

ALEKS

INSTRUCTOR Guide

Fall 2010

What is ALEKS?

Aleks is an online system for the assessment and individualized teaching of mathematics that can be accessed on the Internet. The core of the system is an efficient, adaptive assessment tool that determines quickly and precisely what an individual student knows. Based on that assessment date, the system is able to offer material that the student is best able to learn at a given time.

In addition to the initial assessment, ALEKS offers a learning mode that includes explanations and algorithmically generated problems, ongoing assessments of student knowledge and facilities for review and collaborative help. It can be used on an independent basis or as a supplement to classroom instruction. We have linked ALEKS to the textbooks we are using in our developmental mathematics courses so that the help students get is directly linked to their texts.

How are we using ALEKS in Basic Mathematics and Algebra I this semester?

After having had success with ALEKS in delivering the Basic Mathematics and Algebra components of our combination courses, in Safety Net and summer Bridge Programs, we decided to incorporate it into all our 010, 010A, 010B, 013, 013A and 013B sections during the spring 2010 semester.

Once again, the use of ALEKS will be **mandatory** for the fall 2010 semester for all Basic Mathematics and Algebra I sections (including all 'A' and 'B' forms of the courses). Approximately 25-30% of the students' final grades will depend on the work they do on ALEKS, including the completion of the ALEKS pie (explained later in this guide) and scores on ALEKS Mastery Quizzes (explained later in this guide).

It can't be emphasized enough how important the instructor's involvement in students' performance on ALEKS is to the success of the students in your class. Not only is instructor involvement a key, but also getting students started from Day #1 is critical. If you show interest in ALEKS, your students will hopefully follow suit. This does not always happen, but if you show no interest, the chances of students considering it important are very slim.

IMPORTANT NOTE: Your classroom should be media-enhanced. That means you should be able to log on to ALEKS and project the site in your classroom to help students become familiar with ALEKS. This will help in convincing them that ALEKS is easy to use.

How has ALEKS been set up for use in your course?

❖ CONTENT

Each developmental mathematics coordinator has set up an ALEKS course for your class. The first step taken was to select the skills to be included in the ALEKS assessment and learning mode for a particular course. From a long list of skills, those that best fit our courses at MCC were selected. These skills fall into categories and become the sectors of a pie that the student must try to complete. Each sector of the pie is a different color, making it easier to distinguish one sector from another. When your class is set up you will be able to view the list of skills by going to Course Content.

Our developmental courses do not exactly line up with all of the content in the corresponding ALEKS Basic Mathematics and Algebra courses. The Coordinators have done the best they can to align the ALEKS course with the course you will be teaching.

For Mat-010, the pie sectors are:

1. whole numbers
2. fractions
3. decimals, proportion and percent
4. measurement and data analysis
5. geometry
6. signed #s (and introduction to algebra)

For Mat-013, the pie sectors are:

1. arithmetic readiness
2. real numbers and variables
3. linear equations (and inequalities)
4. functions, lines and systems of equations
5. integer exponents and polynomials
6. rational expressions and proportions
7. radicals and rational expressions
8. complex numbers and quadratic equations.

❖ ALEKS ASSESSMENTS

Initial Assessment

Once a student has registered himself in your ALEKS course (the registration process is explained later in this guide) he will be prompted to take an initial assessment. The problems on the initial assessment are open-ended and the assessment is adaptive; that is problems are selected from the content list based on all previous answers the student has given. It is impossible to predict which types of problems will appear, or in what order.

The initial assessment usually takes approximately 30 minutes or less and will generate a pie comprised of sectors described above.

The pie that is generated is different for each student. A sector will have a shaded part and nonshaded part. The shaded part of the pie indicates the skills a student knows and the nonshaded part of the pie indicates what the student has yet to learn. ALEKS will not allow a student to work on a skill that he is not ready to learn. For example, if a student has not learned how to multiply whole numbers, he will not be allowed to work on multiplication of fractions.

IMPORTANT NOTES:

Students must take the initial assessment in the Learning Center. (see Johnson Commons Learning Center below).

Students who score at least an 80% on the initial assessment (that is, they have mastered 80% of the skills in the content list for the course) will be eligible to move up to the next developmental mathematics course or credit course, depending on the curriculum they are following. These students should be sent as soon as possible to Center 2 to speak with Dr. DeLucia or Dr. Groninger about moving to the next level.

Students who have a high enough score will have only one week to make this move. Therefore, time is of the essence for students to take the initial assessment.

Similarly, students in the one-semester Mat-010 or Mat-013 who score very low on the initial assessment might consider taking the course in two semesters instead of one and might want to drop down to Mat-010A or Mat-013A. Students have four weeks to do the drop down, but the sooner they are registered in the format that is correct for them, the better their chance of success and retention.

Assessments During the Semester

As students work through ALEKS and complete skills, ALEKS will automatically generate a progressive assessment in order to assess the skills the students have not only mastered, but have retained. Usually an assessment will pop up when the student has mastered 20 skills or has been away from ALEKS for a while.

Students who have forgotten previously mastered skills will often notice a **decrease** in the percent of the pie they have completed. Many students get discouraged when they see the decrease in mastered skills. PLEASE explain this to your students and tell them that the decrease in mastered skills is common. Eventually, as the student practices enough and show mastery for a significant amount of time, the pie will increase, until they have reached their final goal. If you reassure them, they will not panic and give up.

★ LEARNING MODE

Once the student's pie has been created, the student can begin working on the learning process. In the Learning Mode. Students choose a sector of the pie they will work on. If whole numbers or integers are being taught in class, students should begin working on those sectors. ALEKS will not allow a student to work on any skill until he is ready. Only skills that the student is ready to learn will be accessible in any given sector. The day-to-day outline will help guide the student in making his way through the pie in a way that parallels the course. This will not be a perfect match, but you can guide your students in optimizing the connection between what you are teaching in class and their work on ALEKS.

Once the student clicks on a topic in a sector, he is given a problem to try. If he knows how to solve it, he can submit the answer. If not, he can click on the EXPLAIN button and an explanation will come up. Because each course is connected to the textbook being used, there are other resources available to help the student. There are PDFs of the text, as well as video lectures on many topics. Once the student practices the skill with no explanation needed and gets enough problems correct (usually two or three), ALEKS will deem that the skill has been learned and adds it to the shaded part of the pie sector. The student continues to work in the Learning Mode until a new assessment appears and the student's progress is reevaluated.

❖ COMPLETING THE PIE

Students continue working on the pie from any computer on or off campus. If a student has 40% of his pie shaded at the initial assessment and then works during the semester to fill another 50% of the pie, he or she will have a total of 90% on the pie. This percentage will comprise 15% of the student's final grade in the course.

❖ QUIZZES

The Coordinators have created ALEKS quizzes for your students to take. These ALEKS quizzes, combined with your own quizzes should comprise 15% of the final grade. There are Practice Quizzes and Mastery Quizzes. The Practice Quizzes may be taken as many times as the student would like and the Mastery Quizzes may be taken only once. The Mastery Quizzes must be taken in the Learning Center in the Johnson Commons. (see Johnson Commons Learning Center below for more information). You will be able to view the quiz scores easily (see Tracking Progress packet) and use those scores with scores on your class quizzes to compute the quiz average.

IMPORTANT NOTE:

The ALEKS quizzes are **not** found under the Quiz Tab, as one would expect. Because of the way ALEKS has been set up, if an assessment is listed as a quiz, the student must take it at a specific time. This would not work for our format. In order to solve this problem, we had to list all quizzes under the 'Homework' tab. Students must click on the 'Homework' tab when they want to work on a Practice or Mastery Quiz.

❖ HOMEWORK

In addition to the quizzes we have created that appear under the 'Homework' tab, you can create your own homework assignments as well. These would appear in the same list as the quizzes, but you would want to label them as homework to distinguish them from the quizzes that appear under the same tab.

If you want to create homework assignments, click on the 'homework' tab, click on 'add homework' and fill in each section as needed. If you need help in creating your own homework (or quizzes), please ask.

❖ TRACKING STUDENT PROGRESS

It is extremely important that you track the progress of your students on the ALEKS pie and quizzes. Because ALEKS can count for as much as 30% of a student's grade, it is almost impossible for a student to earn a 'C' in Basic Mathematics or Algebra without doing work on ALEKS.

A separate packet on how to track your students' work on ALEKS will be distributed.

❖ REGISTERING FOR ALEKS

Instructor Registration

Your registration has been done for you. You will get a login and a password so that you can log in at aleks.com. You will also be given a course code. This is the code that you must give to your students so that when they register, using this code, they will appear on your ALEKS roster. You will be able to track the progress of each of your students.

How do my students register for ALEKS?"

The textbook that your students purchase in the MCC bookstore comes packaged with an ALEKS Access Code. This access code is needed in order to be able to register for ALEKS. If students have not bought or opened their text package before the first day of class, make sure you remind them that the Access Code is shrink-wrapped with the book. Some students hastily open the package and unknowingly discard the Access Code.

IMPORTANT NOTE:

If your students DO NOT have an access code because they purchased the text elsewhere or as a used copy, they will have to purchase the stand-alone ALEKS access code that is sold in the bookstore.

Please make sure that your students do not delay the registration and initial assessment for ALEKS. It is critical to the students' success that they get started immediately!

To register the student follows the directions below:

1. go to aleks.com and clicks on "new user sign up".
2. enter the course code you have been provided by your instructor on the side of the screen that says, "**Using ALEKS with a class**".
3. click on 'continue' and enter your ALEKS Access Code. (This is the code that is found on a sticker inside the back cover of the ALEKS booklet in the package).
4. complete the registration (make sure to enter your email address so that you can be contacted if there is any information you need to know).
5. students will receive create a login name and a password, which they should be encouraged to write down and keep in a safe place. Students can change their password if so desired.

Once students login to the system for the first time, they must take the initial assessment, a tailor-made pie will be generated and then they are on their way to learning what they need to know. **The course has been set up so that students must take the initial assessment 'at school'. This means that students will have to go to the Learning Center to take the initial assessment in a proctored environment.**

There has been some confusion, especially for students who are going from a Mat-010A to a Mat-010B or from a Mat-013A to a Mat-013B course, as to whether they have an ALEKS code that is still active from the spring 2010 semester. Please instruct students who think they might have an active code to try to login with the username and password they used in the spring. If the student can log in, he can move himself from the spring 2010 course to your fall 2010 course by following the instructions below:

Instructions for moving from one ALEKS course to another:

1. Log in to ALEKS using the user name and password from your previous course.
2. At the top of top of the screen, click on OPTIONS
3. In the middle of the screen, click on CHANGE COURSE CODE
4. Enter the course code of the new course you are beginning
5. You are now in the new course and will be asked to take an appropriate Assessment.

IMPORTANT NOTE:

Students must be encouraged on Day #1 to go to the Learning Center to take the initial assessment. Students who do not take the initial assessment by the end of the first week risk falling behind in the course.

❖ **LEARNING CENTER – JOHNSON COMMONS – IRC 241**

The Johnson Commons Learning Center provides assistance for students in developmental math courses. There are computers, from which students may access ALEKS, and also tutors who are available to assist students who may need help.

Reserving space for you and your class during class meeting times:

There are areas within the Learning Center that may be reserved for use with a class. The instructor **MUST** be present with the class for whom space has been reserved during the class meeting time. These areas are reserved on a first-come, first-serve basis. To reserve a section, please contact Melissa Platt at MPlatt@middlesexcc.edu or (732) 548-6000 x3516.

Student Use of the Learning Center:

Upon entering the Learning Center, students will be asked to sign in. Students will need to show a current, valid MCC student ID to use the Learning Center. All ID cards must be validated for the current term by going to the Student Activities office in the College Center.

Taking a Mastery Quiz:

Many of the math students who use the Learning Center will do so to access ALEKS. Mastery Quizzes must be taken in the Learning Center. The following are the procedures that must be followed when taking a Mastery Quiz:

1. Students must let the tutor on duty know that they will be taking a Mastery Quiz before starting the Quiz.
2. Students will not be able to get help while taking a Mastery Quiz.
3. When the quiz is complete, students must let the tutor know that they have finished so that their score may be recorded for reporting to their instructor. Students will be asked to show ID and their score to a Learning Center staff member upon completing the quiz.

Tutoring:

Students who are in need of assistance with homework or with reviewing for an exam should see one of the tutors in the Learning Center. Tutors work on a first-come, first-serve basis, rotating through students who are requesting assistance; therefore we ask that students be patient. Tutoring will be more successful if students come to the Learning Center prepared with questions. If students are working on homework, they should complete as much as they can so that the tutor can know exactly what help to provide. Unless otherwise notified, tutors do not provide assistance on graded work (take-home quizzes/tests). If you wish to make arrangements for tutors to assist your students with a take-home assignment, please email Melissa Platt at MPlatt@middlesexcc.edu with as much information about the assignment as possible. Please indicate the course, when the assignment was given and when it will be due.

Workshops:

At the beginning of the semester, there will be ALEKS workshops held in the Learning Center. This will help your students who are just getting started using ALEKS. There will also be topic specific workshops held during the semester in the Learning Center. You will get a schedule of the available workshops that will be held.

❖ TECHNICAL TIPS AND SUPPORT FOR INSTRUCTORS

The more we use ALEKS in our courses, the more we learn some of the ins and outs of the system. What follows is a list of some of the technology information you and your students will need to have at your fingertips during the semester :

Making changes to quiz Start and Due dates.

Mastery Quiz dates have all been scheduled to begin on the first day of the semester and to be accessible until the last day of the semester. Many of you will want to make changes to these starting and due dates. Because all quizzes are listed under the

Homework Tab, you will be able to edit quiz dates by going to the Homework Tab. The instructions below will assist you with the process.

1. Click on the Homework Tab
2. Click on Edit Homework
3. Click on the Homework you want to edit
4. Enter the Start and End dates and then scroll down and press 'Save'.

Making changes to or deleting quiz grades

Your students will be taking many quizzes on ALEKS. You might find it necessary to make adjustments to quiz results or to even delete a quiz result for some students during the semester. The following is information on how to make the necessary adjustment.

1. Click on the 'Homework Reports' Tab
2. Click on the quiz you want to alter or delete for one of your students
3. Find the student whose score you want to adjust and click on the DATE that student took the quiz you will be adjusting or deleting
4. There is a 'delete this result' button at the bottom or you can choose to view and/or adjust the result of any question on the quiz.
5. If you have deleted the result and the quiz is still active, the student will be able to retake the quiz.

Preventing an automatic assessment from popping up for a few days prior to a class exam

Some instructors have expressed concern that for the period of time prior to an in-class exam, students should be able to work on their ALEKS pie for study purposes without worrying about an automatic assessment popping up. There is no easy way, as of now, to make sure that progressive assessments do not pop up a few days before an exam. Some instructors have suggested a contrived way to prevent the automatic assessment. It entails setting up a fake quiz that is scheduled for the exact date of your class exam, then clicking on the feature found in Step #4 that tells ALEKS to prevent automatic assessments whatever number of days you think would work. The following is what you would do to achieve this goal:

1. Click on the 'Quiz' Tab
2. Click on 'new quiz'
3. Set up a 'dummy' quiz, making the date of your in-class test the start and end date for the quiz.
4. Fill in whatever you have to in order to make it a valid quiz.
5. Select in Step 4 'prevent automatic assessment' for as many days as you want and then select for the entire class.
6. When the test is over and you no longer need this, delete the quiz.

Correcting answers in the Learning Mode or during assessments (make sure your students know about this)

Students should not use a 'back space' button to change an answer they have entered in the Learning Mode or on an assessment. Using the 'back space' often prompts the system to grade the the answer as incorrect. Students should use the '**Clear**' button on the palette instead. This will work better the majority of the time..

We will let you know about other idiosyncrasies as they present themselves during the semester. Please let us know anything that you think would be of interest to everyone.

Technical Support for ALEKS

There will be an ALEKS orientation during the week prior to the beginning of classes. There will also be ALEKS workshops set up in the Learning Center for your students. You might benefit from these workshops as well. The staff in the Learning Center is another resource you can use for assistance.

You can get technical support and consultation by using the following:

online: <http://support.aleks.com> phone: (714) 619-7090

fax: (714) 245-7190

Please feel free to ask any questions about the use of ALEKS in your courses. Susan Shulman, Clairie Vassiliadis, Dr. DeLucia ,Dr. Groninger in Center 2 and Melissa Platt in the Learning Center are often available to help you. Other faculty members who have used ALEKS before can also be consulted.