



Research Report

Curriculum Frameworks

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**THE HOUSE INTERIM COMMITTEE ON EDUCATION
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BUREAU OF LEGISLATIVE RESEARCH
One Capitol Mall, 5TH Floor | Little Rock, Ark., 72201 | (501) 682-1937

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INTRODUCTION

Arkansas statute requires the State Board of Education (SBOE) to determine what subjects should be taught in public schools and develop a plan to review and revise those curriculum standards (§ 6-16-103; § 6-15-1502 et seq.). In order to maintain their accreditation, all public schools in Arkansas must offer specific courses, whether or not any student chooses to enroll in some of those courses. Similarly, there are specific courses that all public school students must take in order to graduate. This policy brief describes the curriculum requirements for both schools and students in Arkansas.

CURRICULUM FRAMEWORKS

The Arkansas **curriculum frameworks** serve as the foundation of the state's school accountability system. These frameworks, also known as "academic content standards" in statute, describe what students must know and be able to do in each academic subject area at each grade level, as specified by the SBOE. Statute does not specify how the subject matter is to be taught or what resources teachers must use; rather, districts, schools, and teachers are held accountable for ensuring that students demonstrate mastery of the knowledge and skills in the frameworks by scoring "proficient" or above on state assessments.¹

FRAMEWORK REVISIONS

Arkansas statute requires the SBOE to periodically review and revise curriculum standards, with input from teachers, higher education and workforce education officials, and other experts (§ 6-15-404). Each year ADE receives funding to facilitate these revision efforts. Act 1309 of 2013, Act 239 of 2014, and Act 987 of 2015 each appropriated \$50,000 for the development of a comprehensive plan for revising the curriculum frameworks and \$161,000 for the cost of the revisions. These annual appropriation levels have not changed since they were first approved in the 2003-05 biennium. Below is the schedule of framework revisions since the 2014 adequacy study, as well as the expected schedule through 2021-22.

ADE Framework Revision Cycle²

Committee Work	Curriculum Framework to be Revised	SBOE Approval	Framework Implementation
Summer 2013	Foreign Language	Late 2013	2014-15
Summer 2013	Library Media	Early 2014	2014-15
Summer 2014	Fine Arts, Social Studies, & Arkansas History	Early 2015	2015-16
Fall 2014	Science	Mid-2015	2016-17: K-4 2017-18: 5-8 2018-19: 9-12
Summer 2015	ELA	Early 2016	2016-17
Summer 2016	Mathematics	Early 2017	2017-18
Summer 2017	Physical Education, Health, & Driver's Education	Early 2018	2018-19
Summer 2019	Foreign Language & Library Media	Early 2020	2020-21
Summer 2020	Fine Arts, Social Studies, & Arkansas History	Early 2021	2021-22

In fall 2015, ADE began surveying teachers and the general public about standards revisions for English Language Arts (ELA) and math. ADE released the survey results in November 2015.³

¹ For more information about state assessments, see BLR's 2015 report on ACTAAP at [http://www.arkleg.state.ar.us/education/K12/AdequacyReports/2016/2015-11-03/04-ACTAAP%20Report,%20BLR%20\(23\).pdf](http://www.arkleg.state.ar.us/education/K12/AdequacyReports/2016/2015-11-03/04-ACTAAP%20Report,%20BLR%20(23).pdf)

² See ADE's website at <http://www.arkansas.gov/divisions/learning-services/curriculum-and-instruction/curriculum-framework-documents>

COMMON CORE STATE STANDARDS (CCSS)

As of 2013-14, all of Arkansas's K-12 curriculum frameworks for English language arts and math have been replaced with the **Common Core State Standards (CCSS)**. Launched in 2009, Common Core is a collaborative effort to provide rigorous, consistent academic standards across participating states. For example, one standard in the English language arts (ELA) curriculum frameworks specifies that by the end of the 3rd grade, all students should be able to "[d]etermine the meaning of words and phrases as they are used in a text, distinguishing literal from nonliteral language."⁴ Although the CCSS initiative was led by the National Governors Association (NGA) and the Council of Chief State School Officers (CCSSO), the federal government endorsed the initiative and tied some federal funding to states' adoption of a common set of standards.

In 2009, under the direction of Gov. Mike Beebe and then-Education Commissioner Ken James, Arkansas entered a memorandum of understanding (MOU) to support the CCSS. The following year, a committee of educators convened by ADE found that most of the CCSS were an "excellent" or "good" match with Arkansas's existing curriculum frameworks, and the SBOE officially adopted the standards for Arkansas schools. The legislature later endorsed the SBOE's decision through Act 989 of 2011. Districts began teaching the new K-2 standards in 2011-12; new standards for grades 3-8 were implemented in 2012-13, and all grades had implemented CCSS by 2013-14. Forty-one other states and the District of Columbia have also adopted the CCSS.⁵

COUNCIL ON COMMON CORE REVIEW

In early 2015, Governor Hutchinson appointed Lt. Gov. Tim Griffin to lead his Council on Common Core Review, comprised of 17 educators, parents, content experts, and community members from across the state. After over 40 hours of public hearings and a nine-city listening tour, the Council released its findings and recommendations to the Governor on July 30, 2015, including the following key points:

- The state should continue using the CCSS, while also maintaining ownership of the standards in order to best meet Arkansas's specific needs and requirements;
- The Governor should order a comprehensive review of the standards, with ongoing revisions and replacements as needed; and
- The Governor should work to improve communication among the ADE, co-ops, districts, and schools to ensure that standards are consistently implemented as intended and that parents have a clear understanding of them.

The Council also recommended replacing the state's new assessment known as Partnership for Assessment of Readiness for College and Careers (PARCC), which was implemented in 2014-15, with the ACT Aspire beginning in 2015-16.⁶ According to ACT, Inc., the ACT Aspire exam is based on the ACT College Readiness Standards and correlates with the CCSS.

³ See ADE's website for surveys: <http://www.arkansased.gov/divisions/learning-services/curriculum-and-instruction/state-standards-review-for-mathematics-and-english-language-arts>

See BLR's website for survey responses:

<http://www.arkleg.state.ar.us/education/K12/Pages/InitiativesAndReports.aspx?catId=34>

⁴ CCSS ELA-Literacy.RL.3.4. <http://www.corestandards.org/ELA-Literacy/RL/3/4>

⁵ Common Core State Standards Initiative. "Standards in Your State." Retrieved November 10, 2015, from <http://www.corestandards.org/standards-in-your-state>

⁶ Governor's Council on Common Core Review. Memo: "Findings and Recommendations". July 30, 2015: https://static.ark.org/eeuploads/lt-gov/The_Governors_Council_on_Common_Core_Review_-_Findings_and_Recommendations.pdf

BLR SURVEY DATA

As part of the adequacy study, the Arkansas Bureau of Legislative Research (BLR) surveyed teachers and interviewed principals in a sample of schools across the state in fall 2015. The BLR also distributed surveys to all 234 superintendents and the directors of all charter schools. The surveys and interview protocol included the following question: *“In general, do you believe that implementing the Common Core State Standards will improve student learning and achievement? Why or why not?”* The following chart summarizes the preliminary results, based on surveys received and interviews conducted as of December 10, 2015.

	# of Teachers	# of Superintendents	# of Principals
Yes	111 (20.6%)	110 (47.2%)	15 (51.7%)
Yes, to some extent	290 (53.9%)	112 (48.0%)	11 (37.9%)
No	137 (25.4%)	22 (9.4%)	3 (10.3%)
No response (blank)	0	3 (1.2%)	0
Total Respondents	538	247	29

These preliminary data suggest that superintendents are more optimistic about the potential for CCSS to improve student learning and achievement than are classroom teachers. In general, most teachers were in favor of having more rigorous standards that prepare students for success in college and careers; however, many teachers stated that CCSS would most likely do more to help students who are already high-performing than they would help students who are performing below grade level or have special needs. In addition, many teachers felt that parents needed to be better informed about what the Common Core standards are and how they will help their students think and perform at higher levels. While most principals and superintendents believed the CCSS would lead to improved student learning and achievement, many respondents stated that it would take more time for those improvements to be reflected in standardized test scores.

NEXT GENERATION SCIENCE STANDARDS (NGSS)

In addition to adopting the CCSS standards in ELA and math, Arkansas has adopted new standards in science known as the **Next Generation Science Standards (NGSS)**. Arkansas was one of 26 states that collaborated with Achieve, the National Research Council, the National Science Teachers Association, and other organizations in order to create rigorous, consistent standards in science education.⁷ The NGSS standards were finalized in April 2013. Arkansas will begin phasing in its version of the new K-12 Science Standards for grades K-4 in 2016-17, followed by grades 5-8 in 2017-18, and grades 9-12 in 2018-19.⁸

⁷ Next Generation Science Standards. “About the Standards Development Process.” Retrieved November 10, 2015, from <http://www.nextgenscience.org/about-standards-development-process>

⁸ ADE: <http://www.arkansased.gov/divisions/learning-services/curriculum-and-instruction/arkansas-k-12-science-standards>

SCHOOL ACCREDITATION STANDARDS

The state's **accreditation standards** require districts to provide instruction to elementary and middle school students annually in each of the following areas listed below. Act 599 of 2013 allows students in 7th and 8th grades to choose between taking one semester of visual arts and one semester of performing arts each year, or a full year of either subject.

Grades K-4	Grades 5-8	Grades 9-12	
Language Arts Math Social Studies Science Tools for Learning (e.g., research skills) Fine Arts Health & Safety Education Physical Education		Language Arts	6 units
		Science	5 units
Practical Living Skills/Career Exploration		Math	6 units
		Foreign Language	2 units
Career & Technical Education		Fine Arts	3½ units
		Computer Science	1 unit
		Social Studies	4 units
		Economics	½ units
		Health & Safety	½ units
		Physical Education	1 unit
		Career & Technical Education	9 units
		TOTAL	38 units

High schools are required to teach 38 units annually in order to meet the state's mandate of providing an "adequate" education. The Economics unit can be counted toward the required social studies or career & technical units with the appropriate teacher licensure.

STANDARDS VIOLATIONS FOR CURRICULUM FRAMEWORKS

In 2014-15, 15 schools were cited for not providing all of the required courses, compared to 11 schools in 2013-14. The following chart summarizes the subject areas for which these schools received citations in 2013-14 and 2014-15 (2015-16 data is not yet available from ADE). Some schools were cited for not offering required courses in more than one subject area.

[Act 853](#) of 2015 ensures that a district is not in violation of accreditation standards if the district offers a course, but no students choose to enroll in that course. In order to qualify for this exemption, the district must provide written proof that it had a properly licensed teacher able to teach the course and that the course was listed on the district's master course schedule, but no eligible student enrolled in the course. No data are available yet on the number of districts using this exemption.

Required Course Not Offered	# of Schools Cited: 2013-14	# of Schools Cited: 2014-15
Physics	0	4
Math	5	4
Drama	2	2
Oral Communications	0	1
Spanish	1	1
Journalism	0	2
Computer Business Apps	0	1
Science Elective	0	1
Advanced Fine Art	0	1
Social Studies	1	1
Instrumental Music	0	1
Physical Education	1	0
Vocal Music	1	0

ADE is considering collecting the required documentation at the end of the semester, following a procedure similar to the one used for another provision in the same section of state statute (§ 6-15-213(1)(A)).

COMPUTER SCIENCE

In addition to the distance/digital learning requirements that were enacted in 2013, [Act 187](#) of 2015 now requires each public high school and charter high school to offer a course in computer science, which can be used to fulfill part of the existing 38 units that high schools are already required to offer. According to ADE, Arkansas high schools may teach, without seeking additional approval, one or more of the following courses in order to meet these requirements:

1. Computer Science and Mathematics;
2. Essentials of Computer Programming;
3. Advanced Placement (AP) Computer Science; or
4. International Baccalaureate (IB) Computer Science, Standard Level (SL) or Higher Level (HL).

An approved computer science course may be used to fulfill part of the existing 38 units that high schools are required to offer, depending upon the certification of the teacher of record for the course. In 2015-16, the state is providing schools with free access to an approved computer science course and training through Virtual Arkansas, so that schools can offer the required course and be in full compliance with the new requirement as soon as possible.

As of the 2015-16 school year, 259 traditional public high schools offered at least one of the above computer science courses, enrolling a total of 2,772 students. Sixteen public charter schools also enrolled a total of 297 students in one of the approved courses.

Of the state's 138,721 traditional high school students, about two percent (1.9%) enrolled in a computer science course in the first semester of the 2015-16 school year. As the charts on the following page illustrate, there are disparities between the number of male and female students who are taking computer science courses, as well as between white and non-white students. While 48.8% of all traditional high school students in Arkansas are female, only 26.6% of students enrolled in computer science courses are female. Also, while 35.9% of all traditional high school students in Arkansas are non-white, only 29.0% of students enrolled in computer science are non-white. However, the percentage of students eligible for free and reduced price school lunches (FRL) is only slightly lower than the percentage of FRL high school students statewide (51.5% vs. 56.3%, respectively).

Of the state's 3,172 charter high school students, 9.3% of students enrolled in a computer science course in the first semester of the 2015-16 school year. The disparities in computer science enrollment by gender, race, and FRL status are far smaller for public charter schools than they are for traditional public schools. While 53.4% of all charter high school students in Arkansas are female, only 41.7% of students enrolled in computer science courses are female. Also, while 54.4% of all charter high school students in Arkansas are non-white, only 44.7% of students enrolled in computer science are non-white. However, like traditional public schools, the percentage of charter high school students eligible for free and reduced price school lunches (FRL) is only slightly lower than the statewide percentage of charter high school students eligible for FRL (40.4% vs. 43.2%, respectively).

Computer Science Enrollment in Traditional Public High Schools, 2015-16

Courses	# Schools Offering	Total # Enrolled	# FRL	# Non-FRL	# Male	# Female	# White	# Non-White	# Digital Learning	# Traditional Classroom
AP Computer Science	26	412	117 (28.3%)	295 (71.6%)	324 (78.6%)	88 (21.3%)	277 (67.2%)	135 (32.7%)	34 (8.2%)	378 (91.7%)
Computer Science With Mathematics	61	453	255 (56.2%)	198 (43.7%)	315 (69.5%)	138 (30.4%)	328 (72.4%)	125 (27.5%)	83 (18.3%)	370 (81.6%)
Essentials of Computer Programming	171	1,898	1,056 (55.6%)	842 (44.3%)	1,389 (73.1%)	509 (26.8%)	1,358 (71.5%)	540 (28.4%)	1,187 (62.5%)	711 (37.4%)
IB Computer Science	1	9	2 (22.2%)	7 (77.7%)	5 (55.5%)	4 (44.4%)	5 (55.5%)	4 (44.4%)	0 (0.0%)	9 (100.0%)
TOTAL	259	2,772	1,430	1,342	2,033	739	1,968	804	1,304	1,468
% of Students Taking Computer Science			51.5%	48.4%	73.3%	26.6%	70.9%	29.0%	47.0%	52.9%
% of All High School Students in AR		138,721	56.3% (78,154)	43.6% (60,567)	51.1% (70,902)	48.8% (67,819)	64.0% (88,802)	35.9% (49,919)		

Note: FRL = Eligible for Free and Reduced-Priced School Lunches

Computer Science Enrollment in Public Charter High Schools, 2015-16

Courses	# Schools Offering	Total # Students Enrolled	# FRL	# Non-FRL	# Male	# Female	# White	# Non-White
AP Computer Science	3	24	10 (41.6%)	14 (58.3%)	21 (87.5%)	3 (12.5%)	9 (37.5%)	15 (62.5%)
Computer Science and Mathematics	3	35	1 (2.8%)	34 (97.1%)	24 (68.5%)	11 (31.4%)	30 (85.7%)	5 (14.2%)
Essentials of Computer Programming	10	238	109 (45.7%)	129 (54.2%)	128 (53.7%)	110 (46.2%)	125 (52.5%)	113 (47.4%)
IB Computer Science	0	0	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
TOTAL	16	297	120	177	173	124	164	133
% of Students Taking Computer Science		9.3%	40.4%	59.5%	58.2%	41.7%	55.2%	44.7%
% of All Charter High School Students in AR		3,172	43.2% (1,371)	56.7% (1,801)	46.5% (1,475)	53.4% (1,697)	45.5% (1,446)	54.4% (1,726)

ADVANCED PLACEMENT (AP) CLASSES

Arkansas statute (§ 6-16-1204) requires all districts to offer one Advanced Placement (AP) course in each of the four core subjects—math, English, science, and social studies—each year. Most Arkansas high schools offered and actually taught at least one AP course in 2014-15, ranging from one AP course at Hector High School (Hector School District) and St. Joe High School (Ozark Mountain School District), to 31 AP courses at Central High School (Little Rock School District). Eight public charter high schools offered and actually taught at least one AP course in 2014-15, ranging from four AP courses at Jacksonville Lighthouse Charter School's College Preparatory Academy to 15 AP courses at eStem High Public Charter School.

AP Enrollment in Traditional and Charter High Schools, 2014-15

	Traditional High School Students in AP	Total Traditional High School Students in Arkansas	Charter Students in AP	Total Charter High School Students in Arkansas
Students eligible for FRL	10,204 (22.0%)	76,371 (55.0%)	337 (20.9%)	1,078 (40.7%)
Non-FRL	36,595 (79.0%)	62,321 (44.9%)	1,275 (79.1%)	1,568 (59.2%)
White	33,076 (71.4%)	89,446 (64.4%)	898 (55.7%)	1,183 (44.7%)
Non-White	13,243 (28.6%)	49,246 (35.5%)	714 (44.3%)	1,463 (55.2%)
Male	19,598 (42.3%)	70,750 (51.0%)	718 (44.5%)	1,223 (46.2%)
Female	26,721 (57.7%)	67,942 (48.9%)	894 (55.5%)	1,423 (53.7%)
TOTAL AP ENROLLMENT	46,319		1,612	
TOTAL HIGH SCHOOL STUDENTS IN ARKANSAS		138,692		2,646

Note: These numbers represent students enrolled in all AP classes. A student who is enrolled in more than one AP class will be counted more than once.

While female students are significantly underrepresented in computer science courses, they make up a greater proportion of students enrolled in AP courses than male students (57.7% female v. 42.3% male in traditional schools, and 55.5% female vs. 44.5% male in charter schools). In addition, while white students make up 64.4% of the total traditional high school population in Arkansas, 71.4% of students enrolled in AP courses in traditional high schools are white. Non-white charter school students also make up a greater proportion of students enrolled in AP courses than non-white students in traditional public schools (44.3% vs. 28.6%, respectively).

GRADUATION REQUIREMENTS

The 38 units that districts are required to teach annually are different from the 22 credits that high school students are required to take in order to graduate. Students may choose to take either the Smart Core curriculum or Core curriculum, as explained in the next section. Beginning with the entering 9th grade class of 2014-15, each high school student shall be required to take at least one digital learning course for credit to graduate. On April 9, 2015, the SBOE also updated the Standards of Accreditation to allow students to take a computer science course as a flex credit, which can be substituted in place of the 4th math credit requirement or the 3rd science credit requirement for either Smart Core or Core graduation paths.

CREDITS	SMART CORE	CORE
English – 4	English 9 English 10 English 11 English 12	English 9 English 10 English 11 English 12

CREDITS	SMART CORE	CORE
Math - 4	Algebra I (1) or both Algebra A & Algebra B (2) Geometry(1) or both Geometry A & Geometry B(2) Algebra II 4 th credit beyond Algebra II (in 11 th or 12 th grade)	Algebra I (1) or Algebra A & B (2) Geometry (1) or Geometry A & B (2) 3 rd credit (if <i>both</i> Algebra I and Geometry I were selected above)* 4 th credit (if <i>either</i> Algebra I or Geometry I was selected above; not needed if student received credit for Algebra A & B and Geometry A & B)*
Science -3	Biology 2 nd credit 3 rd credit (In addition to biology, 2 credits must be earned from Physical Science, Chemistry, or Physics, with only one credit from each category for the 2 nd and 3 rd credits.)*	Biology or its equivalent (1) Physical science (1) 3 rd credit*
Social Studies - 3	U.S. History (1) World History (1) Civics (½) Other Social Studies or Economics (½)*	World History (1) U.S. History (1) Civics (½) Other Social Studies or Economics (½)*
Oral Communications - ½	½ credit	½ credit
Physical Education - ½	½ credit	½ credit
Health & Safety - ½	½ credit	½ credit
Economics - ½	½ credit*	½ credit*
Fine Arts - ½	½ credit	½ credit
Career Focus - 6	6 credits	6 credits
Total Credits	22 credits	22 credits

* Note: An ADE-approved credit for a computer science course may be substituted for the 3rd or 4th math credit; Algebra I and Geometry or their equivalents must be completed. An ADE-approved computer science course may also be substituted for the 3rd science credit. Economics may be counted toward Social Studies or Career Focus, depending upon the teacher's licensure.

SMART CORE VS. CORE CURRICULUM

Students have the option of completing their high school education with the **Core** curriculum or the **Smart Core** curriculum. Both Core and Smart Core require 22 units, but Smart Core requires more rigorous coursework. For example, both Core and Smart Core require four units of math. However, Smart Core requires students to complete Algebra II and a higher math unit, while students taking the Core curriculum could graduate having completed only Algebra I and Geometry. Districts are required to enroll students in Smart Core as the default option; however, parents may obtain a waiver to allow their student to opt out.

Over the past three school years, the percentage of students enrolled in the Smart Core curriculum has held steady at an average of 93.8%, compared to an average of 6.1% of students enrolled in the Core Curriculum.

Total Students Enrolled in Core v. Smart Core Curriculum

SCHOOL YEAR	CORE	SMART CORE	TOTAL ENROLLMENT
2013-14	14,459 (6.7%)	199,262 (93.2%)	213,721
2014-15	13,297 (6.2%)	201,966 (93.8%)	215,263
2015-16	12,010 (5.6%)	203,359 (94.4%)	215,369

Legislation has been enacted in recent years giving schools more flexibility in offering required coursework. For example, Act 421 of 2013 allows curriculum frameworks from two separate courses to be taught in a single course, known as a combined or embedded course.

OTHER RECENT LEGISLATION

As part of the adequacy study, Arkansas Code 10-3-2102 requires the House and Senate Education Committees to review “legislation enacted or rules promulgated during the biennium covered by the study to determine the impact of the legislation and rules on educational adequacy-related public school costs.” The following acts fall under curriculum frameworks:

Act 160: Requires elementary schools to teach cursive writing as a component of English language arts by the end of 3rd grade, beginning in 2015-16.

Act 952: Requires schools to include a unit on dating violence awareness as a component of a health course offered in 7th-12th grades each year.

Act 1079: Gives districts more flexibility in scheduling art, music, and physical education (P.E.) courses in elementary schools. Previous law required schools to offer art and music classes at "no less than 40 minutes" and P.E. classes for 60 minutes per week. Act 1079 reduced the time required for P.E. classes to 40 minutes per week.

Act 1284: Requires that certain social studies or history courses offered in grades 7-12 include a relevant review of United States history from the period of colonization through 1890, specifically including the colonial period, the American Revolution, the foundations of the U.S. government, and the American Civil War. The following courses must contain the new material: (1) A social studies or history course conditioned upon knowledge of historical events from the colonial period to modern times of United States history for which graduation credit is or may be received, except for advanced placement courses; (2) Civics; (3) United States after 1890; (4) United States Government; and (5) A current or future social studies or history course that could benefit from a study of the period of history identified in this section of statute.

RESOURCES

Bureau of Legislative Research:

“The Arkansas Comprehensive Testing, Assessment, and Accountability Program (ACTAAP)”. Bureau Brief, November 2015: [http://www.arkleg.state.ar.us/education/K12/AdequacyReports/2016/2015-11-03/04-ACTAAP%20Report,%20BLR%20\(23\).pdf](http://www.arkleg.state.ar.us/education/K12/AdequacyReports/2016/2015-11-03/04-ACTAAP%20Report,%20BLR%20(23).pdf)

ADE Division of Learning Services:

<http://www.arkansased.gov/divisions/learning-services>

Common Core State Standards (CCSS) Initiative:

<http://www.corestandards.org>

Next Generation Science Standards (NGSS):

<http://www.nextgenscience.org>

Governor’s Council on Common Core Review:

<http://governor.arkansas.gov/promises/common-core>

Arkansas Computer Science Task Force:

<http://www.arkansased.gov/divisions/learning-services/curriculum-and-instruction/resource-materials-for-lesson-plans/computer-science/computer-science-task-force>