

Increasing student success in General Chemistry

The easiest and most successful strategy for increasing student retention and success in General Chemistry is to *increase the amount of time* that students spend engaged with the subject material. Here's how to do it *without increasing your workload*:

1. Assign weekly ChemVantage quizzes for students to complete online *prior to class*. Make the quizzes count 10% of the total grade for the course, because students don't complete optional assignments.
Result: students come to class prepared to learn.
2. Assign weekly ChemVantage homework problem sets to complete online *after class*. Make the homework count 15% of the total grade for the course.
Result: students learn to apply their knowledge to solve problems.

During Fall 2011 a group of 1123 students using ChemVantage were assigned to complete 15 quizzes (1 each week) and 150 homework problems (10 each week). Students were allowed to repeat the assignments to improve their scores. On average, students took each quiz 6.4 times to achieve an average score of 91%. They submitted answers to the homework problems an average of 2.4 times for each problem, achieving an average score of 82%. The average number of assignments submitted by *each student* was 456.

How do students rate



ChemVantage?

How much does ChemVantage cost?

ChemVantage is free to individual users. Just browse to <http://www.chemvantage.org> and login with your Google, Yahoo, AOL or MyOpenID credentials.

In order to provide support and instructor tools for large classes, we must charge a fee. There are two options for this:

1. We charge each student \$4.99 to join a class using ChemVantage. This works out to about \$0.005 per quiz or homework submission over 2 semesters.
2. If the school or college purchases seats on behalf of their students in quantities of 50 or more, the cost is only \$2 per seat (60% discount).

Each institution gets a 4-month free trial period. There is no activation fee, and all student accounts established during this time are without charge. Instructor and administrator accounts are always free.

How Do We Get Started?

There are two main options for institutions to authenticate students using their school or college credentials:

1. **ChemVantage is available as an installable Google App.**
If your institution uses Gmail for student email accounts, your Google Apps administrator can simply browse to the Google Apps Marketplace EDU and install ChemVantage in a few clicks.
2. **ChemVantage is a certified Basic LTI Tool Provider.**
If your class uses a learning management system (LMS) such as Moodle or Blackboard, then you can set up a link to authenticate students and instructors from inside the LMS. All major LMS platforms provide this functionality. Ask your LMS administrator to contact us at admin@chemvantage.org to set this up.

It's also possible to have students authenticate with their Gmail or Yahoo credentials and join classes, but this usually requires a lot of support and we don't normally recommend it, especially for large classes.

How Do I Set Up My Class?

Once you have been granted instructor privileges, you can login to ChemVantage and click the 'Instructor' link at the top of the page. Our [online instructor guide](#) will lead you through the steps to create your ChemVantage group, assign quizzes and homework sets by setting deadlines for each assignment, select the individual questions used for each assignment, assign one or more teaching assistants, manage your group enrollments, and download group scores for quizzes, homework sets or practice exams.

How Can I Get More Support?

Send us email anytime at admin@chemvantage.org with questions or comments. If you need immediate assistance, call us at +1-801-810-4401.



ChemVantage – an Open Education Resource

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