

## ABSE64 : Mathematical Reasoning for the GED/HiSET

### General Information

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Course Code (CB01) :	ABSE64
Course Title (CB02) :	Mathematical Reasoning for the GED/HiSET
Department:	ABSE
Proposal Start:	Spring 2024
TOP Code (CB03) :	(4930.62) Secondary Education (Grades 9-12) and G.E.D.
CIP Code:	(53.0201) High School Equivalence Certificate Program.
SAM Code (CB09) :	Non-Occupational
Distance Education Approved:	No
Will this course be taught asynchronously?:	No
Course Control Number (CB00) :	CCC000642797
Curriculum Committee Approval Date:	12/13/2023
Board of Trustees Approval Date:	01/09/2023
Last Cyclical Review Date:	12/13/2023
Course Description and Course Note:	ABSE 64 is designed for adults who wish to review or master basic algebraic and geometric concepts. The concepts range from solving simple equations to understanding how to graph a two-variable equation in a coordinate plane. The course is designed to provide students with the necessary skills to successfully pass the mathematics section of the GED/HiSET.
Justification:	New Course
Academic Career:	<ul style="list-style-type: none"><li>• Noncredit</li></ul>
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### Academic Senate Discipline

Primary Discipline:	<ul style="list-style-type: none"><li>• Mathematics</li></ul>
Alternate Discipline:	<ul style="list-style-type: none"><li>• Mathematics-Basic Skills: Non-Credit</li></ul>
Alternate Discipline:	<ul style="list-style-type: none"><li>• Interdisciplinary-Basic: Skills: Non-Credit</li></ul>

## Course Development

### Basic Skill Status (CB08)

Course is a basic skills course.

Allow Students to Gain Credit by Exam/Challenge

### Course Special Class Status (CB13)

Course is not a special class.

### Pre-Collegiate Level (CB21)

Two levels below transfer,

### Grading Basis

- Pass / No-Pass Only

### Course Support Course Status (CB26)

Course is not a support course

## Transferability & Gen. Ed. Options

### General Education Status (CB25)

Not Applicable

### Transferability

Not transferable

### Transferability Status

Not transferable

## Units and Hours

### Summary

**Minimum Credit Units (CB07)** 0

**Maximum Credit Units (CB06)** 0

**Total Course In-Class (Contact) Hours** 0

**Total Course Out-of-Class Hours** 0

**Total Student Learning Hours** 64

### Credit / Non-Credit Options

#### Course Type (CB04)

Non-Credit

#### Noncredit Course Category (CB22)

Elementary and Secondary Basic Skills.

#### Noncredit Special Characteristics

No Value

#### Course Classification Code (CB11)

Other Non-Credit Enhanced Funding.

Variable Credit Course

#### Funding Agency Category (CB23)

Not Applicable.

Cooperative Work Experience Education Status (CB10)

### Weekly Student Hours

	In Class	Out of Class
Lecture Hours	64	0
Laboratory Hours	0	0
Studio Hours	0	0

### Course Student Hours

<b>Course Duration (Weeks)</b>	18
<b>Hours per unit divisor</b>	54
<b>Course In-Class (Contact) Hours</b>	
Lecture	64

Laboratory	0
Studio	0
<b>Total</b>	0

**Course Out-of-Class Hours**

Lecture	64
Laboratory	0
Studio	0
<b>Total</b>	0

**Time Commitment Notes for Students**

Students arrange their own time commitment appropriate for the amount of study needed to pass the High School Equivalency exam in Mathematics.

**Pre-requisites, Co-requisites, Anti-requisites and Advisories**

**Advisory**

ABSE20 - BASIC MATH

Objectives

- Compute problems dealing with whole numbers, fractions, decimals, and percent.
- Estimate a reasonable answer to a problem.
- Solve word problems involving whole numbers, fractions, decimals, and percents.

**AND**

**Advisory**

ABSE186 - Essentials in Reading and Writing 1

Objectives

- Comprehend both literature and information-based texts at a high school level.
- Utilize various strategies to develop active reading habits.
- Read and locate details in a passage and identify the stated or unstated main idea.
- Articulate answers to comprehension and analysis questions.

**OR**

**Advisory**

ESL40 - ENGLISH AS A SECOND LANGUAGE LEVEL 4

Objectives

- Demonstrate mastery of grammatical structures studied at a level sufficient to pass unit tests and the divisional grammar mastery test for this level.
- Converse at a functional level adequate for everyday use on the campus and in the community.
- Demonstrate understanding of the majority of face-to-face speech, recorded, and live dialogues in standard dialect at a normal rate, although some repetition may be required.
- Decode 3,000-word reading passages, identify main ideas and supporting details, make inferences, and summarize short passages.

**Entry Standards**

Entry Standards

No value

## Specifications

### Methods of Instruction

Methods of Instruction                      Lecture

Methods of Instruction                      Discussion

Methods of Instruction                      Tutorial

Methods of Instruction                      Independent Study

Methods of Instruction                      Collaborative Learning

Methods of Instruction                      Demonstrations

### Out of Class Assignments

Not Applicable

### Methods of Evaluation

### Rationale

Exam/Quiz/Test

Formative assessments at the end of each chapter

Exam/Quiz/Test

GED and HiSET mathematics practice tests

### Textbook Rationale

No Value

### Textbooks

Author	Title	Publisher	Date	ISBN
Jonathan Cox	HiSET Prep Book 2023-2024: 800+ Practice Questions, HiSET Test Study Guide for All Subjects 1st Edition	Accepted, Inc.	2023	978-1637982846

**Other Instructional Materials (i.e. OER, handouts)**

No Value

**Materials Fee**

No value

**Learning Outcomes and Objectives****Course Objectives**

Solve word problems in basic geometry, and basic algebra.

Simplify and solve systems of equations and inequalities.

Evaluate functions.

Evaluate graphs to solve geometric problems.

Apply properties of triangles and quadrilaterals.

Calculate scale factors.

Calculate area, perimeter, volume, and surface area of composite figures.

**SLOs**

Apply mathematical reasoning to solve a contextualized algebra problem.

Expected Outcome Performance: 75.0

Achieve a Passing Score on the GED/HiSET Readiness Math Test.

Expected Outcome Performance: 75.0

**Additional SLO Information**

**Does this proposal include revisions that might improve student attainment of course learning outcomes?**

No

**Is this proposal submitted in response to learning outcomes assessment data?**

No

If yes was selected in either of the above questions for learning outcomes, explain and attach evidence of discussions about learning outcomes.

No Value

#### SLO Evidence

No Value

## Course Content

### Lecture Content

#### Algebra Basics, Expressions, and Polynomials (24 hours)

- The number line and signed numbers
- Powers and roots
- Scientific notation
- Order of operations
- Absolute value
- Algebraic expressions
- Expressions and calculator skills
- Understand polynomials
- Simplify polynomials
- Add and subtract polynomials
- Multiply polynomials
- Divide polynomials

#### Equations, Inequalities, and Functions (24 hours)

- Equations
- Equation word problems
- Inequalities
- Quadratic equations
- Algebra problem solving
- The coordinate plane
- Graphing a line
- Slope of a line
- Slope and equations
- Systems of linear equations
- Patterns and functions
- Function applications
- Function notation

#### Geometry (16 hours)

- Plane figures
- Triangles
- Pythagorean relationships
- Perimeter and area
- Circles
- Volume
- Surface area
- Combined figures
- Geometry calculator skills.

**Total hours: 64**