

# Common Core High School Content: Standard 8

*To learn more about how programs are scored on this standard, including how individual indicators are satisfied, please see its [scoring methodology](#).*

*For information on resources for this standard, please see the [resources section](#).*

## Background

High school teachers should have a deep understanding of their content area. Under the federal No Child Left Behind statute, "highly qualified" high school teachers must have a major in the subject they teach or pass a rigorous test in that subject. Further, there is direct research indicating that sufficient coursework preparation in mathematics and science makes high school teachers more effective.

Ideally, all high school certifications would require adequate state licensing tests that ensure content knowledge mastery. While a couple of states fully meet that goal, the vast majority come up short.<sup>1</sup> We endorse an academic major for teachers of a single subject. For high school certifications that allow instruction in multiple subjects, we instead require two minors (15 semester credit hours (SCHs) each). These multiple-subject certifications are problematic because, while they require licensing tests, independent cut-scores are not typically provided for each subject area. This standard thus must rely on the evaluation of coursework requirements in states without rigorous testing requirements for all high school certifications.

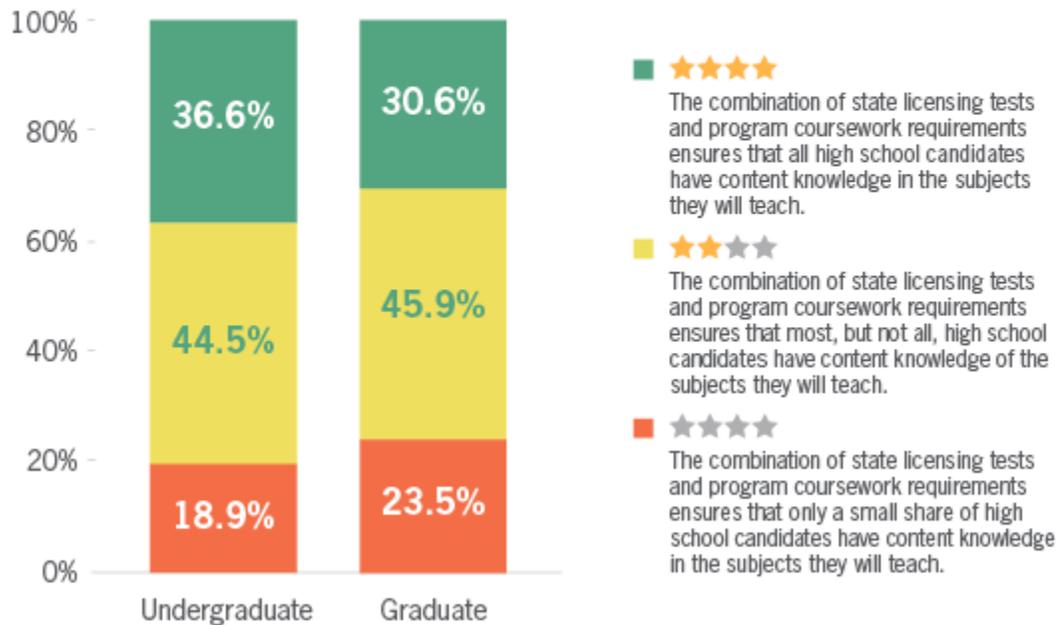
Before addressing findings, the following important background information on evaluation procedures should be noted:

When coursework analysis is required at the undergraduate level, analysts conduct a systematic examination of all courses required for graduation in each of four "pathways" being reviewed: English, math, the sciences and the social sciences. At the graduate level, analysts examine all admissions requirements to verify that content mastery is ensured for applicants to the teacher preparation program who are seeking all certifications available in each pathway.

Each pathway in which certifications are offered by a program is determined to "pass" or "fail" by analysis of all certifications in the pathway offered. The percentage of pathways that pass determines a program's score under this standard.

## Overview

Distribution of scores on  
Standard 8: Common Core High School Content  
(N=1,121 high school programs)



The sample of high school programs evaluated under this standard includes all but 18 high school and secondary preparation programs in IHEs in the *Review* sample offering initial certification. For simplicity's sake and to best complement our references to middle school programs, we refer to both high school programs (grades 9-12) and secondary programs (grades 7-12) as "high school programs." For more information, see our [teaching licensing structure information for each state](#).

Because of differences in the distributions of scores found across undergraduate and graduate programs, findings are reported separately for each.

## What are common reasons that programs earn no stars or few stars on the Common Core High School Content Standard?

- *Programs do not appropriately limit the subjects within the social sciences that can serve as an area of academic concentration.* Majoring in anthropology is excellent preparation for candidates seeking anthropology certification. However, when anthropology, geography, and sociology are treated as concentrations equivalent to economics, history, political science/government and psychology for a general social science certification, programs are not preparing candidates for the teaching assignments they are most likely to receive.
- *Multiple-subject certifications do not provide adequate content preparation.* Every high school teacher candidate needs to take upper-level coursework in at least two subjects to teach at the level of rigor required in the Common Core classroom. To this end, a candidate must be required to take at least 15 SCHs of coursework in two subjects covered under the relevant certification.
- *Graduate programs fail to require or specify undergraduate content area coverage for prospective high school teacher candidates.* Transcript review forms and admissions requirements often fail to specify the content that graduate teacher preparation programs expect applicants to know before enrolling. Without specification, it is unlikely that all candidates will be adequately prepared to teach the subjects for which they will be certified.

## Program Findings

### Undergraduate and graduate high school programs (N = 1,121)

Programs generally perform well on this standard. Nearly 35 percent of the programs reviewed earn four stars for ensuring adequate content knowledge in all pathways through either state licensing tests or coursework requirements. In addition, 45 percent of the remaining programs earn two stars because they are deficient in only a single pathway.<sup>2</sup>

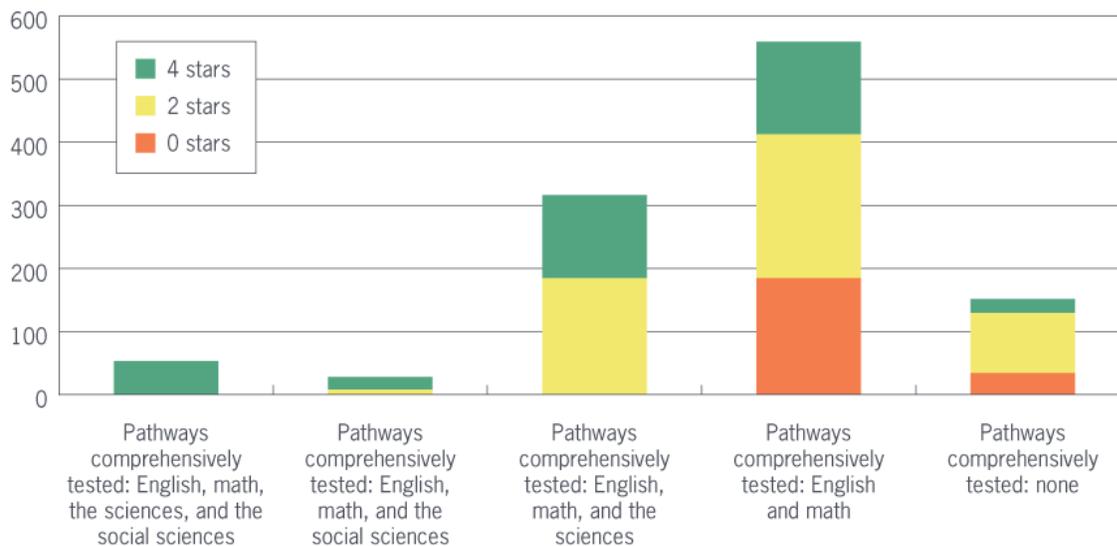
Weak preparation in multiple-subject certifications in the sciences and social sciences pathways is the Achilles heel of secondary preparation. Of the 249 undergraduate programs whose sciences pathway fails, almost 94 percent are inadequately preparing candidates for multiple-subject certifications. In the social sciences pathway, 91 percent of the 367 undergraduate programs that fail are inadequately preparing candidates for multiple-subject certification.

State context has a significant impact on program performance as evaluated by this standard. Single-subject pathways automatically pass in states where corresponding licensure tests are required. And because English and math high school candidates are tested in their respective subjects in all but eight states,<sup>3</sup> the vast majority of English and math pathways pass. Program

scores will therefore tend to vary according to each state's approach to the certifications and testing requirements in the sciences and social sciences pathways, as these certifications can be single-subject (e.g., "history") or multiple-subject (e.g., "general social studies"). Regardless of the state context, all programs should ensure that teaching candidates gain adequate content knowledge through rigorous coursework requirements.

As the graphic below shows, the overwhelming majority of programs earning no stars on the standard are in states that do not comprehensively test certifications in the sciences and social sciences pathways or do not test certifications in any pathways. In addition, almost all programs with two-star scores are in states where testing in the social sciences pathway is not comprehensive.

**Relationship between comprehensive testing regulations and program scores on the Common Core High School Content Standard**



✓+ It is incumbent on programs located in states with inadequate licensing test requirements and multiple-subject certifications in either or both the sciences and social sciences to ensure that teacher candidates know the subjects they will teach.

The following undergraduate high school programs are located in states with inadequate licensing tests in the both the sciences and social sciences pathways, but the programs require sufficient coursework to prepare teacher candidates for multiple-subject certifications in each pathway:

**Arkansas Tech University**  
**Ashland University (OH)**  
**Athens State University (AL)**  
**Bowling Green State University (OH)**  
**Clemson University (SC)**  
**Doane College (NE)**

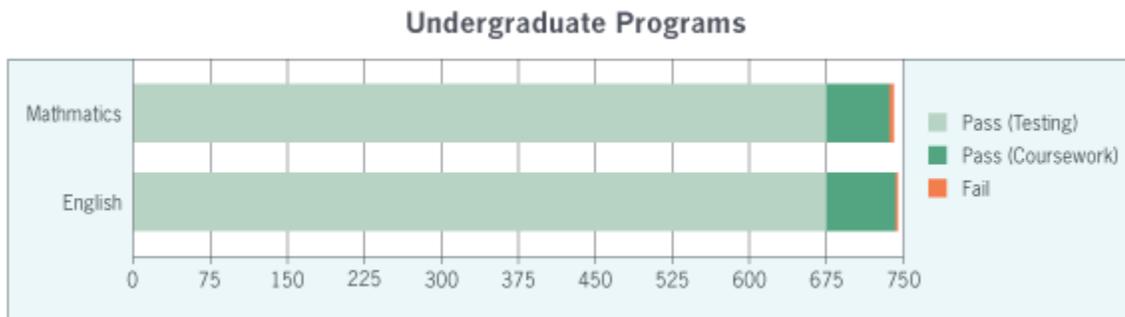
**Northern Arizona University**  
**Ohio Dominican University**  
**Ohio Northern University**  
**Quincy University (IL)**  
**Texas State University - San Marcos**  
**Texas Tech University**

<b>John Carroll University (OH)</b>	<b>University of Akron (OH)</b>
<b>Marian University (WI)</b>	<b>University of Central Arkansas</b>
<b>McMurry University (TX)</b>	<b>University of Mary Hardin - Baylor (TX)</b>
<b>Miles College (AL)</b>	<b>University of North Alabama</b>
<b>Mount Vernon Nazarene University (OH)</b>	<b>University of Texas - Pan American</b>
<b>Neumann University (PA)</b>	<b>Utah Valley University</b>
<b>North Dakota State University</b>	<b>Viterbo University (WI)</b>

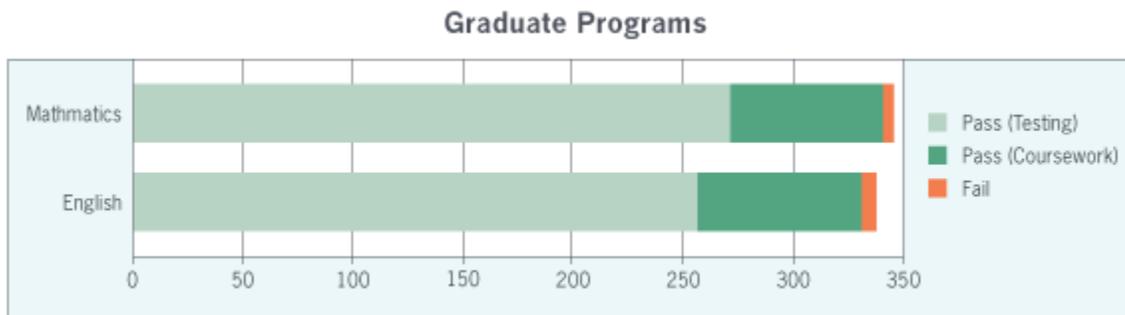
## Pathway-Specific Findings

The following graphics provide pathway-specific findings for undergraduate and graduate high school preparation programs. As mentioned earlier, each pathway in which certifications are offered by a program is determined to "pass" or "fail" by analysis of all certifications in the pathway offered. The percentage of pathways that pass determines a program's score under this standard.

### Mathematics and English Pathways

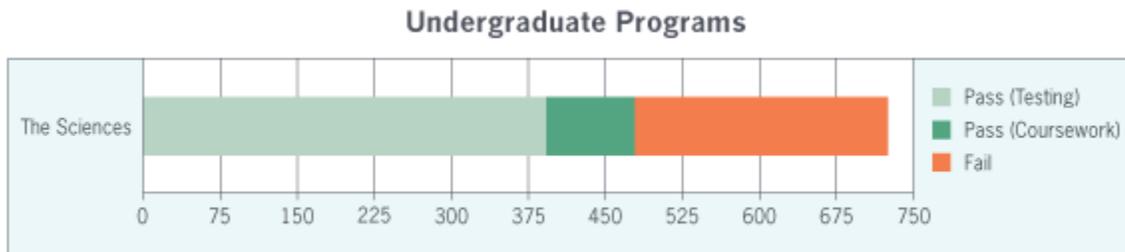


The three undergraduate programs that do not pass these pathways fail to require a full major (30 SCHs) in the subject.

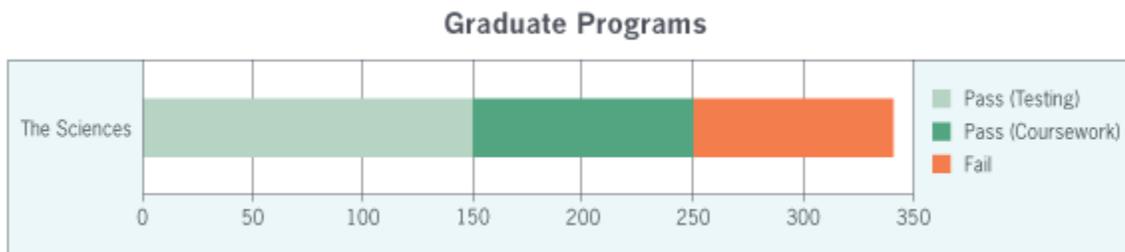


The nine graduate programs that do not pass in these pathways have admissions criteria that specify fewer than 30 SCHs.

## Sciences Pathway

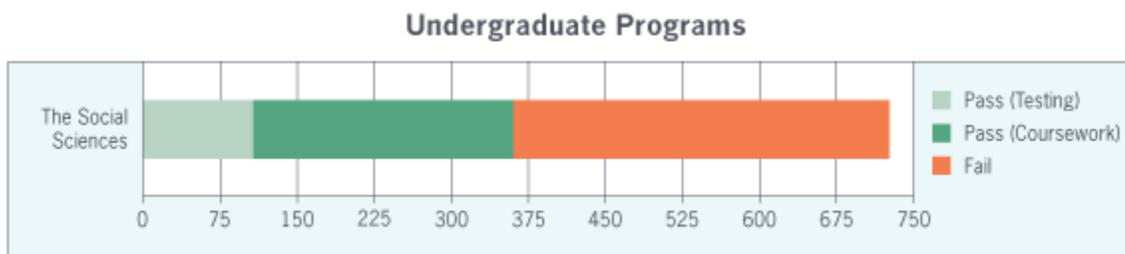


The graphic above paints a somewhat misleading picture. Programs with sciences pathways that pass due to licensing tests typically only offer majors leading to single-subject certifications in the sciences (e.g., biology or physics). Of the 70 different multiple-subject certifications offered by 41 states, only 13 certifications require adequate licensure testing.<sup>4</sup> In the review of coursework that is conducted when testing is inadequate, 233 of 249 programs fail due to insufficient coursework requirements for multiple-subject certifications.

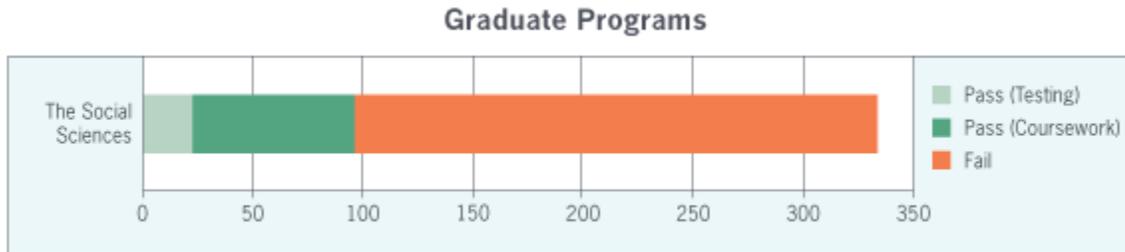


A greater percentage of graduate science pathways than undergraduate pathways pass primarily because of **California**,<sup>5</sup> which does not offer multiple-subject certifications. On the other hand, **California** also does not have required licensure tests, which explains the increased proportion of programs evaluated by examining coursework requirements.

## Social Sciences Pathway



Forty-one states have at least one multiple-subject certification in the sciences pathway, and 48 states do so in the social sciences.<sup>6</sup> Nearly 40 percent of the programs that fail this pathway offer a general social sciences major that requires less than a minor (15 SCHs) in history, when an assignment teaching history is what most teachers with the certification will be given.



More graduate programs than undergraduate programs tend to fail in this pathway because admissions requirements too often specify only that applicants have a "content area major," without stating the particular major and ancillary coursework that are required for admission. Consequently, the successful applicant may have a major in history, but also could have a major in any other social science subject -- even a subject rarely taught in secondary schools, such as sociology.

✓+ **Virginia**, a state that offers only a general social studies certification in the social sciences pathway, specifies that teacher candidates must have either graduated from an approved program or completed coursework that includes 18 SCHs in history, 18 SCHs in political science, nine SCHs in geography and six SCHs in economics. Of the 14 graduate secondary programs we reviewed in the state, eight satisfy this state regulation, with any applicant to a graduate program required to demonstrate that he or she has taken these courses or will take additional coursework to remedy deficiencies. These eight commendable programs are located in the following IHEs:

- Christopher Newport University**
- College of William and Mary**
- George Mason University**
- James Madison University**
- Lynchburg College**
- Old Dominion University**
- University of Mary Washington**
- Virginia Commonwealth University**

1. For information on each state's licensing test requirements, refer to the [High School/Secondary Certification Framework Infographics](#).
2. This statistic refers to programs offering three or four pathways.

3. In addition to the states that don't test, the English certification in **Nevada** is also evaluated through coursework because the cut-score for its English licensure test is set so low that 95 percent of all test takers pass. We do not feel that this test ensures the content knowledge of teacher candidates, and therefore evaluate the coursework preparation in this pathway in all secondary programs in **Nevada**.
4. Six of the 13 the acceptable licensure tests are found in **Ohio**, which allows combinations of science certifications but requires that candidates pass a test for each subject covered by the certification.
5. The vast majority of **California's** traditional preparation programs are post-baccalaureate programs, which the *Review* evaluates at the graduate level. The strengths (and deficiencies) in **California's** certifications are therefore overrepresented in the graduate sample.
6. Of the states offering multiple-subject certification in the social sciences pathway, only **Minnesota** provides comprehensive licensure testing.