

# On-line Review Course for C117



Instructors have found the ALEKS on-line review course to be an outstanding tool for preparation for a rigorous General Chemistry course like C117. Completion of the course with 95% mastery is

- a) Required for enrollment in C117 if your CPE (chemistry placement exam score) was in the range 0-14.
- b) Strongly recommended if your CPE score was in the range 15-20.



**Completion of the ALEKS on-line course is due at the time of enrollment. Students who do not meet the 95% mastery will not be given permission for C117. You do not need to complete the ALEKS tutorial if you have received a passing grade in C103.**

This assignment will use a system called ALEKS ("Assessment and Learning in Knowledge Spaces"), an online assessment and tutoring service. The ALEKS system contains step-by-step instructions to teach you how to use it.

**Quick start guide** (Supported browsers: Internet Explorer 7.0+ or Google Chrome 4.0+. **Do NOT use Firefox browser.**):

1. Go to ([www.aleks.com](http://www.aleks.com))
2. Click on the button marked "New User? Sign Up Now" Located just below the login window  
Enter the course code (JVEUF-AHQ9X) in the two boxes provided on the left side of the screen beneath the heading: "Using ALEKS with a class?"
3. Follow the instructions to register as a new user and establish an account. There will be a one-time \$30 fee.  
IMPORTANT: In the field asking for "Student ID#," enter your IU username (first part of your official IU email address before the '@' symbol), NOT your actual ten digit ID number.
4. Click the "continue" to install the ALEKS plug-in to work with your browser. (You will only need to install the plug-in the first time you use ALEKS on your computer. See below for contact information for ALEKS Customer Support.)
5. After installation of the plug-in, you will need to close your browser and return to ALEKS.com in a fresh browser window
6. After a quick tutorial on using ALEKS, you'll take an individualized online assessment. It will take about an hour and a half.
7. Once you finish taking the assessment (be sure to do this on your own without ANY help) You'll enter what's called "Learning Mode" in ALEKS. ALEKS will work with you on problems that a) You are ready to learn right now, and b) hone your skills in the topics the IUB chemistry faculty have selected as most critical to your success in Chemistry C117.

It will take the average student about 25 hours (some will take much more, others much less, because ALEKS is individualized) to complete the initial pre-training module we have designed for you. If you remember your chemistry well, the questions will go faster. If some things are harder to remember, this tool will provide detailed tutorials so that you have the background knowledge needed for success in C117.

There are more instructions and details on the following pages. If you have trouble with the ALEKS program, **contact the ALEKS Corporation directly** (Email support: <http://support.aleks.com> Phone: (714) 619-7090).

Have fun reviewing chemistry!

## Detailed Instructions

### General Chemistry Assessment, Tutoring, and Learning - ALEKS for Chemistry C117

**C117: Fundamentals of Chemistry and Biochemistry** is a rigorous course that expects students to be comfortable with concepts from a challenging high school chemistry course. Everyone in the Department of Chemistry and at IUB wants you to be successful in your degree program, and because general chemistry is one of the most challenging subjects studied, we have provided students with a new tool that will:

- rapidly identify any important gaps in comprehension of high-school math and science preparation
- efficiently assist students to eliminate those gaps through guided self-study
- provide an interactive tool for study of review material at an individualized pace for each student.

This tool is called ALEKS ("Assessment and Learning in Knowledge Spaces"), and it's an online assessment and tutoring service you can access from any Internet-connected computer. ALEKS will itself teach you how to use it, and ALEKS Corporation will provide you with full technical support in case you have any difficulties getting it to work on your computer.

**You will need to achieve a score of 95% mastery to be eligible to enroll in C117 if your CPE score was in the range 0-14.**

**It is strongly recommended that you read through this entire page prior to starting ALEKS.**

1. Point your browser to [www.aleks.com](http://www.aleks.com) and create an account as follows:
  - a) Go to ([www.aleks.com](http://www.aleks.com))
  - b) Click on the button marked "New User? Sign Up Now" Located just below the login window
  - c) Enter the course code (JVEUF-AHQ9X) in the two boxes provided on the left side of the Screen beneath the Heading: "Using ALEKS with a class?"
  - d) Follow the instructions to register as a new user and establish an account. There will be a one-time \$30 fee. IMPORTANT: In the field asking for your name be sure to enter your full name used for your IU enrollment. In the field for "Student ID#," enter your IU username (first part of your official IU email address before the '@' symbol), NOT your actual ten digit ID number.
  - e) Click the "continue" to install the ALEKS plug-in to work with your browser. (You will only need to install the plug-in the first time you use ALEKS on your computer. See below for contact information for ALEKS Customer Support.)
  - f) After installation of the plug-in, you will need to close your browser and return to ALEKS.com in a fresh browser window, so you can log in and get started

Supported browsers: Internet Explorer 7.0+ or Google Chrome 4.0+. Don't use Chrome if you are on a Mac. If you have trouble with one browser, try another, or contact ALEKS support

2. After a quick tutorial on using ALEKS, you'll take an individualized online assessment, covering high-school math, algebra, and chemistry. It's not timed, but it will probably end up taking you about an hour to an hour and a half. It's impossible to say ahead of time exactly how many questions will be on this assessment, or what they'll be like, because ALEKS chooses new, randomized questions based on your answers to the previous questions. That is, it adapts to your particular state of knowledge.
3. After the assessment, ALEKS will report its findings to you. You'll be able to see what areas of math or chemistry you should review or learn to get ready for chemistry at IUB.
4. Assuming you have some studying to do, you'll enter what's called "Learning Mode" in ALEKS. In this mode, ALEKS will work with you on problems that hone your skill in the topics the IUB chemistry faculty have picked out as most critical to your early success in C117 and the chemistry curriculum.
5. As you master each topic, ALEKS will open up more advanced topics for you to study, until you reach your needed level of preparedness. **The more that you complete, the better prepared you will be for chemistry C117.**

## **Important information about ALEKS**

The biggest advantage of the ALEKS approach, you'll find, is that it is completely individualized. You'll be reviewing only those topics in which you yourself need help. You won't be wasting time on topics you've already fully mastered.

**But we'll also warn you: this may not be a fully enjoyable process, especially if you don't do the assessments carefully and honestly!**

ALEKS is, frankly, like a merciless pre-season training coach. It will train you and drill you on solving chemistry problems until you can do them in your sleep, correct to the last decimal place. It will even go back and re-assess you on earlier material, from time to time, just to make sure you've still got permanent mastery of it. It can be tough! So keep in mind two things:

- Don't try to cram all your ALEKS work into a short period of time, like two or three days. That's like a couch potato trying to run 500 miles in one week to train for a marathon. It just won't work. Plan on spending about an hour or two each day on ALEKS, with plenty of rest in between sessions.
- **Get started as early as you can. That will give you plenty of time to get everything done at a reasonable pace.**

**The good news is that we know your "pre-season" work will really pay off the semester.**

## **Tips for taking the ALEKS initial assessment:**

Once in the ALEKS system, you will work through a short tutorial on how to enter answers in ALEKS. Then you'll start your initial assessment. Here are some tips for getting the best results from the initial assessment:

1. **Take it seriously.** ALEKS studies your answers very carefully, and draws a lot of conclusions from each one. If you make careless or silly mistakes, ALEKS will almost certainly conclude you know a lot less math and chemistry than you do. The ALEKS program will then give you much simpler problems to work on before returning you to the level that you made a mistake on. That will be very painful to go back and do easy questions when you really knew the answer!
2. You'll be assigned lots of topics to review that you already know. We hope you already know them! We want to be sure that everyone is up to speed on fundamental chemistry topics that we will build on in C117.
3. Take your time solving problems. At least 2 or 3 minutes, sometimes 5 or 10. Double check your work. Examine it for typos, sign and unit errors, things you might have accidentally left off or forgotten to erase. Remember, ALEKS is a computer program, not a human being.
4. Don't tire yourself out. An ALEKS assessment isn't timed. You can take as long as you like -- you may wish to spread the assessment out over several days. And you can pause anytime. Just log out (click EXIT). ALEKS will remember exactly where you were, and put you right back there when you log in again. If you find yourself getting tired, frustrated, angry -- JUST LOG OUT. Go get something to eat or drink, relax, talk, read. Don't risk an expensive careless mistake by continuing when you're not at your best.
5. **Don't cheat yourself by cheating.** Don't look up answers on the Internet or a textbook. Don't ask a friend for help. There's no point to this! ALEKS will let you keep working until you have achieved the score necessary for this assignment. It's just a way to find out what exactly YOU need to review. If you're not fully honest with ALEKS, it won't assign you the right topics to study. You'll either end up bored (if you get topics that are too easy) or frustrated (if you get topics that are too hard). Either way, you're bound to spend more time, ultimately, than if you give ALEKS the most honest possible picture of what you know and what you don't. *Remember that if you do not know the basics, then you'll be at a serious disadvantage.*
6. Don't be surprised when you can't solve problems. Remember, ALEKS is looking for the outer limits of what you know. That's only possible if it asks you at least one or two problems that it's pretty sure you won't be able to do. So expect that. If you think there's any chance you can solve a problem, it's best to give it a shot. But if you really have no clue, there's a button marked "I haven't learned this yet." Click there to tell ALEKS you really don't know this topic, and it will go on to the next problem.

## **Getting started in ALEKS Learning Mode:**

After you complete the assessment, ALEKS will show you your "Pie."

This is the central ALEKS report and navigation tool. It's a pie chart of all the topics in the C117 ALEKS course, arranged by color-coded subject area. Fat slices have a lot of topics in them, and narrower slices have fewer. The darker shading on each slice tells you how much of that slice YOU have mastered.

Your goal in ALEKS Learning Mode is to add topics to this Pie, which will make the dark shading move outward.

To get started learning how to solve problems in a topic, move your mouse over some slice of the Pie, opening up the menu, and select a topic. Not ALL of the topics in a slice that you don't know will be available for selection. That's because topics are only available for selection if you're prepared for them -- if you've mastered all the pre-requisite skills. As you master more topics, more topics will become available.

Topics in the ALEKS initial assessment have been divided into seven major sections (resembling the beginning chapters of a general chemistry textbook):

1. Math and Algebra Review
2. Measurement
3. Matter
4. Atoms, Ions and Molecules
5. Stoichiometry
6. Simple Reactions
7. Gases

Now, if the results of your initial assessment show that you do not yet have mastery of all the above topics, then your Pie will be "locked" onto the goal of doing so. What that means is you'll only be able to work on topics that are part of this section, or topics that are pre-requisites. A dotted white line will appear on each slice of your Pie, showing you how far the shading has to go to complete this section.

**Once you master about 20 topics you'll be given another assessment to test your retention of this basic material.**

**After you complete this assessment**, you can move forward, reviewing only material you didn't really commit to your long term memory and you will have the choice of working on any topic for which you're prepared anywhere in the pie.

Click the link underneath the Pie chart to see a complete list of the topics in each section, sorted according to whether you've mastered the topic or not, and color-coded to help you find the topic in the Pie.

If you place out of a specific topic, through the initial assessment, then your Pie will already be unlocked, and you can get started immediately in any of the other six sections.

In addition to the listing of topics completed and yet to be mastered under the Pie, you'll also find a record of your percentage mastery of each section in the ALEKS Gradebook, accessible by clicking on the Gradebook link above the Pie.

Note: if you forget topics in a specific section between when you learn them and when you are re-assessed for mastery you will need to re-study them. Do not ignore any of these "zombie" problems (those you thought you'd killed off, but which have come back to life). If you didn't retain mastery of these basic skills, you really must practice them more, and ALEKS won't let you go on to more advanced topics until you do.

## **Tips for getting the most out of Learning Mode:**

To demonstrate mastery of a topic, you must select it from the Pie and complete several problems in the topic. The exact number of problems you have to do depends on your answers. If you get each problem exactly right, you may have to do as few as 2 or 3 problems.

On the other hand, if you start getting problems wrong, ALEKS will assign more problems to ensure you have mastery. ALEKS will tell you at each step how many more problems you must get right to get the topic added to your Pie.

If you don't know how to do a problem, click the "Explain" button at the bottom of the problem. ALEKS will tell you how to do the problem.

If you need more help while reading the Explanation, you can use the ALEKSPedia, a built-in FAQ-style explanation of chemistry vocabulary, techniques, and concepts. There's a direct link to the ALEKSPedia from the ALEKS toolbar, above the Pie. Also, within an Explanation, you'll usually see lots of hyperlinks on words or phrases about which the ALEKSPedia has more information.

Make use of the **Explain button** and the **ALEKSPedia** if you don't understand something! Remember that wrong answers are costly in ALEKS: they cause you to have more problems assigned. ALEKS holds you accountable and enforces the mastering of topics.

If you ever need help using the ALEKS interface to enter an answer, click the blue **HELP button** in the interface. That will bring up a list of tutorials that show you how to enter various kinds of answers.

### **If things go wrong...**

ALEKS is a computer program, and it operates over the Internet. Part of it operates on the ALEKS servers, in California, but part of it also operates on your browser and your computer, wherever you are. With this many working parts, it's sometimes possible for things to go wrong, either a little bit or a lot, in confusing ways. Here are some things that could happen, and what to do about them:

- **Your browser or computer freezes up**, won't display things correctly, et cetera. This is almost always a problem located within your browser. The best thing to try immediately is to quit the browser and restart it, or if the computer is not acting right, reboot the computer. That will start everything fresh.
  - Don't worry about your work in ALEKS! ALEKS saves what you do as you go along, so when you log back into ALEKS you'll be just where you left off, even if you were right in the middle of an assessment or tutorial. To prevent problems like this, it's often wise not to be asking the browser to do too much else while you're working on ALEKS. Don't have 12 other tabs open, with streaming videos or Flash games in them. This is much more likely to lead to a browser freeze.
- You can't seem to get any response from ALEKS, for example you submit an answer and ALEKS doesn't respond for a long time. This can happen because of Internet problems, and these are usually at the level of your local Internet Service Provider (or sometimes with a WiFi connection if you're using one). It is almost never a problem with the Internet itself, or with the ALEKS servers, which are very large servers with dedicated high-bandwidth connections to the Internet. Again, restart the browser, but also check your Internet connection to other sites.
- ALEKS grades you wrong and you clearly, absolutely, 100% certainly were right! Now, even though ALEKS has already had tens of thousands of chemistry students using it, this is still possible. "Possible" like it's possible for snow to fall on August 30 in Bloomington, mind you, but possible nonetheless.

**The important point, however, is that if you want the fastest response to this kind of problem; don't write your professor, or anyone at Indiana University.**

So cut out the middleman, and just complain directly to ALEKS! Go to <http://support.aleks.com/> and describe your problem in as much detail as you can. It's particularly important that you tell the ALEKS team your ALEKS login and the date and time of the problem, so that they can go back into the ALEKS server logs and see exactly what you did and what ALEKS did, and diagnose the problem.

**Even better**, if possible, send complaints from within ALEKS. Click on the Message Center icon (the envelope) in the upper right of the ALEKS screen, and compose a message to ALEKS Customer Support. Check the little box at the bottom of the form that says "Attach the page on which I was working," so that, again, Customer Support can zero in on exactly what you and ALEKS did, to find the problem. You'll get a response quickly, usually within 24 hours, except on weekends. Meanwhile, ask for another problem on the topic, or even go back to the Pie and work on some other topic entirely.

### **Customer support for ALEKS chemistry**

ALEKS Customer Support hours are Monday to Friday, 6 AM to 9 PM Central Time.

**Email support:** <http://support.aleks.com>

**Phone:** (714) 619-7090

**Fax:** (714) 245-7190

Be prepared to tell the Customer Support Representative the following information:

1. You are a student at Indiana University and working on Preparation for Chemistry C117.
2. The "operating system" of your computer (e.g. Windows, MacOS, OSX).
3. The browser you're using (e.g. IE, Explorer, Google Chrome, Safari).
4. In as much detail, exactly what you were doing when the problem occurred, and what the computer did in response.