A REPORT TO THE LEGISLATURE

December 1, 2016



Prepared by Michigan Virtual University®

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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[®]) and the Michigan Virtual Learning Research InstituteTM (MVLRITM). MVU is governed by a Board of Directors representing the education and business communities.

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his report is submitted in compliance with Section 98 (6) of Public Act 249 of 2016, 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 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 18 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 207,500 course registrations. During the 2015-16 academic year, MVS had 24,448 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.

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 2016, *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.

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.

In addition to MVS, MVU makes a significant and dedicated effort to serving all educators in Michigan in blended, online, and face-to-face modalities. The professional learning services team is comprised of two formally-known programs, Michigan LearnPort and MyBlend. MVU has strategically hosted and developed online courses, videos, webinars, training modules, hosted conferences and regional events, and developed customized professional development solutions for districts and educational organizations. The new Professional Learning Portal (https://plp. mivu.org/) is the hub of all MVU-hosted or partnered professional development activities. Educators are able to register for both face-to-face, blended, and online events in dozens of professional development areas of need

Expanding Educational Opportunities in Michigan

For more than 15 years, MVU has played three key roles to support and accelerate the growth and development of online learning in Michigan, including: 1) a change agent role to introduce schools to online and blended learning models; 2) a *supplemental provider* role for online courses, serving as the state's model laboratory for virtual instruction to Michigan schools; and 3) a *capacity builder* role to support school districts as they strive to implement online and blended learning programs, including innovative research. These three roles are advanced through three different units within MVU including, Student Learning Services (Michigan Virtual School), Professional Learning Services (PLS) and Michigan Virtual Learning Research Institute (MVLRI).

Data published by *MVU*'s Research Institute indicate that the use of online learning in K-12 education has exploded in Michigan during the past five years. The number of students participating in at least one virtually delivered course has grown from a little more 36,000 in 2011, to more than 91,000 students in 2015. During the same time period, the total number of virtual courses Michigan students enrolled in grew from nearly 90,000 to more than 445,000 online courses.

Part of this growth is the result of a major increase in the number of Michigan schools that provide students with access to virtually delivered courses. In 2011, approximately 650 schools had at least one student take a virtual course and by 2015, more than a 1,000 Michigan schools offered virtual enrollments. The growth of online learning is somewhat encouraging; unfortunately the statewide completion rate for all virtual enrollments has gone from 66% in 2011 to approximately 60% in 2015. By comparison, the completion rate for MVS courses is consistently higher than 80%.

Increasingly, online and blended learning will serve as important instructional strategies to personalize learning for all students in the state. However, it appears that a larger percentage of low performing students are being directed to virtual learning options rather than students who enjoy academic

Figure 1

Key Roles for Michigan Virtual University



success in traditional learning environments. Instead of enabling students to go farther faster, it seems as though online courses have become a popular solution to address growing credit recovery needs for individual students. In response to this major trend, *MVU* is working with a variety of stakeholders, including school customers to bring a new online course solution to Michigan schools in mid-2017. This customized credit recovery solution will provide options for students to retake an entire course if needed, or capture learning for targeted areas based on individual student needs.

In 2017, *MVU* will help power a countywide virtual learning program by unbundling its online services, including, teacher training in online instruction, online content, help desk support, learning management systems (LMS) and consulting services. *MVU* is working to help local and intermediate school districts implement locally developed online and blended learning programs. *MVU* believes that Michigan's K-12 education system will need to leverage the power and potential of technology to differentiate instruction, achieve new efficiencies and make learning more relevant for today's students.

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. The need for continued leadership, research and capacity building support is essential for the K-12 system, and *MVU* is uniquely positioned to facilitate system-level changes.

Scope of the Report

The information provided in this report addresses the requirements that are listed in Section 98 (6) of P.A. 249 of 2016. These items include, for the period October 1, 2015 - September 30, 2016, 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, 2015 - September 30, 2016, MVS served students enrolled in 388 different Michigan districts (495 entities within those districts). This included 308 Michigan local education agency districts (LEA Districts), 33 public school academy districts (PSA Districts), six intermediate school districts (ISD Districts), and 41 nonpublic schools. According to data available through the Center for Educational Performance and Information website (http://www.cepi. state.mi.us/eem/EntitySearchQuick.aspx), there were 549 open-active LEA Districts, 300 PSA Districts, 56 ISD Districts, and 643 nonpublic schools in October 2016. Using these counts as estimates for the 2015-16 school year, MVS served approximately 56% of LEA Districts, 11% of PSA Districts, 11% of ISD Districts, and 6% of nonpublic schools. A complete list of the Michigan districts served during 2015-16 is included in Exhibit 1.

These Michigan districts accounted for 22,646 *MVS* course enrollments over the past year. School enrollments in *MVS* courses over the past year ranged from a single student enrollment to 844 student enrollments. The average number of enrollments per Michigan school using *MVS* during 2015-16 was 46. In addition, *MVS* had 1,622 student registrations from 1,051 Michigan home schools during 2015-16.

Figure 2

Michigan Enrollments in the *Michigan Virtual School* by City and Zip Code during the 2015-16 School Year

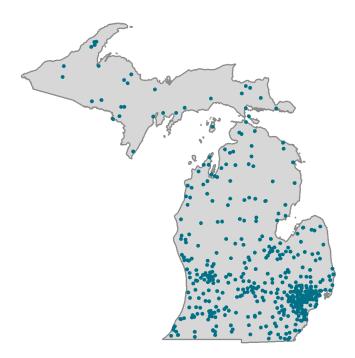


Figure 2 provides a geographic representation of where *MVS* enrollments came from for the public, nonpublic, and home schools that enrolled students during the 2015-16 school year. During this period, schools and families in 78 of the state's 83 counties were supported with *MVS* online courses and programs.

In addition to serving Michigan schools and students, *MVS* had 98 enrollments from 10 schools outside of Michigan and 82 enrollments from 47 home schools outside of Michigan.

In total, the 24,448 enrollment with *MVS* came from 14,555 students. This was an average of 1.7 enrollments per student. Fifty-three percent of students took only one course during 2015-16.

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, 2015 - September 30, 2016. 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 225 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 (81%) were offered at the high school level, though 42 online courses were available for middle school students during 2015-16.

MVS Online Course Completion and Pass Rates

Earlier this year, *MVU*, through the *Michigan Virtual Learning Research Institute*, published the third annual *Michigan's K-12 Virtual Learning Effectiveness Report* (available from http://media.mivu.org/institute/pdf/ er_2015.pdf). This publication used data reported to the state by Michigan public schools to examine all K-12 virtual enrollments in Michigan for the 2014-15 school year.

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 2015-16 school year, schools had to select from among 11 different completion statuses for an enrollment. (See page 483 of the *Michigan Student Data System (MSDS) Collection Details Manual Version 1.2.* Available from http://www.michigan.gov/documents/cepi/Collection_ Details_SY1516_v1.0_486132_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 469 of the *Michigan Student Data System (MSDS) Collection Details Manual Version 1.2.* Available from <u>http://www.michigan.</u> gov/documents/cepi/Collection_Details_SY1516_ v1.0_486132_7.pdf). The NCES subject areas also correspond to the way courses are organized within Michigan's Online Course Catalog (<u>https://micourses.</u> org), the website publicizing Section 21f online courses in the state.

Figure 3 2015-16 *MVS* Withdrawn, Failed, and Pass Rates by NCES Subject Area

	Attempted		Completed/	MVS	MI 14-15
NCES Subject Area	Count	Withdrawn	Failed	Pass Rate	Pass Rate
Agricultural, Food, and Natural Resources	97	0.0%	9.3%	90.7%	56%
Business and Marketing	1,037	0.8%	11.0%	88.2%	67%
Communications and Audio/Visual Technology	105	2.9%	13.3%	83.8%	68%
Computer and Information Sciences	1,068	1.6%	14.6%	83.8%	64%
Engineering and Technology	97	0.0%	7.2%	92.8%	63%
English Language and Literature	1,741	1.8%	15.7%	82.5%	57%
Fine and Performing Arts	978	0.8%	14.5%	84.7%	62%
Foreign Language and Literature	5,671	1.3%	16.1%	82.6%	66%
Health Care Sciences	607	0.8%	14.7%	84.5%	81%
Life and Physical Sciences	2,457	1.6%	14.9%	83.6%	58%
Mathematics	3,385	1.7%	14.3%	84.0%	54%
Miscellaneous	1,469	1.4%	11.5%	87.1%	64%
Physical, Health, and Safety Education	900	1.3%	11.7%	87.0%	63%
Public, Protective, and Government Services	477	0.8%	10.3%	88.9%	72%
Religious Education and Theology	76	0.0%	7.9%	92.1%	84%
Social Sciences and History	4,134	1.0%	11.0%	88.0%	88%
Total	24,299	1.3%	13.8%	84.9%	60%

Notes: Percentages may not sum to 100% due to rounding. MI 14-15 Pass Rate is based on the 2014-15 *Effectiveness Report (p. 21)*. That rate may be negligibly higher if "Audited" enrollments were removed from calculations.

With those understandings, *MVS* had a total of 24,448 enrollments in the 2015-16 school year. Of those, 149 enrollments were in courses where credit or a grade were not attempted. Of the 24,299 credit- or grade-attempted enrollments, 23,973 enrollments were from students who finished or remained in the course through the last day of the academic term for a completion rate of 98.7%. In terms of course success, 20,625 of the 24,299 enrollments earned 60% or more of the total course points for an overall pass rate of 84.9%. Figure 3 shows how the *MVS* pass rate varied by subject area. A full list of the 2015-16 *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 21 of the *Effectiveness Report* (p. 18), 66,503 K-12 virtual enrollments fell into one of the three withdrawn categories, 77,062 had completion statuses of "Completed/Failed," and 265,446 had "Completed/ Passed" status. That means of the 409,011 enrollments with completion statuses similar to *MVS*, 16.3% had a "withdrawn" status, 18.8% had a "Completed/Failed" status and 64.9% had a "Completed/Passed" status. For the purpose of this comparison, 11,453 "Audited," 23,848 "Incomplete," 46 "Testing Out," and 1,574 "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 23,848 incomplete enrollments excluded from the above calculation eventually turned into "Completed/ Passed," the statewide average would only rise to 66.8% — more than 18 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 4 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 4 makes apparent, student performance in *MVS* courses is considerably different among these five reasons. Students who enroll in *MVS* courses because the course was unavailable locally or to resolve a scheduling conflict had pass rates in 2015-16 of 87.1% and 88.7%, respectively. Conversely, students using *MVS* courses for credit recovery purposes were less likely to pass, yielding only a 62.5% 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 82.6% 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 71% 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 95%. 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 5 charts how districts' MVS pass rates differed. Of the 384 Michigan districts that had pass rate data with MVS in 2015-16 (four districts only had audited enrollments), 176 of them (46%) had overall *MVS* pass rates of 90% or greater. Another 90 districts (23%) 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

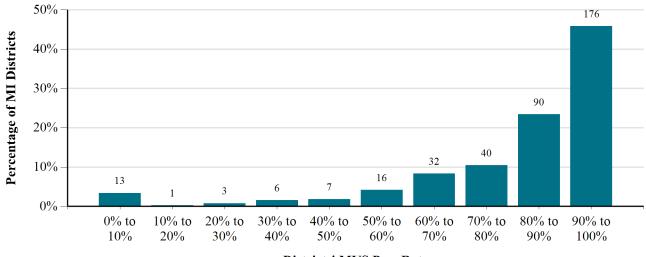
Figure 4

2015-16 MVS Pass Rates by NCES Subject Area and Enrollment Reason

NCES Subject Area	Course Unavailable Locally	Scheduling Conflict	Learner Preference	Credit Recovery	Other
Agriculture, Food, and Natural Resources	89.2%	100.0%	91.7%	-	93.8%
Business and Marketing	89.2%	78.4%	90.9%	60.0%	85.7%
Communications and Audio/Visual Technology	93.0%	100.0%	76.5%	<10.0%	71.4%
Computer and Information Sciences	85.9%	79.3%	75.6%	80.0%	86.8%
Engineering and Technology	95.8%	100.0%	73.3%	-	100.0%
English Language and Literature	92.8%	89.4%	83.0%	55.2%	78.6%
Fine and Performing Arts	87.1%	84.6%	81.7%	<10.0%	83.1%
Foreign Language and Literature	83.1%	83.8%	84.0%	65.1%	80.0%
Health Care Sciences	85.2%	86.4%	77.5%	50.0%	89.3%
Life and Physical Sciences	88.5%	87.7%	78.2%	63.5%	79.9%
Mathematics	88.1%	90.6%	82.0%	68.7%	81.5%
Miscellaneous	88.4%	88.0%	85.1%	85.0%	84.9%
Physical, Health, and Safety Education	85.9%	92.6%	84.0%	55.6%	87.4%
Public, Protective, and Government Service	90.9%	82.6%	81.1%	66.7%	91.2%
Religious Education and Theology	92.9%	100.0%	100.0%	50.0%	87.5%
Social Sciences and History	91.7%	91.0%	85.3%	58.4%	86.7%
Total	87.1%	88.7%	82.9%	62.5%	83.0%

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

Figure 5 2015-16 Districts' MVS Pass Rate Distribution by Pass Rate Bins



Districts' MVS Pass Rate

for their students. Toward this end, *MVU* has focused on developing practical resources to support school administrators, counselors, teachers, and parents which are updated every year.

Section 21f Tool Kit. Section 21f of the State School Aid Act allows students in grades K-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) 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 a link to 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.

Student Guide. New in Fall 2016, the *Student Guide to Online Learning* is a 10-page publication prepared for middle and high school students who are interested in taking virtual courses. Most of the content comes from teachers, mentors, and students who have personal experience with online learning and includes sections focused on what students like about taking online courses, what they need to think about before enrolling, how to decide what course is right for them, and how to prepare for taking a virtual course. Parents, guardians, counselors, and others who want more resources to support their students may also find this guide helpful in beginning informed conversations. The *Student Guide* is available for free at <u>https://</u> micourses.org/resources/pdf/toolkit/studentguide.pdf.

Mentor Resources. Like the *Parent Guide*, *MVU*'s Mentor Fundamentals: A Guide for Mentoring Online Learners is full of practical, research- and experiencebased 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 many mentors receive has been lacking. Mentor Fundamentals is freely available at https://micourses.org/resources/pdf/toolkit/ mentorguide.pdf.

MVU also produced an online mentor orientation and training module, *Mentoring Basics*, that combines research with best practices derived from the mentor interviews. *Mentoring Basics* is available at <u>http://olot.mivu.org/mentor/articulate/presentation.html</u>.

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 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 – supporting their efforts. OLOT is freely available at <u>http://olot.mivu.org/</u>.

Conclusion

Online learning in Michigan continues to grow rapidly as evidenced by more than 445,000 virtual enrollments in 2014-15. In contrast to the 60% pass rate found statewide during that time period, 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.

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. 2015-16 Michigan Districts Served

Achieve Charter Academy Addison Community Schools AGBU Alex-Marie Manoogian School Airport Community School Dist. 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 Anchor Bay School District Ann Arbor Public Schools Arbor Preparatory High School Arenac Eastern School District Austin Catholic Academy Bad Axe Public Schools **Baldwin Community Schools** Bath Community Schools **Bay City School District Beal City Public Schools** Bear Lake School District Beaver Island Community School **Beaverton Rural Schools Bedford Public Schools** Belding Area School District **Bellaire Public Schools** Benzie County Central Schools Berrien Springs Public Schools Big Bay De Noc School District Birch Run Area School District Birmingham City School District Black River Public School **Blissfield Community Schools Bloomfield Hills School District** Bloomingdale Public School Dist. Boyne City Public Schools Brandon School District Breckenridge Community Schools **Breitung Township Schools** Bridgman Public Schools **Brighton Area Schools Brimley Area Schools** Brown City Community Schools Buchanan 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 Christian School

Calvary Baptist Academy Calvin Christian High School Canton Charter Academy Canton Preparatory High School Cardinal Mooney Catholic School Caseville Public Schools **Cass City Public Schools Cassopolis Public Schools** Cedar Springs Public Schools Central Academy Charlevoix Montessori Academy for the Arts **Charlevoix 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 **Clinton Community Schools Clintondale Community Schools Coldwater Community Schools** Coloma Community Schools **Comstock Public Schools** Concord Academy Boyne **Concord Community Schools** Constantine Public School District Coopersville Area Public School District **Dansville Schools** Dearborn City School District Decatur Public Schools Deckerville Community School District DeLaSalle Collegiate High School

SUPPLEMENTAL INFORMATION

Exhibit 1: 2015-16 Michigan Districts Served

Exhibit 2:

2015-16 Online Course Titles Offered by *MVS* to Michigan Schools

Exhibit 3:

2015-16 MVS Summary of Courses, Enrollments, and Pass Rates

> Delton-Kellogg School District DeTour Area Schools DeTour Arts and Technology Academy **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** 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 Elkton-Pigeon-Bay Port Laker Schools **Engadine Consolidated Schools** Escanaba Area Public Schools Eton Academy Evart Public Schools Ewen-Trout Creek Consolidated School District **Excel Charter Academy** Fairview Area School District Farber Hebrew Day School Farmington Public School District Fennville Public Schools Ferndale Public Schools Forest Hills Public Schools Forest Park School District Fowler Public Schools Fowlerville Community Schools Fr. Gabriel Richard High School Frankel Jewish Academy Frankenmuth School District

Frankfort-Elberta Area Schools Franklin Road Christian School Freeland Community School

District Fremont Public School District Fruitport Community Schools

Fulton Schools

Gabriel Richard Catholic High School

Galesburg-Augusta Community Schools

Gaylord Community Schools Gibraltar 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 Rapids Public Schools Grandville Public Schools Grass Lake Community Schools Greenville 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 Public Schools Honey Creek Community School Hopkins Public Schools Houghton Lake Community Schools Houghton-Portage Township Schools Howell Public Schools Hudson Area Schools

Huron School District

Huron Valley Lutheran High School Huron Valley Schools Ida Public School District Imlay City Community Schools Ingham ISD Interlochen Arts Academy Ionia Public Schools Iron Mountain Public Schools Ishpeming Public School District Island City Academy Ithaca Public Schools Jackson Public Schools Jefferson Schools (Monroe) Jenison Public Schools Johannesburg-Lewiston Area Schools Joseph K. Lumsden Bahweting Anishnabe Academy Kalamazoo Christian High School Kalamazoo Public School District Kalkaska Public Schools Kearslev Community Schools Kelloggsville Public Schools Kenowa Hills Public Schools Kensington Woods High School Kent City Community Schools Kentwood Public Schools Keystone Academy **Kingston Community School** District Ladywood High School-Detroit Lake City Area School District Lake Linden-Hubbell School District Lake Orion Community Schools Lakeshore School District (Berrien) Lakeview Public Schools (Macomb) Lakeview Sch. District (Calhoun) Lakewood Public Schools L'Anse Area Schools L'Anse Creuse Public Schools Lansing Catholic Central High School Lansing Christian School Lawrence Public School District Lawton Community School Dist. Leland Public School District Lenawee Christian School Lenawee ISD Leslie Public Schools Life Tech Academy Litchfield Community Schools Livonia Public Schools Ludington Area School District

Lumen Christi High School Lutheran High School South Mackinac Island Public Schools Mackinaw City Public Schools Madison Public Schools (Oakland) Manchester Community Schools Manistee Area Schools Manistee Catholic Central Schools Manistique Area Schools Marian High School Marlette Community Schools Marquette Area Public Schools Marshall Public Schools Martin Luther High School Mason Public Schools (Ingham) Mattawan Consolidated School Mayville Community School Dist. Mendon Community School Dist. Menominee Area Public Schools Michigan Center School District Michigan Islamic Academy Michigan Virtual Charter Academv Midland Academy of Advanced and Creative Studies Midland Public Schools Milan Area Schools Millington Community Schools Monroe Public Schools Montabella Community Schools Muskegon Catholic Central High School Negaunee Public Schools New Life Christian Academy Niles Community School District North Branch Area Schools North Dickinson County Schools North Muskegon Public Schools Northport Public School District Northview Public School District Northville Public Schools Norway-Vulcan Area Schools Notre Dame Preparatory School Novi Community School District Oakland FlexTech Academy **Oakridge Public Schools** Ojibwe Charter School **Okemos Public Schools Olivet Community Schools Onekama Consolidated Schools Onsted Community Schools** Ontonagon Area Schools Orchard View Schools **Otsego Public Schools Ovid-Elsie** Area Schools

Oxford Community Schools Pansophia Academy Paramount Charter Academy Paw Paw Public School District Peck Community School District Pellston Public Schools Pennfield Schools Perry Public School District Pewamo-Westphalia Community Schools **Pickford Public Schools** Pinckney 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 Prevail Academy Quincy Community School Dist. **Rapid River Public Schools** Reed City Area Public Schools **Reeths-Puffer Schools Regina High School Richmond Community Schools River Valley School District Riverside Academy Riverview Community School** District Rochester Community School District Rockford Public Schools Rogers City Area Schools Romeo Community Schools Roscommon Area Public Schools Rudyard Area Schools Sacred Heart Academy Saginaw City School District Saginaw Township Community Schools 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 Shelby Public Schools Shepherd Public School District Shiawassee Regional ESD Shrine High School South Christian High School

South Haven Public Schools South Lyon Community Schools South Redford Virtual Shared Time Program Southfield Public School District Southgate Community School District Sparta Area Schools Spring Lake Public Schools St. Catherine of Siena Academy St. Charles Community Schools St. Clair County RESA St. Ignace Area Schools St. Joseph County ISD St. Joseph Public Schools 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 Taylor Preparatory High School **Tecumseh Public Schools** Thornapple Kellogg School Dist. 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 Washtenaw ISD Watervliet School District Waverly Community 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 Dist. Westwood Community Schools Whiteford Agricultural Schools Whitehall District Schools Whitmore Lake Public Schools Whittemore-Prescott Area Schools Williamston Community Schools Wolverine Community Schools

Yale Public Schools

Zeeland Public Schools

Exhibit 2. 2015-16 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 Entrepreneurship Hospitality and Tourism 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 Social Media 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 (6-8)

English Language and Literature (Cont.)

Reading World Literature

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)(6-8)French 2 (B) (6-8) French 2 (A) French 2 (B) French 3 (A) French 3 (B) French 4 (A) French 4 (B) German 1 (A) (6-8) German 1 (B) (6-8) German 1 (A) German 1 (B) German 2 (A) (6-8) German 2 (B) (6-8) German 2 (A) German 2 (B) German 3 (A) German 3 (B)

Foreign Language and Literature (Cont.)

German 4 (A) German 4 (B) Japanese 1 (A) Japanese 1 (B) Japanese 2 (A) 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)

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) Great Minds in Science Human Space Exploration Oceanography (A)

Life and Physical Sciences (Cont.)

Oceanography (B) Physical Science (A) Physical Science (B) Physics Physics (A) Physics (B) Science 6 (A) Science 6 (B) Science 7 (A) Science 7 (B) Science 8 (A) Science 8 (B) Science 8 (B)

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-Calculus (A) Pre-Calculus (B) Probability and Statistics (A) Probability and Statistics (B) Trigonometry

Miscellaneous

Career Planning Careers - Find Your Future Employability Skills

Miscellaneous (Cont.)

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 Criminology Economics History of the Holocaust Native American History Philosophy Psychology Sociology (A) Sociology (B) U.S. History & Geography (A) U.S. History & Geography (B) 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 & Geography (A) World History & Geography (B) World History (B)

Exhibit 3. 2015-16 MVS Summary of Courses, Enrollments, and Pass Rates

Agriculture,	Food, a	and Natural	Resources
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Course Title	Count	Pass Rate
Veterinary Science	97	90.7%

Business and Marketing

Course Title	Count	Pass Rate
Accounting (A)	188	89.4%
Accounting (B)	76	90.8%
Business Ethics	314	91.4%
Entrepreneurship	235	80.9%
Hospitality and Tourism	75	92.0%
Sports and Entertainment	149	88.6%

Communications and Audio/Visual Technology

Course Title	Count	Pass Rate
Journalism	105	83.8%

Computer and Information Sciences

Course Title	Count	Pass Rate
AP Computer Science A (A)	115	88.7%
AP Computer Science A (B)	93	90.3%
Game Design	211	74.4%
Java Programming	177	84.2%
Microsoft Office 2013	49	73.5%
Social Media	118	94.9%
Visual Basic.Net Programming	173	79.8%
Web Design Basics HTML	132	88.6%

Engineering and Technology

Course Title	Count	Pass Rate
Bioethics	97	92.8%

English Language and Literature

Course Title	Count	Pass Rate
AP English Lang. & Comp. (A)	53	94.3%
AP English Lang. & Comp. (B)	52	94.2%
AP English Lit. & Comp. (A)	60	88.3%
AP English Lit. & Comp. (B)	45	93.3%
Composition - Advanced	27	85.2%
Composition - Beginning	108	86.1%
English 6 (A)	<10	66.7%
English 6 (B)	<10	75.0%
English 7 (A)	10	90.0%
English 7 (B)	11	72.7%
English 8 (A)	30	70.0%
English 8 (B)	25	80.0%

English Language and Literature (Cont.)

Linghish Language and Literature (Cont.)			
Course Title	Count	Pass Rate	
English 9 (A)	84	73.8%	
English 9 (B)	103	68.0%	
English 10 (A)	112	65.2%	
English 10 (B)	104	75.0%	
English 11 (A)	171	76.0%	
English 11 (B)	148	80.4%	
English 12 (A)	197	87.3%	
English 12 (B)	189	91.5%	
Mythology and Folklore	101	94.1%	
Reading (6-8)	<10	83.3%	
Reading	44	81.8%	
World Literature	54	92.6%	

Fine and Performing Arts

Course Title	Count	Pass Rate
American Film Survey	287	80.8%
AP Art History (A)	23	87.0%
AP Art History (B)	<10	100.0%
Art Appreciation	136	80.1%
Digital Photography	193	93.3%
Directors of the Golden Age	75	85.3%
In Search of Cyrano	<10	66.7%
Music Appreciation	252	84.1%

Foreign Language and Literature

Course Title	Count	Pass Rate
American Sign Language 1 (A)	916	77.6%
American Sign Language 1 (B)	552	94.6%
American Sign Language 2 (A)	226	94.2%
American Sign Language 2 (B)	190	93.2%
AP French (A)	<10	85.7%
AP French (B)	<10	100.0%
AP Spanish (A)	21	76.2%
AP Spanish (B)	13	76.9%
Chinese 1 (A)	62	74.2%
Chinese 1 (B)	43	95.3%
Chinese 2 (A)	47	80.9%
Chinese 2 (B)	35	91.4%
Chinese 3 (A)	44	77.3%
Chinese 3 (B)	30	90.0%
Chinese 4 (A)	21	71.4%
Chinese 4 (B)	10	100.0%
French 1 (A) (6-8)	14	64.3%
French 1 (B) (6-8)	<10	100.0%

Course Title Count Pass Rate Course Title Count Count French 1 (A) 200 82.0% Medical Terminology 607 French 2 (A) (6-8) <10 71.4% Life and Physical Sciences Count French 2 (B) (6-8) <10 100.0% Anatomy & Physiology (A) 241 French 2 (B) 105 86.7% Anatomy & Physiology (B) 99 French 3 (A) 43 69.8% AP Biology (B) 42 French 4 (B) 25 92.0% AP Chemistry (A) 27 French 4 (B) 25 92.0% AP Chemistry (A) 27 French 4 (B) 25 92.0% AP Chemistry (B) 21 German 1 (A) 285 74.0% AP Physics 1(B) 46 German 1 (B) 188 84.6% AP Physics 1(B) 46 German 2 (B) (6-8) <10 100.0% AP Physics 1(B) 40 German 3 (A) 26 73.1% Biology (A) 126 German 2 (B) 83	Foreign Language and Literature (Cont.)		Health Care Services		
French 1 (B)14283.1%IfFrench 2 (A) (6-8)<1071.4%Life and Physical SciencesFrench 2 (B) (6-8)<10100.0%Course TitleCountelFrench 2 (B)10586.7%Anatomy & Physiology (A)241French 2 (B)10586.7%Anatomy & Physiology (B)99French 3 (A)4369.8%AP Biology (B)42French 4 (B)2592.0%AP Chemistry (A)27French 4 (B)2592.0%AP Chemistry (B)21German 1 (A) (6-8)<10100.0%AP Environmental Science (A)43German 1 (A)28574.0%AP Physics 1 (B)46German 1 (A)28574.0%AP Physics 1 (B)46German 2 (A) (6-8)<10100.0%AP Physics C - Mechanics (A)59German 2 (A) (6-8)<10100.0%AP Physics C - Mechanics (A)59German 2 (A)9888.8%Astronomy315German 3 (B)1485.7%Chemistry (B)112German 4 (A)<10100.0%Earth Science (A)61Japanese 1 (A)24375.3%Earth Science (B)23Japanese 2 (B)4285.7%Great Minds in Science11Latin 1 (A)14784.4%Human Space Exploration80Latin 1 (A)14784.4%Human Space Exploration80Latin 1 (A)14784.4%Human Space Calparty (A)217Latin 1 (B) <t< th=""><th>Course Title</th><th>Count</th><th>Pass Rate</th><th>Course Title</th><th>Count</th></t<>	Course Title	Count	Pass Rate	Course Title	Count
French 2 (A) (6-8)<1071.4%Life and Physical SciencesFrench 2 (B) (6-8)<10	French 1 (A)	200	82.0%	Medical Terminology	607
French 2 (B) (6-8)<10100.0%Course TitleCountFrench 2 (A)10486.5%Anatomy & Physiology (A)241French 2 (B)10586.7%Anatomy & Physiology (B)99French 3 (A)4369.8%AP Biology (A)22French 3 (B)2871.4%AP Biology (B)42French 4 (A)3789.2%AP Chemistry (B)21German 1 (A) (6-8)<10	French 1 (B)	142	83.1%		
French 2 (A)10486.5%Anatomy & Physiology (A)241French 2 (B)10586.7%Anatomy & Physiology (B)99French 3 (A)4369.8%AP Biology (A)52French 3 (B)2871.4%AP Biology (B)42French 4 (A)3789.2%AP Chemistry (A)27German 1 (A) (6-8)<10	French 2 (A) (6-8)	<10	71.4%	Life and Physical Sciences	
French 2 (B)10586.7%Anatomy & Physiology (B)99French 3 (A)4369.8%AP Biology (A)52French 3 (B)2871.4%AP Biology (B)42French 4 (A)3789.2%AP Chemistry (A)27French 4 (B)2592.0%AP Chemistry (B)21German 1 (A) (6-8)<10	French 2 (B) (6-8)	<10	100.0%	Course Title	Count
French 3 (A)4369.8%A P Biology (A)52French 3 (B)2871.4%AP Biology (B)42French 4 (A)3789.2%AP Chemistry (A)27French 4 (B)2592.0%AP Chemistry (B)21German 1 (A) (6-8)<10	French 2 (A)	104	86.5%	Anatomy & Physiology (A)	241
French 3 (B)28 71.4% A P Biology (B)42French 4 (A)3789.2%AP Chemistry (A)27French 4 (B)2592.0%AP Chemistry (B)21German 1 (A) (6-8)<10	French 2 (B)	105	86.7%	Anatomy & Physiology (B)	99
French 4 (A)3789.2%AP Chemistry (A)27French 4 (B)2592.0%AP Chemistry (B)21German 1 (A) (6-8)<10	French 3 (A)	43	69.8%	AP Biology (A)	52
French 4 (B)2592.0%AP Chemistry (B)21German 1 (A) (6-8)<10	French 3 (B)	28	71.4%	AP Biology (B)	42
German 1 (A) (6-8)<10100.0%AP Environmental Science (A)43German 1 (B)(6-8)<10	French 4 (A)	37	89.2%	AP Chemistry (A)	27
German 1 (B) (6-8)<10100.0%AP Environmental Science (B)35German 1 (A)28574.0%AP Physics 1 (A)58German 2 (B) (6-8)<10	French 4 (B)	25	92.0%	AP Chemistry (B)	21
German 1 (A)285 74.0% AP Physics 1 (A)58German 1 (B)18884.6%AP Physics 1 (B)46German 2 (A) (6-8)<10	German 1 (A) (6-8)	<10	100.0%	AP Environmental Science (A)	43
German 1 (B)18884.6%AP Physics 1 (B)46German 2 (A) (6-8)<10	German 1 (B) (6-8)	<10	100.0%	AP Environmental Science (B)	35
German 2 (A) (6-8)<10100.0%AP Physics C - Mechanics (A)59German 2 (B) (6-8)<10	German 1 (A)	285	74.0%	AP Physics 1 (A)	58
German 2 (B) (6-8)<10 100.0% AP Physics C - Mechanics (B)50German 2 (A)9889.8%Astronomy315German 2 (B)8380.7%Biology (A)126German 3 (A)2673.1%Biology (B)112German 3 (B)1485.7%Chemistry (A)101German 4 (A)<10	German 1 (B)	188	84.6%	AP Physics 1 (B)	46
German 2 (A)9889.8%Astronomy315German 2 (B)8380.7%Biology (A)126German 3 (A)2673.1%Biology (B)112German 3 (B)1485.7%Chemistry (A)101German 4 (A)<10	German 2 (A) (6-8)	<10	100.0%	AP Physics C - Mechanics (A)	59
German 2 (A)9889.8%Astronomy315German 2 (B)8380.7%Biology (A)126German 3 (A)2673.1%Biology (B)112German 3 (B)1485.7%Chemistry (A)101German 4 (A)<10	German 2 (B) (6-8)	<10	100.0%	AP Physics C - Mechanics (B)	50
German 3 (A)26 73.1% Biology (B)112German 3 (B)14 85.7% Chemistry (A)101German 4 (A)<10	German 2 (A)	98	89.8%	Astronomy	315
German 3 (B)1485.7%Chemistry (A)101German 4 (A)<10	German 2 (B)	83	80.7%	Biology (A)	126
German 4 (A)<10 77.8% Chemistry (B)110German 4 (B)10 100.0% Earth Science (A)61Japanese 1 (A)243 75.3% Earth Science (B)23Japanese 1 (B)148 80.4% Environmental Science (A)81Japanese 2 (A)50 90.0% Environmental Science (B)34Japanese 2 (B)42 85.7% Great Minds in Science11Latin 1 (A)147 84.4% Human Space Exploration80Latin 1 (B)104 92.3% Oceanography (A)217Latin 2 (A)57 86.0% Oceanography (B)55Latin 2 (B)49 95.9% Physical Science (A)32Latin 3 (A)11 100.0% Physical Science (B)24Latin 3 (B)<10	German 3 (A)	26	73.1%	Biology (B)	112
German 4 (B)10100.0%Earth Science (A)61Japanese 1 (A)24375.3%Earth Science (B)23Japanese 1 (B)14880.4%Environmental Science (A)81Japanese 2 (A)5090.0%Environmental Science (B)34Japanese 2 (B)4285.7%Great Minds in Science11Latin 1 (A)14784.4%Human Space Exploration80Latin 1 (B)10492.3%Oceanography (A)217Latin 2 (A)5786.0%Oceanography (B)55Latin 3 (A)11100.0%Physical Science (A)32Latin 3 (B)<10	German 3 (B)	14	85.7%	Chemistry (A)	101
Japanese I (A)24375.3%Earth Science (B)23Japanese I (B)148 80.4% Environmental Science (A) 81 Japanese 2 (A)50 90.0% Environmental Science (B) 34 Japanese 2 (B)42 85.7% Great Minds in Science 11 Latin 1 (A)147 84.4% Human Space Exploration 80 Latin 1 (B)104 92.3% Oceanography (A) 217 Latin 2 (A)57 86.0% Oceanography (B) 55 Latin 3 (A)11 100.0% Physical Science (A) 32 Latin 3 (B)<10	German 4 (A)	<10	77.8%	Chemistry (B)	110
Japanese 1 (B)148 80.4% Environmental Science (A) 81 Japanese 2 (A)50 90.0% Environmental Science (B) 34 Japanese 2 (B)42 85.7% Great Minds in Science 11 Latin 1 (A)147 84.4% Human Space Exploration 80 Latin 1 (B)104 92.3% Oceanography (A) 217 Latin 2 (A)57 86.0% Oceanography (B) 55 Latin 2 (B)49 95.9% Physical Science (A) 32 Latin 3 (A)11 100.0% Physical Science (B) 24 Latin 3 (B)<10	German 4 (B)	10	100.0%	Earth Science (A)	61
Japanese 2 (A)50 90.0% Environmental Science (B)34Japanese 2 (B)42 85.7% Great Minds in Science11Latin 1 (A)147 84.4% Human Space Exploration80Latin 1 (B)104 92.3% Oceanography (A)217Latin 2 (A)57 86.0% Oceanography (B)55Latin 2 (A)11100.0\%Physical Science (A)32Latin 3 (A)11100.0\%Physical Science (B)24Latin 3 (B)<10	Japanese 1 (A)	243	75.3%		23
Japanese 2 (B)4285.7%Great Minds in Science11Latin 1 (A)14784.4%Human Space Exploration80Latin 1 (B)10492.3%Oceanography (A)217Latin 2 (A)5786.0%Oceanography (B)55Latin 2 (B)4995.9%Physical Science (A)32Latin 3 (A)11100.0%Physical Science (B)24Latin 3 (B)<10	Japanese 1 (B)	148	80.4%	Environmental Science (A)	81
Latin 1 (A)14784.4%Human Space Exploration80Latin 1 (B)10492.3%Oceanography (A)217Latin 2 (A)5786.0%Oceanography (B)55Latin 2 (B)4995.9%Physical Science (A)32Latin 3 (A)11100.0%Physical Science (B)24Latin 3 (B)<10	Japanese 2 (A)	50	90.0%	Environmental Science (B)	34
Latin 1 (A)147 84.4% Human Space Exploration80Latin 1 (B)10492.3%Oceanography (A)217Latin 2 (A)57 86.0% Oceanography (B)55Latin 2 (B)4995.9%Physical Science (A)32Latin 3 (A)11100.0%Physical Science (B)24Latin 3 (B)<10	Japanese 2 (B)	42	85.7%	Great Minds in Science	11
Latin 2 (A)57 86.0% Oceanography (B)55Latin 2 (B)49 95.9% Physical Science (A)32Latin 3 (A)11 100.0% Physical Science (B)24Latin 3 (B)<10	* • • •	147	84.4%	Human Space Exploration	80
Latin 2 (A)57 86.0% Oceanography (B)55Latin 2 (B)49 95.9% Physical Science (A)32Latin 3 (A)11 100.0% Physical Science (B)24Latin 3 (B)<10	Latin 1 (B)	104	92.3%	Oceanography (A)	217
Latin 3 (A)11 100.0% Physical Science (B)24Latin 3 (B)<10	Latin 2 (A)	57	86.0%		55
Latin 3 (B)<10 100.0% Physics<10Spanish 1 (A) (6-8)34 64.7% Physics (A)139Spanish 1 (B) (6-8)<10	Latin 2 (B)	49	95.9%	Physical Science (A)	32
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Latin 3 (A)	11	100.0%	Physical Science (B)	24
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Latin 3 (B)	<10	100.0%	Physics	<10
Spanish 1 (A) 252 55.2% Science 6 (A) <10	Spanish 1 (A) (6-8)	34	64.7%	Physics (A)	139
Spanish 1 (B) 171 80.1% Science 6 (B) <10	Spanish 1 (B) (6-8)	<10	80.0%	Physics (B)	106
Spanish 2 (A) (6-8) <10	Spanish 1 (A)	252	55.2%	Science 6 (A)	<10
Spanish 2 (B) (6-8) <10	Spanish 1 (B)	171	80.1%	Science 6 (B)	<10
Spanish 2 (B) (6-8) <10	Spanish 2 (A) (6-8)	<10	100.0%	Science 7 (A)	<10
Spanish 2 (B) 148 83.1% Science 8 (B) 19 Spanish 3 (A) 105 88.6% Science Tracks <10		<10	100.0%	Science 7 (B)	<10
Spanish 3 (A) 105 88.6% Science Tracks <10 Spanish 3 (B) 78 91.0% </td <td>Spanish 2 (A)</td> <td>221</td> <td>79.6%</td> <td>Science 8 (A)</td> <td>17</td>	Spanish 2 (A)	221	79.6%	Science 8 (A)	17
Spanish 3 (B) 78 91.0% Spanish 4 (A) 74 85.1%	Spanish 2 (B)	148	83.1%	Science 8 (B)	19
Spanish 3 (B) 78 91.0% Spanish 4 (A) 74 85.1%	• · · ·	105	88.6%		<10
Spanish 4 (A) 74 85.1%	· · ·	78	91.0%		
	÷ ` ´	74	85.1%		
	Spanish 4 (B)	57	91.2%		

Pass Rate

Pass Rate

82.6%

97.0%

96.2%

90.5%

88.9%

66.7%

90.7%

100.0%

87.9%

97.8%

93.2%

96.0%

86.3% 75.4%

76.8%

70.3%

59.1%

77.0%

82.6%

86.4%

100.0%

90.9%

88.8%

80.6%

90.9%

68.8%

79.2%

84.9%

86.8%

100.0%

100.0%

80.0%

80.0%

70.6%

63.2%

NA

NA

84.5%

Mathematics

Course Title	Count	Pass Rate
Algebra 1	<10	NA
Algebra 1 (A)	190	76.8%
Algebra 1 (B)	181	75.1%
Algebra 2 (A)	225	76.4%
Algebra 2 (B)	245	79.6%
AP Calculus AB (A)	46	100.0%
AP Calculus AB (B)	41	87.8%
AP Calculus BC (A)	59	98.3%
AP Calculus BC (B)	54	98.1%
AP Statistics (A)	80	92.5%
AP Statistics (B)	61	93.4%
Calculus (A)	53	81.1%
Calculus (B)	25	88.0%
Geometry (A)	185	74.1%
Geometry (B)	164	78.0%
Math Tracks	<10	NA
Mathematics 6 (A)	<10	87.5%
Mathematics 6 (B)	<10	100.0%
Mathematics 7 (A)	<10	50.0%
Mathematics 7 (B)	<10	57.1%
Mathematics 8 (A)	18	61.1%
Mathematics 8 (B)	15	66.7%
Mathematics of Baseball	222	80.2%
Personal Finance (A)	429	89.3%
Personal Finance (B)	475	91.4%
Pre-Algebra (A)	38	63.2%
Pre-Algebra (A) - Numbers	<10	100.0%
Pre-Algebra (B)	28	75.0%
Pre-Calculus (A)	158	89.9%
Pre-Calculus (B)	149	92.6%
Probability and Statistics (A)	126	81.7%
Probability and Statistics (B)	24	87.5%
Trigonometry	66	80.3%

Miscellaneous

Course Title	Count	Pass Rate
Career Planning	279	85.7%
Careers - Find Your Future	316	83.2%
Employability Skills	233	92.3%
Leadership Skills Development	63	90.5%
Leadership Skills Development (A)	<10	42.9%
Leadership Skills Development (B)	<10	50.0%
Study Skills	569	88.0%

Physical, Health, and Safety Education

Course Title	Count	Pass Rate
Health	524	88.5%
Personal Fitness	376	84.8%

Public, Protective, and Government Services

Course Title	Count	Pass Rate
Forensic Science - Introduction	394	88.8%
Forensic Science - Advanced	83	89.2%

Religious Education And Theology

Course Title	Count	Pass Rate
World Religions	76	92.1%

Social Sciences and History

Course Title	Count	Pass Rate
Anthropology (A)	89	94.4%
AP Macroeconomics	135	92.6%
AP Microeconomics	119	95.8%
AP Psychology	312	91.3%
AP U.S. Government & Politics	97	87.6%
AP U.S. History (A)	58	82.8%
AP U.S. History (B)	42	92.9%
AP World History (A)	41	92.7%
AP World History (B)	34	94.1%
Archaeology	31	87.1%
Civics	504	88.7%
Criminology	253	93.3%
Economics	578	91.2%
History of the Holocaust	30	80.0%
Native American History	71	76.1%
Philosophy	86	91.9%
Psychology	384	83.1%
Sociology (A)	315	92.7%
Sociology (B)	81	98.8%
U.S. History & Geography (A)	171	69.6%
U.S. History & Geography (B)	169	78.7%
U.S. History (B)	<10	66.7%
U.S. History 8 (A)	36	80.6%
U.S. History 8 (B)	36	77.8%
World Cultures 6 (A)	<10	88.9%
World Cultures 6 (B)	10	100.0%
World Geography 7 (A)	14	85.7%
World Geography 7 (B)	13	84.6%
World History & Geography (A)	194	78.4%
	171	,, .

Social Sciences and History (Cont.)

Course Title	Count	Pass Rate
World History & Geography (B)	188	91.0%
World History (B)	25	92.0%









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