CHEMISTRY PLACEMENT TEST INFORMATION

General Testing Information

Offered by: Warrior Welcome Center, Student Services Center Building, 1st Floor, Room 141
Test is taken online via an El Camino College Canvas login. Appointments are needed.
Phone Number: 310-660-3405
Email: welcomecenter@elcamino.edu
For Current Office Hours:
Please visit the Testing Webpage at
https://www.elcamino.edu/student/studentservices/welcomecenter/index.aspx

Do I need to take a Chemistry Placement Test?

Yes, if you are going to enroll into Chemistry 1A (General Chemistry I). However, please note, the Chemistry Placement Test may not be taken if a student has enrolled in Chemistry 4 (Beginning Chemistry) at any time.

Do I need an appointment?

Yes, the Chemistry Placement Test is given on an appointment-basis only. Appointments are made on our Chemistry Placement Test webpage:

https://www.elcamino.edu/admissions/assessment/chemistry-placement-test.aspx

Please note: Students who have never taken a Chemistry course or who want a beginning level course, should not test, but should enroll into Chemistry 4, 20, or 21A, depending upon their majors and completion of math prerequisites.

What are the math prerequisites?

Both the beginning and college-level chemistry courses have math prerequisites, which must be met prior to enrollment into Chemistry 1A or Chemistry 4:

Chemistry 1A	=	Eligibility for Math 170 (Trigonometry)
Chemistry 4	=	Completion of Math 70 (Intermediate Algebra) with a minimum grade of C or equivalent

What do I need to take the test?

- A valid picture ID (driver's license, ECC ID card, high school ID card, passport, etc.)
- Your El Camino College ID number (the number you received when you filed your application to the College)
- A pen
- A pencil
- A four-function or scientific calculator (No graphing calculators) – provided online during the exam

Is there a fee for the test?

No, assessment testing is free.

How long will the test take?

Students will have 60 minutes (timed) to complete 20 questions.

What is the test like?

The Chemistry Placement Test is designed to assess the readiness of students who are planning to enroll in a first year college-level chemistry course (Chemistry 1A). It is an online multiple-choice test. The test presumes that students have completed one year of chemistry in high school or its equivalent. Although not mandatory, it is highly encouraged that you take an appropriate amount of time to prepare and review for the test to ensure that you do your very best on it. **The Chemistry Placement Test may be taken only once**. On the following pages you will find a listing of the topics covered by the exam and sample chemistry questions (with answers). An online periodic table will be provided at the testing session. Since this is a timed test, it is important that you do not linger on any one question. If you do not know the answer, skip to the next question--otherwise, you may not complete the exam.

When do I get the results?

You will receive your results at the end of the exam. Be sure to have your results available when you have your remote meeting with a counselor.

Can I repeat the test?

No, the Chemistry Placement Test may be taken only once. If desired placement is not attained, students are permitted to petition the Dean of the Natural Sciences Division for "placement reconsideration". The petition form is available by request via email: welcomecenter@elcamino.edu

What should I do if I test, try to register, and the computer says I have not met the pre-requisite for the course?

Please email the Warrior Welcome Center (welcomecenter@elcamino.edu) for assistance. Please include a detailed description of the problem and your phone number. We can attempt to solve the problem by manually inputting your placement level, so that you may continue your registration.

Are sample test questions available?

CHEMISTRY TEST TOPICS

The exam covers nine topic areas of general chemistry:

Compounds and Elements
States of Matter
Reactions
Stoichiometry
Structure of Matter
Periodic Properties
Solutions
Dynamics
Mathematics

TOTAL NUMBER OF QUESTIONS: 20

SAMPLE QUESTIONS FOR THE CHEMISTRY PLACEMENT TEST

Note: These questions are intended to represent the general level of difficulty and areas of coverage of the chemistry placement exam. They are NOT intended to be a complete representation of the specific types of questions to be found on the exam.

1. The correct formula for calcium phosphate is

a) $CaPO_4$
b) $Ca_3(PO_4)_2$
c) $Ca_2(PO_4)_3$
d) Ca_3PO_4

2. Aluminum reacts with element X to form a compound with the formula Al_2X_3. Element X exists as diatomic molecules, X_2, in the gaseous state at normal temperature and pressure. Element X must be

a) Nitrogen
b) Sulfur
c) Oxygen
d) Chlorine

3. What is the coefficient of 0_2 when the following equation:

$$C_2H_4O(g) + O_2(g) \rightarrow CO_2(g) + H_2O(g)$$

a) 2
b) 3
c) 4

d) 5

4. **Given the balanced equation: $2H_2(g) + O_2(g) \rightarrow 2\ H_2O(e)$**
How many grams of water are formed if 9.00 mol of hydrogen reacts completely with an excess of oxygen?

a) 18.0g
b) 36.0 g
c) 81.0 g
d) 162 g

5. **Which element has exactly five electrons in the highest principal energy level?**

a) Se b) Ba c) P d) Ge

6. **A substance releases heat when it changes from**

a) Liquid to solid
b) Solid to gas
c) Liquid to gas
d) Solid to liquid

7. **Which element is a metal?**

a) Se b) Co c) C d)Br

8. **Which of the following species is neither acidic nor basic when dissolved in water?**

a) HCl
b) NH_3
c) NaCl
d) $NaHCO_3$

9. **What volume of 1.5M NaOH is needed to provide 0.75 mol of NaOH?**

a) 500 ml
b) 5.0 L
c) 500 L
d) 0.75 L

10. **Which substance does not obey the Lewis octet rule?**

a) N_2
b) Ar
c) CF_4
d) NO

11. **For a chemical reaction it is usually found that the reaction rate is faster at higher temperature. The rate increases because**

a) The concentrations of reactants increase.

b) More reactants collide with energy equal to or greater than the activation energy.
c) The concentrations of products increase.
d) The volume expands and there is more room for products to form.

12. What will be the effect on the following equilibrium if the pressure is increased by decreasing the volume of the reaction vessel?

$$H_2(g) + I_2(g) \leftrightarrow 2\,HI(g)$$

a) The equilibrium will shift to the right.
b) The equilibrium will shift to the left.
c) The equilibrium will not shift.
d) The effect cannot be predicted.

13. To the correct number of significant figures, the result of the following calculation should be reported as

$$[(11.13 - 2.6) \times 10^4]/[103.15 \times 10^{-6}]$$

a) 8.3×10^8
b) 8.3×10^{-4}
c) 8.27×10^8
d) 8.27×10^{-8}

14. Which answer is closest to the true value of the expression:

$$(9.1 \times 10^4)(1.1 \times 10^{-5})(\log 10^{-13})(1000)$$

a) 1.3
b) 13000
c) -13000
d) 1.3×10^{-11}

Answers: 1b;2c;3d;4d;5c;6a;7b;8c;9a;10d;11b;12c;13a;14c