



STATE OF MICHIGAN  
DEPARTMENT OF EDUCATION  
LANSING



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GOVERNOR

MICHAEL P. FLANAGAN  
SUPERINTENDENT OF  
PUBLIC INSTRUCTION

November 8, 2005

**MEMORANDUM**

TO: State Board of Education

FROM: Michael P. Flanagan, Chairman

SUBJECT: Presentation of Proposed High School Graduation Requirements

**Background**

Growing concerns over the quality of American high school students' education and their inadequate preparation for postsecondary educational and workplace success have sparked significant concern in Michigan. Thus, along with other states across the country, Michigan is re-examining its high school education programs with respect to:

- The rigor of standards, curriculum, and expectations, providing intellectual depth for students and graduates sufficient to meet the demands of postsecondary education and the workplace;
- The relevance of curriculum and instruction to how what is learned in high school is personally meaningful and applies to further education and work;
- The relationships that are critical to students feeling connected to school, to adults in the school, and to other students.

Key concerns include Michigan's current high school graduation requirements and the underperforming economy in Michigan. Current statutory requirements mandate only that high school graduates take one unit of Civics (Government), which is typically a semester course. Any remaining graduation requirements are the prerogative of local boards of education to determine. Especially troubling is the fact that a recent survey by the Michigan Department of Education indicated great disparity among these local graduation requirements.

Michigan is struggling with a high unemployment rate and struggling to attract and retain business investment. The state economy will continue to suffer if we cannot produce employees who are educated and prepared for today's jobs. Families and

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college students will continue to suffer economic losses if college students must pay \$100-\$350 per credit hour for a high school education delivered as remediation with no college credit.

## **Action**

I commissioned a Task Force to study and make recommendations on high school graduation requirements for Michigan students.

The Chief Academic Officer, at the direction of the Superintendent, formed the Task Force comprised of business leaders, education leaders from higher education, nonprofit educational organizations, local and intermediate superintendents, building principals, career and technical education, alternative education, special education and state government.

## **The Case for Change in High School Requirements**

In formulating recommendations to the Superintendent, the Task Force drew upon research from many sources, including Achieve, Inc., its American Diploma Project and its report, *The Expectations Gap, a 50-state Review of High School Graduation Requirements*. Achieve collected detailed data from every state education agency on the course-taking requirements for earning a high school diploma, from employers on the current state of readiness in new hires, and from other researchers on the adequacy of high school graduate preparation for postsecondary success. Among the results Achieve found:

- Only 32 percent of students who enter 9<sup>th</sup> grade and graduate four years later have mastered basic literacy skills and have completed the coursework necessary to succeed in a four-year college. For African Americans, this figure is 20 percent and for Latinos it is just 16 percent.
- Three quarters of high school graduates go on to a postsecondary education within two years of leaving high school. Nearly 30 percent of college freshmen are immediately placed into remedial courses that cover material they should have learned in high school.
- Over the course of their college careers, over 40 percent of postsecondary students will take at least one remedial course.
- Three-quarters of students who require remediation in reading and 63 percent of those who require one or two remedial math courses fail to earn degrees. In contrast, nearly two-thirds of students who do not require remediation complete associate or bachelor degrees.
- More than 60 percent of employers report that recent graduates have poor math skills, and nearly 75 percent report deficiencies in grammar and writing skills. Unqualified and poorly trained, these high school graduates are likely to become trapped in unskilled, low-paying jobs that do not support a family

well above the poverty level, provide benefits, or offer a clear pathway for advancement.

- Data show a strong correlation between taking higher-level courses in high school and achieving success in college and employment in high-growth, high performance jobs.
- What courses they take matters for all students, but it is particularly important for students from disadvantaged backgrounds. Taking a rigorous high school curriculum that includes math at least through Algebra II cuts in half the gap in college completion rates between white students and African American and Latino students.
- Unfortunately, minority youngsters are significantly less likely to take rigorous, college- and work-preparatory curricula than are Asian and white students. Of the graduating class of 2000, less than one-third of American Indian, Latino, and African American students took a math course beyond Algebra II, compared with nearly half of white students and more than two-thirds of Asian students who did.
- Only one in four high school graduates surveyed nationally indicated that they were significantly challenged by their high school coursework (Achieve, 2005).

### **Meetings with Other States**

Through research, five states were identified as having taken or being in the midst of taking unique steps to rethink and redesign their expectations for high school graduates. These five states were: Rhode Island, Indiana, Massachusetts, Arkansas, and Oregon. All five states accepted invitations to come to Michigan to make presentations to the Task Force, describe their programs, and dialogue with Task Force members. Separate days were scheduled for each state's visit to allow maximum time for dialogue.

My recommendations take the best of what was learned from other leading states, the work of the Task Force, and adds a Michigan flair. Michigan has long been regarded as a national leader in education and we want to remain as the state that others in the nation and the world look to as the model for educational excellence and innovation. I firmly believes that the adoption and implementation of these recommendations, with a unique focus on 21<sup>st</sup> Century skills and online learning, will set Michigan on the road to reclaim its prominence as a world leader in education.

To implement the recommendations contained in this report, it will be necessary to evaluate current expenditures, realize efficiencies, leverage state and local resources, prioritize strategies, and make critical investments to bring about the desired student achievement outcomes.

## **Guiding Principles**

A number of principles guided the work:

- Graduation requirements must focus on the knowledge and skills students will need in the 21<sup>st</sup> Century to succeed in post-secondary education and the workplace.
- The preparation students need for success in education beyond high school is the same as the preparation required for success in the workplace.
- Graduation requirements must allow for each and every high school student, regardless of instructional need, to successfully attain them. Schools must employ all necessary accommodations, appropriate interventions, and alternative pathways.
- Rigorous learning standards must ensure that students see and understand the relevance of what they are learning.
- Recommendations to improve preparation and achievement in our existing system must also encourage and promote the development of innovative educational models and practices.
- The teacher in the classroom is the heart of instructional excellence. Teachers will need support to deliver more rigorous curriculum and instruction, make instruction relevant, and adapt instruction so that each and every student is successful.
- All Michigan high school students, regardless of where they live, deserve to learn a core of knowledge and skills that reflect high expectations and create equitable opportunities.

I would like to thank the members of the Task Force for their contributions to the development of this report. I will not forget the time, energy, and brainpower that they put into this challenge. It is our job now to deliberate further to develop a plan for the students and citizens of Michigan.

**Recommendations from the State Superintendent to the  
State Board of Education on  
Michigan High School Graduation Requirements  
November, 2005**

**Summary of Recommendations for Students**

***Student Graduation Requirements***

I recommend that Michigan establish the following high school graduation requirements:

- Participation in the Michigan Merit Examination or MI-Access in the spring of the junior year.
- Completion of a **Michigan Merit Curriculum** that includes a **Michigan Merit Core** and a **21<sup>st</sup> Century Applied Learning Core**.
- Completion of an online credit or noncredit course or learning experience.

***Implementation of the Michigan Merit Curriculum Requirements***

- Requirements beginning with the freshman class of 2006-07 (the graduating class of 2010). (If legislation to support this requirement has not been signed into law by March 1, 2006, the requirement will begin with the freshman class of 2007-08.)
- District requirement to file a phase-in plan if unable to implement immediately.
- Student modification allowed after three years in Michigan Merit Curriculum.

## Michigan Merit Core

The **Merit Core** content standards may be met in a traditional course sequence or in different contexts or formats such as a Humanities course sequence, Career and Technical Education programs, or a specialized small school curriculum, or as an online course. Schools that offer courses in a different format must be prepared to demonstrate how these courses align with the **Merit Core** content standards and demonstrate how the content standards will be assessed.

<b>English Language Arts</b>	4 Credits
	Credits to Include: <ul style="list-style-type: none"> <li>■ English 9 {or Humanities sequence, or CTE sequence}</li> <li>■ English 10</li> <li>■ English 11</li> <li>■ English 12</li> </ul> These courses will include writing, speaking, representing, reading, listening, viewing, literature, culture and language.
<b>Mathematics</b>	4 Credits
	Credits to Include: <ul style="list-style-type: none"> <li>■ Algebra I {or Integrated Math sequence, or CTE sequence}</li> <li>■ Geometry</li> <li>■ Algebra II</li> <li>■ 1 Additional Math or Math-Related class (For example: Calculus, Trigonometry, Electronics, Accounting, Probability and Statistics)</li> </ul> <b>Math must be taken in the Senior year.</b>
<b>Science</b>	3 Credits
	Credits to Include: <ul style="list-style-type: none"> <li>■ Biology {or Integrated Science sequence, or CTE sequence}</li> <li style="text-align: center;">+</li> <li>■ Physics or Chemistry</li> <li style="text-align: center;">+</li> <li>■ 1 year of Additional Science</li> </ul> Examples: Earth Science, Environmental Science, Forensic Science, Microbiology, Nanoscience, Oceanography, AP/IB/College for credit Sciences, Health Sciences, Agriscience, Chemistry, Physics
<b>Social Science</b>	3 Credits
	Credits to Include: <ul style="list-style-type: none"> <li>■ Government/Civics .5 (semester) {or Humanities sequence, or CTE sequence}</li> <li>■ Economics .5 (semester)</li> <li>■ US History (including Geography)</li> <li>■ World History (including Geography)</li> </ul>
<b>Health/Physical Education</b>	1 Credit
	Examples: Health, Personal Fitness, Team Sports
<b>Fine Arts/Music</b>	1 Credit
	Examples: Vocal and Instrumental Music, Art, Music Appreciation, Art History, Multicultural Art, Readers' Theater
<b>SUBTOTAL</b>	<b>16 Credits</b>

## 21<sup>st</sup> Century Applied Learning Core

**All remaining elective credits must include teaching and learning of 21<sup>st</sup> century skills, examples shown below.**

The following set of skill categories represent the 21<sup>st</sup> century skills that all students need to know and apply for successful living in the 21<sup>st</sup> century. These skills permeate the **Merit Academic Core** and are enhanced by courses in the elective areas. The course content standards must incorporate one or more of the following categories. Assessments in the 21<sup>st</sup> Century Applied Learning Core often involve demonstration of satisfactory performance by applying the course content standards to real-world tasks and projects, and contexts.

*adapted from the Partnership for 21<sup>st</sup> Century Skills*

<http://www.21stcenturyskills.org/index.php>

<p><b>21<sup>st</sup> Century Skill: Global Literacy</b></p> <ul style="list-style-type: none"> <li>▪ Understand and address global issues.</li> <li>▪ Learn from and work with others from diverse cultures, religions, and lifestyles.</li> <li>▪ Master non-English language skills as a tool for understanding other nations and cultures.</li> </ul>	<p><b>Course Examples</b></p> <p>Fine Arts            Music and Performing Arts            World Languages: including world languages Chinese, Japanese, Arabic, Swahili, Hindi, Sign language, in addition to Spanish, French, German, etc.            Global Studies            Multicultural Studies: including, African American Studies, Native American Studies, Latino Studies, Asian Studies            World Religions            Philosophy            Anthropology            Sociology/Psychology            International Business            MVHS Online Classes            Advanced Placement Courses            JROTC</p>
<p><b>21<sup>st</sup> Century Skill: Civic Literacy</b></p> <ul style="list-style-type: none"> <li>▪ Participate effectively in government as an informed citizen</li> <li>▪ Exercise the rights and obligations of citizenship at local, state, national and global levels.</li> <li>▪ Understand the local and global implications of civic decisions.</li> <li>▪ Apply 21st century skills to make intelligent choices as a citizen.</li> </ul>	<p><b>Course Examples</b></p> <p>Student Government            Leadership            Law            Service Learning            Legislative Internship            Business Ethics            MVHS Online Classes            Advanced Placement Courses</p>
<p><b>21<sup>st</sup> Century Skill: Financial, Economic, and Entrepreneurial Literacy</b></p> <ul style="list-style-type: none"> <li>▪ Make appropriate personal economic choices.</li> <li>▪ Understand the role of the economy and the role of business in the economy.</li> <li>▪ Apply appropriate 21st century skills to function as a productive contributor within an organizational setting.</li> <li>▪ Integrate oneself within and adapting continually to our nation's evolving economic and business environment.</li> </ul>	<p><b>Course Examples</b></p> <p>Business Technology            Entrepreneurship, Accounting, Marketing            Global Economics            Junior Achievement Applied Economics            Internships            Life Science –Personal Living            Financial Management            Business Management</p>

<p><b>21<sup>st</sup> Century Skill: Information and Communications Technology Literacy</b></p> <ul style="list-style-type: none"> <li>▪ Using information and media literacy skills.</li> <li>▪ Analyzing, accessing, managing, integrating, evaluating and creating information in a variety of forms and media.</li> <li>▪ Understanding the role of media in society.</li> <li>▪ Understanding, managing and creating effective oral, written and multimedia communication in a variety of forms and contexts.</li> <li>▪ Demonstrating interpersonal and self-direction skills. Becoming more productive in accomplishing tasks and developing interest in improving own skills.</li> </ul>	<p><b>Course Examples</b></p> <p>Multimedia, Broadcasting, CISCO, Computer Science  Debate and Forensics  Oral Communication  Journalism—Publications  Creative Writing  Drama  Theater Arts  Film and Photography  Desktop Publishing  Advertising  Graphic Arts and Design  Fine Arts  Performing Arts—Dance, Orchestra, Marching Band, Music Technology  MVHS Online Classes</p>
<p><b>21<sup>st</sup> Century Learning Skills</b></p> <ul style="list-style-type: none"> <li>▪ <b>Thinking and Problem-Solving</b>—Critical thinking, systems thinking, exercising sound reasoning, making complex decisions, problem identification, formulation and solution.</li> <li>▪ <b>Interpersonal and Self-Directional</b>-Teamwork and leadership; adapting to varied roles and responsibilities; working productively with others; exercising empathy; respecting diverse perspectives.</li> <li>▪ <b>Information and Communication</b>- Creativity and intellectual curiosity, information and media skills, communications skills, self direction.</li> </ul>	<p><b>Course Examples</b></p> <p>Electronics, Aviation, Building and Construction Trades  Robotics  Internships  Work Based Learning Experiences  Probability and Statistics  Health Sciences  Personal Fitness and Wellness</p>
<p><b>Accelerated Learning</b></p> <ul style="list-style-type: none"> <li>▪ Acknowledges that students learn at different rates</li> <li>▪ Can occur at any time in a student’s high school experience</li> <li>▪ Can assist students in moving beyond grade level, remaining at grade level, or moving to grade level.</li> </ul>	<p><b>Course Examples</b></p> <p>Advanced Placement Courses  Dual Enrollment Courses  Online courses  Literacy Labs  Math Labs  Gear Up  Upward Bound  Ramp Up Courses  Mentor Reading  2 + 2 + 2 Articulated Programs</p>
<p><b>Michigan Merit Curriculum Total</b></p>	<p><b>Total credits for graduation determined by district</b></p>

## Student Graduation Requirements

- 1. RECOMMENDATION: I recommend that all students be required to participate in the Michigan Merit Examination or MI-Access in the spring of the junior year.**

As Michigan moves to a new assessment that has the ACT college-readiness test as its core, it is important that all students be required to take this test in the spring of the junior year. All students, even those who have not seriously considered college, must take advantage of this free opportunity to assess their “college readiness.” In other states where the ACT has been used, many students learned that they were capable of college level work and adjusted their sights and attitudes to focus on the pursuit of higher education. Taking the Michigan Merit Examination or MI-Access Assessment will let students know where they stand in their acquisition of skills and knowledge, and provide enough time while still in high school to seek accelerated learning.

- 2. RECOMMENDATION: I recommend that all students be required to complete the Michigan Merit Curriculum that includes a Merit Core and a 21<sup>st</sup> Century Applied Learning Core.**

The Michigan Merit Core curriculum represents the minimum core learning standards that all students need to be successful in the 21<sup>st</sup> Century. I, therefore, recommend that these credits be the default graduation curriculum requirements for all students.

Upon the advice of the American Diploma Project ([www.achieve.org](http://www.achieve.org)), we have packaged the curriculum into units commonly known as “credits.” This packaging, however, is not meant to suggest that these content standards can be delivered only in a traditional course sequence and semester format. Local districts are free to integrate the content standards into different contexts (e.g. Integrated Math, Career and Technical Education (CTE), Special Education, English Language Learner programs) or course titles.

- 3. RECOMMENDATION: I recommend that all students be required to complete an online credit or noncredit course or learning experience.**

Students and employees must possess 21<sup>st</sup> Century literacy, which is defined as the set of abilities and skills where auditory, visual, and digital literacy overlap. These include the ability to understand the power of images and sounds, to recognize and use that power, to manipulate and transform digital media, to distribute them pervasively, and to easily adapt them to new forms. In the 21<sup>st</sup> Century the ability to be a lifelong learner will, for many people, be dependent on their ability to access and benefit from online learning. The experience of online learning must be integrated into each and every student’s high school education. To meet this requirement, schools can work collaboratively with Michigan Virtual High School (MVHS) or other online course providers and/or implement strategies to use local educators to teach online courses in a blended face-to-face and virtual format.

## **Implementation (Phase-In) of the Michigan Merit Curriculum Requirements**

- 4. RECOMMENDATION: I recommend that the Michigan Merit Curriculum described above be the required curriculum for each and every student, beginning with the freshman class of 2006-07 (the graduating class of 2010). (If legislation to support this requirement has not been signed into law by March 1, 2006, the requirement will begin with the freshman class of 2007-08.)**

I considered carefully the option of phasing in the recommended requirements over a number of graduating classes. Tennessee, for instance, does this, requiring the graduating class of 2005 to have taken Algebra I, the graduating class of 2006 to have taken both Algebra I and Geometry, and the graduating class of 2007 to have taken Algebra I, Geometry, and Algebra II.

I was struck, however, with a sense of urgency: that too much slippage had already occurred in the successful preparation and readiness of Michigan high school graduates for postsecondary education and workplace readiness. Phasing in the Michigan Merit Curriculum over several graduating classes would mean it would not be until 2015 that graduates would leave Michigan high schools having completed the Michigan Merit Curriculum.

- 5. RECOMMENDATION: I recognize that some school districts, because of seriously constraining local needs and circumstances, may not be able immediately to implement all of the recommended graduation requirements. In such cases, I recommend that such districts be permitted to phase-in the graduation requirements recommended in this report. I recommend that districts needing to phase in the requirements be required to file a phase-in plan with the Michigan Department of Education, which shall approve such plans on a case-by-case basis.**

## **Individual Student Exceptions to the Michigan Merit Curriculum**

Some states that have identified a core curriculum that is the default for each and every student also have identified a second curriculum, with less rigor and fewer requirements. Students, with parental permission, may opt out of the default curriculum into this second curriculum.

I considered carefully the option of identifying such a “second curriculum” for Michigan high schools and decided against this. I believe that I have identified and are recommending a curriculum that each and every student needs in order to be successful in postsecondary education or in the workplace. To develop anything less would be to acknowledge that not all students need, or that not all students can learn, the skills and knowledge represented by the Michigan Merit Curriculum.

Furthermore, opting out of the default curriculum before a student has even attempted it would deprive the student of the surprise that might occur when the student, with proper support, finds that he or she can indeed experience success in a rigorous course of study.

I, however, was conscious of the fact that in some circumstances, in spite of accommodations and support mechanisms, some students may not be able to complete the entire Michigan Merit Curriculum, especially at the top end.

- 6. RECOMMENDATION: For this reason, I recommend that each and every student be required to complete the Michigan Merit Curriculum through the third year of high school, and that in the third year a student, with parental permission, may request a modification to allow the student to pursue other options in their senior year.**

An example might be the case of a student who, as a junior, is not successful in Algebra II and, instead of repeating Algebra II in the senior year, requests a modification that would allow the student to fulfill the Mathematics requirement by taking a different Math course. Additionally, a Special Education student's IEP or an English Language Learner's prescribed program will take precedence over the Michigan Merit Curriculum requirements.

## Frequently Asked Questions

**Q: Will the Michigan Merit Curriculum requirements adversely impact the scheduling of regional Career and Technical Education (CTE) Programs?**

**A:** With careful planning, students who wish to participate in regional area Career Technical Programs should have little difficulty scheduling a full two years. Generally, students need one-half of the 6-period day (or 3 hours) for class instructional time and travel time to and from the center. The graphic below illustrates how students can participate in the two-year program. Additionally, some CTE classes will be able to meet the course content requirements in Mathematics and Science.

Sample Student Schedules

### Career and Technical Education

	Grade 9	Grade 10	Grade 11	Grade 12
Period 1	English 9	English 10	English 11	English 12
Period 2	Biology	US History	Algebra II	Math-Related
Period 3	World History	Chemistry	Gov/Econ	Science
Period 4	Health/PE	Geometry		
Period 5	Algebra I	Fine Arts/Music		
Period 6	Elective/Elective	Elective/Elective		

The same would be true for students who are interested in the Arts.

### Music Interest & World Language

	Grade 9	Grade 10	Grade 11	Grade 12
Period 1	English 9	English 10	English 11	English 12
Period 2	Biology	US History	Algebra II	Math-Related
Period 3	World History	Chemistry	Gov/Econ	Science
Period 4	Health/PE	Geometry	World Language	Elective/Elective
Period 5	Algebra I	World Language	Fine Arts/Music	Elective/Elective
Period 6	Band	Band	Band	Band

Many schools have expanded student course offerings with little or no additional costs, by going to an alternative schedule like:

- 4x4 or A/B Block
- A modified 6 period block
- Trimester
- Zero and 7<sup>th</sup> hour (modified staff reporting times)

*"Time is the resource we still haven't figured out how to use wisely...The approach of a new century offers the opportunity to create an education system geared to the demands of a new age and a different world. In the school of the future, learning—in the form of high, measurable standards of student performance—must become the fixed goal. Time must become an adjustable resource."* Milton Goldberg and Christopher Cross, *Time Out, Edutopia*, September 2005

**Q: Does the Michigan Merit Curriculum eliminate decisions made by local school districts?**

**A:** The Michigan Merit Curriculum—the “**what** should be taught”—is based on content standards and 21<sup>st</sup> Century learning skills. These standards and skills have been thoroughly researched and embraced by state and national experts. In my recommendations, I strongly urge that all students in the state of Michigan are required to complete this curriculum because I believe that this curriculum will prepare Michigan’s students for education beyond high school. This is a moral and economic imperative.

However, the equally important task of instruction—the “**how** the curriculum should be taught” -- is left to the local school districts. In collaboration with their teachers, students, parents, and community, local school districts will determine how best to teach the standards so that all students learn at a sufficient level.

Local school districts will still issue the diploma. Other decisions in this recommendation proposal left to the local decisions include, but are not limited to: school calendar and credit awarding system, textbooks and resources, development of the Accelerated Learning process, additional graduation requirements, scheduling options, and 21<sup>st</sup> Century Applied Learning offerings. My intent is to provide local school districts maximum flexibility within the framework of uniform course content standards for all students.

**Q: What’s different about the Michigan Merit Curriculum graduation requirements?**

**A:** The biggest difference, I believe, is that the Michigan Merit Curriculum is required of each and every student. The curriculum supports the need for personalization, acceleration, and innovation in an atmosphere of high expectations and high support for students. The Michigan Merit Curriculum is crafted around the philosophical belief that each and every student will need extended learning opportunities for extended learning beyond high school. As the learning skills for college and the workplace have merged, I have designed a curriculum that can take students wherever life leads them in the future.

The Michigan Merit Curriculum addresses the academic and the applied learning skills needed for success in the 21<sup>st</sup> Century. The 21<sup>st</sup> Century Applied Learning Core has expanded the traditional elective course offerings to include applied learning demonstrations of competency. I offered just a few examples of current electives that can incorporate 21<sup>st</sup> Century learning skills, but we expect that districts will develop even more electives that are relevant to students.

The online learning requirement (addressed more extensively in another FAQ) represents my belief that all students need to have the experience of learning in the powerful virtual learning environment.

**Q: What if a student takes Algebra I in the 8<sup>th</sup> grade? Does the student have to take 4 years of Math in high school?**

**A:** The answer will depend on local district policy. An eighth grade student may be granted high school credit for Algebra I, if the student successfully completes an algebra course that is based on the high school course content standards for Algebra I. If the district granted high school credit for the course, the student would not be required to take 4 years of mathematics in high school. However, the student must take mathematics in the senior year.

If a student successfully completes Algebra I in 8<sup>th</sup> grade, and the district does not grant high school credit, the student will advance in 9<sup>th</sup> grade to the next highest mathematics course and will have to take 4 years of mathematics in high school.

**Q: Why has an online learning experience been added to the Michigan Merit Curriculum? What counts for the online learning requirement?**

**A:** Online learning or e-learning will be a part of every high school student's future learning experiences. The State of Michigan Education Technology Plan calls for Michigan to act decisively or risk falling far behind in a global society. A key recommendation from the report states: ***“Every Michigan Student will have meaningful technology-enabled learning opportunities based on research and best practice that include virtual learning experiences.”***

In addition, the State Board of Education's Task Force on Embracing the Information Age (2001) included the recommendation: “Require . . . all high school students to take no less than one on-line course from the Michigan Virtual High School or other quality distance learning institution as a condition for graduation.”

Virtual learning will be a part of our students' everyday lives. Already, many universities and colleges require students to have a laptop with them when they arrive on campus. Businesses conduct training sessions online, and cities now are providing wireless Internet access in businesses to attract customers to their establishments. To give our students an experience of learning in a virtual world, the online learning experience is included in the Michigan Merit Curriculum requirements. Credit for the online learning experience could be gained by enrollment in programs such as:

- Michigan Virtual High School <http://www.mivhs.org/> or another online school
- Courses using online textbooks
- Online preparation courses for Advanced Placement Examinations, and ACT or SAT Test Preparation
- CTE online courses like CISCO Networking Certification, Engineering Drafting/CAD, Computerized Accounting
- A Career Awareness class [currently in development by Michigan Virtual High School (MVHS)]
- Freedom to Learn classrooms

As technology in this area quickly advances, more and more opportunities to meet the e-learning requirement will become available.

## High School Graduation Task Force Members

W. Charles Breiner, Superintendent, Howell Public Schools

Patty Cantu, Director, Office of Career and Technical Preparation, Michigan Department of Labor and Economic Growth (Saundra Carter, Alternate)

Ryan Donlan, Superintendent, Bay-Arenac Community High School (Charter Alternative High School)

Jamey Fitzpatrick, President, Michigan Virtual University (comprising the Michigan Virtual High School) (Dan Schultz, Alternate)

MaryAlice Galloway, Special Assistant to the Chief Academic Officer and Assistant to the Task Force

Jeremy M. Hughes, Ph.D., Deputy Superintendent/Chief Academic Officer, Michigan Department of Education (Chair)

Barbara Markle, Ph.D., Assistant Dean for K-12 Outreach, College of Education, Michigan State University (Christopher Reiman, Alternate)

Diane McMillan, High School Redesign Consultant, Michigan Department of Education

Jay Newman, Superintendent, St. Joseph Intermediate School District, Chair of Program and Services Committee, Michigan Association of Intermediate School Administrators

Lee Schleicher, Dean, Washtenaw Technical Middle College

Michael Schmidt, Director, Education and Community Development, Ford Motor Company Fund

Mark Thomas, Principal, Northview High School and President, Michigan Association of Secondary School Principals

Jacque Thompson, Ph.D., Director, Office of Special Education and Early Intervention Services, Michigan Department of Education (Beth Steenwyk, Alternate)

Gary VanKempfen, Ph.D., Vice-President of Academic Affairs, Lansing Community College

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Zhao, Y. (October 25, 2005). Presentation: *Lessons Learned from China on Education Reform*, presented to the Senate Education Committee. Lansing, MI.

## Glossary of Terms

Accelerated Learning	A system of support that provides personalized instruction opportunities to each student for remediation on curriculum content not yet mastered or to increase learning and experience through early college and internship.
Advanced Placement	Advanced Placement courses are taught on site at a high school or online. They offer students a rigorous course of study that is equivalent to a college-level course. Students can take an AP test and, if they score high enough, can receive college credit for the course. Each college or university sets its own policy for acceptable scores and the number of credits.
Articulation	Articulation is an agreed upon alignment between courses and levels of academic instruction. For example, some Career and Technical Education programs have articulation agreements with community colleges and universities in which specific CTE course serve as prerequisites for college courses.
Assessment	Assessments are used to evaluate a student’s mastery of the instructed curriculum. Assessments can be paper and pencil or can be a demonstration or project.
Benchmark	A benchmark is a standard or point of reference. As used in describing curriculum, a benchmark is a specific descriptor of what a student should know and be able to do within a specific curriculum area. For example, within the English language arts curriculum, content standard 4 states “All students will use the English language effectively.” Benchmark 4 for early elementary states: “Become aware of and begin to experiment with different ways to express the same idea”.
Carnegie Unit	The unit was developed in 1906 as a measure of the amount of time a student has studied a subject. For example, a total of 120 hours in one subject – meeting 4 or 5 times a week for 40 to 60 minutes, for 36 to 40 weeks each year – earns the student one “unit” of high school credit. Fourteen units were deemed to constitute the minimum amount of preparation that may be interpreted as “four years of academic or high school preparation.”

Competence	Demonstration of satisfactory attainment of high school course standards, benchmarks and expectations
Courses	A class that comprises a specific set of high school content standards. A course is not defined by "seat time" or Carnegie units or semesters; it is defined by the content and instruction.
Grade Level Content Expectations	GLCEs state in clear and measurable terms what students in each grade are expected to know and be able to do in a specific curriculum area like math or English language arts
Dual Enrollment	Participation of eligible high school students in college-level courses; eligible courses must not be offered by the high school or academy and <u>must</u> lead towards accreditation, certification and/or trade licensing
Educational Development Plan	A tool that students use beginning in middle school to explore careers and the educational requirements for achieving a career goal
High Stakes Testing	This term is used to describe a variety of assessments and usually refers to statewide assessments that have a serious impact on students, schools and school districts. For example, some states require students to pass a statewide assessment in order to move to the next grade or to graduate from high school.
Information Communication Technology	Refers to the many modalities of communication and understanding that make up 21 <sup>st</sup> century literacy which is defined as the set of abilities and skills where aural, visual and digital literacy overlap. These include the ability to understand the power of images and sounds, to recognize and use that power, to manipulate and transform digital media, to distribute them pervasively, and to easily adapt them to new forms.
Leadership Capacity Building	Developing the ability in school district staff to nurture and sustain positive change without gaps in progress even when key leaders leave the organization
Mastery	Demonstrating skills and knowledge specified in content area expectations
Mentor System	An established system of providing adult coaching and support to each student
Proficiency	The acquisition of enough knowledge and skill to advance to the next level

Relationship	Ensuring that each and every student is known, has an adult who serves as mentor/advisor and who helps each student feel connected to school, to other students and to adults in the school
Relevance	The learning in a classroom is related to real world skills and applications that are clearly evident to the student; the learning is personally meaningful and applied to further education and work
Remediation	Opportunities to learn or re-learn to bring a student up to satisfactory performance of academic expectations
Rigor	Refers to an academic course of study that has standards, curriculum, and expectations, providing intellectual depth for students and graduates sufficient to meet the demands of postsecondary education and the workplace
Satisfactory Performance	Performance that displays achievement of content expectations
Standard	A uniform metric or statement against which academic performance can be measured
Time-on-Task	Time spent teaching, learning, investigating and demonstrating
Universal Design for Learning	In terms of learning, universal design means the design of instructional materials and activities that makes the learning goals achievable by individuals with wide differences in their abilities to see, hear, speak, move, read, write, understand English, attend, organize, engage, and remember. Universal design for learning is achieved by means of flexible curricular materials and activities that provide alternatives for students with differing abilities. These alternatives are built into the instructional design and operating systems of educational materials- they are not added on after-the-fact.
Virtual Learning	Demonstrated content and skill development through the medium of technology.