Michigan Merit Curriculum

Guidelines

ONLINE EXPERIENCE

MICHIGAN Department of **Education**

Welcome

This guide was developed to assist teachers in successfully implementing the Michigan Merit Curriculum. The identified content expectations and guidelines provide a useful framework for designing curriculum, assessments and relevant learning experiences for students. Through the collaborative efforts of Governor Jennifer M. Granholm, the State Board of Education, and the State Legislature, these landmark state graduation requirements are being implemented to give Michigan students the knowledge and skills to succeed in the 21st Century and drive Michigan's economic success in the global economy. Working together, teachers can explore varied pathways to help students demonstrate proficiency in meeting the content expectations and guidelines.

Definition of Online Learning

A structured learning activity that utilizes technology with intranet/ internet-based tools and resources as the delivery method for instruction, research, assessment, and communication

Research has shown that students are most successful in a teacher-led environment. Although a teacher-led course or experience is preferable, not all districts have this capacity, and district discretion will prevail.

It is encouraged that teachers will incorporate the *Michigan Curriculum Framework*, *Standards for Teaching and Learning*; higher order thinking, deep knowledge, substantive conversation, and connections to the world beyond the classroom, into the experience. It also places emphasis on the use of the global Internet, rather than a stand-alone software product.

Rationale for Online Learning

Completing a meaningful online learning experience in grades 6-12 with a specific emphasis at the high school level, will allow students to become familiar with a key means of increasing their own learning skills and knowledge. It will also prepare them for the demands that they will encounter in higher education, the workplace, and in personal life-long learning. While students informally develop technology skills and gain experience through their media-rich lives, an online learning experience will require them to complete assignments, meet deadlines, learn appropriate online behavior, and effectively collaborate with others in an instructional setting.

Michigan's new online learning requirement is consistent with one of the core recommendations contained in the U.S. Department of Education's 2005 National Education Technology Plan. According to this plan, schools should "provide every student access to e-learning." The online learning requirement is also consistent with the State Educational Technology Plan adopted by the Michigan State Board of Education in March 2006. A key recommendation contained in this document states: "Every Michigan student will have meaningful technology-enabled learning opportunities based on research and best practice that include virtual learning experiences."

Providing a Successful Experience

It is clearly an opportunity for Michigan high schools to effectively use technologies in ways that provide successful "online learning experiences" that truly prepare learners for the future. Online learning should include a combination of technologies to create an experience that replicates real-world data gathering and application required in business and industry; thus preparing students with the skills needed for learning in the 21st century.

The goal for educators and policy makers is to provide high quality integrated online learning experiences that will engage and challenge today's high school students. Today, technology plays an integral role in the workplace and at home. It is important that students in grades K-12 and state-approved career and technical education programs must have experiences where the teacher makes extensive use of available online resources and communication strategies. To support these state guidelines, local educational agencies are encouraged to develop local standards and legal and ethical guidelines by working collaboratively with parents, students, educators and community groups. In addition, school districts should provide support systems, policy, and knowledgeable professional educators to guide students through an online learning experience.

Online Learning Delivery Formats

Over the past five years, Michigan has seen significant growth in the number of K-12 students and educators engaged in online learning. Today, learners of all ages can experience a variety of instructional formats while participating in formal online educational activities. Below is a brief description of the four most common formats used to deliver online educational programs and services to students at the K-12 level. These formats are presented in order of the most online teacher involvement to the least as methods for students to meet the online learning provision contained in Michigan's new high school graduation requirements.

Teacher-Led: This mode of online learning mirrors the role of a traditional classroom teacher in a virtual environment. This format usually makes use of a Web-based course management system or application such as Blackboard to create an online learning environment for students. The online teacher provides the organization, direction, educational content and feedback for the students. The teacher makes assignments, leads threaded discussions, grades student work, establishes deadlines and administers quizzes and tests. The teacher also plays an active role in monitoring student progress and developing differentiated instructional strategies for students. This delivery format is one-hundred percent dependent on the use of technology tools such as e-mail, chat rooms, threaded discussions and pod casts to communicate and interact with students. Given the strong reliance on technology, this format requires both teachers and students to have strong computer and Internet skills.

Blended Instruction: Blended online learning is a balanced mix of traditional face-to-face instructional activities with appropriately designed online experiences. Teachers that engage in blended online learning often utilize a course management system as an extension of the physical classroom. This format leverages the communication benefits of a traditional classroom environment and links it to the power of Internet-based learning tools and resources. Educators utilize this format to expand and reinforce classroom-based instructional activities and to extend learning beyond the classroom walls and the normal school day, including evenings, weekends and scheduled breaks. This format can provide opportunities for students to work outside the classroom in virtual teams with students from other schools to learn writing, research, teamwork and technology skills.

Teacher-Facilitated: Teacher-facilitated online learning enables an educator to work with one or more students to provide coach-like assistance with their online course or learning activities. Teachers can facilitate student learning through a combination of face-to-face interactions and exchanges using communication tools commonly found in most Internet-based course management systems. This form of delivery places an expectation on students to take significant responsibility for their own learning. A key role of the teacher facilitator is to ensure that students are engaged and making progress in their online course or activity. Teachers providing the facilitation usually know the subject matter well and can provide content-related instructional assistance to students. This delivery mode can be compared to some independent study activities used in high schools.

Self-Paced*: A growing number of online educational products and services can be used by students with no teacher involvement. These products are often referred to as "self-paced" online learning experiences and they usually work best for highly independent learners who regularly demonstrate self-initiative and require little guidance, motivation and direction. Self-paced online courses and activities are often shorter in duration than semester-length courses and tend to focus on concentrated topics such as learning a specific software tool or program. Other examples include online test preparation tools and online remedial courseware. Two common shortfalls of self-paced online learning include: a) the inability of students to seek support, feedback and direction from an educator online; and b) the inability of students to be part of a learning community and benefit from interactions with other learners for support and assistance on collaborative projects.

If the online course is being taken for high school credit it is recommended that this format not be used by schools as a strategy to meet the online learning provision contained in Michigan's high school graduation requirements.

* The communication provided by the instructor serves as a tremendous motivator for students. Research has shown that without this type of communication, many students fail to follow through with an online course or activity (*Interaction and Immediacy in Online Learning*, Robert H. Woods, Jr., Jason D. Baker, The International Review of Research in Open And Distance Learning, Vol. 5, No. 2 (2004)). Students who have teachers that build an online relationship with them have been shown to be most successful when taking online courses or participating in an online experience.

A Framework

The Michigan Merit Curriculum guidelines for online learning require that students:

- Take an online course, or
- Participate in an online experience, or
- Participate in online experiences incorporated into each of the required credit courses of the Michigan Merit Curriculum.

Following is a framework for online learning that outlines a spectrum of possible experiences in these areas. Successful learning embraces the principles of universal design for learning.

For the learning experience to be successful it should:

- Be relevant and address many learning styles appropriate to the tasks
- Include asynchronous and/or synchronous interaction between teacher and student, and student-to-student
- Include teachers who are knowledgeable in web-based instruction techniques
- Incorporate resources outside the classroom
- Include a monitoring plan

To ensure accessibility for all students, any applications that are developed or resources used in an online environment should be compliant with the requirements of Section 508 of the *Rehabilitation Act of 1973*, as amended.

Online Course*

A course delivered through an intranet or internet connection

Students will complete a course of study delivered via the intranet/internet that:

- Is organized in a coherent, sequential manner
- Has instructional goals, objectives, strategies, and assessments that are aligned with state standards, benchmarks and expectations
- Is comparable in rigor, depth, and breadth to traditionally delivered courses

The online course may include courses delivered through:

- Local districts
- Intermediate School Districts
- Regional Educational Media Centers
- Universities and colleges
- Michigan Virtual University
- Distance Learning courses that incorporate online learning management systems

The delivery of the free *Career Forward* course, developed by the Michigan Department of Education and Michigan Virtual High School with funding through Microsoft, may be offered via the MVHS Blackboard system or by incorporating the stand alone web version through an entities' learning management system.

*Local districts will determine high school credit.

Online Learning Experience

A combination of structured, sustained, integrated, online experiences accessed via a telecommunications network.

Meaningful online learning activities usually require a period of time for students to practice using technology tools, explore the virtual learning environment, and develop a competency operating in this space. Structured, sustained online experiences have more instructional value than informal one-time online learning events. These experiences could include a combination of voice, video, and online activities. This integrated online experience should be enough to develop competency for learning in a virtual environment. The meaningful online experience requires a minimum accumulation of twenty hours (in one or more delivery formats outlined on pages 3 and 4) for students to become proficient in using technology tools to virtually explore content.

The following represent opportunities to fulfill the online learning experience:

- Provide opportunities for students to interact with other students and experts from around the globe in authentic online learning activities in a controlled environment
- Utilize webquests, blogs, podcasting, webinars, vblogs (videoblogs), Real Simple Syndication(RSS) feeds, or virtual reality simulations
- Utilize an online learning management system that allows ongoing interactive opportunities for students
- Use technology tools for online research or online projects
- Develop and track an electronic portfolio (organized collection of completed materials)
- Determine the value and reliability of content collected on websites and other online resources
- Provide an opportunity for interactive discussion with an instructor or expert, such as an author
- Communicate via threaded discussions with other students in and outside of their school
- Provide authentic experiences through online fieldtrips by bringing the community into the school/classroom
- Participate in an online project where students apply understanding of software applications to simulated or real data
- Participate in ongoing online projects for teachers and students
- Provide teacher-led, student-directed online learning activities such as test preparation tools and career planning resources

Online Learning Incorporated into Each of the Required Credits

Students must take an online course or learning experience or have the online learning experience incorporated into each course of the required curriculum beginning with the class of 2011.

Schools choosing this integrated option will have a plan in place that will assist teachers with the integration of an online learning experience into each of the required credits of the Michigan Merit Curriculum. This can be accomplished by choosing any combination of the options in the online learning experience. Utilizing an online learning management system, such as Moodle, Blackboard, or Desire2Learn for a "hybrid" instructional experience (online learning used to complement traditional face to face instruction) is another option. The online instruction or experience should be a minimum accumulation of 20 hours.

Technology Requirements

To maximize the Michigan Merit Curriculum Online Learning Experience schools should have, at a minimum, the ability to access the internet or an intranet. Most online experiences encourage a fast, reliable Internet connection, with a minimum of a 56.6 KBps. as a basic requirement for taking an online course or learning experience. The connection speed is determined by the computer's physical location, the speed of the modem, and the access plan purchased from an Internet Service Provider (ISP). In addition, many courses and websites may require or be significantly enhanced with a broadband Internet connection (cable, DSL, or satellite).

For the best online learning experience, it is recommended that the following computer requirements be in place to access the internet/intranet: A Pentium speed PC or PowerMac with at least 32Mb will enhance the interactive learning experience. To best display Web pages, screen resolution should be at least 800 x 600 pixels and a color depth of Hi Color (16 bit/64K) or greater. Using these settings will require less vertical scrolling and improve the appearance of graphics. Additional hardware such as a CD-ROM and/or sound card (with speakers or headphones) may be required for some courses or programs.

To ensure that all students can access and be successful with their online learning experience schools should be prepared to offer assistive technology devices and software. Examples of assistive technology can be:

- Software that enlarges the image on the screen.
- Alternate keyboards or mouse-type devices.
- Software that reads back to the user (screen readers).
- Software that lets the user dictate to the computer.
- Refreshable Braille display, an electro-mechanical device for displaying Braille characters.

Suggestions for Developing an Online Learning Experience

Characteristics of Online Learning

The characteristics of quality online learning can be categorized in five broad areas. These five areas are summarized below and describe specific experiences in which students should engage to develop 21st century learning skills. The following are suggestions for schools to use when developing online courses or experiences to meet the requirement of online learning.

1. Develop Life-long Learning Skills

As much as students need knowledge in core subjects, they also need to know how to keep learning continually throughout their lives. Life-long learners demonstrate information and communication skills; thinking and problem-solving skills; and interpersonal and self-directional skills.

Does the online course or online learning experience require students to:

- Conduct research using Internet-based search engines and software tools?
- Access, analyze, and manage or store information gathered from online sources?
- Evaluate information from various online resources for accuracy, bias, appropriateness, and comprehensiveness?
- Create and share electronic documents and multimedia materials with educators and other students?
- Post messages to threaded discussions, participate in synchronous chats, blogs, listservs and/or similar forms of communication?
- Make independent learner decisions?
- Develop, implement, and communicate new ideas to others via the internet?
- Monitor one's own learning needs and take responsibility for meeting these needs?
- Demonstrate teamwork, develop relationships in a virtual environment and respect diverse perspectives of others?
- Demonstrate network etiquette and ethical behavior in an online community context?
- Navigate Web sites and other online resources such as Podcasts, and determine the value and reliability of content collected?
- Take tests, complete assignments and respond to instructor feedback in an online environment?

2. Use of Technology Tools

In the digital world, students need to learn to use the tools that are essential to everyday life and workplace productivity.

Does the online course or online learning experience require students to:

- Use a laptop or desktop computer, Internet connection, MP3 player, camcorder, digital camera, personal digital assistant, cell phone, or other multimedia device?
- Use spreadsheets, databases, email programs, word processor, Web browser, search engine software, calendar tools, groupware, or graphical and multimedia programs for presentations?

3. Content Alignment and Use of Media

The curricular content of online courses or online experiences that are taken to satisfy core high school graduation requirements should be aligned with state curriculum standards, benchmarks and expectations. Online courses and learning experiences that utilize sound instructional design standards and make use of rich multimedia content can be more engaging for students.

Does the content in the online course or online learning experience:

- Align with state and local standards, benchmarks, and expectations?
- Contain learning activities based on sound instructional design methodologies?
- Utilize audio, video animation, simulations and other engaging multimedia?
- Provide opportunities to use online tools and applications that make learning more relevant to the real world?

4. Educator, Expert and Student Involvement

Students learn best in an online learning environment when they have the opportunity to interact with educators, other adult experts and with other students. Some online self-paced courseware programs can provide valuable remedial or enrichment support for students, however, many lack the characteristics of quality online learning because of limited human interaction or instructor feedback.

Does the online course or online learning experience:

- Include an instructor who can facilitate student learning, online discussions and other activities?
- Provide an opportunity for students to work and learn in a virtual environment for a minimum accumulation of twenty hours?
- Utilize teacher-driven online assessments or other tools that offer instructor feedback to students?

5. Sustained Learning

Meaningful online learning activities usually require a period of time for students to practice using technology tools, explore the virtual learning environment and develop a comfort level in operating in this space.

Does the online course or online learning experience:

- Provide an opportunity for students to work and learn in a virtual environment for a minimum accumulation of twenty hours?
- Provide an opportunity for students to develop working relationships with an educator and other students that do not attend their local school?

Glossary

Assistive Technology Devices and Services: Assistive technology is any item that is required by a student to increase functional capabilities. This is determined by the student's individualized education plan (IEP). The continuum of assistive technology is very broad and includes no/low-tech (pencil grips, reading guides, etc.), moderate-tech (portable word processor, talking spell checkers, etc.) and high-tech (computers, software, augmentative & alternative communication (AAC) devices, etc.).

Asynchronous Learning: Asynchronous learning is a teaching method using the asynchronous delivery (teacher and learner access the curriculum at their own convenience, not necessarily at the same time) of training materials or content using computer network technology. It is an approach to providing technology-based training that incorporates learner-centric models of instruction. The asynchronous format has been in existence for quite some time; however, new research and strategies suggest that this approach can enable learners to increase knowledge and skills through self-paced and self-directed modules completed when the learner is prepared and motivated to learn.

Blended Course: A blended or hybrid course combines face-to-face (FTF) classroom instruction with electronic online delivery. A significant amount of learning in a blended course occurs online and, as a result, reduces the amount of classroom seat time.

Blog and Vlog: Blog is short for weblog. A weblog is a journal (or newsletter) that is frequently updated and intended for general public viewing. Blogs generally represent the personality of the author or the Web site. A vlog is a weblog which uses video as its primary presentation format. It is primarily a medium for distributing video content. Vlog posts are usually accompanied by text, image, and additional meta data to provide a context or overview for the video. Vlogs or videoblogs are created by vloggers or videobloggers, while the act itself is referred to as vlogging or videoblogging.

Distance Learning: Distance learning, or distance education, is a field of education that focuses on the pedagogy/andragogy, technology, and instructional systems design that are effectively incorporated in delivering education to students who are not physically "on site" to receive their education. Instead, teachers and students may communicate asynchronously (at times of their own choosing) by exchanging printed or electronic media, or through technology that allows them to communicate in real time (synchronously). Distance education courses that require a physical on-site presence for any reason including the taking of examinations is considered to be a hybrid or blended course or program.

Electronic Portfolio: In the context of education and learning, an ePortfolio is a portfolio based on electronic media and services. It consists of a personal digital record containing information such as personal profile and collection of achievements, information on which different services can be provided to the owner of the ePortfolio and the people and organizations to whom the owner has granted access.

Internet: The Internet is the worldwide, publicly accessible network of interconnected computer networks that transmit data by packet switching using the standard Internet Protocol (IP). It is a "network of networks" that consists of millions of smaller domestic, academic, business, and government networks, which together carry various information and services, such as electronic e-mail, online chat, file transfer, and the interlinked Web pages and other documents of the World Wide Web.

Intranet: An intranet is a private computer network that uses Internet protocols, network connectivity, and possibly the public telecommunication system to securely share part of an organization's information or operations with its students or employees. The same concepts and technologies of the Internet such as clients and servers running on the Internet protocol suite are used to build an intranet. HTTP and other Internet protocols are commonly used as well, especially FTP and e-mail. An intranet can be understood as "a private version of the Internet".

Learning Management System: A learning management system (LMS) is a software application or Web-based technology used to plan, implement, and assess a specific learning process. A learning management system provides an instructor with a way to create and deliver content, monitor student participation, and assess student performance. A learning management system may also provide students with the ability to use interactive features such as threaded discussions, video conferencing, and discussion forums.

Online Learning: A structured learning activity that utilizes technology with intranet/internet-based tools and resources as the delivery method for instruction, research, assessment, and communication.

Podcasting: Podcasting is the method of distributing multimedia files, such as audio programs or music videos, over the Internet for playback on mobile devices and personal computers. The term podcast, like 'radio', can mean both the content and the method of delivery. The host or author of a podcast is often called a podcaster. Podcasters' web sites may also offer direct download or streaming of their files; a podcast however is distinguished by its ability to be downloaded automatically using software capable of reading RSS feeds.

Real-time Online Learning: Learning that takes place when the instructor and student both access the course site at the same time, also known as 'synchronous' instruction.

Real Simple Syndication (RSS): Web feeds that provide web content or summaries of web content together with links to the full versions of the content. This is also known as an RSS feed, webfeed, RSS stream, or RSS channel. In addition to facilitating syndication, web feeds allow a website's frequent readers to track updates on the site.

Rehabilitation Act of 1973: Section 508 of the *Rehabilitation Act* was enacted to eliminate barriers in information technology, to make available new opportunities for people with disabilities, and to encourage development of technologies that will help achieve these goals. For more information visit the website at http://www.section508.gov.

Synchronous Learning: Learning and teaching takes place in real time (same time) while the trainer and learners are physically separated from each other (place shift).

Examples include watching a live television broadcast, audio/video conferencing, Internet telephony, online lectures, and two-way live satellite broadcast.

Telecommunication: Telecommunication is the transmission of signals over a distance for the purpose of communication. Today, telecommunication is widespread and devices that assist the process such as television, radio and telephone are common in many parts of the world. There is also a vast array of networks that connect these devices, including computer networks, public television networks, radio networks and television networks. Computer communication across the Internet, such as e-mail and instant messaging, is just one of many examples of telecommunication.

Threaded Discussion: In a threaded discussion, a group of individuals is connected via an electronic network, such as an e-mail list, listserv, or a bulletin board service or LMS. It allows members of the group to communicate about common interests asynchronously, in their own time and at their own pace. An individual may post a message in the evening and another may respond the next day. Threaded discussion is a common tool in e-learning environments. Advocates of threaded discussion suggest that learners may stop and think about what their messages will be, taking into account the other messages in the discussion forum, before posting their thoughts. Such asynchronous communication permits deeper consideration of the ideas under discussion.

Universal Design for Learning: A framework that provides a way to make various approaches to educational change more feasible by incorporating new insights on learning and new applications of technology.

Virtual Learning Environment: A virtual learning environment (VLE) is a set of teaching and learning tools designed to enhance a student's learning experience by including computers and the Internet in the learning process.

Webinar: A webinar is a seminar which is conducted over the World Wide Web. It is a type of web conferencing. In contrast to a Webcast, which is transmission of information in one direction only, a webinar is designed to be interactive between the presenter and audience. A webinar is 'live' in the sense that information is conveyed according to an agenda, with a starting and ending time. In most cases, the presenter may speak over a standard telephone line, pointing out information being presented on screen, and the audience can respond over their own telephones, preferably a speakerphone.

Webquest: A WebQuest is a research activity in which students collect information and where most of the information comes from the World Wide Web. A WebQuest is "an inquiry-oriented activity in which some or all of the information that learners interact with comes from resources on the internet, optionally supplemented with videoconferencing." (http://webquest.sdsu.edu/about_webquests.html)

Usually, the quest is divided in the following sections: Introduction, Task, Process, Evaluation, Conclusion, and Teacher Page. Students typically complete WebQuests in groups. Each student in each group then has a "role," or specific area to research. WebQuests often take the form of role-playing scenarios, where students take on the personas of professional researchers or historical figures.

The WebQuest is valued as a highly constructivist teaching method, meaning that students are given the independence to find, synthesize, and analyze information in a hands-on fashion, actively constructing their own understanding of the material. WebQuests' focus on group work also makes them popular examples of cooperative learning.

World Wide Web: The World Wide Web ("WWW" or simply the "Web") is a global, read-write information space. Text documents, images, multimedia and many other items of information, referred to as resources, are identified by short, unique, global identifiers called Uniform Resource Identifiers (URIs) so that each can be found, accessed and cross-referenced in the simplest possible way.

The term is often mistakenly used as a synonym for the Internet itself, but the Web is actually something that is available via the Internet, just like e-mail and many other Internet services.

These definitions have been paraphrased from Wikipedia and the Center for Applied Special Technology.

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