

Alignment of Common Core State Standards for Mathematics with Michigan Grade Level and High School Content Expectations (GLCE/HSCE) June 2010

MDE has posted four alignment charts comparing CCSS with Michigan GLCE/HSCE.

K-8 CCSS – Mathematics GLCE Alignment http://www.michigan.gov/documents/mde/K-8_CCS_Mathematics_-_GLCE_Alignment_sc_4-23-10_319493_7.pdf

K-8 GLCE (Mathematics) – K-8 CCSS Alignment
http://www.michigan.gov/documents/mde/K-8_GLCE_Mathematics_-_CCS_Alignment_sc_4-23-10_319495_7.pdf

HS CCSS – Mathematics HSCE Topic and Course Alignment
http://www.michigan.gov/documents/mde/Math_HSCE_Course_and_CCR_Comparison_sc4-30-10_319719_7.pdf

HSCE (Mathematics) – CCSS HS Mathematics Course Alignment
http://www.michigan.gov/documents/mde/HS_CCS_Mathematics_-_HSCE_Topic_and_Course_Alignment_sc_4-23-10_319488_7.pdf

The Common Core State Standards for K-12 Mathematics provide focused and specific progressions of understandings, content knowledge, and skills that lead to college- and career-readiness. The Common Core State Standards (CCSS) for high school mathematics provide additional standards for readiness for advanced mathematics courses. The Common Core State Standards for Mathematics include statements that define what students should “understand” as well as what students should be able to do to demonstrate understanding. Similar to Michigan’s current standards and expectations, the Common Core State Standards do not represent a curriculum. Instead they are learning goals that students reach only when supported by a rich and engaging curriculum that infuses the mathematical practices outlined in the Common Core State Standards document. Adopting the Common Core State Standards will allow Michigan to move the conversation from the mathematics content to engaging discussions about instructional effectiveness.

The K-8 Common Core State Standards-Grade Level Content Expectations alignment shows a very good fit between our Grade Level Content Expectations and Common Core State Standards. There are areas, most notably in geometry, where the Common Core State Standards are much more coherent than the Grade Level Content Expectations; while this suggests a misalignment, the intended rigor is not compromised.

The K-8 Common Core State Standards alignment documents are organized by grade level and “critical area” (CCCS) or focal point (MI GLCE). The “critical areas” as described in the CCSS introductory sections for each grade level indicate the focus of the clusters of standards for the grade level and align closely with Michigan focal points.

The High School Content Expectations (HSCE) are written in language more applicable to assessment; the Common Core State Standards are written from an instructional standpoint. Both provide a definition of college- and career-readiness, articulating what students should know/understand and be able to do to be prepared for entry-level college courses and career training programs.

The Common Core State Standards for high school mathematics are organized under six conceptual categories, the equivalent of Michigan’s HSCE strands; Common Core State Standards are further grouped in clusters that reflect HSCE topics. Of the 136 High School Mathematics Common Core State Standards, 92 represent college- and career-readiness (CCR) and should be met by all students. The other 44 Common Core State Standards have been designated STEM (Science, Technology, Engineering, Math) for students who wish to take advanced mathematics courses, such as calculus, advanced statistics or discrete mathematics (see table below).

Common Core State Standards Category	College/Career Ready	STEM Ready
Number and Quantity	9	18
Algebra	24	4
Functions	21	7
Geometry	37	6
Statistics and Probability	22	9
Modeling	Infused throughout other categories	
Total	92	44

Some Common Core State Standards designated as STEM are addressed in traditional Algebra II courses and a few reflect foundational knowledge addressed in Algebra I and Geometry. Nineteen (19) of the forty-four (44) STEM standards align with Michigan HSCE and are expected of all students. Eight (8) of the STEM standards are addressed in Algebra I and Geometry in Michigan. All but four (4) Common Core State Standards designated as College and Career Ready for all students align with current Michigan content and skills. Seventeen (17) common core college and career ready state standards for Statistics and Probability exceed standards described in the existing Algebra II Course/Credit Requirements (09/09).

The March draft Common Core State Standards included initial considerations of pathways for addressing the Common Core State Standards for High School Mathematics into courses. The optional course descriptions developed by ACHIEVE (available June 30) may inform possible adjustments in the MMC Course/Credit Requirements.

Two High School Common Core State Standards alignment documents link CCSS and HSCE to the courses/credits in which they are addressed.

The five-column High School Common Core State Standards – HSCE alignment chart is organized by CCSS. It links each CCSS to the Michigan HSCE topic and Michigan Merit Curriculum (MMC) course/credit in which the standard is taught. Column 1 lists the CCSS for High School Mathematics, Columns 2-4 list HSCE topics addressed in the three required MMC course/credits that align with the CCSS, and Column 5 includes notes regarding the CCSS addressed in PreCalculus, those designated as *Recommended* but not required, and topics removed from Algebra II Course/Credit Requirements.