

ASU Science Course requirements

By David Monk

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Meeting Arizona State University's competency requirements strikes fear in the hearts of most homeschool parents when their children reach the high school years. To help you sleep better, I have compiled the following information based on conversations I had with ASU admission officers in September of this year. This information is expected to be valid for several years to come, so you can plan now to be able to ease through the admission process.

First, some background. Typical of any university, getting admitted into ASU takes energy, determination, and a little bit of money. You should check with their most recent requirements through their website before you actually apply. (<http://www.asu.edu/admissions>) You will have to meet these general university requirements. These are the same for all students, regardless of the where they go to high school.

In addition to the general requirements, there are a special list of requirements for home school applicants. They are listed here:

Admission Requirements (for home-school students)

Admission requirements to Arizona State University are the same for all applicants. Home-school students may meet those requirements in the following ways. Students who have completed an associate's degree or Arizona General Education Curriculum (AGEC) with a 2.0 GPA do not have to meet high school graduation, aptitude, or competency requirements.

- High School Graduation
Must submit a notarized *Affidavit of Completion of Secondary School Education*
OR
GED score of 50 (taken before 2002) or 500 (taken 2002 and after)
- High School Aptitude
ACT Composite: 22 OR SAT Reasoning: 1040. (ASU does not require the writing option for these tests.)
- Meet Competency requirements. If you are using home school science courses to meet laboratory science competencies, submit a course description for each science course.
- Transfer Aptitude
GPA: 2.0 or above (4.0=A) for students who are dual enrolled in college courses or using college courses to meet competency requirements

Additionally, all students must meet "Competency" requirements. These are in place to make sure you are able to study at the college level. There are English, math, lab science, social science, foreign language, and fine arts requirements. Current competency requirements are posted at: <http://www.asu.edu/admissions/requirements/competencyrequirements.html>. (Note: failure to meet competency requirements does not necessarily mean you will not be admitted. You may be admitted with "deficiencies". This means you have to take some remedial courses before starting your normal course of study.) Generally, they are straight-forward to satisfy using typical homeschool curriculum. The lab science requirement, however, has caused some difficulties recently. Some students have been admitted with deficiencies because their homeschool labs were rejected. Additionally, there have been rumors among the homeschool

community that certain curriculum were not being accepted, or that there was some list of “acceptable” texts for science. With this in mind, I discussed the science requirements with ASU’s admission department.

First, to dispel some myths. 1.) There is no black-listed curriculum. You can use any curriculum you choose. 2.) While it is recommended that you take one lab course at a community college, this is not an absolute requirement. You may submit your application with all three lab sciences in homeschool.

The Board of Regents has some specific requirements for lab science courses. Therefore, ASU requires all teachers of science courses to file paperwork on their course if they wish to call it a “lab science”. Homeschoolers, since they are the teachers, need to supply this information for their courses as well. This is the first reason for the special requirements. The second reason is that the admissions department wants to insure students will be able to succeed in science courses at the college level.

When you submit your lab course for approval, you will need to fill out a questionnaire. Here are the questions:

“1. What is the name of your course of study? What is the textbook title and copyright date?”

They are looking for documentation on the book or books that you used. They are NOT checking this against a list of approved curriculum. Contrary to rumors, they do NOT have any books or courses that they will not accept. (They have rejected courses in the past, but not because they used the wrong book.)

“2. Briefly describe course content. Please include a list of the laboratory experiments or projects you do that require manipulation of equipment (minimum of one laboratory per week).”

They want to see a generous number of example laboratories that you have done. You do not have to list every one. (i.e. you don’t need to list 36 labs!) Each should include manipulating some type of equipment or data, and they generally should include some type of hypothesis. One applicant listed “I laid on the trampoline and looked at the stars” as an astronomy lab. That was rejected because it did not include any scientific study, just observation. Another applicant listed “made a butterfly collection”. This was rejected because there is no application of the scientific method. “A trip to the zoo”, may be acceptable if you are investigating something specific. For example, you could go to the zoo and observe characteristics of animals, make hypotheses about their habitat and check them with the signs. You could go to the Botanical Gardens, observe the different leaf types, propose why these may be useful in different habitats and check that against textbook answers.

Generally, they are not looking to throw out homeschool labs; they just want to make sure there was some application of the scientific method and some manipulation of equipment as required by the Board of Regents. In my conversation with them, I detected a preference for labs with a testable hypotheses. I do not think every one must be written in those terms, however. If you are familiar with science fair projects, these are the “experiment” type, rather than the categorization, or collection type. My personal opinion is that other types of labs (such as categorizing trees, figuring how high your model rocket flew, etc.) are useful, and I wouldn’t throw them out of my curriculum. I would just make sure my list of experiments was not too heavy with them. One final note: don’t copy the table of contents out of your lab book;

they don't like that. The table of contents lists all the labs in the book, not examples of what you actually did.

"3. Using standard Scientific Method outlined by the following questions, describe one typical laboratory assignment associated with this course." This is probably the most important part. They want a simple, 1-2 page write up explaining the details of one of the labs. They want to make sure the student was taught how to apply the scientific method. You only have to write up one experiment like this per course. Therefore, choose this experiment well. This question goes on to give you the specific format they want:

- ◆ *State the problem or concept investigated during this laboratory assignment. (Do oranges stored in a refrigerator have more Vitamin C than oranges picked fresh from a tree?)*
- ◆ *Formulate a hypothesis for this problem using "if/then" statements. (If oranges picked fresh from a tree have more Vitamin C, then juice from these oranges will take longer to turn a starch solution blue.)*
- ◆ *Describe the experiment you performed to prove or disprove your hypothesis. List all essential materials. Describe each step you performed in the experiment.*
- ◆ *Describe the results of your experiment or study. Use graphs and charts where appropriate.*
- ◆ *Explain your data or results. Give an analysis of your experiment.*
- ◆ *Write a conclusion for your study. Was your hypothesis supported or refuted?*

In summary, they are quite happy with homeschool science courses in general. Frankly, the courses they have the most problems with are on-line lab science courses taught through institutions. They just want to get enough information from you so they can understand what you did. The most common reason for rejecting lab courses, according to the admission department, is that they can't tell what you did, or how it applies to the science.

Carol Carpenter is the homeschool coordinator in the admissions office and would be glad to talk to any homeschoolers who have questions. You can reach her at 480-965-0302. Marilyn Enlov, the director of operations in the admissions department, is also available to answer questions. You can reach her at 480-965-2688.