

## Why is There a Chemistry Placement Test?

The chemistry placement test is designed to identify students who have the potential to successfully complete CHM 151, or General Chemistry I. Excellent math skills and college-level reading skills often predict success in General Chemistry while previous exposure to chemistry is expected.

Some North Carolina public universities have chemistry placement tests (such as North Carolina State and University of North Carolina at Asheville) while other public universities have math pre-reqs for General Chemistry (such as University of North Carolina at Chapel Hill and Appalachian State University). Some universities, such as Eastern Carolina University and North Carolina State University, offer pre-college level chemistry courses to prepare students for college level chemistry.

College level chemistry is very different from high school chemistry and the estimates for failure rates in General Chemistry courses range from 25 - 60%. For more information about the difference between high school chemistry and college level chemistry, please read the brief explanation of [Why Students Drop Out of Chemistry 101](#).

At Haywood Community College, student success is our priority. We want students to have the opportunity to take a university level chemistry course with the skills they need to succeed. The chemistry placement test helps us identify whether your current skills are a good match for the demands of college level chemistry.

Whether your next step is to transfer a four-year institution, seek admission to a competitive graduate program, or earn your credentials for a degree at Haywood Community College, we want you to be competitive, confident and prepared for success.

## What is the Chemistry Placement Test?

The Chemistry Placement Test consists of 1 content question (your name and student id) and 30 content questions. The questions are short answer, multiple choice and matching.

There is no time limit to the test, but you should give yourself at least an hour to carefully consider every question.

Students are not permitted to use a calculator, but there will be simple calculations on the test.

You will be given a pencil and scratch paper. A periodic table will be provided as a link on the test.

The majority of the questions are stated within a chemical context, most of the questions require good logic, math and reading skills. Some of the questions require knowledge of mathematical or chemical concepts.

The test is designed so that students with an excellent background in chemistry, as well as students who may have a weak background in chemistry but excellent math and reading skills, will be able to pass.

## **What is the passing grade and what if I don't pass?**

The passing grade is 60%, which means you must get at least 18 questions correct. If you make a grade between 55 - 59% you may take a re-test. However, the second test must be taken at least two weeks after the first attempt.

If you don't pass, you must pass CHM 090 before you can enroll in CHM 151. CHM 090 is offered online at Haywood Community College during the summer and as a face to face course in the spring.

## **How Should I Prepare for the Chemistry Placement Test?**

As with any placement test, you will want to do your best to prepare yourself. Please review the test taking strategies and the math and chemistry concepts that you are expected to be familiar with. The practice test has five sample questions that are similar to some of the questions you may see on the placement test. You are encouraged to take the practice test. This test can be taken as many times as you like and it does not affect your grade on the chemistry placement test.

### **Good Test Taking Strategies**

- Be sure that you are well-rested, well (not over) fed, and hydrated.
- Give yourself enough time to take the quiz - you want to be able to read each question carefully and answer to the best of your ability.
- Read each question at least two times to be sure that you understand the question.
- For multiple choice questions, try to determine the answer first. Some of the multiple choice questions can have as many as seven choices.
- Do not be over confident! Check your answers when possible.

### **Math Concepts**

- Review percentages
- Review scientific notation
- Review operations with powers of ten
- Review geometric concepts such as volume, the difference between diameter and radius

- Review algebraic manipulation of linear equations and solving linear algebraic equations
- Review linear graphs

## Chemistry Concepts

- Review moles
- Review stoichiometry, including limiting reagents
- Review balancing chemical equations
- Review nomenclature
- Review quantum chemistry including photons
- Review subatomic particles
- Review dimensional analysis and units
- Review the periodic table
- Review classifications of chemicals (metals, non-metals, molecules, compounds, ionic, molecular, etc.)
- Review metric units and prefix meanings
- Review ideal gas law

## Some other tips:

- You will not be required to memorize any formulas or equations.
- The periodic table will have the names of the elements.
- You will be given scratch paper.
- You will be given the chance to review your answers before you submit the test.

## Online Resources to Help Me Prepare for Math

For math concepts, the Purple Math site is excellent: <https://www.purplemath.com/>.

This site includes notes, video tutorials and interactive problem solving Purplemath has a search bar that you can use to isolate specific content (such as scientific notation).

The screenshot shows the Purplemath website interface. At the top, there are three buttons: DEMO, JOIN, and LOGIN, all with the MathHelp.com logo. Below these is a navigation bar with links for Home, About Us, Contact Us, and Privacy Policy. The main content area is divided into three columns. The left column features the Purplemath logo and a section titled 'Need help with math? Start browsing Purplemath's free resources below!' with a link to 'Lessons: How do you really do this stuff?'. The middle column is titled 'MathHelp.com' and includes a search bar, a 'Need a personal math teacher?' section, and three categories: LEARN (from a teacher), PRACTICE (with a teacher by your side), and TEST (yourself). The right column is titled 'MATHHELP LESSONS' and includes a search bar with an arrow pointing to it, and a list of lesson categories: Elementary / Middle / High School Math, 5th Grade Math, 6th Grade Math, Pre-Algebra, Algebra 1, Geometry, and Algebra 2.

## Online Resources to Help Me Prepare for Chemistry

For chemistry concepts, Kahn Academy provides videos on chemistry concepts. If you are an audio learner this is a great site for you

<https://www.khanacademy.org/science/chemistry>.

The Learn Chemistry site is designed to assist AP Chemistry students and contains notes, examples of problems and interactive problems

<http://www.learnchem.net/tutorials/>.

The Brightstorm site has videos on chemistry concepts. Unlike Kahn Academy, these videos display the instructor as well as the work on the board.

<http://www.brightstorm.com/science/chemistry/>

## Who Do I Contact if I Want to Take the Chemistry Placement Test?

To make an appointment to take the chemistry placement test, please contact Debbie Rowland at [drowland@haywood.edu](mailto:drowland@haywood.edu) 828-627-4607.