

2012-2013 ANNUAL REPORT

KANSAS CORE OUTCOMES GROUPS

Public Universities



Public Community and Technical Colleges

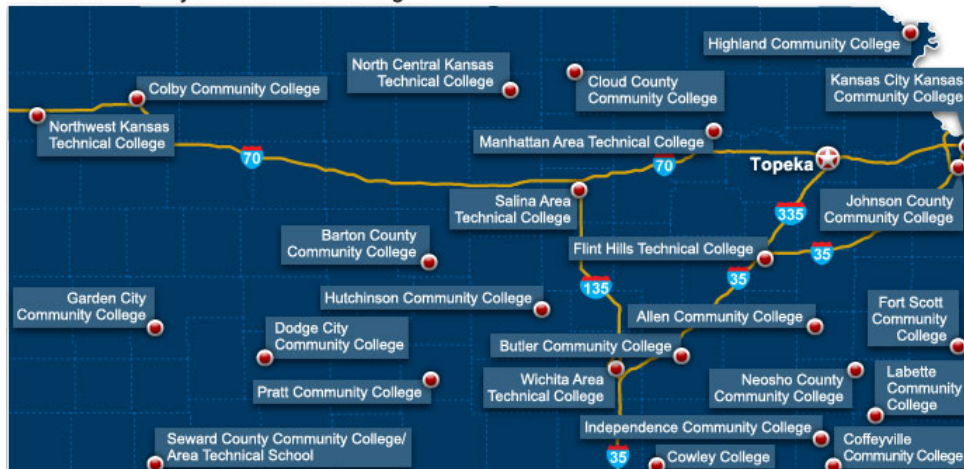


Table of Contents

Topic	Page
Background	3
2012 Annual Meeting Summary	4
Transfer and Articulation Advisory Council 2012-23	5
Institutions and Number of Faculty Participating.....	6
REPORTS	
Anthropology	7
Art	12
Biology	15
Chemistry.....	27
Communication/Speech	34
Computer Science.....	43
Economics	47
English	52
Geography	59
History	61
Mathematics.....	66
Modern Languages-Spanish.....	73
Music	75
Philosophy.....	77
Physics	85
Political Science	93
Psychology	98
Sociology	104
Theatre	108

Please contact Karla Wiscombe, Transfer Coordinator for the Kansas Board of Regents, with questions or suggestions regarding this report. (785-296-1487, kwiscombe@ksbor.org)

Institutional abbreviations used throughout the report:

CC = Community College
TC = Technical College
U = University

BACKGROUND

The Kansas Core Outcomes Project was initiated in 1999 by the Kansas Council of Instructional Administrators (KCIA), a group comprised of the chief academic officers of the state's community colleges and vocational-technical schools/colleges. The goal of this project was to develop core outcomes and competencies for general education courses at the state's colleges and universities.

The first meeting for the project was held in fall 1999 at the Southside Educational Center in Wichita. Faculty were invited to that meeting from the state's 19 public community colleges, six Regents' universities, and Washburn University. Six disciplines were represented: Biology, Computer Science, English, Mathematics, Sociology, and Speech. A second meeting, in spring 2000, was conducted at Emporia State University, and three additional disciplines—Chemistry, History, and Psychology—were added to that initial group of six. A third meeting, again at Southside, was conducted in January 2001. Another meeting of the core competency groups was held in September of 2002. Subsequently, disciplines such as English, Mathematics, and Speech have scheduled other, independent meetings.

The Core Competency meetings were originally financed through the KCIA budget. Each institution made a commitment to its faculty and supplied them with finances for lunch and travel. Due to increased budget decreases and the time commitment for our faculty, it was decided that future meetings would be held annually in the fall semester. In 2005 and 2006, additional Core Competency meetings occurred, and reports have been filed with the Kansas Board of Regents.

At its retreat in the summer of 2007, the KCIA members decided that the project needed a comprehensive list of courses that have been evaluated in each area, a standard format for reporting of the reviews and outcomes, as well as minutes. Therefore, this report follows a standard format for each discipline even though some information, such as course titles, may be missing. The annual reports are posted to the Kansas Board of Regents' website. Each report contains the most recent review of the outcomes for the courses listed at each academic institution.

For years 2007, 2008 and 2009, the faculty from the various disciplines met at the Eugene M. Hughes Metropolitan Complex, Wichita State University, in Wichita, Kansas. Attendance ranged from 120 to 170. In 2010, the location for the Core Outcomes was held at the University of Kansas. Approximately 149 individuals from 28 institutions participated in the September 24, 2010 meeting on KU's Lawrence campus, and around 175 individuals from 35 institutions participated in the October 14th, 2011 meeting on KU's Lawrence campus.

The 2012 Kansas Core Outcomes Annual Meeting took place on the Kansas State University campus on October 19, 2012, and marked the official incorporation of developing course outcomes by the Kansas Core Outcomes Groups (KCOG) into system-wide transfer for Kansas public postsecondary institutions. In June of 2012, the Kansas Board of Regents authorized the Transfer and Articulation Advisory Council (TAAC) as the body responsible for creating structures and processes that facilitate student transfer and degree completion within Kansas higher education. TAAC utilized the structure of the faculty led KCOGs, which had been in place since 1999, to create additional discipline groups and facilitate the first official system wide transfer meeting. At this first meeting, over 500 faculty members, from 19 disciplines, revised and articulated learning outcomes as well as recommended future courses for system-wide transfer. The following reports indicate the results of the 2012 meeting and work completed afterward by the discipline groups.

2012 ANNUAL MEETING SUMMARY

Disciplines from the following areas reviewed the listed courses:

Discipline	Courses Reviewed	KCOG Chair
Anthropology	ANT 1101 Intro to Cultural Anthropology	William McFarlane
Art	ART 1101 Art Appreciation	Jennifer Nolan
Biology	BIO 1201 Anatomy & Physiology BIO 2201 Microbiology	Don Barker and Peter Chung
Chemistry	CHM 1101/02-Chem. I/lab	Stephen Donnelly
Communication/Speech	COM 1100 Public Speaking CSC 1101 Introduction to Computers & Applications	Marg Yaroslaski
Computer Science	ECO 1101 Microeconomics	Gladys Swindler
Economics	ECO 1102 Macroeconomics	June Freund
English	ENG 1101-Eng. Comp I ENG 1102-Eng. Comp II ENG 1201-Intro to Lit	Sonya Lancaster and Rachelle Smith
Geography	GEO 1101 World Reg. Geography	Max Lu
History	HIS 1200 History of World Civ. to 1500 HIS 1101 US History to 1877 HIS 1102 US History since 1877	Brad Fenwick
Math	MAT 1101 College Algebra MAT 2101 Calculus I	Jeff Frost
Modern Languages: Spanish	SPA 1101 Spanish I	Rosalea Postma-Carttar
Music	MUS 1201 Music Appreciation	Randy Berls
Philosophy/Ethics	PHL 1101 Introduction to Philosophy PHL 1102 Ethics	Dennis Arjo
Physics	PHY 1101/1102 Physics I & Lab PHY 1201/1202 Physics II & Lab	Gavin Buffington
Political Science	POL 1121 American Government POL 1101 Intro to Political Science	Michael Hall
Psychology	PSY 1101 Introduction to Psychology PSY 1102 Human Lifespan/Developmental Psychology	Bruce Warner
Sociology	SOC 1101 Intro to Soc.	Stu Shafer
Theater	THT 1101 Theatre Appreciation THT 1201 Acting	Lawrence Alford

TRANSFER AND ARTICULATION ADVISORY COUNCIL MEMBERS FOR 2012-13

Alysia Johnston	Coffeyville CC
Bill Ivy	Pittsburg State U
Brad Will	Fort Hays State U
Bruce MacTavish	Washburn U
Jackie Vietti	Butler County CC
JC Tice	North Central Kansas TC
Jim Williams	Emporia State U
Joey Linn	Fort Hays State U
Kim Krull	Cloud County CC
Lee Furbeck	U of Kansas
Linnea Glenmayer	Wichita State U
Mike Ahern	Dodge City CC
Nathan Stanley	Neosho County CC
Randy Myers	Hutchinson CC
Sara Rosen	U of Kansas
Steven Vacik	Colby CC
Sue Maes	Kansas State U
Terry Calaway	Johnson County CC
Tony Kinkel	Wichita Area TC

**INSTITUTIONS AND NUMBER OF FACULTY PARTICIPATING
AT THE 2012 ANNUAL MEETING**

Allen County Community College	18
Barton County Community College	31
Butler Community College	32
Cloud County Community College	22
Coffeyville Community College	16
Colby Community College	15
Cowley County Community College	16
Dodge City Community College	21
Emporia State University	21
Flint Hills Technical College	3
Fort Hays State University	25
Fort Scott Community College	14
Garden City Community College	7
Highland Community College	11
Hutchinson Community College	22
Independence Community College	16
Johnson County Community College	21
Kansas City Kansas Community College	24
Kansas State University	28
Labette Community College	10
Manhattan Area Technical College	7
Neosho County Community College	18
North Central Kansas Technical College	9
Northwest Kansas Technical College	2
Pittsburg State University	21
Pratt Community College	10
Salina Area Technical College	0
Seward County Community College	11
University Of Kansas	23
Washburn University	17
Wichita Area Technical College	8
Wichita State University	19
TOTAL	518*
	*Does not include administrators

**Kansas Core Outcomes Group Annual Meeting Report
October 19, 2012**

Discipline: Mathematics

Kansas Regents System Number (KRSN) and Title: MAT 1101 College Algebra

Date Learning Outcomes Approved or Modified: 2012

Kansas Core Outcomes Group Participants

Chair/Facilitator(s): Jeff Frost, Johnson County Community College

KBOR Transfer and Articulation Council Liaison/Representative: Bill Ivy, Pittsburg State University

Courses from Kansas Public Institutions for which Core Outcomes apply (equivalent courses across the system) and Faculty Representatives:

Institution	Course Number and Title	Cr. Hrs.	Voting Faculty Member	Present Y or N	Vote Y or N
Allen County CC	MAT 105, College Algebra	3	Doug Joseph	Y	Y
Barton County CC	MATH 1828, College Algebra; MATH 1826, Intermediate and College Algebra	3/5	Brian Howe	Y	Y
Butler CC	MA 135, College Algebra	3	Donna Gorton	Y	Y
Cloud County CC	MA 111, College Algebra	3	Mark Whisler	Y	Y
Coffeyville CC	MATH 105, College Algebra	3	Kendall Payne	Y	Y
Colby CC	MA 178, College Algebra	3	John Olson	Y	Y
Cowley County CC	MTH 4420, College Algebra	3	Uwe Conrad	Y	Y
Dodge City CC	MATH 106, College Algebra	3	Kent Craghead	Y	Y
Flint Hills TC					
Fort Scott CC	MAT 1083, College Algebra	3	DeeAnn VanLuyck	Y	Y
Garden City CC	MATH 108-01, College Algebra	3	Sergio Fagundez	Y	Y
Highland CC	MAT 104, College Algebra	3	Lauren Jacobs	Y	Y
Hutchinson CC	MA 106, College Algebra	3	Sherri Rankin	Y	Y
Independence CC					
Johnson County CC	MATH 171, College Algebra	3	Steve Wilson	Y	Y
Kansas City KCC	MATH 105, College Algebra	5	Margret Hathaway	Y	Y
Labelle CC	MATH 115, College Algebra	3	Ralph Gouvion	Y	Y
Manhattan Area TC	MAT 135, College Algebra	3	Janelle Phillips	Y	Y
Neosho County CC	MATH 113, College Algebra	3	Paul Walcher	Y	Y
North Central KTC	MA 111, College Algebra	3	Mark Pahls	Y	Y
Northwest KTC					
Pratt CC	MTH 1781, College Algebra	3	Mike Jackson	Y	Y
Salina Area TC					

Seward County CC	MA 1173, College Algebra	3	Luke Dowell	Y	Y
Wichita Area TC	MTH 112, College Algebra	3	Shelby Jansen	Y	Y

Emporia St. U.	MA 110, College Algebra	3	Joe Yanik	Y	Y
Fort Hays St. U.	MATH 110, College Algebra	3	Mohammad Riazi	Y	Y
Kansas St. U.	MATH 100, College Algebra	3	John Maginnis	Y	Y
Pittsburg St. U.	MATH 113, College Algebra	3	Tim Flood	Y	Y
U. Of Kansas	MATH 101, College Algebra	3	Margaret Bayer	Y	Y
Washburn U.					
Wichita St. U.	MATH 111, College Algebra	3	Paul Scheuerman	Y	Y

Failure to participate in the articulation of course outcomes will be taken as agreement (recorded as a yes vote) with any actions approved at the KCOG meeting.

Core Outcomes:

4-6 specific, measurable learning outcomes expected of every student that completes the course

Upon completion of [KSRN and title], students will be able to:

See list of course competencies (from pages 56-57 in the *2011-2012 Kansas Core Outcomes Project*)

Students will be expected to use appropriate technology as one tool to achieve the following outcomes:

Analysis and Graphing of Functions and Equations

- Use functional notation.
- Recognize and distinguish between functions and relations (equations).
- Use concepts of symmetry, intercepts, left- and right-hand behavior, asymptotes, and transformations to sketch the graph of various types of functions (constant, linear, quadratic, absolute value, piecewise-defined, square root, cubic, polynomial, rational, exponential, and logarithmic) or relations (circle) given in description.
- Determine the domain and range of a function.
- Write the equation that describes a function (for types given above) or circle given its description.
- Use graphs of functions for analysis.
- Find arithmetic combinations and composites of functions.
- Find the inverse of a function.

Solutions of Equations and Inequalities

- Solve equations listed in the third bullet above, i.e., literal equations, quadratic equations by factoring and the quadratic formula, equations involving rational expressions, equations involving radicals, and equations involving absolute value expressions, along with equations involving exponential or logarithmic functions.
- Solve inequalities of the following types: linear (in one and two variables), polynomial, rational, absolute value.
- Solve systems of inequalities by graphing.
- Apply equations from the first bullet in this core outcome to real-world situations, including but not limited to depreciation, growth and decay, and max/min problems.

- Examine and analyze data, make predictions/interpretations, and do basic modeling.
- Solve systems of equations by various methods, including matrices.

Comments:

Information contained in this section shall not exempt any institution from honoring equivalencies which have been approved as transferable across the system of Kansas public and municipal colleges and universities.

Outcomes approved by TAAC on 12/20/12

**Kansas Core Outcomes Group Annual Meeting Report
October 19, 2012**

Discipline: Mathematics

Kansas Regents System Number (KRSN) and Title: MAT 2101 Calculus

Date Learning Outcomes Approved or Modified: 2012

Kansas Core Outcomes Group Participants

Chair/Facilitator(s): Jeff Frost, Johnson County Community College

KBOR Transfer and Articulation Council Liaison/Representative: Bill Ivy, Pittsburg State University

Courses from Kansas Public Institutions for which Core Outcomes apply (equivalent courses across the system) and Faculty Representatives:

Institution	Course Number and Title	Cr. Hrs.	Voting Faculty Member	Present Y or N	Vote Y or N
Allen County CC	MAT 123, Calculus with Analytic Geometry I	5	Doug Joseph	Y	Y
Barton County CC	MATH 1832, Analytic Geometry and Calculus I	5	Brian Howe	Y	Y
Butler CC	MA 151, Calculus I with Analytic Geometry	5	Donna Gorton	Y	Y
Cloud County CC	MA 120, Analytic Geometry and Calculus I	5	Mark Whisler	Y	Y
Coffeyville CC	MATH 115, Calculus with Analytic Geometry I	5	Kendall Payne	Y	Y
Colby CC	MA 220, Calculus I and Analytic Geometry	5	John Olson	Y	Y
Cowley County CC	MTH 4435, Calculus I and Analytic Geometry	5	Uwe Conrad	Y	Y
Dodge City CC	MATH 120, Analytic Geometry and Calculus I	5	Kent Craghead	Y	Y
Flint Hills TC					
Fort Scott CC	MAT 1015, Calculus I with Analytic Geometry	5	DeeAnn VanLuyck	Y	Y
Garden City CC	MATH 122-01, Calculus I and Analytic Geometry	5	Sergio Fagundez	Y	y
Highland CC	MAT 106, Calculus I	5	Lauren Jacobs	Y	Y
Hutchinson CC	MA 111/112H, Analytic Geometry and Calculus I	5	Sherri Rankin	Y	Y
Independence CC					

Johnson County CC	MATH 241, Calculus I	5	Steve Wilson	Y	Y
Kansas City KCC	MATH 122, Calculus I	5	Margret Hathaway	Y	Y
Labette CC	MATH 130, Calculus I	5	Ralph Gouvion	Y	Y
Manhattan Area TC			Janelle Phillips	Y	Y
Neosho County CC	MATH 150, Analytic Geometry and Calculus I	5	Paul Walcher	Y	Y
North Central KTC			Mark Pahls	Y	
Northwest KTC					
Pratt CC	MTH 191, Analytic Geometry and Calculus I	5	Mike Jackson	Y	Y
Salina Area TC					
Seward County CC	MA 2605, Analytic Geometry and Calculus I	5	Luke Dowell	Y	Y
Wichita Area TC	MTH 121, Calculus I	5	Shelby Jansen	Y	Y

Emporia St. U.	MA 161, Calculus I	5	Joe Yanik	Y	N
Fort Hays St. U.	MATH 234, Calculus I	5	Mohammad Riazi	Y	Y
Kansas St. U.	MATH 220, Calculus I	4	John Maginnis	Y	Y
Pittsburg St. U.	MATH 150, Calculus I	5	Tim Flood	Y	Y
U. Of Kansas	No equivalent course	NA	Margaret Bayer	Y	Y
Washburn U.					
Wichita St. U.	MATH 242, Calculus I	5	Paul Scheuerman	Y	Y

Failure to participate in the articulation of course outcomes will be taken as agreement (recorded as a yes vote) with any actions approved at the KCOG meeting.

Core Outcomes:

4-6 specific, measurable learning outcomes expected of every student that completes the course

Upon completion of [KSRN and title], students will be able to:

Content Outline and Course Competencies for Calculus I:

The course outcomes for Calculus I included in this document apply to any Kansas public college or university teaching a calculus I course that is the equivalent of the first semester in a three-semester calculus sequence.

- I. Using Limits
 - a. Evaluation of Limits
 - o Evaluate the limit of a function at a point both algebraically and graphically
 - o Evaluate the limit of a function at infinity both algebraically and graphically
 - o Use the definition of a limit to verify a value for the limit of a function
 - b. Use of Limits
 - o Use the limit to determine the continuity of a function
 - o Apply the Intermediate-Value Theorem

- Use the limit to determine differentiability of a function
- c. Limiting Process
 - Use the limiting process to find the derivative of a function
- II. Finding Derivatives
 - Find derivatives involving powers, exponents, and sums
 - Find derivatives involving products and quotients
 - Find derivatives involving the chain rule
 - Find derivatives involving exponential, logarithmic, and trigonometric functions
 - Find derivatives involving implicit differentiation
- III. Using Derivatives
 - a. Curve Sketching
 - Use the first derivative to find critical points
 - Apply the Mean-Value Theorem for derivatives
 - Determine the behavior of a function using the first derivative
 - Use the second derivative to find inflection points
 - Determine the concavity of a function using the second derivative
 - Sketch the graph of the function using information gathered from the first and second derivatives
 - Interpret graphs of functions
 - b. Applications of Derivatives
 - Use the derivative to find velocity, acceleration, and other rates of change
 - Use the derivative to find the equation of a line tangent to a curve at a given point
 - Use optimization techniques in areas such as economics, the life sciences, the physical sciences, and geometry
 - Solve related rates problems
 - Use Newton's Method
 - Use differentials to estimate change
- IV. Finding Integrals
 - Find area using Riemann sums and integrals
 - Express the limit of a Riemann sum as a definite integral
 - Evaluate the definite integral using geometry
 - Integrate algebraic, exponential, and trigonometric functions
 - Evaluate definite integrals using the Fundamental Theorem of Calculus
 - Apply the Mean-Value Theorem for integrals
 - Integrate indefinite integrals
 - Integrate using substitution
 - Approximate integrals using Simpson's Rule and the Trapezoidal Rule

Comments:

Kansas Public College and University mathematics professors believe that a strong foundation in the concepts of calculus will lead to success in careers that have a strong emphasis in critical thinking,

such as engineering, computer science, or biotechnology. However, this will not happen if calculus is taught at primarily a skills and formula level without sufficient time to engage students in the deeper, conceptual tenets of calculus. All calculus teachers have an obligation to the mathematics community to ensure that students completing a first-semester, mainstream calculus course understand the material in a rigorous fashion at the level required to pass the AP Calculus exam.

Courses to be reviewed at the 2013 Annual Meeting: Elementary Statistics

Chair for the 2013 Annual Meeting: Paul Walcher, Neosho CC, will be the chair for 2013.

Outcomes approved by TAAC on 12/20/12