Glendale College

Course Outline of Record Report

Course ID 010486

Revision - March 2025

ABSE38 : Integrated Mathematics 3B

General Information

Author:	• Jesus Carino • Perner, Kimberli
Course Code (CB01) :	ABSE38
Course Title (CB02) :	Integrated Mathematics 3B
Department:	ABSE
Proposal Start:	Spring 2026
TOP Code (CB03) :	(1701.00) Mathematics, General
CIP Code:	(27.0101) Mathematics, General.
SAM Code (CB09) :	E - Non-Occupational
Distance Education Approved:	No
Will this course be taught asynchronously?:	Yes
Course Control Number (CB00) :	CCC000613461
Curriculum Committee Approval Date:	03/26/2025
Board of Trustees Approval Date:	06/17/2025
Last Cyclical Review Date:	03/26/2025
Course Description and Course Note:	ABSE 38 focuses on the integration of algebra and geometry through examining the mathematical measures of circles. Student also explore geometric and logarithmic sequences, as well as statistical measures. This course is designed to meet the needs of students who wish to continue their study of Integrated Mathematics and to earn high school credit in mathematics. Laboratory 100 hours. Note: This is a self-paced course in an open-entry, open-exit lab environment. Successful completion of this course results in 5 high school credits.
Justification:	Content Change
Academic Career:	• Noncredit
Mode of Delivery:	• Online
Author:	No value
Course Family:	No value

Academic Senate Discipline

Primary Discipline:	• Mathematics-Basic Skills: Non-Credit
Alternate Discipline:	No value
Alternate Discipline:	No value

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)

One level below transfer.

Grading Basis

- Grade Only

Course Support Course Status (CB26)

Course is not a support course

General Education and C-ID

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	100
Total Course Out-of-Class Hours	0
Total Student Learning Hours	100

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)

Non-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	0	0
Laboratory Hours	100	0
Studio Hours	0	0

Course Student Hours

Course Duration (Weeks)	18
Hours per unit divisor	54
Course In-Class (Contact) Hours	
Lecture	0

Laboratory	100
Studio	0
Total	100

Course Out-of-Class Hours

Lecture	0
Laboratory	0
Studio	0
Total	0

Time Commitment Notes for Students

This is a self-paced course in an open-entry, open-exit lab environment.

Units and Hours - Weekly Specialty Hours

Activity Name	Type	In Class	Out of Class
No Value	No Value	No Value	No Value

Prerequisites, Corequisites, Recommended Corequisites, and Recommended Preparation

Advisory

ABSE37 - Integrated Mathematics 3A

Objectives

- Use slope to solve problems involving parallel and perpendicular lines.
- Write a coordinate proof.
- Use slope and the distance formula in coordinate proofs.
- Find the surface area of a prism or cylinder.
- Use the formula for the surface area of a sphere to calculate the surface areas of composite figures.
- Define and describe inverse functions.
- Explain how the Binomial Theorem is useful.
- Find the rational roots of a polynomial equation.
- Identify the features of a graph of rational functions.
- Add, subtract, multiply and divide rational expressions.
- Find the inverses of quadratic function and cubic functions.
- Simplify expressions containing rational exponents and radicals involving nth roots.
- Solve equations involving square roots and cube roots.

AND

Advisory

ESL30 - ENGLISH AS A SECOND LANGUAGE LEVEL 3 (in-development)

Objectives

- Develop coherence and mechanical accuracy.
- 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.

Entry Standards

Entry Standards	Description
No value	No value

Course Limitations

Cross Listed or Equivalent Course	Description
No value	No value

Requisite Validation

Upload Statistical Validation and/or other documents (if necessary)

No Value

Specifications

Methods of Instruction

Methods of Instruction	Laboratory
Methods of Instruction	Tutorial
Methods of Instruction	Independent Study

Out of Class Assignments

N/A

Methods of Evaluation	Description of Activity/Interaction
Other	Individualized contract

Exam/Quiz/Test	Assessments at the end of each chapter
Exam/Quiz/Test	Unit exams

Textbook Rationale

No Value

Textbooks

Author	Title	Publisher	Date	ISBN
Timothy D. Kanold	California Integrated Mathematics 3	Houghton Mifflin Harcourt Publishing Company	2015	9780544389885

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

Description	Instructor-generated materials
Author	No value
Citation	No value
Online Resource(s)	No value

Learning Outcomes

Course Objectives

Define an arithmetic and a geometric sequence.

Model the value of an investment that earns compound interest.

Identify the properties of logarithms.

Use trigonometric ratios to find side lengths and angle measures of right and non-right triangles.

Define the relationship between the unit circle and radian measure.

Identify the key features of the graphs of the sine, cosine and tangent functions.

Choose which measures of center and spread are appropriate for a normal distribution, and which are appropriate for a skewed distribution.

Calculate a confidence interval and a margin of error for a population proportion or population mean.

Determine the measures of central angles and inscribed angles of a circle.

Identify the key theorems about tangents to a circle.

Calculate the length of an arc.

Find the area of a sector of a circle.

Write the equation of a parabola that opens up or down given its focus and directrix.

SLOs

Build exponential and logarithmic functions that model relationships between two quantities Expected Outcome Performance: 70.0

ABSE NCR AHS Diploma	Apply mathematical ways of thinking to real world issues and challenges using mathematical modeling and problem solving techniques.
ABSE NCR Adult Basic Education	Compute and solve real world problems using basic operations with whole numbers, fractions, decimals, and percents.
ILOs Core ILOs	Use quantitative and/or analytical mathematical skills to solve problems and to interpret, evaluate, and process information and data to draw logical conclusions and support claims.

Provide mathematical justification for conclusions from sample surveys, experiments, and observational studies. Expected Outcome Performance: 70.0

ILOs Core ILOs	Analyze and solve problems using critical, logical, and creative thinking; ask questions, pursue a line of inquiry, and derive conclusions; cultivate creativity that leads to innovative ideas.
	Use quantitative and/or analytical mathematical skills to solve problems and to interpret, evaluate, and process information and data to draw logical conclusions and support claims.
ABSE NCR AHS Diploma	Apply mathematical ways of thinking to real world issues and challenges using mathematical modeling and problem solving techniques.
ABSE NCR Adult Basic Education	Compute and solve real world problems using basic operations with whole numbers, fractions, decimals, and percents.
ABSE NCR GED Preparation	Solve a variety of word problems, many with graphics, using basic computation, analytical and reasoning skills.

Explain the key theorems about tangents to a circle Expected Outcome Performance: 70.0

ABSE NCR AHS Diploma	Apply mathematical ways of thinking to real world issues and challenges using mathematical modeling and problem solving techniques.
ILOs Core ILOs	Communicate clearly, ethically, and creatively; listen actively and engage respectfully with others; consider situational, cultural, and personal contexts within or across multiple modes of communication.
	Use quantitative and/or analytical mathematical skills to solve problems and to interpret, evaluate, and process information and data to draw logical conclusions and support claims.
ABSE NCR Adult Basic Education	Compute and solve real world problems using basic operations with whole numbers, fractions, decimals, and percents.

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

No value

Laboratory/Studio Content

Sequence and Series (7 hours)
- Arithmetic Sequences
- Geometric Sequences
- Geometric Series

Exponential Functions (9 hours)
- Exponential Growth Functions
- Exponential Decay Functions
- The Base e
- Compound Interest

Modeling with Exponential and Other Functions (5 hours)
- Fitting Exponential Functions to Data
- Choosing Among Linear, Quadratic, and Exponential Models

Logarithmic Functions (5 hours)
- Defining and Evaluating a Logarithmic Function

- Graphing Logarithmic Functions

Logarithmic Properties and Exponential Equations (5 hours)
- Properties of Logarithms
- Solving Exponential Equations

Trigonometry with all Triangles (7 hours)
- Problem Solving with Trigonometry
- Law of Sines
- Law of Cosines

Unit-Circle Definition of Trigonometric Functions (7 hours)
- Angles of Rotation and Radian Measure
- Defining and Evaluating the Basic Trigonometric Functions
- Using a Pythagorean Identity

Graphing Trigonometric Functions (9 hours)
- Stretching, Compressing, and Reflecting Sine and Cosine Graphs
- Stretching, Shrinking, and Reflecting Tangent Graphs
- Translating Trigonometric Graphs
- Fitting Sine Functions to Data

Gathering and Displaying Data (4 hours)
- Data-Gathering Techniques
- Shape, Center, and Spread

Data Distributions (6 hours)
- Probability Distributions
- Normal Distributions
- Sampling Distributions

Making Inferences from Data (7 hours)
- Confidence Intervals and Margins of Error
- Surveys, Experiments, and Observational Studies
- Determining the Significance of Experimental Results

Probability and Decision Making (5 hours)
- Using Probability to Make Fair Decisions
- Analyzing Decisions

Angles in Circles (12 hours)
- Central Angles and Inscribed Angles Angles in Inscribed Quadrilaterals
- Tangents and Circumscribed Angles
- Segment Relationships in Circles
- Angle Relationships in Circles

Arc Length and Sector Area (7 hours)
- Justifying Circumference and Area of a Circle
- Arc Length and Radian Measure
- Sector Area

Equations of Conics (5 hours)
- Equation of a Circle
- Equation of a Parabola

Total Hours: 100

Additional Information

Repeatability

Repeatable

Justification (if repeatable was chosen above)

Non-credit courses

Is it possible this course will have a material fee?

No

I have contacted my library liaison (https://campusguides.glendale.edu/faculty/liaisons):

Yes

What term(s) will this course be offered?

Fall/Winter/Spring/Summer

Will any additional resources be needed for this course? (Click all that apply)

- No

If additional resources are needed, add a brief description and cost in the box provided.

No Value