



CONNECT Math Transfer Agreement

March 10, 2011

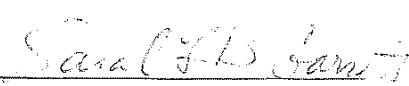
The Chief Academic Officers of the CONNECT institutions--Bridgewater State University, Bristol Community College, Cape Cod Community College, Massasoit Community College, Massachusetts Maritime Academy, and the University of Massachusetts Dartmouth--hereby enter into the following agreement:


Objective: The objective of this agreement is to promote and facilitate the transfer of college-level Mathematics courses among CONNECT institutions and provide transfer students a foundation for success.


Process: Members of the CONNECT Mathematics Partnership, in conjunction with Mathematics faculty at CONNECT institutions, have developed a list of topics which form a core of essential skills for students in various college-level Mathematics courses (see attached appendices). The process of developing these lists of essential topics included coordination and cooperation among Mathematics faculty and Mathematics departments from the above-mentioned CONNECT institutions. Mathematics faculty members came to consensus regarding the essential skills and equivalency of these courses. Given the implementation of MassTransfer, this agreement indicates that the courses described provide students with the knowledge and skills enabling success upon transfer, and establishes equivalency of the listed courses (<http://www.mass.edu/masstransfer/>).


Agreement: The six participating CONNECT institutions agree to accept any Mathematics course listed in the attached appendices from any of the other participating institutions as equivalent to their own correspondingly listed course. Individual Mathematics departments working with their CONNECT Mathematics representatives will communicate actual course equivalencies to transfer coordinators.

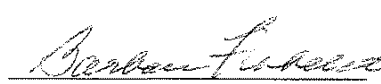
Maintenance and Review: All participating institutions agree to maintain current listings of course equivalencies. Any substantive changes to any of these courses will be brought to the attention of the CONNECT Mathematics representatives and/or the individual CONNECT Mathematics departments to determine if the revisions impact the list of course equivalencies. The Chief Academic Officers hereby direct the CONNECT transfer advisory group, every two or three years, to prompt Mathematics departments to perform a review of the course equivalencies, to be done in a timely fashion. Revisions of the essential topics charts may be made with agreement of the Mathematics departments of all participating institutions.



Sarah L.D. Garrett
Bristol Community College


Howard London
Bridgewater State University


Susan Miller
Cape Cod Community College


Brad Lima
Massachusetts Maritime Academy


Barbara Finkelstein
Massasoit Community College


Anthony Garro
University of Massachusetts
Dartmouth

Appendix 1: Introductory Statistics Courses

ESSENTIAL TOPICS FOR STATISTICS (With Respect to Transferability)
I. Topics in Descriptive Statistics
Types of Data
Measures of Center
Measures of Variability
Graphs
Frequency Tables
Sampling/Designing Studies
II. Topics in Probability
Theoretical
Formal Rules
Empirical – Contingency Tables
Probability Distributions – Discrete and Continuous
III. Inferential Statistics
Confidence Intervals
One sample Hypothesis Tests
Regression/Correlation

As of implementation date, the current course equivalencies are:

STATISTICS TRANSFER EQUIVALENCES			
School	Course Number	Course Name	Credit Hours
Bridgewater State University	MATH 110	Elementary Statistics	3
Bristol Community College	MTH 119	Fundamental Statistics	3
Cape Cod Community College	MAT 150	Elementary Statistics	3
Massachusetts Maritime Academy	SM 2218	Statistics	3
Massasoit Community College	MATH 131	Intro to Statistics	3
University of Massachusetts Dartmouth	MTH 104	Fundamentals of Statistics	3

Appendix 2: Mathematics Courses for Elementary Teachers

After careful consideration of the most recent recommendations from the MA Department of Education in the *Guidelines for the Preparation of Elementary Teachers* (<http://www.doe.mass.edu/mtel/mathguidance.pdf>), members of the CONNECT Mathematics group offer this proposal as a set of essential topics for the transfer among CONNECT institutions. These topics should be taught with pedagogy that is meaningful for elementary educators while maintaining the rigor necessary for a college level mathematics course.

ESSENTIAL TOPICS FOR MATH FOR ELEMENTARY TEACHERS (With Respect to Transferability)	
Essential Topics for a Course in Number and Operations	<ul style="list-style-type: none"> • Whole Numbers and Their Operations • Non-decimal Positional Number Systems • Rounding and Estimation • Divisibility and Prime Factorization of Natural Numbers • Integers and Their Operations • Rational Numbers and Their Operations • Ratio and Proportion • Percentage and Rates • Number Theory
Essential Topics for a Course in Geometry, Measurement, Probability, and Statistics	<ul style="list-style-type: none"> • Measurement Systems (US & Metric) • Figures, Polygons, and Curves • Three-dimensional Figures • Length • Perimeter • Area • Volume and Capacity • Surface Area • Pythagorean Theorem with Applications • Symmetries and Geometric Transformations • Organizing, Representing, and Interpreting Data • Recognizing Misuse of Statistics • Measures of Central Tendency • Counting Techniques • Experimental Probability
Essential Topics for a Course in Functions and Algebra	<ul style="list-style-type: none"> • Patterns • Concept of Variable • Algebraic Expressions • Concept of Functions • Linear Equations • Graphing Linear Functions • Solving Algebraic Equations

MATH FOR ELEMENTARY TEACHERS TRANSFER EQUIVALENCES NUMBER & OPERATIONS			
School	Course Number	Course Name	Credit Hours
Bridgewater State University	MATH 112	Math for Elementary Teachers I	3
Bristol Community College	MTH 127	Math for Elementary School Teachers I	3
Massasoit Community College	MATH 127	Math for Elementary Teachers I	3

MATH FOR ELEMENTARY TEACHERS TRANSFER EQUIVALENCES GEOMETRY & MEASUREMENT, PROBABILITY & STATISTICS			
School	Course Number	Course Name	Credit Hours
Bridgewater State University	MATH 113	Math for Elementary Teachers II	3
Bristol Community College	MTH 128	Math for Elementary School Teachers II	3
Massasoit Community College	MATH 128	Math for Elementary Teachers II	3

Note: Bridgewater State University is the only CONNECT school which offers a mathematics course for elementary teachers in Functions and Algebra, currently.

Appendix 3: Finite Mathematics

ESSENTIAL TOPICS FOR FINITE MATHEMATICS (With Respect to Transferability)	
1.	Linear Equations
2.	Systems of Linear Equations
3.	Linear Functions and Their Graphs
4.	Applications of Linear Equations and Functions
	a) Market Equilibrium
	b) Break – Even Analysis
	c) Linear Regression and Correlation
5.	Linear Inequalities and Linear Programming
6.	Mathematics of Finance
	a) Simple Interest and Discounts
	b) Compound Interest
	c) Annuities
7.	Use of Technology with a variety of non-linear functions to model selected applications
8.	Probability
	a) Sets and Counting Techniques
	b) Basic Probability
	c) Conditional Probability and Independence
9.	Statistics
	a) Measures of Central Tendency
	b) Measures of Variation
	c) Normal Distribution

As of implementation date, the current course equivalencies are:

FINITE MATHEMATICS TRANSFER EQUIVALENCES			
School	Course Number	Course Name	Credit Hours
Cape Cod Community College	MAT 165	Finite Mathematics	3
University of Massachusetts Dartmouth	MTH 103	Finite Mathematics	3

Bristol Community College offers a Finite Mathematics course which serves a slightly different purpose, and as such, does not include all of the Essential Topics for Finite Mathematics. In addition to taking Finite Mathematics, students who transfer into a Business Major at Bristol Community College also take a Statistics course. These two courses, together, include the entire list of the Essential Topics for both Statistics and Finite Mathematics. Subject to the ability of a receiving institution to accept two courses from a sending institution as two of their own courses, the following pairs of courses are equivalent, with respect to transferability.

COMBINED FINITE MATHEMATICS AND STATISTICS TRANSFER EQUIVALENCES			
School	Course Number	Course Name	Credit Hours
Bristol Community College	MTH 131 <u>and</u> MTH 251, or MTH 119	Elements of College Mathematics <u>and</u> Fundamental Business Statistics, or Fundamental Statistics	Total of 6
Cape Cod Community College	MAT 165 <u>and</u> MAT 150	Finite Mathematics <u>and</u> Elementary Statistics	Total of 6
University of Massachusetts Dartmouth	MTH 103 <u>and</u> MTH 104	Finite Mathematics <u>and</u> Fundamentals of Statistics	Total of 6