General Education Course Review

MTH 135 College Algebra

General Education Goal	Course Goal
Part One: Intellectual Abilities and Dispositions	
A. Conceptual and Practical Understanding of Modes of Learning, Problem-Solving and Creative Inquiry	Students will develop and demonstrate problem solving strategies. Students will learn to recognize patterns. Students will gain the ability to solve equations and inequalities involving algebraic functions. Students will acquire a working knowledge of advanced theorems of algebra including The Binomial Theorem. Students will learn to use the concepts of algebra to solve practical physical problems. Students will read, work to understand, then communicate mathematical ideas both verbally and in writing. Students will perceive mathematics as active, engaging, and dynamic. Students will approach mathematics through a focus on gathering information, making and testing conjectures, and justifying ideas through organized mathematical argument.
B. Information-Gathering, Reasoning, and Synthesizing Abilities	
1. Skill in formulating questions and in setting goals for inquiry.	Students will develop and demonstrate problem solving strategies. Students will gain the ability to solve equations and inequalities involving algebraic functions. Students will acquire a working knowledge of advanced theorems of algebra including The Binomial Theorem.
2. Knowing how and when to make generalizations and value judgments.	Students will develop and demonstrate problem solving strategies. Students will learn to recognize patterns.
3. Skill in generating and evaluating observations and evidence.	Students will develop and demonstrate problem solving strategies. Students will learn to recognize patterns. Students will acquire a working knowledge of advanced theorems of algebra including The

	Binomial Theorem.
4. Skill in making deductive inferences.	Students will develop and demonstrate problem solving strategies. Students will learn to recognize patterns. Students will gain the ability to solve equations and inequalities involving algebraic functions. Students will acquire a working knowledge of advanced theorems of algebra including The Binomial Theorem. Students will learn to use the concepts of algebra to solve practical physical problems. Students will read, work to understand, then communicate mathematical ideas both verbally and in writing.
5. Ability to use relevant quantitative methods.	Students will develop and demonstrate problem solving strategies. Students will learn to recognize patterns. Students will learn to use the concepts of algebra and to solve practical physical problems.
C. Reflective, Creative, and Critical Dispositions	
1. Striving to be well informed and open-minded.	
2. Looking for multiple possibilities and being able to deal with ambiguity.	Students will develop and demonstrate problem solving strategies. Students will learn to recognize patterns. Students will gain the ability to solve equations and inequalities involving algebraic functions. Students will perceive mathematics as active, engaging, and dynamic. Students will approach mathematics through a focus on gathering information, making and testing conjectures, and justifying ideas through organized mathematical argument.
3. Striving to achieve one's best with persistence and imagination.	Students will develop and demonstrate problem solving strategies. Students will read, work to understand, then communicate mathematical ideas both verbally and in writing.
4. Willingness to make choices and to evaluate those choices.	Students will develop and demonstrate problem solving strategies. Students will gain the ability to solve equations and inequalities involving algebraic and trigonometric functions.

5. Intellectual self-awareness: being conscious of one's own thinking process, including the cultural and social contexts of that thinking.	Students will develop and demonstrate problem solving strategies. Students will read, work to understand, then communicate mathematical ideas both verbally and in writing.
D. Communication Skills	
1. Writing and speaking with clarity and precision for diverse audiences.	Students will read, work to understand, then communicate mathematical ideas both verbally and in writing.
2. Making use of computers and other technological tools	Students will develop and demonstrate the use of technology while solving algebraic equations and inequalities.
3. Interpreting and communicating visual information	Students will develop and demonstrate problem solving strategies. Students will learn to recognize patterns. Students will gain the ability to solve equations and inequalities involving algebraic functions. Students will acquire a working knowledge of advanced theorems of algebra including The Binomial Theorem. Students will learn to use the concepts of algebra to solve practical physical problems. Students will read, work to understand, then communicate mathematical ideas both verbally and in writing. Students will perceive mathematics as active, engaging, and dynamic. Students will approach mathematics through a focus on gathering information, making and testing conjectures, and justifying ideas through organized mathematical argument.
Part Two: **Knowledge and Understanding**	
A. Understanding the Natural World	
1. Knowledge of the physical Universe, including its origin and the physical laws governing it.	
2. Knowledge of living systems, including their nature, organization, and evolution.	
3. Understanding the history and methods of scientific inquiry and alternative explanations of the natural world.	

4. Understanding the multiple influences on scientific inquiry and the consequences of science and technology.	
5. Understanding the ways human choices affect the earth and living systems and the responsibilities of individual citizens and communities to preserve global resources.	
B. Understanding of Culture and Society	
1. Knowledge of the many expressions of culture, including • Understanding the unique shared ways of thinking, believing, and acting, developed by a people who live together over a long period of time. • Ability to conceptualize and trace the influences of community, institutions, and other constructions such as class, gender, and race • Familiarity with the ways in which culture is expressed artistically, through literature, performance, and artifact • Awareness of and appreciation for the ways in which culture and society influence and are influenced by work and leisure.	
2. Understanding the sources and expression of diverse values throughout the world, including ethical, religious, aesthetic, political, and economic values as well as social and cultural priorities.	
3. Ability to trace the impact of technology on societies and cultures for diverse audiences.	
4. Understanding the ways human choices affect communities, from local to global, and responsibilities of individuals to assume the duties of citizenship.	
5. Understanding the role of government regulation and of legal requirements, political processes, and financial and economic influences on decisions of individuals and society.	

C. Self-Understanding	
1. Understanding the nature of our humanness and how human beings are like and different from the other beings with whom they share the planet.	
2. Knowledge of individual physical, emotional, intellectual, social and creative development as well as ability to use such knowledge to improve personal well-being.	
3. Knowledge of individual physical, emotional, intellectual, social, historical, spatial, and cultural matrices into which the individual is born; and the influence of the unique set of experiences which the individual encounters.	
4. Ability to perceive one's own being not only from cognitive perspectives but also from those perspectives which come from exposure to and creative vision of the arts – to imagine the possibilities the future holds and to develop responsible goals for interactions with others, modes of personal expression, and roles in improving the world.	