UNIFORM STATEWIDE STANDARDS for REMEDIATION-FREE STATUS
Established by the Presidents of Ohio's Public Colleges and Universities
April 2018

Ohio Revised Code Section 3345.061 (F) Not later than December 31, 2012, the presidents, or equivalent position, of all state institutions of higher education, or their designees, jointly shall establish uniform statewide standards in mathematics, science, reading, and writing each student enrolled in a state institution of higher education must meet to be considered in remediation-free status. The presidents also shall establish assessments, if they deem necessary, to determine if a student meets the standards adopted under this division. Each institution is responsible for assessing the needs of its enrolled students in the manner adopted by the presidents. The board of trustees or managing authority of each state institution of higher education shall adopt the remediation-free status standards, and any related assessments, into the institution's policies. The chancellor shall assist in coordinating the work of the presidents under this division.

For the purposes of the following standards and assessments, a student deemed remediation free in a subject is eligible to enroll in a college credit-bearing course in that subject, including College Credit Plus courses. These remediation-free standards and thresholds are not intended to replace institutional placement policies. Each institution may adopt and implement placement policies to ensure that each student is provided the best opportunity to succeed in his/her course of study. Admitted students who are deemed remediation free are still subject to any pre-requisite and placement testing requirements for specific academic programs. The standards, expectations, and assessment thresholds in this (2018) document are recommended for implementation beginning with the Summer 2018 academic term.

Standards / Expectations

English

Reading	
Key Ideas and Details	A. Understand that reading is a strategic process of constructing meaning from texts.
	B. Actively engage texts, autonomously applying skills and strategies that are appropriate for the demands of the texts and their purposes for reading.
	C. Formulate and clearly express complex ideas related to texts, citing evidence to support inferences and interpretations.
	D. Think critically and creatively about the texts they read, often drawing upon their personal experiences and knowledge to enhance comprehension.
	E. Analyze and interpret fiction and non-fiction texts (including expository and persuasive essays) and work-related documents such as manuals, memos, letters and business plans.
	F. Determine and comprehend the central themes of a text and analyze their development. Summarize the key supporting details and ideas.
	G. Analyze how and why individuals, events, and ideas develop and interact over the course of a text.
	H. Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.

	I. Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
	J. Integrate and evaluate multiple sources of information presented in different media or formats (e.g. visually, quantitatively) as well as in words in order to address a question or solve a problem.
Craft and Structure	A. Employ pre-reading strategies to identify features of text that aid comprehension (e.g., informational).
	B. Understand and use text formatting features (table of contents, glossaries, navigation bars) to effectively locate and acquire information in a variety of texts.
	C. Differentiate between fact and opinion.
	D. Employ vocabulary-building strategies while reading various texts.
	E. Evaluate an author's purpose and point of view by analyzing the use of language, style and point of view found in the text.
	F. Demonstrate an understanding that the writer's choice of language shapes meaning.
	G. Evaluate an author's rhetorical and argumentative strategies.
	H. Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.
	I. Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g., a section, chapter scene or stanza) relate to each other and the whole.
Integration of Knowledge and Ideas	A. Read and respond orally and in writing to texts representing a variety of genres, authors, cultures, and historical periods.
	B. Establish and apply criteria for selecting and evaluating the credibility of print and multimodal texts for a range of purposes, including research.
	C. Use features (e.g. pie charts, bar graphs, pictures) to enhance, emphasize, and clarify comprehension of print and multimodal or oral texts across the curriculum.
Range of Reading and Level of Text Complexity	A. Actively engage texts, autonomously applying skills and strategies that are appropriate for the demands of the texts and their for purposes reading.
	B. Skillfully read a wide range of increasingly complex texts, print and multimodal.
Writing	
Text Types and Purposes	A. Independently and ethically produce writing that meets the needs of a particular purpose and audience, appropriate for academic and work-related documents.
	B. Select from a repertoire of processes and modes to develop writing for purposes such as persuasion, explanation, research, or personal expression.
	C. Use style, voice, and organizational structures that are transparent and appropriate for the rhetorical purpose and audience.
	D. Adeptly respond in writing to diverse texts and formats, synthesizing, critiquing, and analyzing those texts.
	E. Adapt writing strategies for audience, purpose and type of task.
	F. Produce texts that convey an argument that is organized, coherent, fully developed, and rhetorically appropriate in support of a thesis.
	G. Produce writing that exhibits word choices that convey intended meaning.
Production and Distribution of Writing	A. Independently and ethically produce writing that meets the needs of a particular purpose and audience, appropriate for academic and work-related documents.
	B. Draft, revise, and edit writing autonomously.
	C. Adapt writing strategies for audience, purpose, and type of task.

	D. Use reflective strategies for critiquing and evaluating student's own and others' writing.
	E. Employ sentences of varying lengths and structures that are appropriate to audience, purpose, and context.
	F. Use appropriate conventions of the English language, including grammar and usage, punctuation, capitalization, and spelling.
Research to Build and Present Knowledge	A. Employ the research writing skills of evaluating sources and integrating them in support of a thesis.
	B. Accurately and correctly quote, paraphrase, and summarize material from another text to avoid unintentional plagiarism.
	C. Properly cite sources, using a generally accepted citation system such as MLA or APA.
Speaking, Viewing and Listening	
Comprehension and Collaboration	A. Listen actively and speak effectively in a variety of academic and work-related situations.
	B. Listen carefully, take notes as needed, and not interrupt other speakers when engaged in group or committee work.
	C. Deliver a clearly organized message when contributing to the group or committee work.
	D. Take notes while listening to lectures or participating in other forms of information gathering and use the notes to review and reflect on learning.
	E. Know how to identify and accommodate cultural differences in communication styles and strategies.
	F. Analyze and synthesize information gathered from a variety of sources.
	G. Summarize information heard into another form of communication, (e.g., rephrase statements, summarize a speech, paraphrase an oral reading).
	H. Evaluate and respond to a speaker's message.
	I. Use viewing skills and strategies to understand and interpret visual media.
	J. Support and clarify written and oral presentations with visual media resources, including electronic technologies.
	K. Recognize and respect cultural and language differences in both formal and informal speaking situations.
	L. Interpret and evaluate a speaker's rhetorical strategies and evidence.
	M. Employ appropriate non-verbal strategies to enhance communication.
	N. Understand the impact that visual media have on society.
	O. Set criteria and evaluate the technology techniques used to influence economic, political, cultural, social, and aesthetic decision making.
Presentation of Knowledge and Ideas	A. Present successfully to an audience, recognizing the needs of an audience for both visual and auditory messages.
	B. Deliver a clearly organized message when contributing to the group or committee work.
	C. Speak fluently, enunciating clearly with appropriate rate and volume.
	D. Speak effectively and listen actively in diverse communicative contexts.
	E. Express ideas, thoughts, and concerns effectively in both formal and informal speaking situations, (e.g., conversations, discussion, presentations, collaborative groups, one-on-one interactions, debates, negotiations, and interviews).
	F. Employ appropriate non-verbal strategies to enhance communication.
	G. Recognize and evaluate techniques used in visual media to influence opinions, decision making, and cultural perceptions.
	H. Use images to convey meaning, often in conjunction with written or oral presentations.
	I. Use visual media or computer technology to communicate effectively with a variety of audiences for a variety of purposes.
	J. Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations, to enhance understanding of findings, reasoning, and evidence, and to add interest.

Mathematics

Mathematical Processes	
Problem Solving	A. Use a variety of problem solving strategies.
	B. Reflect on and analyze the student's own problem solutions and the solutions of others.
	C. Connect ideas in a variety of context.
	D. Solve complex, non-routine, and multi-step problems that may require student formulation of problems and/or sustained thought and effort.
Communication using Math Ideas	A. Use correct mathematical terminology and notation.
	B. Show a logical progression of thought, clearly and coherently, orally, and in writing.
	C. Read mathematical material with understanding and independence.
	D. Use appropriate degrees of precision based upon problem context.
	E. Use exact answers (e.g., √ or π) when appropriate.
	E. Proposed change to: Use exact answers (e.g., $\sqrt{2}$ instead of 1.41; π instead of 3.14) when appropriate.
Mathematical Reasoning	A. Understand the need for proof in mathematics; recognize when a proof is required
	B. Understand the difference between a statement verified by proof and one illustrated by using examples.
	C. Understand the meaning of logical terms (e.g., and, or, but, not, if ... then).
	D. Understand the significance of and roles played by definitions, assumptions, theorems/propositions, examples,, and counterexamples in mathematics.
Connecting Mathematical Concepts	A. Connect mathematics with a variety of disciplines and workplace and everyday settings.
	B. Use connections among and within branches of mathematics (e.g., algebraic properties of a function and geometric properties of its graph).
Appropriate Use of Technology and other Tools	A. Use a variety of tools to solve mathematical problems—ranging from common tools (e.g., rulers, protractors) to technology-enhanced tools (e.g., calculators, computers, spreadsheets).
	B. Use technology to collect, organize, and analyze information with the goal of interpretation, presentation, and argumentation and as motivation for proof.
	C. Use appropriate technology to enhance and support student learning.
Number and Operations	
Structure of the Number System	A. Understand and convert between different representations of numbers (decimal, percent, fraction, scientific notation, radicals...).
	B. Explain the effects of operations on the magnitudes of quantities and signs of numbers.
Operations	C. Perform arithmetic operations on various forms of real numbers.
	D. Compute and explain the solutions to problems involving ratio, proportion, percent, scientific notation, square roots, and numbers with integer and rational exponents;
	E. Apply and generalize properties of operations (including order of operations) as a foundation for algebra.

Estimation	Estimate the solutions to problems involving ratio, proportion, percent, scientific notation, square roots, and numbers with integer and rational exponents.
Algebra	
Equations and Inequalities	A. Algebraically solve linear equations in one variable, including examples with no solution, one solution, and infinitely many solutions.
	B. Solve systems of linear equations with two variables by graphing, substitution, and addition/elimination; including examples with no solution, one solution, and infinitely many solutions.
	C. Solve quadratic equations by graphing, factoring, completing the square, and using the quadratic formula (including equations that have complex solutions).
	D. Algebraically solve linear inequalities and represent solutions in multiple ways such as graphically, inequality notation, and interval notation.
	E. Algebraically solve absolute value equations in the form $\lvert Ax + B \rvert = C$ and related absolute value inequalities and represent solutions in multiple ways.
	F. Algebraically solve equations that include rational expressions or radicals including examples that generate extraneous solutions.
	G. Solve for specified variables in literal equations.
	H. Solve exponential equations in one variable using logarithms.
Operations with Algebraic Objects	A. Perform operations with exponents and radicals, including laws of exponents, with both numerical and algebraic expressions.
	B. Add, subtract, multiply, and divide rational expressions by hand and identify values where they are undefined. (Limit numerators and denominators to monomial, linear and quadratic expressions).
	C. Evaluate and simplify algebraic expressions.
	D. Add, subtract, multiply, and divide polynomial expressions (limit divisors to monomial and linear expressions).
Graphing	A. Graph linear equations and inequalities and quadratic equations in two variables, with and without technology (limit quadratic equations to vertical and horizontal parabolas).
	B. Graph common functions (e.g., absolute value, square root, linear, quadratic, rational, exponential, piecewise) with and without technology.
	C. Read a graph to interpret solutions to an equation and identify and interpret characteristics such as intercepts, extrema, and rates of change.
	D. Graph transformations of functions (limit transformations to vertical and horizontal shifts, reflections, and stretches).
	E. Interpret transformations of functions from both a graphical and algebraic perspective.
	F. Define functions; determine whether a relationship between two variables (represented in a variety of ways) represents a function; identify, as appropriate for the context, both the domain and range of a function; and use function notation.
	G. Describe how a change in one variable affects the value of a related variable, for example, problems involving direct and inverse variation.
	H. Interpret sequences as functions whose domain is a subset of the whole numbers. Solve problems with arithmetic and geometric sequences.

Functions and Applications	I. Adjust the parameters of function families to model relationships between variables (function families include linear, quadratic, piecewise, absolute value, square root, power, and exponential).
	J. Formulate equations or functions that model problems in a variety of contexts.
Geometry	
Structure	A. Describe and explain the different roles of assumptions, definitions, theorems, and proofs in the logical structure of geometry.
	B. Use theorems about parallel and perpendicular lines, angles, congruent figures, similar figures, right triangles (e.g., Pythagorean Theorem), polygons, circles, polyhedrons, spheres, cylinders, and cones to solve problems.
	C. Prove theorems about lines, angles, triangles, and parallelograms.
	D. Use similarity to solve problems and to model proportional relationships.
	E. Use right triangle trigonometry to solve problems.
Geometric Representations	A. Represent geometric objects algebraically using coordinates (analytic geometry).
	B. Use algebra to solve geometric problems.
	C. Draw and define reflections, rotations, translations, and dilations of geometric objects and understand compositions of these transformations.
	D. Define, describe, and identify reflectional and rotational symmetry.
	E. Express transformations algebraically (i.e., using coordinates).
Measurement	A. Explain that the geometric measures (length, perimeter, area, volume) depend on the choice of unit, and that measurements are approximations.
	B. Explain the effect of a scale factor on length, perimeter, area, and volume.
	C. Calculate the perimeter and area of common plane figures and the surface area and volume of solids.
	D. Distinguish between exact and approximate values. Explain differences among accuracy, precision, and error, and describe how errors affect later calculations.
	E. Solve problems involving measurement, including problems requiring a choice of scale and unit.
	F. Convert fluently from one measurement unit to another, within and across systems.
Probability and Statistics	
Data Displays and Interpretation	A. Create and/or interpret graphical displays to describe sets of data with distributions (e.g., box-and-whisker, scatterplot, frequency distribution, normal distribution
	B. Find and interpret measures of central tendency and variability for sets of data.
	A. Use the context to determine appropriate way(s) to represent data, and understand the advantages and disadvantages of various representations.

Representations and Use of Data	B. Identify misuses of data.
	C. Distinguish between correlation and causation.
	D. Understand the characteristics of well-designed studies (e.g., lack of bias, sampling methods, randomness) in order to interpret results.
Probability Concepts	A. Use the fundamental counting principle to determine the number of possible outcomes.
	B. Compute probability of compound events including conditional probability (independent and simple dependent events).
	C. Compare experimental and theoretical results for simple experiments.

Note: the Ohio College Readiness Advisory Committee also provided additional expectations for students planning to enroll in calculus. These recommendations are beyond the standards for remediation-free status.

Science – Biology, Chemistry, Computer Science, Engineering, Geology and Physics

Learning Skills (for all students)	
A. Learn science using a variety of sources including but not limited to:	
• Standard college-level science textbooks • Inquiry-based laboratory experiences that engage students in asking valid scientific questions, and gathering and analyzing information • Well-reasoned and evidence-based discussions of science principles, concepts, and problems with well-prepared peers and faculty • Well-organized lectures delivered at an appropriate cognitive level for first-year STEM college students by college faculty • Other appropriate sources of science information in the popular press and in other sources, such as research reports and summaries that are at an appropriate cognitive level for first-year college students.	
B. Reliably and accurately assess the student's learning and take effective action to remediate deficiencies, prior to instructor-administered summative assessments	
C. Persist in learning despite encountering initial difficulty in mastering challenging material and seek and use alternative learning strategies when finding initial strategies are not as effective as desired, so that the student consistently meets learning goals and achieves targeted learning outcomes.	
Science Content Knowledge and Skills (for non-science majors)	
Content	A. Satisfactorily complete the Ohio graduation requirements for science and mathematics, meeting all of the expectations specified in the New Ohio Learning Standards: K-12 science for each of those courses.
	B. Satisfactorily complete the following high school science courses: biology, physical science, and one advanced science course.
	C. Consistently demonstrate mastery of the first five Recommendations in "Mathematical Expectations for College Readiness 2011" within science contexts. Demonstrate mastery of these processes, concepts, functions, applications, and operations by creating models of physical realities related to those models.
	D. Use the models created to reliably and consistently solve problems dealing with the concepts and relationships described in the Syllabus and Model Curriculum of the Ohio Revised Science Standards for the science courses taken in high school. Non-science majors do not need to be able to demonstrate the "Additional Expectations for Calculus."
Rationale	This level of mastery should be accomplished by satisfactory completion of three high school science courses as defined by the syllabi and model curricula of the New Ohio Learning Standards: K-12 Science.
	A. Identify questions and concepts that guide scientific investigations.
	B. Design and conduct scientific investigations.
	C. Use technology and mathematics to improve investigations and communications.
	D. Formulate and revise explanations and models using logic and evidence (critical thinking).
	E. Recognize and analyze explanations and models.
	F. Communicate and support a scientific argument.

Note: the Ohio College Readiness Advisory Committee provided additional recommendations for science content knowledge and science and mathematics skills needed by students majoring in the natural and health sciences, and in engineering. These recommendations have to do with placement, not remediation status.

College Readiness Indicators – assessment thresholds to guarantee "remediation free" status at any public post-secondary institution in Ohio

A student who meets or exceeds the following thresholds will be deemed as remediation free and eligible to enroll in a college credit-bearing course at any of Ohio's public institution of higher education.

Readiness Area	ACT	SAT[ii]	Accuplacer		GED	MapleSoft T.A.	ALEKS	PlaceU (WebAssign)
			Classic[iii]	Next Gen[iv]				
English Sub Score	18	Evidence-Based Reading & Writing	Sentence Skills 88 or 5 on Writeplacer	Next Gen Writing – 263 or above OR 5 on Writeplacer	One or More Content Areas			
Reading Sub Score	22	480	80	Next Gen Reading- 250 or above	>165			
Mathematics Sub Score	*22	*530	55CLM	QAS - 263 or above		Algebra 50% of items correct	46	18
				AAF – 263 or above				

*While students who are deemed remediation free (at the baseline college ready score) are to be placed into a credit-bearing mathematics course; students in a major requiring a STEM intensive pathway may be subject to college level pre-requisite or supportive coursework (e.g., co-requisite, supplemental instruction) to fulfill major requirements.

[i]Ohio public colleges and universities may not establish a required score for remediation-free status higher than the statewide threshold, but may establish a required score lower than the statewide threshold

[ii] High school graduates of the Class of 2016 should crosswalk their SAT scores to previous SAT and use those standards. Scores reflected in this table apply to graduates of the Class of 2017.

[iii] Beginning on **Monday, January 28, 2019**, classic ACCUPLACER tests will no longer be available. By this time, ACCUPLACER users will need to transition to using the next-generation placement tests.

ivNext Gen Accuplacer is in early implementation. College Board strongly recommends collecting data from schools offering this assessment and review against standards of gateway mathematics and English courses in the Ohio Transfer Module to ensure alignment. This work should occur in 2017 and will require a review for students entering in fall 2018.

- ***Institutions are not required to place students scoring below the threshold score into remedial courses*.** Further, institutions are encouraged to establish an appeals process for students scoring below the threshold scores. The results of this appeals process could serve as a substitute for the remediation-free assessment thresholds listed above. An appeals process could include but is not limited to the following examples: high school or prior postsecondary grade point average, an institutional writing assessment, a portfolio, or recommendation of high school instructor or counselor.
- *Until better assessments of science content knowledge are available, institutions should continue to use their own assessments of science* content to supplement the other sources of information such as ACT scores, high school grade point average (GPA), and other indicators of college readiness in determining the college readiness in science.
- Assessment exam scores will be valid for two years from the completion of that assessment, after which institutions may require students to repeat an assessment to determine the currency of their college readiness.
- These remediation-free *thresholds are not intended to determine eligibility for admission to any college or university*. Each institution has its established admission requirements. Admitted students who have achieved or exceeded these scores are guaranteed exemption from institutional placement into non- credit remedial courses.
- These remediation-free standards and *thresholds are not intended to replace institutional placement policies*. Admitted students who are deemed remediation free are still subject to any pre-requisite and placement testing requirements for specific academic programs. Similarly, placement testing may be required for students who do not achieve the remediation-free threshold, to determine the appropriate initial class – which may be a for-credit class if indicated by the placement examination.