CORE CURRICULUM COMPONENT APPLICATION

CORE COMPONENT AREA	Mathematics
COURSE TYPE	Existing Core
DEPARTMENT	Mathematics and Engineering
COURSE RUBRIC & NUMBER	MATH 1314
COURSE NAME	College Algebra
CATALOG DESCRIPTION	In-depth study and applications of polynomial, rational, radical, exponential and logarithmic functions, and systems of equations using matrices. Additional topics such as sequences, series, probability, and conics may be included.
NUMBER OF SECTIONS OFFERED/FALL	22
NUMBER OF SECTIONS OFFERED/SPRING	18
EXTIMATED ANNUAL ENROLLMENT	1100
COURSE LEVEL	Freshman
CONTACT PERSON (dept. representative)	Dr. Krista Cohlmia
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DEPARTMENT APPROVAL STATUS	**Approved** - Date **4/10/2013**
CORE COMMITTEE COMMENTS (REQUEST FOR ADDITIONAL INFORMATION)	
CORE COMMITTEE APPROVAL STATUS	Select One - Date Click here to enter a date.

Best practices and accreditation guidelines generally place the faculty in a position of responsibility for curricular decisions.

Indicate below how each learning objective will be supported, what strategies or activities will be used to introduce each objective and how student learning will be assessed.

***NOTE: Component Area Option –**

A. A minimum of 3 SCH must meet the definition and corresponding Core Objectives specified in one of the foundational component areas
B. As an option for up to 3 semester credit hours of the Component Area Option, an institution may select course(s) that:
   i. Meet(s) the definition specified for one or more of the foundational component areas; and
   ii. Include(s) a minimum of three Core Objectives, including Critical Thinking Skills, Communication Skills, and one of the remaining Core Objectives of the institution's choice.

#	THECB CORE OBJECTIVE "ICO"	PROGRAM GOALS/OUTCOMES	COURSE LEARNING OUTCOMES	KEY IDENTIFIERS	LEARNING EXPERIENCE	ASSESSMENT
1	**Critical Thinking Skills** - to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information. ***Must be addressed in all core curriculum courses***		Upon successful completion of this course, the student will be able to apply logical reasoning to solve mathematical problems.	The student successfully solves stated problems.	Students will participate in group discussions, complete homework or quizzes, and take exams. The comprehensive departmental course final exam will be submitted for assessment.	This core objective will be assessed by an interdepartmental assessment committee using the Critical Thinking rubric.
2	**Communication Skills** - to include effective development, interpretation and expression of ideas through written, oral and		Upon successful completion of this course, the student will be able to develop and interpret solutions to	The student is able to write logical conclusions and interpretations based on his/her calculations.	Students will participate in group discussions, complete homework or quizzes, and take	This core objective will be assessed by an interdepartmental assessment committee using the

	visual communication. ***Must be addressed in all core curriculum courses***		mathmatical problems centered on algebra topics.		exams. The comprehensive departmental course final exam will be submitted for assessment.	Communication rubric.
3	**Empirical and Quantitative Skills** - to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions ***Must be addressed in all Mathematic, Life and Physical Sciences, AND Social & Behavioral Sciences component area core curriculum courses. Optional for all other component areas.***		Upon successful completion of this course, the student will be able to: 1. Demonstrate and apply knowledge of properties of functions, including domain and range, operations, compositions, and inverses. 2. Recognize and apply polynomial, rational, radical, exponential and logarithmic functions and solve related equations. 3. Apply graphing techniques. 4. Evaluate all roots of higher degree polynomial and rational functions. 5. Recognize, solve	1. The student is able to correctly identify the domain and range of a function; is able to correctly perform operations on functions; is able to find the inverse of the function. 2. The student is able to correctly use polynomial, rational, radical, exponential and logarithmic functions. 3. The student correctly uses graphing techniques for a variety of functions. 4. The student is able to correctly	Students will participate in group discussions, complete homework or quizzes, and take exams. The comprehensive departmental course final exam will be submitted for assessment.	This core objective will be assessed by an interdepartmental assessment committee using the Empirical and Quantitative Skills rubric.

			and apply systems of linear equations using matrices.	identify roots of polynomial and rational functions. 5. The student is able to correctly use matrices to solve system of linear equations.		
4	**Teamwork** - to include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal. ***Must be addressed in all Communication, Life & Physical Sciences, and Creative Arts component area core curriculum courses. Optional for all other component areas.***					
5	**Social Responsibility**: to include intercultural competence, knowledge of civic responsibility, and the ability to engage effectively in regional, national, and global communities ***Must be addressed in all Language, Philosophy & Culture, Creative Arts, American History and***					

	Government/Political Science, and Social & Behavioral Sciences component area core curriculum courses. Optional for all other component areas.					
6	**Personal Responsibility** - to include the ability to connect choices, actions and consequences to ethical decision-making. ***Must be addressed in all Communication, Language, Philosophy & Culture, American History and Government/Political Science component area core curriculum courses. Optional for all other component areas.***					
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Critical Thinking Skills

To include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information.

Must be addressed in all core courses

Communication Skills

To include effective development, interpretation and expression of ideas through written, oral and visual communication.

Must be addressed in all core courses

Empirical and Quantitative Skills

To include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions.

Must be addressed in all core courses that satisfy the following requirements:

- Mathematics
- Life and Physical Sciences
- Social and Behavioral Sciences
- Some Component Area Options

Teamwork

To include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal.

Must be addressed in all core courses that satisfy the following requirements:

- Communication
- Life and Physical Sciences
- Creative Arts
- Some Component Area Options

Social Responsibility

To include intercultural competence, knowledge of civic responsibility, and the ability to engage effectively in regional, national and global communities.

Must be addressed in all core courses that satisfy the following requirements:

- Language, Philosophy and Culture
- Creative Arts
- American History
- Government/Political Science
- Social and Behavioral Sciences
- Some Component Area Options

Personal Responsibility

To include the ability to connect choices, actions and consequences to ethical decision-making.

Must be addressed in all core courses that satisfy the following requirements:

- Communication
- Language, Philosophy and Culture
- American History
- Government/Political Science
- Some Component Area Options