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*Michigan Virtual University*® (*MVU*) is a nonprofit Michigan corporation that was established in 1998 to deliver online education and training opportunities to the citizens of Michigan. It is the parent organization of the *Michigan Virtual School*® (*MVS*®), *Michigan LearnPort*® and the *Michigan Virtual Learning Research Institute™* (*MVLRI™*). MVU is governed by a Board of Directors representing the education and business communities.
This report is submitted in compliance with Section 98 (6) of Public Act 85 of 2015, which requires the Michigan Virtual University (MVU) to provide, not later than December 1 of each fiscal year, a report to the House and Senate Appropriations Subcommittees on State School Aid, the State Budget Director, the House and Senate Fiscal Agencies and the Department of Education that includes specific information related to the Michigan Virtual School (MVS) for the preceding fiscal year.

Background

The Michigan Virtual School, Michigan LearnPort, and Michigan Virtual Learning Research Institute are the core divisions of MVU, a 501(c)(3) nonprofit organization that works in partnership with K-12 schools to supplement and expand online learning opportunities. For the past 17 years, MVU has provided leadership to accelerate the adoption and use of online learning within Michigan. Working in partnership with hundreds of Michigan schools, MVU offers classes to students and professional development programs for educators through online, web-based services. MVS was created by Public Act 230 of 2000 to serve both traditional and nontraditional students, and since its inception, MVS has recorded over 183,000 course registrations.

During the 2014-15 academic year, MVS had 23,673 course registrations. MVS offers a broad range of core academic courses aligned with state standards, college-level equivalent courses, remedial, enrichment and world language courses, and other innovative online experiences. Other MVU services include Michigan LearnPort, a statewide web-based professional development system that provides approximately 350 online courses, videos, webinars, and training modules for Michigan educators and school employees, and myDreamExplorer® (MDX), an online career exploration tool that includes a rich collection of planning resources that supported over 8,500 middle and high school students during 2014-15. Last year, MVU launched MyBlend, a program offering blended learning resources, products, and services to schools to aid them in providing personalized learning options to their students to support improved student achievement.

Funding for MVS is provided through a combination of annual appropriations from the Legislature, reduced course fees charged to enrolling schools, and private grant funds. MVS does not grant course credit or award diplomas independently, but works in partnership with local and intermediate school districts that award credit or diplomas.

In 2011, MVS was awarded a five-year accreditation renewal by AdvancED®. This comprehensive evaluation process recognizes MVS’s commitment to providing high-quality online instructional services. As part of this continued quality improvement process, MVS will be hosting AdvancED representatives this spring for a re-accreditation visit.

MVS continues to be recognized as one of the leading and largest virtual schools in the U.S. and works in collaboration with a national network of K-12 online learning organizations to promote the development of high-quality programs and services for students and educators.
Expanding Educational Opportunities in Michigan

*MVU* has played three key roles to support and accelerate the growth and development of online learning in Michigan’s K-12 schools. Initially, the organization served as a change agent at a time when most school leaders and parents were not familiar with online learning. Over the past decade, *MVU* has invested significant time and resources to create a general awareness of online learning for Michigan’s policy makers, educators, parents, and students.

As school leaders developed an appreciation for the value and potential of online instruction, *MVU* also became a service provider of high-quality online courses and career planning tools. These efforts included helping schools develop local support systems to ensure student success through mentor training, technical support and helpdesk services. *MVU* also introduced innovative online professional development programs and services available to all Michigan K-12 education personnel.

A third role for *MVU* has evolved as schools adopt locally-developed online learning programs, including blended models using classroom-based and online resources. Through its MyBlend program, *MVU*, helps schools train teachers, acquire online content, develop online assessments, monitor quality, conduct evaluation, and improve infrastructure and technical support services.

In 2012, the Michigan Legislature asked *MVU* to establish a center for online learning research and innovation, and through this center, directed *MVU* to engage in a variety of strategic initiatives to advance understanding of the interrelationship of learning and technology. The center, now formally known as the *Michigan Virtual Learning Research Institute (MVLRI)*, is a natural extension of the work *MVU* performs.

In 2014, *MVU* completed an eight-month organizational strategic planning process using both internal and external stakeholders to review and update *MVU*’s vision, mission, and strategic goals, including formal input and support from the *MVU* Board of Directors.

Four important planning assumptions helped shape discussion:

1. Michigan’s K-12 education system must leverage the power and potential of technology tools to differentiate instruction, achieve new efficiencies and make learning more relevant for today’s students.
2. Online and blended learning will serve as critically important instructional strategies to personalize learning for all students in the state.
3. The transition to the future for the K-12 community will likely be fraught with resistance to change. There will be many trials and errors with no clear road map that guarantees student success and system sustainability.
4. The need for leadership, research and capacity building support is essential for the K-12 system, and *MVU* is uniquely positioned to facilitate system level changes.

Recognizing these challenges, *MVU*’s strategic plan identified four key roles for the organization:

- **Leadership** – Demonstrate expertise in online and blended learning through success.
- **Innovation & Research** – Leverage our capacity to develop, study, and energize the adoption of new educational delivery models.
- **Quality Services** – Improve continuously in what we do through attention to feedback.
- **Capacity Builder** – Elevate *MVU* and the K-12 community to support digital learning environments.

These roles and recommendations from the *MVU* strategic plan refine the general direction of the company rather than set a radical new path. For the foreseeable future, schools will continue to need assistance in developing competencies for teaching and supporting online and blended learners. Despite
more than a decade of expansion in online learning, only about two percent of K-12 enrollments in Michigan are delivered online. MVU, through Michigan LearnPort and MyBlend, is positioned to continue providing the K-12 community with courses, resources, and services that will help support local districts as they broaden student opportunities. Through MVLRI, ongoing research and evaluation into online and blended learning models will help Michigan schools and students to better incorporate and adapt to these new learning opportunities.

**Scope of the Report**

The information provided in this report addresses the requirements that are listed in Section 98 (6) of P.A. 85 of 2015. These items include, for the period October 1, 2014 - September 30, 2015, a list of districts served by MVS, a list of online course titles available to districts, course enrollment and completion rate information by course, and the overall completion rate.

**Districts Served by MVS**

From October 1, 2014 - September 30, 2015, MVS served students enrolled in 401 different Michigan districts (505 entities within those districts). This included 318 Michigan local education agency districts (LEA Districts), 32 public school academy districts (PSA Districts), four intermediate school districts (ISD Districts), and 47 nonpublic schools. According to data available through the Center for Educational Performance and Information website ([http://www.cepi.state.mi.us/eem/EntitySearchQuick.aspx](http://www.cepi.state.mi.us/eem/EntitySearchQuick.aspx)), there were 548 open-active LEA Districts, 302 PSA Districts, 56 ISD Districts, and 661 nonpublic schools in October 2015. Using these counts as estimates for the 2014-15 school year, MVS served approximately 58% of LEA Districts, 11% of PSA Districts, 7% of ISD Districts, and 7% of nonpublic schools. A complete list of the Michigan districts served during 2014-15 is included in Exhibit 1.

These Michigan districts accounted for 21,676 MVS course enrollments over the past year. School enrollments in MVS courses over the past year ranged from a single student enrollment to 969 student enrollments. The average number of enrollments per Michigan school using MVS during 2014-15 was 43. In addition, MVS had 1,857 student registrations from 1,168 Michigan home schools during 2014-15.

Figure 1 provides a geographic representation of where MVS enrollments came from for the public, nonpublic, and home schools that enrolled students during the 2014-15 school year. During this period, schools and families in 78 of the state’s 83 counties were supported with MVS online courses and programs.

In addition to serving Michigan schools and students, MVS had 58 enrollments from eight schools outside of Michigan and 82 enrollments from 45 home schools outside of Michigan.

In total, the 23,673 enrollment with MVS came from 14,348 students. This was an average of 1.6 enrollments per student. Fifty-five percent of students took only one course during 2014-15.
MVS Online Courses Available to Michigan Districts

Exhibit 2 provides a listing of the online courses offered by MVS to Michigan districts and students during the period October 1, 2014 - September 30, 2015. These online courses include titles listed in the MVS course catalog for the corresponding fall, spring, and summer semesters, as well as three trimesters during the fall and spring. The list includes 214 possible courses, representing core academic courses specifically aligned with the Michigan Merit Curriculum (MMC) and the Common Core, Advanced Placement® (AP®) courses, credit recovery courses, and summer enrichment experiences for students. These online courses include those developed by MVS and courses and content licensed from nationally-recognized providers. A majority of MVS courses (82%) were offered at the high school level, though 41 online courses were available for middle school students during 2014-15.

MVS Online Course Completion and Pass Rates

Earlier this year, MVU, through the Michigan Virtual Learning Research Institute, published the second annual Michigan’s K-12 Virtual Learning Effectiveness Report (available from http://media.mivu.org/institute/pdf/er_2014.pdf). This publication used data reported to the state by Michigan public schools to examine all K-12 virtual enrollments in Michigan between the 2012-13 and 2013-14 school years.

To assist with comparisons between the statewide data presented in the Effectiveness Report and the data published in this report, MVS course enrollments were classified according to state-recognized completion statuses. When schools report enrollment information to the state, one of the data components submitted is for a completion status field. For the 2014-15 school year, schools had to select from among 11 different completion statuses for an enrollment. (See page 501 of the Michigan Student Data System (MSDS) Collection Details Manual Version 1.3. Available from http://www.michigan.gov/documents/cepi/2014-15_MSDS_collection_details_454235_7.pdf). A few examples of completion statuses include: Audited, Completed/Passed, Completed/Failed, and Withdrawn/Exited.

Using this established framework for reporting on all enrollments, a few important issues are evident. First, enrollments with a completion status of “Audited” exist where the student enrolls in the course without expecting or receiving credit. Because there is no performance expectation for such instances, MVU has removed any audited enrollments from MVS performance calculations. To remind readers of this removal, the phrase “credit- or grade-attempted enrollments” is used in performance calculations to indicate that audited enrollments have been excluded.

Second, a course “completion” is not synonymous with “passing” a course. As noted, schools differentiate when reporting to the state those enrollments that were completed but failed (Completed/Failed) from those that were completed and passed (Completed/Passed). Thus, “completion” as it is traditionally used by schools when reporting data to the state conveys the meaning of “finished” or “remained enrolled” throughout the course timeframe and does not signify whether the student earned a passing grade in the course for which credit would be granted.

To better align with this convention, this report uses the term “completion rate” to refer to the percentage of credit- or grade-attempted enrollments where the student finished or remained in the course through the last day of the academic term. A new calculation – “pass rate” – is used in this report to refer to the percentage of credit- or grade-attempted enrollments where the student earned 60% or more of the total course points (an indication of passing).

To allow for easier comparisons with data collected by the state, data in this report are grouped using the National Center for Education Statistics (NCES) Subject Areas. (See page 486 of the Michigan Student Data System (MSDS) Collection Details Manual Version 1.3. Available from http://www.michigan.gov/documents/cepi/2014-15_MSDS_collection_details_454235_7.pdf). The NCES subject areas also correspond to the way courses are organized within Michigan’s Online Course Catalog (https://micourses.org), the website publicizing Section 21f online courses in the state.
Passed” status. That means of the 287,238 enrollments with completion statuses similar to MVS, 18.8% had a “withdrawn” status, 17.5% had a “Completed/Failed” status and 63.7% had a “Completed/Passed” status. For the purpose of this comparison, 7,622 “Audited,” 24,623 “Incomplete,” 121 “Testing Out,” and 26 “Ongoing Enrolled/Special Ed” enrollments were omitted from the calculations. Their inclusion would only lower the statewide pass rate.

Though this comparison data is from the prior year, it suggests the MVS pass rate was considerably higher than the state average for virtual courses. In fact, even if all 24,623 incomplete enrollments excluded from the above calculation eventually turned into “Completed/Passed,” the statewide average would only rise to 66.6% — more than 16 percentage points below the MVS pass rate.

Several factors impact the MVS pass rate. The reason a student enrolls in an MVS course is one worthy

<table>
<thead>
<tr>
<th>NCES Subject Area</th>
<th>Attempted Count</th>
<th>Withdorned</th>
<th>Completed/Failed</th>
<th>Completed/Passed (Pass Rate)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural, Food, and Natural Resources</td>
<td>&lt;10</td>
<td>0%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Business and Marketing</td>
<td>1,087</td>
<td>0.6%</td>
<td>12.1%</td>
<td>87.2%</td>
</tr>
<tr>
<td>Communications and Audio/Visual Technology</td>
<td>125</td>
<td>0%</td>
<td>19.2%</td>
<td>80.8%</td>
</tr>
<tr>
<td>Computer and Information Sciences</td>
<td>920</td>
<td>1.5%</td>
<td>18.4%</td>
<td>80.1%</td>
</tr>
<tr>
<td>Engineering and Technology</td>
<td>118</td>
<td>0%</td>
<td>11.9%</td>
<td>88.1%</td>
</tr>
<tr>
<td>English Language and Literature</td>
<td>1,575</td>
<td>2.0%</td>
<td>19.6%</td>
<td>78.4%</td>
</tr>
<tr>
<td>Fine and Performing Arts</td>
<td>972</td>
<td>1.2%</td>
<td>16.8%</td>
<td>82.0%</td>
</tr>
<tr>
<td>Foreign Language and Literature</td>
<td>5,738</td>
<td>1.5%</td>
<td>18.2%</td>
<td>80.2%</td>
</tr>
<tr>
<td>Health Care Sciences</td>
<td>608</td>
<td>0.2%</td>
<td>11.2%</td>
<td>88.7%</td>
</tr>
<tr>
<td>Life and Physical Sciences</td>
<td>2,428</td>
<td>0.9%</td>
<td>15.4%</td>
<td>83.6%</td>
</tr>
<tr>
<td>Mathematics</td>
<td>3,620</td>
<td>1.3%</td>
<td>15.2%</td>
<td>83.5%</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>1,353</td>
<td>1.0%</td>
<td>11.3%</td>
<td>87.7%</td>
</tr>
<tr>
<td>Physical, Health, and Safety Education</td>
<td>887</td>
<td>2.0%</td>
<td>11.7%</td>
<td>86.2%</td>
</tr>
<tr>
<td>Public, Protective, and Government Services</td>
<td>609</td>
<td>1.1%</td>
<td>9.0%</td>
<td>89.8%</td>
</tr>
<tr>
<td>Religious Education and Theology</td>
<td>&lt;10</td>
<td>0%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Social Sciences and History</td>
<td>3,434</td>
<td>1.9%</td>
<td>12.6%</td>
<td>85.5%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>23,478</strong></td>
<td><strong>1.4</strong></td>
<td><strong>15.3%</strong></td>
<td><strong>83.3%</strong></td>
</tr>
</tbody>
</table>

Note: Percentages may not sum to 100% due to rounding.

With those understandings, MVS had a total of 23,673 enrollments in the 2014-15 school year. Of those, 195 enrollments were in courses where credit or a grade were not attempted. Of the 23,478 credit- or grade-attempted enrollments, 23,150 enrollments were from students who finished or remained in the course through the last day of the academic term for a completion rate of 98.6%. In terms of course success, 19,555 of the 23,478 enrollments earned 60% or more of the total course points for an overall pass rate of 83.3%. Figure 2 shows how the MVS pass rate varied by subject area. A full list of the 2014-15 MVS pass rates by course title can be found in Exhibit 3.

To put the MVS pass rate statistics into perspective, consider what rates were for all K-12 virtual courses in the previous school year. Using the data from Table 18 of the Effectiveness Report (p. 17), 54,102 K-12 virtual enrollments fell into one of the three withdrawn categories, 50,126 had completion statuses of “Completed/Failed,” and 183,010 had “Completed/Passed” status. That means of the 287,238 enrollments with completion statuses similar to MVS, 18.8% had a “withdrawn” status, 17.5% had a “Completed/Failed” status and 63.7% had a “Completed/Passed” status. For the purpose of this comparison, 7,622 “Audited,” 24,623 “Incomplete,” 121 “Testing Out,” and 26 “Ongoing Enrolled/Special Ed” enrollments were omitted from the calculations. Their inclusion would only lower the statewide pass rate.

Though this comparison data is from the prior year, it suggests the MVS pass rate was considerably higher than the state average for virtual courses. In fact, even if all 24,623 incomplete enrollments excluded from the above calculation eventually turned into “Completed/Passed,” the statewide average would only rise to 66.6% — more than 16 percentage points below the MVS pass rate.

Several factors impact the MVS pass rate. The reason a student enrolls in an MVS course is one worthy
of highlighting. Figure 3 shows how the MVS pass rate varies by enrollment reason. When a student is enrolled in an MVS course, the person enrolling the student selects one of five enrollment reasons. Those reasons are: course unavailable at local school, scheduling conflict, learning preference of the student, credit recovery, or other. As Figure 3 makes apparent, student performance in MVS courses is considerably different among these five reasons. Students who enroll in MVS courses because of the course was unavailable locally or to resolve a scheduling conflict had pass rates in 2014-15 of 88.9% and 88.3%, respectively. Conversely, students using MVS courses for credit recovery purposes were less likely to pass, yielding only a 75.8% pass rate.

In addition to considering how pass rates varied by enrollment reason, it is also worth considering how the pass rate varied by district. Consider, for instance, the MVS pass rate of 80.2% for Foreign Language and Literature. One of the districts served by MVS had over 50 enrollments in Foreign Language and Literature courses, yet had a 63% pass rate. A different district also with more than 50 Foreign Language and Literature enrollments— including many of the same titles — had a pass rate of 91%. This district-level variability is similar to what was found statewide in the Effectiveness Report; some districts implemented high-performing online learning models and others did not. Figure 4 charts how districts’ MVS pass rates differed. Of the 401 Michigan districts that used MVS in 2014-15, 176 of them (44%) had overall MVS pass rates of 90% or greater. Another 97 districts (24%) achieved MVS pass rates of 80% to less than 90%. Clearly, many Michigan districts experience high levels of success with MVS courses.

### Implementation Resources

These data and the data in the Effectiveness Report clearly suggest many schools need help in implementing successful online learning programs for their students. Toward this end, MVU has focused

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**Table 1: MVS Pass Rates by NCES Subject Area and Enrollment Reason**

<table>
<thead>
<tr>
<th>NCES Subject Area</th>
<th>Course Unavailable Locally</th>
<th>Scheduling Conflict</th>
<th>Learner Preference</th>
<th>Credit Recovery</th>
<th>Other</th>
<th>Missing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture, Food, and Natural Resources</td>
<td>100%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>100%</td>
<td>-</td>
</tr>
<tr>
<td>Business and Marketing</td>
<td>87.2%</td>
<td>85.7%</td>
<td>90.2%</td>
<td>75%</td>
<td>88.5%</td>
<td>87.8%</td>
</tr>
<tr>
<td>Communications and Audio/Visual Technology</td>
<td>91.7%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>80%</td>
<td>78.4%</td>
</tr>
<tr>
<td>Computer and Information Sciences</td>
<td>87%</td>
<td>80%</td>
<td>80%</td>
<td>100%</td>
<td>81.5%</td>
<td>80.3%</td>
</tr>
<tr>
<td>Engineering and Technology</td>
<td>93.3%</td>
<td>-</td>
<td>66.7%</td>
<td>-</td>
<td>100%</td>
<td>88.5%</td>
</tr>
<tr>
<td>English Language and Literature</td>
<td>93.5%</td>
<td>88.5%</td>
<td>83.6%</td>
<td>69%</td>
<td>75.8%</td>
<td>79.9%</td>
</tr>
<tr>
<td>Fine and Performing Arts</td>
<td>88.4%</td>
<td>93.8%</td>
<td>84.2%</td>
<td>33.3%</td>
<td>85.2%</td>
<td>82.2%</td>
</tr>
<tr>
<td>Foreign Language and Literature</td>
<td>86.7%</td>
<td>84.8%</td>
<td>90.9%</td>
<td>70.9%</td>
<td>83.5%</td>
<td>80.1%</td>
</tr>
<tr>
<td>Health Care Sciences</td>
<td>89.9%</td>
<td>87.5%</td>
<td>71.4%</td>
<td>100%</td>
<td>95.7%</td>
<td>89.1%</td>
</tr>
<tr>
<td>Life and Physical Sciences</td>
<td>91.3%</td>
<td>91.8%</td>
<td>88%</td>
<td>84.3%</td>
<td>88.2%</td>
<td>82.6%</td>
</tr>
<tr>
<td>Mathematics</td>
<td>87.7%</td>
<td>84.9%</td>
<td>84.7%</td>
<td>77.1%</td>
<td>80.6%</td>
<td>85.1%</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>89.9%</td>
<td>100%</td>
<td>90.6%</td>
<td>76.5%</td>
<td>94.1%</td>
<td>87.7%</td>
</tr>
<tr>
<td>Physical, Health, and Safety Education</td>
<td>95%</td>
<td>90.7%</td>
<td>89.2%</td>
<td>92.3%</td>
<td>85.3%</td>
<td>86.1%</td>
</tr>
<tr>
<td>Public, Protective, and Government Service</td>
<td>96%</td>
<td>100%</td>
<td>86.7%</td>
<td>100%</td>
<td>88.9%</td>
<td>89.2%</td>
</tr>
<tr>
<td>Religious Education and Theology</td>
<td>-</td>
<td>100%</td>
<td>-</td>
<td>100%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Social Sciences and History</td>
<td>90.4%</td>
<td>88.2%</td>
<td>85%</td>
<td>73%</td>
<td>91.3%</td>
<td>86.2%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>88.9%</strong></td>
<td><strong>88.3%</strong></td>
<td><strong>86.4%</strong></td>
<td><strong>75.8%</strong></td>
<td><strong>85.2%</strong></td>
<td><strong>83.6%</strong></td>
</tr>
</tbody>
</table>

Note: Percentages may not sum to 100% due to rounding.
on developing practical resources to support school administrators, counselors, teachers, and parents.

**Section 21f Tool Kit.** Section 21f of the State School Aid Act allows students in grades 6-12 to take two online courses from their local district catalog or the statewide catalog of online courses hosted by MVU. With input from the Michigan Department of Education, the Michigan Association of Secondary School Principals, the Michigan Elementary and Middle School Principals Association, the Michigan Association of School Administrators, the Michigan Association of Intermediate School Administrators, the Michigan Association of School Boards, the Michigan Association for Computer Users in Learning, the Michigan Association for Supervision and Curriculum Development, and Regional Educational Media Center representatives, MVU created the Section 21f Tool Kit. The Tool Kit (available at [https://micourses.org/resources/21f_Tool_Kit.html](https://micourses.org/resources/21f_Tool_Kit.html)) provides comprehensive resources in a single site. From information about the legislation itself to FAQs about the law to an implementation guide, the Tool Kit contains critical information for both consumers and producers of online courses. In addition, the Tool Kit includes links to relevant sections of the Pupil Accounting Manual; draft letters for parents, school personnel, and school board members; sample school board policy; and even sample surveys that can be used to gauge local interest in online learning.

**Parent Guide.** One of the most popular resources in the Tool Kit include MVU’s *Parent Guide to Online Learning*. The *Parent Guide* is a 16-page publication prepared for parents, guardians, counselors, and others who want to help students decide whether online courses are a good option for them. The guide outlines features of online learning and introduces some of the benefits that online learning offers. It also includes information on online learning opportunities in Michigan, characteristics of successful online learners, and how to prepare for learning online. The guide contains questions and an online learner readiness rubric to help students self-evaluate their skills, knowledge, and dispositions for online learning. The rubric also helps schools, educators, parents, and guardians understand what extra supports students might need during their online coursework. The *Parent Guide* is available for free at [http://media.mivu.org/institute/pdf/parentguide.pdf](http://media.mivu.org/institute/pdf/parentguide.pdf).

**Mentor Resources:** A companion resource available through the Section 21f Tool Kit website is *Mentor Fundamentals: A Guide for Mentoring Online Learners*. Like the Parent Guide, *Mentor Fundamentals* is full of practical, research- and experience-based best practices for school employees or parents who provide on-site support.
for online learners. Much of the content for Mentor Fundamentals was distilled from interviews with 14 experienced mentors from a range of school settings. These interviews yielded significant shared conceptions about mentor roles and responsibilities, proven practices that lead to increased student success, and common concerns about pacing and communication issues. The guide also includes a section that highlights the research conducted around mentoring online learners. Mentor Fundamentals fills an important void for schools as the professional development and assistance that many mentors receive has been lacking. Mentor Fundamentals is available for free at https://micourses.org/resources/pdf/toolkit/mentor_guide_14.pdf.

Also, MVU, through MVLRI and its Fellows program, produced an online mentor orientation and training module, Mentor Basics, that combines research with best practices derived from the mentor interviews. Mentor Fundamentals and the mentor training module are two resources MVU shares freely across the state as it works to connect, educate, and support the important work building-level personnel are doing to help online learners in their schools maximize their online learning experiences.

OLOT. A final resource to mention is MVU’s Online Learning Orientation Tool – OLOT. OLOT is a self-paced, web-based resource intended to help students understand what online learning entails and introduces students to the skills and knowledge that are key to success in online learning. OLOT covers areas such as Knowing What to Expect, Technical Skills You’ll Need, Learning Skills You’ll Need, and Managing Day-to-Day. OLOT may be paired with the MVU Online Learner Readiness Rubric allowing mentors to direct students to OLOT modules and/or specific units within the modules based on the results of the student’s strengths and weaknesses as identified by the rubric.

Even though OLOT may be used by students independently, often it will be more effective if students have someone they are accountable to for the results and someone – their mentor, parent, or guardian, for example – directing and supporting their efforts. OLOT is freely available at http://olot.mivu.org/.

Conclusion

Virtual enrollments in Michigan, including online enrollments, exceeded 319,000 in the 2013-14 school year. The growth in online and blended learning in Michigan and across the nation appears to continue on the trajectory that has experts predicting that by 2019 over half of all enrollments will involve blended or online learning. Unfortunately, Michigan’s virtual learning student performance data has shown suboptimal outcomes with some schools implementing high-quality solutions, but too many virtual programs yielding underwhelming results. The data in this report provide evidence that MVS online courses are living up to the promise of high-quality online learning being available to students all across the state. As students, parents, teachers, administrators, and policy leaders work to transition toward learning models that enable personalized learning for all students, MVU continues to catalyze and accelerate this reform through its online course offerings to middle and high school students; research, evaluation, and distillation of best practices; and professional development services.

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Vision

Michigan’s digital learning leader advancing personalized education for all learners.

Mission

Advancing K-12 education through digital learning, research, innovation, policy and partnerships.

---

Michigan Virtual University, a nonprofit corporation, is an equal opportunity employer committed to the principles of nondiscrimination.
### Exhibit 1. 2014-15 Michigan Districts Served

Achieve Charter Academy  
Adrian City School District  
AGBU Alex-Marie Manoogian School  
Airport Community School Dist.  
Akiva Hebrew Day School  
Alanson Public Schools  
Alba Public Schools  
Alcona Community Schools  
All Saints Central School  
Allegan Public Schools  
Allen Park Public Schools  
Allendale Public School District  
Alma Public Schools  
Almont Community Schools  
Ann Arbor Public Schools  
Arbor Preparatory High School  
Arenac Eastern School District  
Armada Area Schools  
Austin Catholic Academy  
Bad Axe Public Schools  
Baldwin Community Schools  
Bath Community Schools  
Battle Creek Academy  
Battle Creek Public Schools  
Bay City School District  
Beal City Public Schools  
Bear Lake School District  
Beaver Island Community School-Beaver Island  
Belding Area School District  
Belleaire Public Schools  
Benzie County Central Schools  
Berkeley School District  
Berrien Springs Public Schools  
Big Bay De Noc School District  
Big Rapids Public Schools  
Birch Run Area School District  
Birmingham City School District  
Black River Public School  
Blissfield Community Schools  
Bloomfield Hills School District  
Boyeo City Public Schools  
Brandon School District  
Brendywine Community Schools  
Breckenridge Community Schools  
Breitung Township Schools  
Bridgman Public Schools  
Brighton Area Schools  
Brimley Area Schools  
Bronson Community School Dist.  
Brown City Community Schools  
Buckley Community School Dist.  
Bullock Creek School District  
Byron Area Schools  
Byron Center Charter School  
Byron Center Public Schools  
Cadillac Area Public Schools  
Caledonia Community Schools  
Calhoun ISD  
Calvary Baptist Academy  
Calvary Christian Academy-Ypsilanti  
Calvin Christian High Sch.  
Canton Charter Academy  
Canton Preparatory H.S.  
Cardinal Mooney Cath. Sch.  
Carney-Nadeau Public Schools  
Caro Community Schools  
Carson City-Crystal Area Schools  
Caseville Public Schools  
Cass City Public Schools  
Cassopolis Public Schools  
Cedar Springs Public Schools  
Central Academy  
Central Lake Public Schools  
Central Montcalm Public Schools  
Charlotte Public Schools  
Charlton Heston Academy  
Charyl Stockwell Academy  
Cheboygan Area Schools  
Chesaning Union Schools  
Chippewa Hills School District  
Chippewa Valley Schools  
City of Harper Woods Schools  
Clarkston Community School District  
Clintondale Community Schools  
Coldwater Community Schools  
Colon Community School District  
Columbia School District  
Comstock Public Schools  
Concord Academy Boyne  
Concord Community Schools  
Constantine Public School District  
Coopersville Area Public School District  
Cornerstone Health and Technology School  
Crossroads Charter Academy  
Crosowell-Lexington Community Schools  
Dansville Schools  
Dearborn City School District  
DeLaSalle Collegiate High School  
Delton-Kellogg School District  
DeTour Arts and Technology Academy  
Detroit City School District  
DeWitt Public Schools  
Dexter Community School Dist.  
Divine Child High School  
Dr. Joseph F. Pollack Academic Center of Excellence  
Dryden Community Schools  
Durand Area Schools  
Early College Alliance  
East China School District  
East Grand Rapids Public Schools  
East Jordan Public Schools  
East Lansing School District  
Eaton Rapids Public Schools  
Edwardsburg Public Schools  
Elk Rapids Schools  
Engadine Consolidated Schools  
Escanaba Area Public Schools  
Essexville-Hampton Public Schools  
Eton Academy  
Evart Public Schools  
Everest Academy  
Ewen-Trout Creek Consolidated School District  
Excel Charter Academy
Fairview Area School District
Farmington Public Schools
Ferris Tech High School
Forest Hills Public Schools
Forest Park School District
Fowler Public Schools
Fowlerville Community Schools
Fr. Gabriel Richard High School
Frankel Jewish Academy
Frankfort-Elberta Area Schools
Freeland Community School District
Fremont Public School District
Fulton Schools
Gabriel Richard Catholic High School
Galesburg-Augusta Community Schools
Gaylord Community Schools
Gibralter School District
Gladwin Community Schools
Glen Lake Community Schools
Gobles Public School District
Godwin Heights Public Schools
Grand Blanc Community Schools
Grand Haven Area Public Schools
Grand Ledge Public Schools
Grand Rapids Christian High School
Grand Rapids Ellington Academy
Grand Traverse Academy
Grandville Public Schools
Grass Lake Community Schools
Greenbush Public Schools
Grosse Ile Township Schools
Grosse Pointe Public Schools
Gull Lake Community Schools
Hamilton Community Schools
Hancock Public Schools
Harbor Beach Community Schools
Harper Creek Community Schools
Harrison Community Schools
Hart Public School District
Hartford Public School District
Hartland Consolidated Schools
Haslett Public Schools
Hastings Area School District
Hemlock Public School District
Hesperia Community Schools
Hillsdale Community Schools
Holland Christian High School
Holland City School District
Holly Area School District
Holt Lutheran Schools
Holt Public Schools
Honey Creek Community School
Hopkins Public Schools
Houghton Lake Community Schools
Houghton-Portage Township Schools
Howell Public Schools
Huron School District
Huron Valley Lutheran High School
Huron Valley Schools
Imlay City Community Schools
Interlochen Arts Academy
Ionia Public Schools
Iron Mountain Public Schools
Ishpeming Public School District
Ithaca Public Schools
Jackson Catholic Middle School
Jackson Public Schools
Jenison Public Schools
Johannesburg-Lewiston Area Schools
Joseph K. Lumsden Bahweting Anishnabé Academy
Kalamazoo Christian High School
Kalamazoo Public School District
Kaleva Norman Dickson School District
Kalkaska Public Schools
Kearsley Community Schools
Kelloggsville Public Schools
Kenowa Hills Public Schools
Kensington Woods High School
Kent City Community Schools
Kentwood Public Schools
Kingsley Area Schools
Kingston Community School District
L'Anse Creuse Public Schools
Ladywood High School (Detroit)
Lake Linden-Hubbell School District
Lake Orion Community Schools
Lakeshore School District (Berrien)
Lakeview Public Schools
(Macomb)
Lakeview Sch. District (Calhoun)
Lakewood Public Schools
Lansing Catholic Central High School
Lansing Christian School
Lansing Public School District
Lapeer Community Schools
Lawrence Public School District
Lapeer Public Schools
Lawton Community School District
Leland Public School District
Lenawee Christian School
Lenawee ISD
Les Cheneaux Community Schools
Leslie Public Schools
Livonia Public Schools
Ludington Area School District
Lumen Christi High School
Mackinac Island Public Schools
Macomb Christian Schools
Madison Public Schools (Oakland)
Manchester Community Schools
Manistee Area Schools
Manistique Area Schools
Maple Valley Schools
Marcellus Community Schools
Marian High School
Marlette Community Schools
Marquette Area Public Schools
Marshall Public Schools
Mason Public Schools (Ingham)
Mattawan Consolidated School
Mayville Community School District
Mendon Community School District
Menominee Area Public Schools
Merritt Academy
Michigan Center School District
Michigan Islamic Academy
Michigan Technical Academy
Mid Peninsula School District
Midland Academy of Advanced and Creative Studies
Midland Public Schools
Milan Area Schools
Millington Community Schools
Mona Shores Public School District
Monroe Public Schools
Montabella Community Schools
Montrose Community Schools
Morrice Area Schools
Munising Public Schools
Muskegon Catholic Central High School
Negaunee Public Schools
New Buffalo Area Schools
New Life Christian Academy
Niles Community School District
North Adams-Jerome Schools
North Branch Area Schools
North Dickinson County Schools
North Huron School District
North Muskegon Public Schools
Northport Public School District
Northview Public School District
Northville Public Schools
Norway-Vulcan Area Schools
Notre Dame Preparatory School
Nouvél Catholic Central High School
Novi Community School District
Oakland Christian School
Oakland FlexTech Academy
Oakland Schools
Oakridge Public Schools
Ojibwe Charter School
Okemos Public Schools
Olivet Community Schools
Onekama Consolidated Schools
Onsted Community Schools
Ontonagon Area Schools
Orchard View Schools
Oscoda Area Schools
Otsego Public Schools
Ovid-Elsie Area Schools
Oxford Community Schools
Parchment School District
Paw Paw Public School District
Peck Community School District
Pellston Public Schools
Pennfield Schools
Pentwater Public School District
Perry Public School District
Pewamo-Westphalia Community Schools
Pickford Public Schools
Pinecrest Community Schools
Plainwell Community Schools
Plymouth Christian Academy
Plymouth-Canton Community Schools
Port Huron Area School District
Portage Public Schools
Portland Public School District
Potterville Public Schools
Powell Township Schools
Prevail Academy
Quincy Community School District
Rapid River Public Schools
Reach Charter Academy
Reading Community Schools
Redford Union School District
Reed City Area Public Schools
Republic-Michigamme Schools
Richmond Community Schools
River Valley School District
Riverview Community School
District
Rochester Community School District
Rockford Public Schools
Rogers City Area Schools
Romeo Community Schools
Roscommon Area Public Schools
Sacred Heart Academy
Saginaw City School District
Saline Area Schools
Sand Creek Community Schools
Sandusky Community School District
Saranac Community Schools
Saugatuck Public Schools
Sault Ste. Marie Area Schools
School District of the City of Royal Oak
Schoolcraft Community Schools
Shepherd Public School District
Shrine High School
South Canton Scholars Charter Academy
South Christian High School
South Lyon Community Schools
Southfield Christian School
Southfield Public School District
Southgate Community School District
Sparta Area Schools
Spring Lake Public Schools
St. Catherine of Siena Academy
St. Clair County RESA
St. Ignace Area Schools
St. Mary Catholic Central High School
St. Thomas School
Standish-Sterling Community Schools
Stockbridge Community Schools
Sturgis Public Schools
Summerfield School District
Superior Central Schools
Suttons Bay Public Schools
Swan Valley School District
Swartz Creek Community Schools
Tecumseh Public Schools
The Pathfinder School Inc.
Thornapple Kellogg School District
Three Rivers Community Schools
Traverse City Area Public Schools
Trenton Public Schools
Tri County Area Schools
Troy School District
Ubly Community Schools
Union City Community Schools
Unionville-Sebewaing Area S.D.
Unity Christian High School
Utica Community Schools
Vanderbilt Area Schools
Vandercook Lake Public Schools
Vassar Public Schools
Vicksburg Community Schools
Walkerville Public Schools
Walled Lake Consolidated Schools
Warren Woods Public Schools
Washtenaw Christian Academy
Watersmeet Township School District
Watervliet School District
Waverly Community Schools
Wayland Union Schools
Wayne-Westland Community School District
Webberville Community Schools
Wellspring Preparatory High School
West Branch-Rose City Area Schools
West Iron County Public Schools
West Michigan Aviation Academy
West Ottawa Public School District
Western School District
Whiteford Agricultural Schools
Whitehall District Schools
Whitmore Lake Public Schools
Williamston Community Schools
Wolverine Community Schools
Yale Public Schools
Zeeland Public Schools
Exhibit 2. 2014-15 Online Course Titles Offered by MVS to Michigan Schools

Agriculture, Food, and Natural Resources
Veterinary Science

Business and Marketing
Accounting (A)
Accounting (B)
Business Ethics
Entrepreneur Bus. Management
Entrepreneur Business Planning
Entrepreneurship
Sports and Entertainment

Communications and Audio/Visual Technology
Journalism

Computer and Information Sciences
AP Computer Science A (A)
AP Computer Science A (B)
Game Design
Java Programming
Microsoft Office 2013
Visual Basic.Net Programming
Web Design Basics HTML

Engineering and Technology
Bioethics

English Language and Literature
AP English Lang. & Comp. (A)
AP English Lang. & Comp. (B)
AP English Lit. & Comp. (A)
AP English Lit. & Comp. (B)
Composition - Advanced
Composition - Beginning

English 6 (A)
English 6 (B)
English 7 (A)
English 7 (B)
English 8 (A)
English 8 (B)
English 9 (A)
English 9 (B)
English 10 (A)
English 10 (B)
English 11 (A)
English 11 (B)
English 12 (A)
English 12 (B)
Mythology and Folklore
Reading

Foreign Language and Literature (Cont.)
Japanese 2 (B)
Latin 1 (A)
Latin 1 (B)
Latin 2 (A)
Latin 2 (B)
Latin 3 (A)
Latin 3 (B)
Spanish 1 (A) (6-8)
Spanish 1 (B) (6-8)
Spanish 1 (A)
Spanish 1 (B)
Spanish 2 (A) (6-8)
Spanish 2 (B) (6-8)
Spanish 2 (A)
Spanish 2 (B)
Spanish 3 (A)
Spanish 3 (B)
Spanish 4 (A)
Spanish 4 (B)

Fine and Performing Arts
American Film Survey
AP Art History (A)
AP Art History (B)
Art Appreciation
Digital Photography
Directors of the Golden Age
In Search of Cyrano
Music Appreciation

Foreign Language and Literature
American Sign Language 1 (A)
American Sign Language 1 (B)
American Sign Language 2 (A)
American Sign Language 2 (B)
AP French (A)
AP French (B)
AP Spanish (A)
AP Spanish (B)
Chinese 1 (A)
Chinese 1 (B)
Chinese 2 (A)
Chinese 2 (B)
Chinese 3 (A)
Chinese 3 (B)
Chinese 4 (A)
Chinese 4 (B)
French 1 (A) (6-8)
French 1 (B) (6-8)
French 1 (A)
French 1 (B)
French 2 (A)
French 2 (B)
French 3 (A)
French 3 (B)
French 4 (A)
French 4 (B)

Foreign Language and Literature
Japanese 1 (A)
Japanese 1 (B)
Japanese 2 (A)

Health Care Sciences
Medical Terminology

Life and Physical Sciences
Anatomy & Physiology (A)
Anatomy & Physiology (B)
AP Biology (A)
AP Biology (B)
AP Chemistry (A)
AP Chemistry (B)
AP Environmental Science (A)
AP Environmental Science (B)
AP Physics 1 (A)
AP Physics 1 (B)
AP Physics C - Mechanics (A)
AP Physics C - Mechanics (B)
Astronomy
Biology (A)
Biology (B)
Chemistry (A)
Chemistry (B)
Earth Science (A)
Earth Science (B)
Environmental Science (A)
Environmental Science (B)
Human Space Exploration
Oceanography (A)
Oceanography (B)
Physical Science (A)
Physical Science (B)
Physics (A)
Physics (B)
Science 6 (A)
Life and Physical Sciences  
(Cont.)
Science 6 (B)  
Science 7 (A)  
Science 7 (B)  
Science 8 (A)  
Science 8 (B)  
Science Tracks  
Mathematics  
Algebra 1  
Algebra 1 (A)  
Algebra 1 (B)  
Algebra 2 (A)  
Algebra 2 (B)  
AP Calculus AB (A)  
AP Calculus AB (B)  
AP Calculus BC (A)  
AP Calculus BC (B)  
AP Statistics (A)  
AP Statistics (B)  
Calculus (A)  
Calculus (B)  
Geometry (A)  
Geometry (B)  
Math Tracks  
Mathematics 6 (A)  
Mathematics 6 (B)  
Mathematics 7 (A)  
Mathematics 7 (B)  
Mathematics 8 (A)  
Mathematics 8 (B)  
Mathematics of Baseball  
Personal Finance (A)  
Personal Finance (B)  
Pre-Algebra (A)  
Pre-Algebra (A) - Numbers  
Pre-Algebra (B)  
Pre-Algebra (B) - Numbers  
Pre-Calculus (A)  
Pre-Calculus (B)  
Probability and Statistics (A)  
Probability and Statistics (B)  
Trigonometry  
Miscellaneous  
Career Planning  
Careers - Find Your Future  
Employability Skills  
Leadership Skills Development  
Leadership Skills Develop. (A)  
Leadership Skills Develop. (B)  
Study Skills  
Physical, Health, and Safety  
Education  
Health  
Personal Fitness  
Public, Protective, and  
Government Services  
Forensic Science - Intro  
Forensic Science - Advanced  
Religious Education and  
Theology  
World Religions  
Social Science and History  
Anthropology (A)  
AP Macroeconomics  
AP Microeconomics  
AP Psychology  
AP U.S. Government & Politics  
AP U.S. History (A)  
AP U.S. History (B)  
AP World History (A)  
AP World History (B)  
Archaeology  
Civics  
Economics  
Native American History  
Psychology  
Sociology (A)  
Sociology (B)  
U.S. History (A)  
U.S. History (B)  
U.S. History 8 (A)  
U.S. History 8 (B)  
World Cultures 6 (A)  
World Cultures 6 (B)  
World Geography 7 (A)  
World Geography 7 (B)  
World History (A)  
World History (B)

### Agriculture, Food, and Natural Resources

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Count</th>
<th>Pass Rate</th>
</tr>
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<tbody>
<tr>
<td>Veterinary Science</td>
<td>&lt;10</td>
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### Business and Marketing

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<thead>
<tr>
<th>Course Title</th>
<th>Count</th>
<th>Pass Rate</th>
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</thead>
<tbody>
<tr>
<td>Accounting (A)</td>
<td>191</td>
<td>84.3%</td>
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<tr>
<td>Accounting (B)</td>
<td>68</td>
<td>82.4%</td>
</tr>
<tr>
<td>Business Ethics</td>
<td>382</td>
<td>91.1%</td>
</tr>
<tr>
<td>Entrepreneur Business Management</td>
<td>237</td>
<td>93.2%</td>
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<tr>
<td>Entrepreneur Business Planning</td>
<td>102</td>
<td>84.3%</td>
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<tr>
<td>Entrepreneurship</td>
<td>105</td>
<td>71.4%</td>
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<tr>
<td>Sports and Entertainment</td>
<td>&lt;10</td>
<td>50.0%</td>
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### Communications and Audio/Visual Technology

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<tr>
<th>Course Title</th>
<th>Count</th>
<th>Pass Rate</th>
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<tr>
<td>Journalism</td>
<td>125</td>
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### Computer and Information Sciences

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<tr>
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<th>Pass Rate</th>
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<tbody>
<tr>
<td>AP Computer Science A (A)</td>
<td>89</td>
<td>91.0%</td>
</tr>
<tr>
<td>AP Computer Science A (B)</td>
<td>68</td>
<td>89.7%</td>
</tr>
<tr>
<td>Game Design</td>
<td>252</td>
<td>74.6%</td>
</tr>
<tr>
<td>Java Programming</td>
<td>114</td>
<td>84.2%</td>
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<tr>
<td>Microsoft Office 2013</td>
<td>46</td>
<td>56.5%</td>
</tr>
<tr>
<td>Visual Basic.Net Programming</td>
<td>195</td>
<td>81.0%</td>
</tr>
<tr>
<td>Web Design Basics HTML</td>
<td>156</td>
<td>81.4%</td>
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### Engineering and Technology

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<tr>
<th>Course Title</th>
<th>Count</th>
<th>Pass Rate</th>
</tr>
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<tbody>
<tr>
<td>Bioethics</td>
<td>118</td>
<td>88.1%</td>
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### English Language and Literature

<table>
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<tr>
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<th>Count</th>
<th>Pass Rate</th>
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<tbody>
<tr>
<td>AP English Lang &amp; Comp (A)</td>
<td>36</td>
<td>94.4%</td>
</tr>
<tr>
<td>AP English Lang &amp; Comp (B)</td>
<td>34</td>
<td>91.2%</td>
</tr>
<tr>
<td>AP English Lit &amp; Comp (A)</td>
<td>39</td>
<td>84.6%</td>
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<tr>
<td>AP English Lit &amp; Comp (B)</td>
<td>28</td>
<td>92.9%</td>
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<tr>
<td>Composition - Advanced</td>
<td>43</td>
<td>100.0%</td>
</tr>
<tr>
<td>Composition - Beginning</td>
<td>98</td>
<td>86.7%</td>
</tr>
<tr>
<td>English 9 (A)</td>
<td>102</td>
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<td>English 9 (B)</td>
<td>86</td>
<td>73.3%</td>
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<tr>
<td>English 10 (A)</td>
<td>110</td>
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<tr>
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<td>124</td>
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<tr>
<td>English 11 (A)</td>
<td>181</td>
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<tr>
<td>English 11 (B)</td>
<td>149</td>
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### English Language and Literature (Cont.)

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<th>Count</th>
<th>Pass Rate</th>
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<tbody>
<tr>
<td>English 12 (A)</td>
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<tr>
<td>English 12 (B)</td>
<td>165</td>
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<tr>
<td>English 6 (A)</td>
<td>&lt;10</td>
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<tr>
<td>English 6 (B)</td>
<td>&lt;10</td>
<td>50.0%</td>
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<tr>
<td>English 7 (A)</td>
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<td>44.4%</td>
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<td>English 7 (B)</td>
<td>&lt;10</td>
<td>57.1%</td>
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<tr>
<td>English 8 (A)</td>
<td>16</td>
<td>75.0%</td>
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<tr>
<td>English 8 (B)</td>
<td>18</td>
<td>83.3%</td>
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<tr>
<td>Mythology and Folklore</td>
<td>&lt;10</td>
<td>100.0%</td>
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<tr>
<td>Reading</td>
<td>59</td>
<td>78.0%</td>
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<tr>
<td>World Literature</td>
<td>32</td>
<td>75.0%</td>
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</table>

### Fine and Performing Arts

<table>
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<tr>
<th>Course Title</th>
<th>Count</th>
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### Foreign Language and Literature

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### Foreign Language and Literature (Cont.)

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### Life and Physical Sciences

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### Health Care Services

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### Physical, Health, and Safety Education

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### Public, Protective, and Government Services

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### Religious Education And Theology

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### Social Sciences and History

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