

## ABSE32 : PHYSICAL SCIENCE 1A

### General Information

Author:	<ul style="list-style-type: none"> <li>Jesus Carino</li> </ul>
Course Code (CB01) :	ABSE32
Course Title (CB02) :	PHYSICAL SCIENCE 1A
Department:	ABSE
Proposal Start:	Spring 2025
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) :	CCC000338473
Curriculum Committee Approval Date:	05/22/2024
Board of Trustees Approval Date:	07/16/2024
Last Cyclical Review Date:	05/22/2024
Course Description and Course Note:	ABSE 32 is a high school level course designed to acquaint students with the basic physical properties of matter, atoms, compounds, and simple chemical equations. This is the first half of a one-year course. Laboratory 100 hours. Note: This is a self-paced course in an open-entry, open-exit lab environment. Successful completion of the course results in 5 high school credits.
Justification:	Mandatory Revision
Academic Career:	<ul style="list-style-type: none"> <li>Noncredit</li> </ul>
Author:	

### Academic Senate Discipline

Primary Discipline:	<ul style="list-style-type: none"> <li>Interdisciplinary-Basic: Skills: Non-Credit</li> </ul>
Alternate Discipline:	No value
Alternate Discipline:	No value

### Course Development

Basic Skill Status (CB08)	Course Special Class Status (CB13)	Grading Basis
Course is a basic skills course.	Course is not a special class.	<ul style="list-style-type: none"> <li>Grade Only</li> </ul>
<input type="checkbox"/> Allow Students to Gain Credit by Exam/Challenge	<b>Pre-Collegiate Level (CB21)</b> Not applicable.	<b>Course Support Course Status (CB26)</b> 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

<b>Minimum Credit Units (CB07)</b>	0
<b>Maximum Credit Units (CB06)</b>	0
<b>Total Course In-Class (Contact) Hours</b>	100
<b>Total Course Out-of-Class Hours</b>	0
<b>Total Student Learning Hours</b>	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)

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	0	0
Laboratory Hours	100	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	0
Laboratory	100
Studio	0
<b>Total</b>	100
<b>Course Out-of-Class Hours</b>	
Lecture	0
Laboratory	0
Studio	0
<b>Total</b>	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
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No Value	No Value	No Value	No Value
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## Pre-requisites, Co-requisites, Anti-requisites and Advisories

### 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.
- Write a three-paragraph composition that contains an introductory paragraph, a body, and a conclusion.
- Decode 3,000-word reading passages, identify main ideas and supporting details, make inferences, and summarize short passages.

## Entry Standards

Entry Standards

## Course Limitations

Cross Listed or Equivalent Course

## Specifications

Methods of Instruction

Methods of Instruction	Independent Study
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Methods of Instruction	Multimedia
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Methods of Instruction

Lecture

### Out of Class Assignments

N/A

### Methods of Evaluation

Other

Completion of individualized contract

Exam/Quiz/Test

Unit exams

### Textbook Rationale

No updated editions of Common Core textbook, but still accurate and comprehensive content coverage. Newer OER material included.

### Textbooks

Author	Title	Publisher	Date	ISBN
Glencoe	Physical iScience	New York: Glencoe/McGraw- Hill	2011	978-0078880049

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

#### Description

OpenStax - Physics High School

#### Author

Fatih Gozuacik, Denise Pattison, Catherine Tabor

#### Citation

Gozuacik, F., Pattison, D., & Tabor, C. (2019, February 14). Physics High School. OpenStax. OpenStax | Free Textbooks Online with No Catch. (n.d.-b). @Openstax/Os-webview. <https://openstax.org/details/books/physics>

#### Online Resource(s)

Digital: ISBN-13: 978-1-951693-21-3

#### Description

OpenStax - Chemistry

#### Author

Don Frantz, Paul Hooker, George Kaminski

#### Citation

Frantz, D., Hooker, P., & Kaminski, G. (2019, February 14). Chemistry. OpenStax. <https://openstax.org/details/books/chemistry-2e>

#### Online Resource(s)

Digital: ISBN-13: 978-1-947172-61-6

#### Description

Instructor-generated materials covering discipline topics, along with duplicate booklets from books obtained with copyright permission.

#### Author

No value

#### Citation

No value

#### Online Resource(s)

No value

### Materials Fee

No value

# Learning Outcomes and Objectives

## Course Objectives

List the properties of matter.

Describe atoms, molecules, elements, and compounds.

Analyze and use the periodic table of compounds, acids and bases.

Interpret and write balanced equations.

Name and explain the four main types of chemical reactions.

## SLOs

**Identify the metric measurement and convert from US system to metric system.**

Expected Outcome Performance: 70.0

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*ABSE* Apply the skills that the Common Core Standards have identified for each course.  
Core  
PLOs

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*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.  
Core  
ILOs

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**List the properties of matter and distinguish between characteristics of atoms and molecules.**

Expected Outcome Performance: 70.0

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*ABSE* Apply the skills that the Common Core Standards have identified for each course.  
Core  
PLOs

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*ILOs* Demonstrate depth of knowledge in a course, discipline, or vocation by applying practical knowledge, skills, abilities, theories, or methodologies to solve unique problems.  
Core  
ILOs

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**Use the periodic table, identify symbols for common elements.**

Expected Outcome Performance: 70.0

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*ABSE* Apply the skills that the Common Core Standards have identified for each course.  
Core  
PLOs

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*ILOs* Demonstrate depth of knowledge in a course, discipline, or vocation by applying practical knowledge, skills, abilities, theories, or methodologies to solve unique problems.  
Core  
ILOs

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**Distinguish metals, non-metals and gases.**

Expected Outcome Performance: 70.0

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*ABSE* Apply the skills that the Common Core Standards have identified for each course.  
Core  
PLOs

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ILOs Demonstrate depth of knowledge in a course, discipline, or vocation by applying practical knowledge, skills, abilities, theories, or  
Core methodologies to solve unique problems.  
ILOs

State how compounds are formed and explain chemical changes.

Expected Outcome Performance: 70.0

ABSE Apply the skills that the Common Core Standards have identified for each course.  
Core  
PLOs

ILOs Communicate clearly, ethically, and creatively; listen actively and engage respectfully with others; consider situational, cultural, and personal  
Core contexts within or across multiple modes of communication.  
ILOs

Demonstrate depth of knowledge in a course, discipline, or vocation by applying practical knowledge, skills, abilities, theories, or  
methodologies to solve unique problems.

## 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

#### Measurement (10 hours)

- Physical science
  - Chemistry
  - Physics
- Scientific measurement
  - English system
  - Metric system (length, area, volume, and mass)

#### The Properties of Matter (10 hours)

- Mass verses weight
- Measuring
  - Mass of a liquid
  - The volume of a liquid
  - The volume of solid objects
- Density

#### The Structure of Matter (20 hours)

- Molecules and states of matter
- Elements
- Compounds
- Atoms
  - Models of atoms
  - Observations
- Identifying elements

#### Classifying Elements (20 hours)

- Element symbols
- The periodic table
  - Isotopes
  - Atomic mass
- Metals, nonmetals and noble gases
  - Identifying nonmetals
  - Electricity and metals

#### Compounds (20 hours)

- Characteristics of compounds
- How compounds are formed
  - Arrangement of electrons in an atom
  - How atoms combine
- Chemical formulas
- How compounds are named
- Acids and bases

#### How Matter Changes (20 hours)

- Reactions
  - Separating a mixture
  - Dissolving a mixture
- Showing reactions with chemical equations
  - Law of conservation of matter
  - Balancing equations
- Synthesis and decomposition reactions
- Single- and double-replacement reactions

**Total Hours: 100**

## Additional Information

Is this course proposed for GCC Major or General Education Graduation requirement? If yes, indicate which requirement in the two areas provided below.

No

**GCC Major Requirements**

No Value

**GCC General Education Graduation Requirements**

No Value

**Repeatability**

Repeatable

**Justification (if repeatable was chosen above)**

Non-credit courses

**Resources**

**Did you contact your departmental library liaison?**

Yes

**If yes, who is your departmental library liaison?**

Caroline Hallam (Mathematics, Physical Science)

**Did you contact the DEIA liaison?**

No

**Were there any DEIA changes made to this outline?**

No

**If yes, in what areas were these changes made:**

No Value

**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