# ABSE32 : PHYSICAL SCIENCE 1A

## General Information

| | |
|---|---|
| **Author:** | • Jesus Carino<br>• Perner, Kimberli |
| **Course Code (CB01) :** | ABSE32 |
| **Course Title (CB02) :** | PHYSICAL SCIENCE 1A |
| **Department:** | ABSE |
| **Proposal Start:** | Fall 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?:** | Yes |
| **Course Control Number (CB00) :** | CCC000338473 |
| **Curriculum Committee Approval Date:** | 04/09/2025 |
| **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 class is equivalent to the first semester of Physical Science and meets the requirements of a high school diploma. 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:** | • Noncredit |
| **Mode of Delivery:** | • Online |
| **Author:** | No value |
| **Course Family:** | No value |

## Academic Senate Discipline

| | |
|---|---|
| **Primary Discipline:** | • Interdisciplinary-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)**

Not applicable.

**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)**

Other Non-Credit Enhanced Funding.

**Funding Agency Category (CB23)**

Not Applicable.

Cooperative Work Experience Education Status (CB10)

Variable Credit Course

### 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

ESL30 - ENGLISH AS A SECOND LANGUAGE LEVEL 3

**Objectives**

- Write paragraphs at the low-intermediate level with sufficient unity.
- 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.
- Respond to questions about recorded and live speeches, dialogues, role plays, and lectures.
- Decode 2,500-word reading passages, respond to inference and recall questions, and utilize a monolingual English dictionary to advantage.

## 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** | Independent Study |
| **Methods of Instruction** | Multimedia |
| **Methods of Instruction** | Lecture |

### Out of Class Assignments

N/A

| Methods of Evaluation | Rationale |
|---|---|
| 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 |

## Learning Outcomes

### 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

**Apply use of metric measurements and conversions.** Expected Outcome Performance: 70.0

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

**Explain characteristics of atoms and molecules.** Expected Outcome Performance: 70.0

| | |
|---|---|
| *ABSE* Core PLOs | Apply the skills that the Common Core Standards have identified for each course. |
| *ILOs* Core ILOs | Demonstrate depth of knowledge in a course, discipline, or vocation by applying practical knowledge, skills, abilities, theories, or methodologies to solve unique problems. |

**Apply understanding of the periodic table to identify symbols for elements, metals, non-metals, and gases.** Expected Outcome Performance: 70.0

| | |
|---|---|
| *ABSE* Core PLOs | Apply the skills that the Common Core Standards have identified for each course. |
| *ILOs* Core ILOs | Demonstrate depth of knowledge in a course, discipline, or vocation by applying practical knowledge, skills, abilities, theories, or methodologies to solve unique problems. |

**Describe how compounds are formed and explain chemical changes.** Expected Outcome Performance: 70.0

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

**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