

DORDT COLLEGE

CHEMISTRY ASSESSMENT/PLACEMENT TEST INFORMATION

All students taking either Chemistry 101 or 111 need to take the placement/assessment test. The test is a 60 question multiple choice test. You will have 1 hour to complete the test. You will need to bring a #2 pencil and a calculator. This test will only be used for assessment and placement purposes, and will have no effect on any course grades. There are no penalties for wrong answers, so it is to your advantage to answer every question.

Times and Locations

Saturday, August 24, x-x PM, SB108

Monday, August 26, x-x AM, SB108

Only students who have been contacted need to plan on taking the placement test during WOW. Other students will have the test administered during the first couple days of class.

Topics covered on the test

The test is based on the topics typically covered in a year-long high school chemistry course and a year of algebra. The list below outlines these topics.

Mathematics (1/3 of test)

- understanding algebraic expressions
- algebra, manipulation of equations
- exponential notation
- percentage and average
- reading and interpreting graphs

Chemistry (2/3 of test)

- physical and chemical properties
- density
- units of measurement and SI prefixes
- structure of the atom: protons, neutrons, and electrons
- electron configurations
- isotopes
- organization of the periodic table

Chemistry (continued)

- understanding and using chemical formulas and molecular models
- reactivity of elements based on position on the periodic table
- molecular interpretation of physical properties (melting point, boiling point, solubility)
- names and symbols of common elements
- naming compounds and polyatomic ions
- molar mass
- mole-mass-molecule calculations (stoichiometry)
- concentration units: molarity
- limiting and excess reagents
- ideal gas law concepts
- chemical energy
- definition of acid and base

Preparing for the test

The topics noted above will be covered in Chemistry 101. Chemistry 111 will assume that you are familiar with these topics. You may want to study so that you can score well on the placement test and start in Chemistry 111 this fall. The following websites have information, tutorials, videos, and other resources that you can use to review.

- General Chemistry Topics at Purdue:
<http://chemed.chem.purdue.edu/genchem/topicreview/index.php>
- General Chemistry Online at Frostburg State University:
<http://antoine.frostburg.edu/chem/senese/101/index.shtml>
- Chemtutor.com: <http://www.chemtutor.com/>
- Kahn Academy: <https://www.khanacademy.org/science/chemistry>
- Principles of Chemical Science at MIT:
<http://ocw.mit.edu/courses/chemistry/5-111-principles-of-chemical-science-fall-2008/>
- Introduction to Chemistry at Carnegie Mellon Univ.:
<http://oli.cmu.edu/courses/free-open/chemistry/>
- Useful handouts from UMass Boston:
<http://ocw.umb.edu/chemistry/chem-115-chemical-principles-i/other-materials>