (3 cr.)			
	7-11		8
		Credits to complete at Cortland	0

Electives

SUNY Cortland Course	Credit Hours	Transfer College Course	Credit Hours

MAT 201 Statistical Methods	3	MAT 260 Applied Probability and Statistics	4
REC 102 Backpacking PED 137 Skating PED 246 Introductory Yoga HLH 1XX elective	1	PED 103 Backpacking or PED 110 Basic Ice Skating or PED 141 Yoga or PED 150 Personal Nutrition	1
		Total Transfer Elective Credits	5
Credits Required for Graduation	**120**	**Total Transfer Credits**	63
		Total Credits to complete at Cortland (requirements plus electives)	57