

Mathematics HSCE (v.11/07) – MI Course Assignment – CCR/STEM Assignment (v. 3-10) Comparisons

Michigan HSCE	Michigan Course/Credit Requirement				Recommended HSCE 06	CCR/STEM
	Algebra I	Geom.	Alg. II (09/09)	Alg. II (11/07)		
<b>STRAND 1: QUANTITATIVE LITERACY AND LOGIC</b>						
<b>L1 REASONING ABOUT NUMBERS, SYSTEMS, AND QUANTITATIVE SITUATIONS (13)</b>						
<b>L1.1</b> Number Systems and Number Sense	N.RN.3, N.RN.4					
<b>L1.2</b> Representation and Relationships	S.SI.2	N.VM.1, N.VM.2, N.VM.3, N.VM.5, N.VM.11	N.RN.2, S.SI.2			N.VM.1, N.VM.2, N.VM.3, N.VM.5, N.VM.11
<b>L1.3</b> Counting and Probabilistic Reasoning			A.APR.4, S.CP.5			A.APR.4
<b>L2 CALCULATION, ALGORITHMS, AND ESTIMATION (13)</b>						
<b>L2.1</b> Calculation Using Real and Complex Numbers	N.RN.1, N.RN.2, N.Q.4, N.CN.1, N.CN.2, S.MD.1, S.MD.3		N.CN.1, N.CN.2, N.CN.6, N.CN.7, S.MD.3			N.CN.2, N.CN.7
<b>L2.2</b> Sequences and Iteration			A.BF.2, A.BF.8, A.BF.9, A.LOE.5, A.LOE.7		L2.2.4* and A.SSE.8	A.SSE.8
<b>L2.3</b> Measurement Units, Calculations, and Scales		G.MG.3	N.Q.1, N.Q.2, N.Q.3			
<b>L2.4</b> Understanding Error				S.IC.6		

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<b>L3 MATHEMATICAL REASONING, LOGIC, AND PROOF</b>						
<b>L3.1</b> Mathematical Reasoning		G.CO.4, Mathematical Practice 3				
<b>L3.2</b> Language and Laws of Logic		Mathematical Practice 3				
<b>L3.3</b> Proof		Mathematical Practice 3				
<b>STRAND 2: ALGEBRA AND FUNCTIONS</b>						
<b>A1 EXPRESSIONS, EQUATIONS, AND INEQUALITIES (16)</b>						
<b>A1.1</b> Construction, Interpretation, and Manipulation of Expressions	A.SSE.1, A.SSE.3, A.SSE.6, A.SSE.7, A.APR.1, A.APR.2, A.APR.6, A.APR.9		A.SSE.1, A.SSE.3, A.SSE.6, A.APR.1, A.APR.3, A.APR.5, A.APR.8			A.APR.5
<b>A1.2</b> Solutions of Equations and Inequalities	N.Q.5, N.CN.8, A.SSE.4, A.CED.2, A.CED.3, A.CED.4, A.REI.1, A.REI.2, A.REI.3, A.REI.6, A.REI.7, A.REI.10,		N.Q.5, A.CED.2, A.CED.3, A.CED.4, A.REI.1, A.REI.10, A.REI.12			N.CN.8

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	A.REI.11, A.REI.12, A.REI.15, A.REI.16, A.REI.17, A.REI.19					
<b>A2 FUNCTIONS (16)</b>						
<b>A2.1</b> Definitions, Representations, and Attributes of Functions	A.REI.4, A.REI.5, A.REI.6, A.REI.7, A.REI.13, A.IF.1, A.IF.2, A.IF.3, A.IF.4, A.IF.5, A.IF.6, A.IF.7, A.IF.8, A.IF.9, A.IF.10, A.BF.2, A.BF.5		A.REI.4, A.REI.5, A.REI.13, A.IF.2, A.IF.3, A.IF.4, A.IF.5, A.IF.6, A.IF.7, A.IF.8, A.IF.9, A.IF.10, A.BF.2, A.BF.5			
<b>A2.2</b> Operations and Transformations	A.SSE.5, <i>A.REI.9</i> , A.IF.11, A.BF.1, A.BF.7, <i>A.BF.11</i> , <i>A.BF.12</i>		A.SSE.2, A.SSE.5, <i>A.REI.9</i> , A.BF.1, A.BF.7, <i>A.BF.11</i> , <i>A.BF.12</i> , G.GPE.3		MI A2.2.4*, A2.2.5*, A.2.2.6* and <i>A.BF.10</i> <i>A.BF.13</i>	<i>A.REI.9</i> , <i>A.BF.11</i> , <i>A.BF.12</i>

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<b>A2.3</b> Representations of Functions	A.LQE.4, A.LQE.8, A.LQE.9, A.LQE.13, A.LQE.15, A.LQE.16		A.LQE.9			
<b>A2.4</b> Models of Real-world Situations Using Families of Functions	A.CED.1, A.REI.8, A.REI.8, A.REI.18 A.LQE.11		A.CED.1, A.REI.8, A.REI.18,			
<b>A3</b> FAMILIES OF FUNCTIONS (27)						
<b>A3.1</b> Lines and Linear Functions	A.BF.6, A.LQE.1, A.LQE.10, G.GPE.2, G.GPE.7,					
<b>A3.2</b> Exponential and Logarithmic Functions	A.LQE.3, A.LQE.12, A.LQE.14		<i>A.REI.20</i>			<i>A.REI.20</i>
<b>A3.3</b> Quadratic Functions	A.IF.10, A.BF.5, A.LQE.2, <i>G.GPE.5</i>					<i>G.GPE.5</i>
<b>A3.4</b> Power Functions	A.IF.10					
<b>A3.5</b> Polynomial Functions	A.APR.7					
<b>A3.6</b> Rational Functions			<i>A.APR.10</i>			<i>A.APR.10</i>
<b>A3.7</b> Trigonometric Functions				<i>A.TF.1, A.TF.2, A.TF.3, A.TF.4, A.TF.5, A.TF.6, A.TF.7</i>		<i>A.TF.1, A.TF.2, A.TF.3, A.TF.4, A.TF.5, A.TF.6, A.TF.7</i>

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	Algebra I	Geom.	Alg. II (09/09)	Alg. II (11/07)		
<b>STRAND 3: GEOMETRY AND TRIGONOMETRY</b>						
<b>G1 FIGURES AND THEIR PROPERTIES (29)</b>						
<b>G1.1</b> Lines and Angles; Basic Euclidean and Coordinate Geometry		G.CO.6, G.CO.10				
<b>G1.2</b> Triangles and Their Properties		G.CO.7, G.SRT.5, G.GPE.9,				
<b>G1.3</b> Triangles and Trigonometry		G.CO.12, G.SRT.4, G.SRT.7, G.SRT.8, G.TGT.1, G.TGT.2, G.TGT.4, G.TGT.6				G.TGT.1, G.TGT.2, G.TGT.4, G.TGT.6
<b>G1.4</b> Quadrilaterals and Their Properties		G.CO.8, G.CO.9, G.GPE.9, G.GPE.11, G.GPE.14,				G.GPE.14,
<b>G1.5</b> Other Polygons and Their Properties		G.GPE.9, G.GMD.1, G.GMD.3				G.GMD.3
<b>G1.6</b> Circles and Their Properties		G.C.1, G.C.2, G.C.3, G.C.4, G.C.5, G.C.7,				G.C.7
<b>G1.7</b> Conic Sections and Their Properties			G.GPE.2, G.GPE.4, G.GPE.5, G.GPE.10 G.GPE.12, G.GPE.13, G.GPE.14			G.GPE.4, G.GPE.5, G.GPE.13, G.GPE.14

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	Algebra I	Geom.	Alg. II (09/09)	Alg. II (11/07)		
<b>G1.8</b> Three-dimensional Figures		G.GMD.7				
<b>G2</b> RELATIONSHIPS BETWEEN FIGURES (10)						
<b>G2.1</b> Relationships Between Area and Volume Formulas		G.GMD.6				
<b>G2.2</b> Relationships Between Two-dimensional and Three-dimensional Representations		G.GMD.3, G.GMD.4, G.GMD.5, G.GMD.8				G.GMD.3, G.GMD.8
<b>G2.3</b> Congruence and Similarity		G.CO.2, G.SRT.6, G.SRT.9, G.GPE.11				G.SRT.9
<b>G3</b> TRANSFORMATIONS OF FIGURES IN THE PLANE (5)						
<b>G3.1</b> Distance-preserving Transformations: Isometries		G.CO.1, G.CO.3, G.SRT.1				
<b>G3.2</b> Shape-preserving Transformations: Dilations and Isometries		G.CO.13, G.SRT.2, G.SRT.3				
<b>STRAND 4: STATISTICS AND PROBABILITY</b>						
<b>S1</b> UNIVARIATE DATA – EXAMINING DISTRIBUTIONS (9)						
<b>S1.1</b> Producing and Interpreting Plots			N.Q.6			
<b>S1.2</b> Measures of Center and Variation			S.SI.5, S.ES.5, S.SI.1	S.SI.5, S.ES.5, S.SI.1		
<b>S1.3</b> The Normal Distribution				S.ES.5		
<b>S2</b> BIVARIATE DATA – EXAMINING RELATIONSHIPS (6)						

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<b>S2.1</b> Scatterplots and Correlation	S.SI.3, S.SI.4, S.SI.6, S.SI.9, S.SI.10					
<b>S2.2</b> Linear Regression	S.SI.4, S.SI.7, S.SI.8					
<b>S3</b> SAMPLES, SURVEYS, AND EXPERIMENTS (3)						
<b>S3.1</b> Data Collection and Analysis				S.PM.6, S.IC.1, S.IC.2, S.IC.3, S.IC.5, S.IC.6, S.IC.7		
<b>S4</b> PROBABILITY MODELS AND PROBABILITY CALCULATION (4)						
<b>S4.1</b> Probability				S.PM.1, S.PM.5, S.IPM.1, S.IPM.2, S.IPM.3, S.IPM.4, S.IC.4, S.IC.8, S.CP.1, S.CP.2, S.CP.4, S.CP.5, S.CP.7, S.CP.8	MI S4.1.3* and S.PM.3, S.PM.4, S.PM.7, S.ES.1, S.ES.2, S.ES.3, S.ES.4	

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S4.2 Application and Representation				S.PM.2, S.IC.4, S.IC.8, S.CP.3, S.CP.4, S.CP.6, S.CP.9, S.MD.2, S.MD.4, S.MD.5, S.MD.6, S.MD.7		