

# Helena Public Schools College and Career Readiness Administrative Summary 2014-2018

## **ACT Benchmarks**

ACT provides a highly respected and reliable gauge of college and career readiness. \*The ACT benchmarks identify the level of knowledge and skills students need to be successful in their first year of college level courses associated with the ACT subject area tests. Students who attain the benchmark score have about a **50% chance of obtaining a B or higher** or about a **75% chance of obtaining a C or higher** in their first year corresponding college course.

\*The empirically derived benchmarks are based on a sample of 214 institutions and more than 230,000 students from across the United States.

## **Core or More**

To assist students in selecting courses that better prepare them for the rigor of college, ACT recommends that students take 4 or more years of English and 3 or more years each of math, natural science, and social studies. ACT refers to these recommendations as Core or More and furnishes school districts with Core or More results in their ACT Profile Report.

-- ACT, Inc., The ACT Profile Report – National, Graduating Class of 2017

-- ACT, Inc., ACT College and Career Readiness Benchmarks

## **Course Patterns**

Although a distribution table provides an important overview of student performance, it doesn't provide information on student performance in relation to the courses taken. The course pattern analysis in this report identifies ACT performance in relation to the most rigorous course(s) taken in each subject area. Examining ACT performance in relation to course completion offers multiple benefits: 1) informs instruction, 2) identifies ACT performance in relation to course options, and 3) motivates students to take more rigorous coursework.

The HSD course pattern analysis is modeled after ACT's Core or More analysis. Although similar, HSD's course pattern analysis provides more detail and uses actual course history information. In contrast, ACT relies on information gathered through a voluntary self-reporting form that is completed prior to the test. ACT and the HSD course history information includes the senior year.

The following Administrative Summary provides a snapshot of ACT performance in relation to course patterns in English, writing, math, science, and STEM at the District level. The full reports breakout performance results for both Capital High School and Helena High School in English, writing, math, science, and STEM. The full reports also include gender performance based on level of preparation and Advanced Placement participation percentages and scores.

## **The Impact of Professional Learning Communities (PLC) on Student Achievement**

Helena School District strongly believes that Professional Learning Communities provide a pathway to College and Career Readiness. Every Monday students are released early so that all educators can participate in their grade level and content area PLC meetings. The PLC process has allowed teachers and support staff to plan and adjust instruction to meet the needs of each student.

Measuring student growth through additional assessment and intervention programs in math across all grades levels allows the District to place instructional and human resources in identified areas allowing for optimum student growth. As a result, Helena School District has seen a tremendous jump in the overall elementary math proficiency for students in first grade through fifth grade as measured by a nationally normed product, *Renaissance Learning*. In three complete school years, from the fall of the 2013-2014 school year to the spring of the 2015-2016 school year, the percentage of these students at or above benchmark (40 percentile ranking (PR)) increased from 70% to 85%. In a district that serves approximately 2500 first through fifth graders, this increase from 70% to 85% represents nearly four hundred fifty total students.

Even more so, this increase in students performing at or above the benchmark of 40 PR has carried over into middle school. In the spring of 2016, 465 of the district's 556 fifth graders were performing at or above benchmark and of the 465 at or above benchmark, 192 were between an 80-94 PR and 124 were at or above a 95 PR. The weekly PLC process has allowed teachers and support staff to plan and adjust to the advancing level of our students.

To increase writing proficiency, Helena School District has focused resources on developing and administering a writing assessment to all students in grades 9-12 in the fall and spring of each year. This score is aligned to the proficiency scores for the ACT writing assessment and the Montana University System (MUS) writing proficiency requirement.

As a result of dedicated educators and the PLC process, Helena School District students have a strong foundation in math and literacy. This groundwork enables the District to offer advanced courses of study with increased rigor. The District is confident that a strong foundation in literacy and math will allow Helena Public Schools to continue along an academic path which includes a standards-based curriculum and instruction, effective assessments, and a collaborative communication model that allows teachers to benefit from the best work of their colleagues.

### **Credit**

ACT is the registered trademark of ACT, Inc. AP is the registered trademark of the College Board. Test names are the trademarks of their respective owners. Academic rankings and their designated terminology are property of their respective owners. Helena Public Schools is not affiliated with ACT, Inc., or the College Board.

Unless otherwise noted, the data analysis in this report was completed by employees of Helena Public Schools using electronic ACT student scores and course enrollment histories. While every care has been exercised in analyzing, compiling, and presenting this data, Helena Public Schools and the personnel involved in this work accept no responsibility for errors or omissions contained in this information.

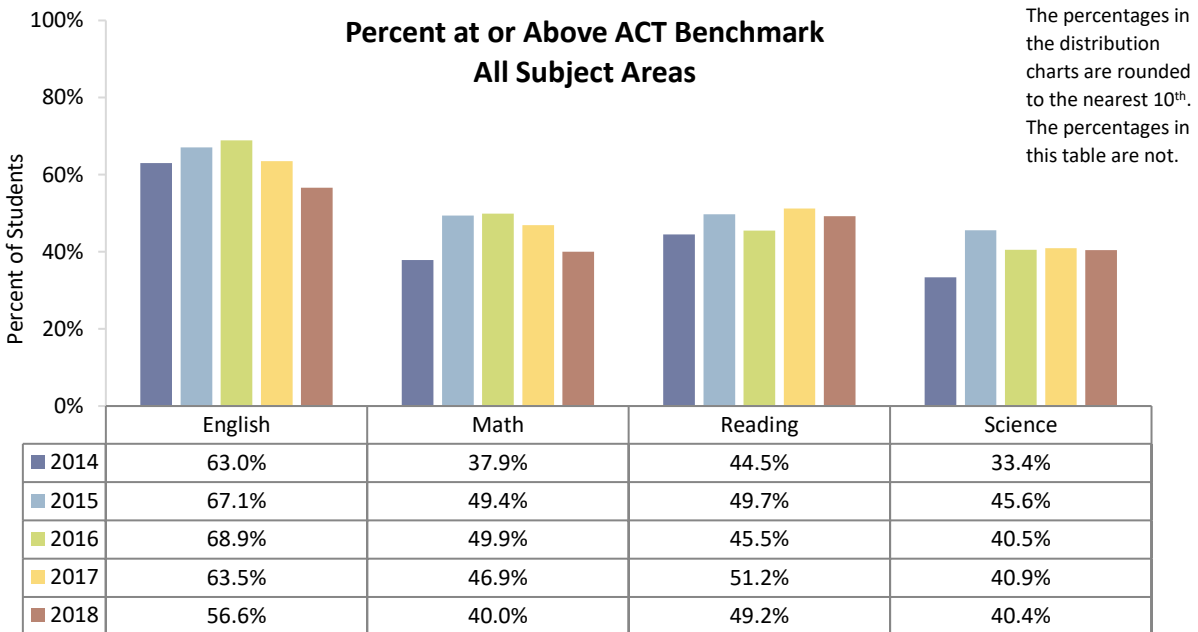
# Helena School District ACT Analysis

## Average ACT Scores and Percent Meeting Benchmark for CHS and HHS Students

Average ACT Scores				
Cohorts	English	Math	Reading	Science
2014	19.8	20.5	21.2	20.4
2015	20.4	21.4	21.9	21.4
2016	20.8	21.3	21.8	21.7
2017	19.7	21.3	21.9	21.2
2018	19.4	20.6	21.6	20.9

The standard error of measurement is about 2 points above and below a student score for English, Math, Reading, Science, STEM, and ELA and about 1 point for the Composite and the Writing score.

-- ACT, Inc., The ACT High School Report, Graduation Year: 2018



### Montana - 2018

English – 49.4%  
Math – 33.5%  
Reading – 38.6%  
Science – 31.0%

### Highest Among Census Testing States - 2017

English – 63% (Minnesota)  
Math – 48% (Minnesota)  
Reading – 50% (Minnesota)  
Science – 42% (Minnesota)

### Highest AA School - 2018

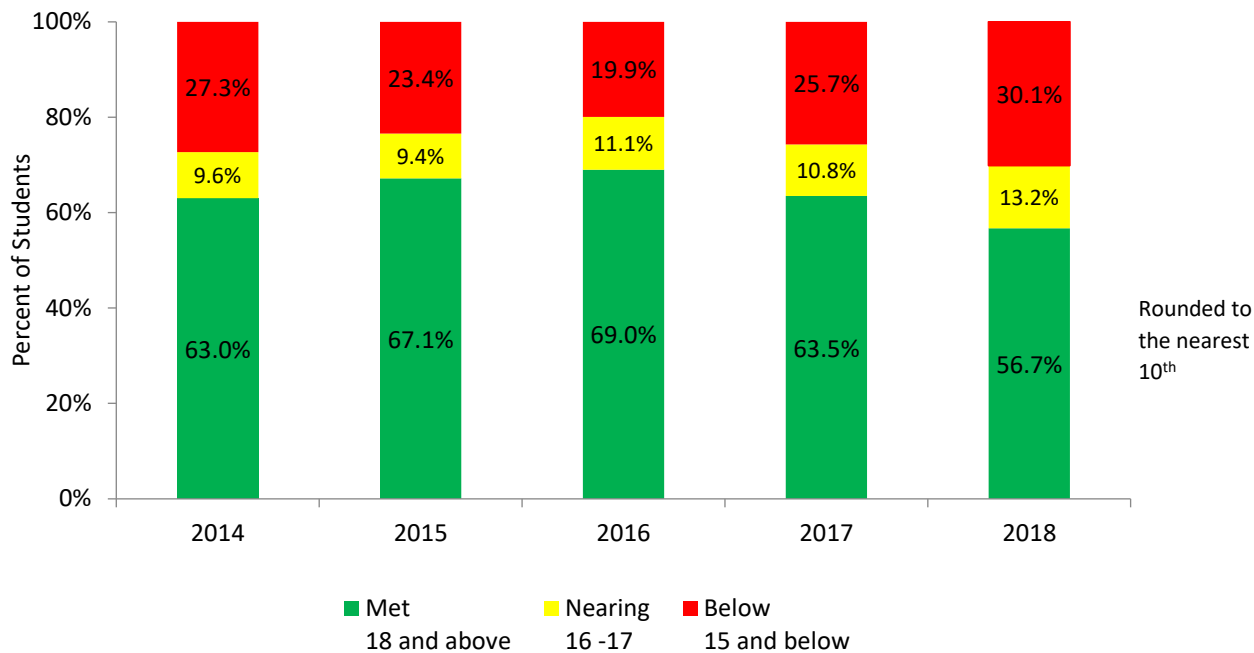
English – 69.0% (Bozeman)  
Math – 52.0% (Bozeman)  
Reading – 54.5% (Bozeman)  
Science – 49.4% (Bozeman)

-- ACT, Inc., The Condition of College and Career Readiness, 2017 National

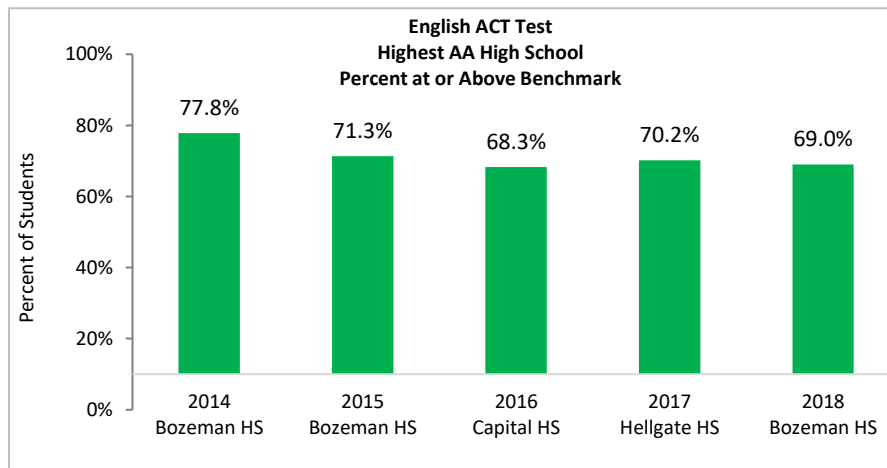
-- Montana Office of Public Instruction. Growth and Enhancement of Montana Students (GEMS), Student Achievement, ACT College Readiness Dashboard

The standard error of measurement is about 2 points above and below benchmark.

### District English ACT Test Percentage Distribution for ACT Benchmark



Note: Distribution percentages are rounded to the nearest 10<sup>th</sup>.



### Course Patterns

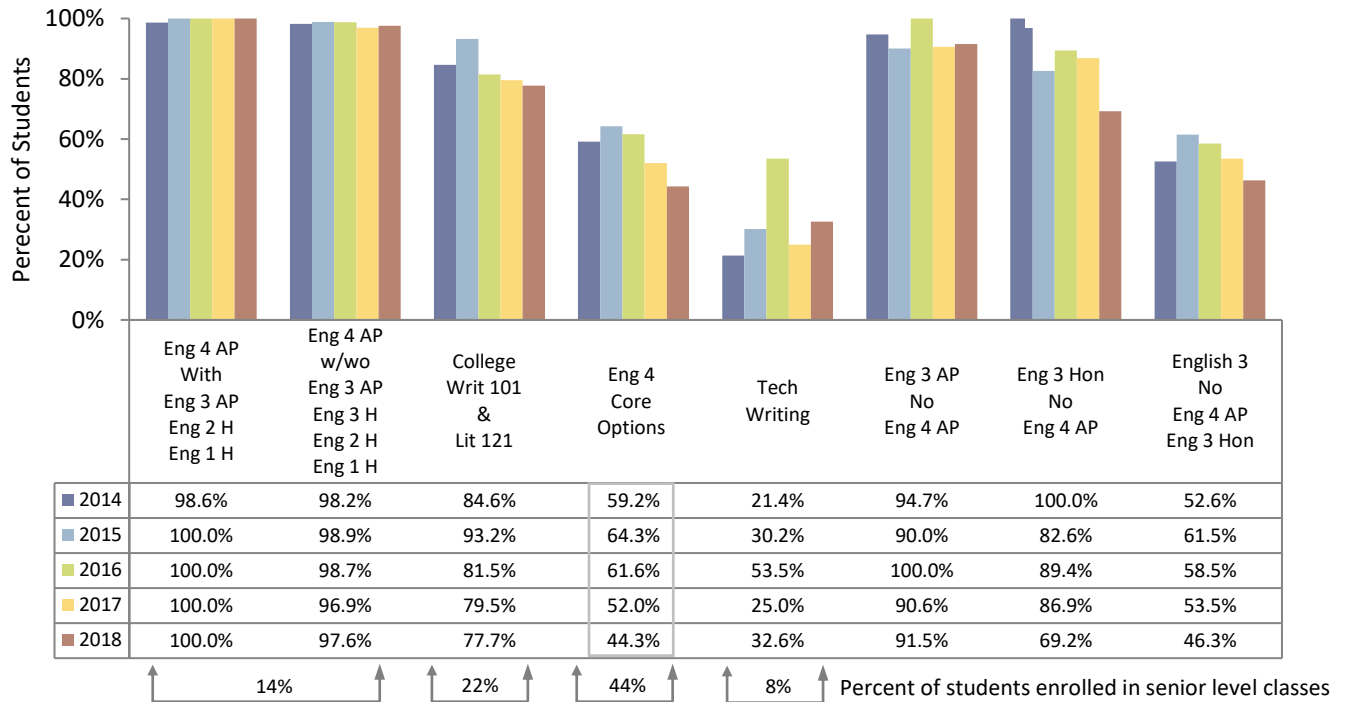
Although a distribution table provides an important overview of student performance, it doesn't provide information on student performance in relation to the courses taken. The course pattern analysis in this report identifies ACT performance in relation to the most rigorous course(s) taken in each subject area. Examining ACT performance in relation to course completion offers multiple benefits: 1) informs instruction, 2) identifies ACT performance in relation to course options, and 3) motivates students to take more rigorous coursework.

-- Montana Office of Public Instruction. Growth and Enhancement of Montana Students (GEMS), Student Achievement, ACT College Readiness Dashboard

-- ACT, Inc., The ACT High School Report, Graduation Year: 2018

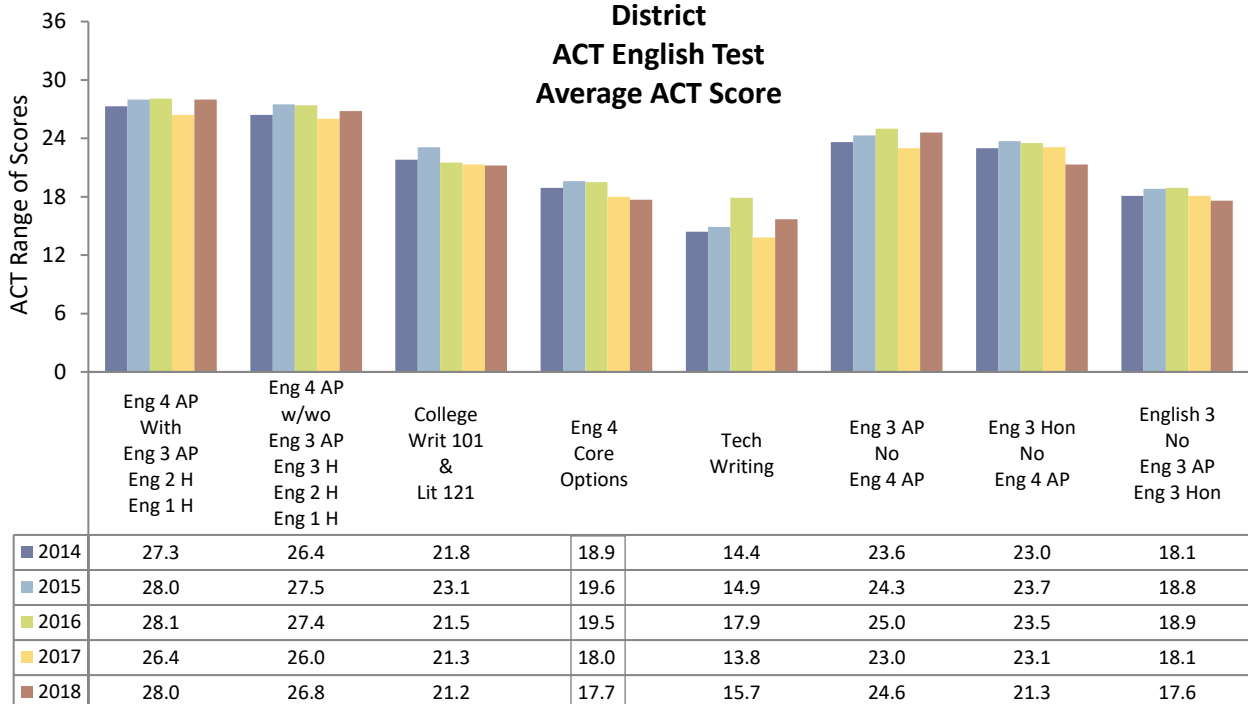
The ACT achievement information for senior level courses represents the averages and the percent meeting benchmark for the groups going into their senior year.

### District ACT English Test Percent at or Above Benchmark



Although students who take dual enrollment or Advanced Placement classes are predictably more prepared for the academic challenges of college, **57%** of students enrolled in the English 4 Core Options attained benchmark.

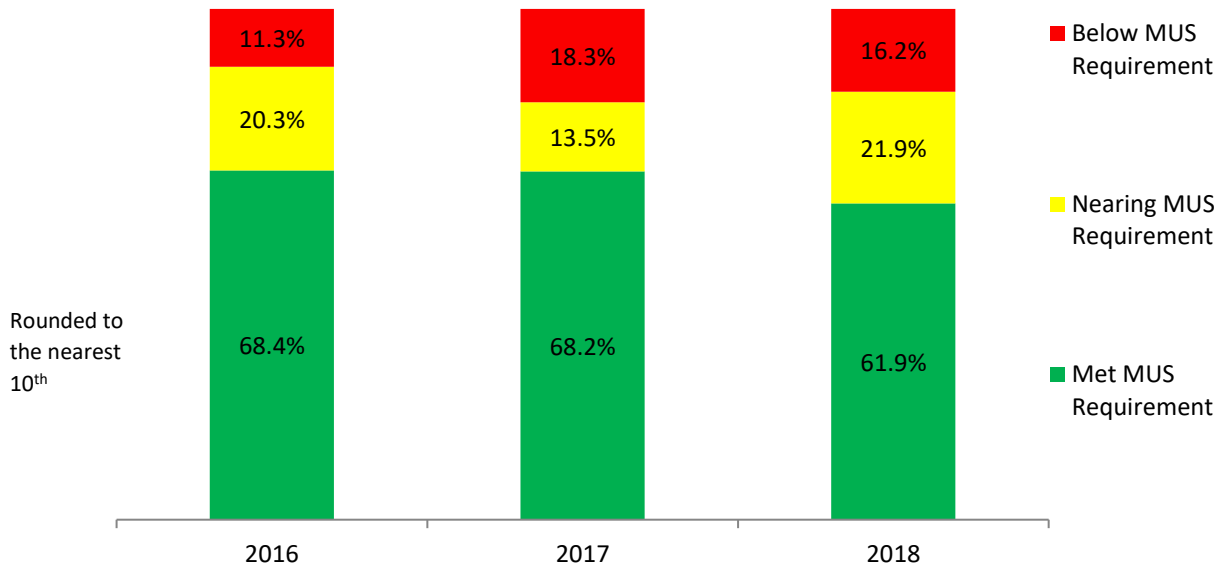
### District ACT English Test Average ACT Score



28 – 87th percentile	24 – 74th percentile	20 – 52nd percentile	16 – 34th percentile
27 – 85th percentile	23 – 69th percentile	19 – 47th percentile	15 – 28th percentile
26 – 82nd percentile	22 – 64th percentile	18 – 42nd percentile	14 – 22nd percentile
25 – 79th percentile	21 – 59th percentile	17 – 38th percentile	13 – 17th percentile

-- Act, Inc., National Distributions of Cumulative Percents for ACT Test Scores, ACT- Tested High School Graduates from 2015, 2016 and 2017

**District  
ACT Writing Test  
Percent at or Above MUS Admission Requirement**



Distribution	2016 (2-12 score)	2017 (1-36 score)	2018 (2-12 score)
Below	5 and below	16 and below	5 and below
Nearing	6	17 and 18	6
Met or Exceeded	7 and above	19 and above	7 and above

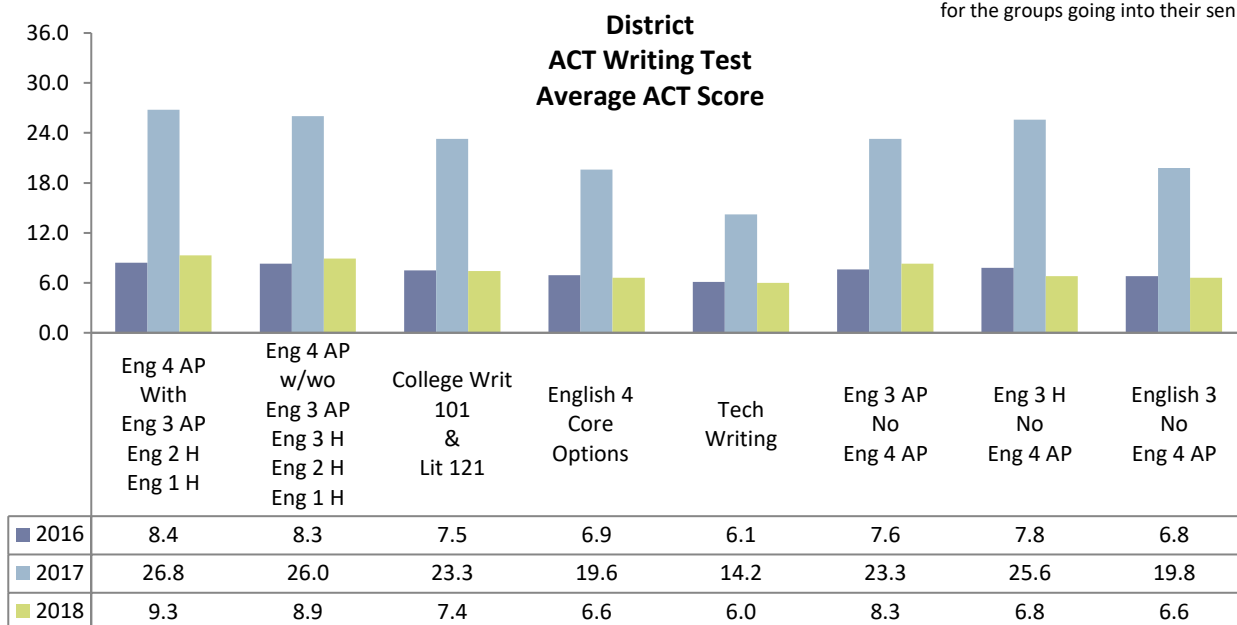
Over the last three years, **66%** of students have met MUS admission requirement by demonstrating writing proficiency on the ACT Writing test.

ACT does not identify a writing benchmark score. The Montana University System (MUS) requires students to demonstrate writing proficiency by earning an ACT ELA score of 18 (average of the English, reading, and writing scores) or score 7 on the ACT essay (2016 and 2018) or 19 on the ACT essay (2017).

ACT used a 1-36 writing score range for the 2017 cohort. In the fall of 2016, ACT returned to the previous writing score range of 2-12. Therefore, the 2018 graduates' writing score will be the average of four 2-12 domain scores.

-- ACT Inc., 5 Ways to Compare 2015-2016 and 2016-2017 ACT Writing Scores  
 -- Montana University System, MUS Admission Requirements

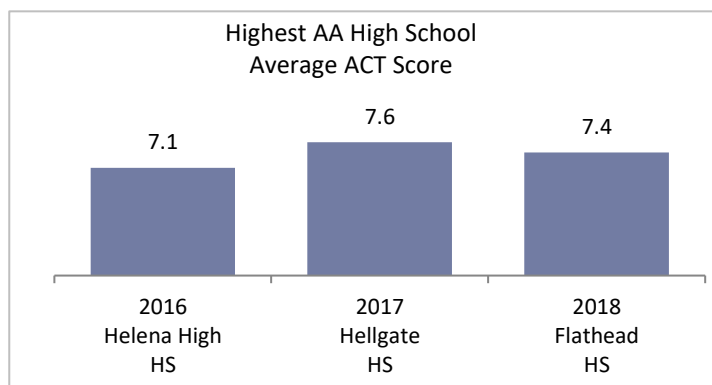
The ACT achievement information for senior level courses represents the averages and the percent meeting the MUS requirement for the groups going into their senior year.



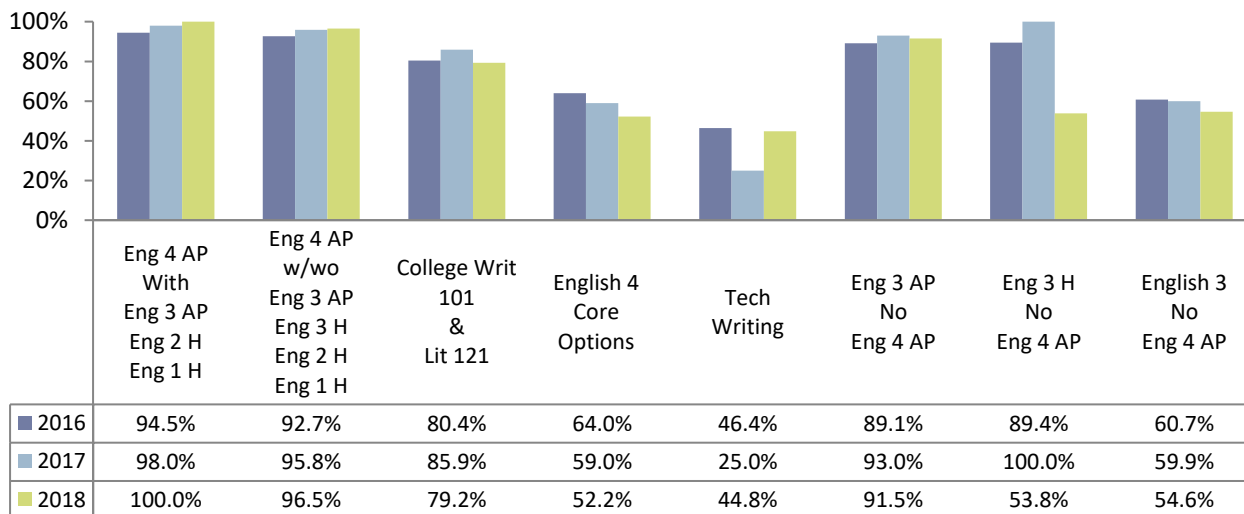
MUS Admission Requirements for Writing:  
2016 and 2018 Cohorts – 7  
2017 – 19

Writing Score  
2016: 2-12  
2017: 1-36

OPI converted the scores for the 2017 cohort to be comparable to the 2-12 range. Helena School District did not convert the scores.



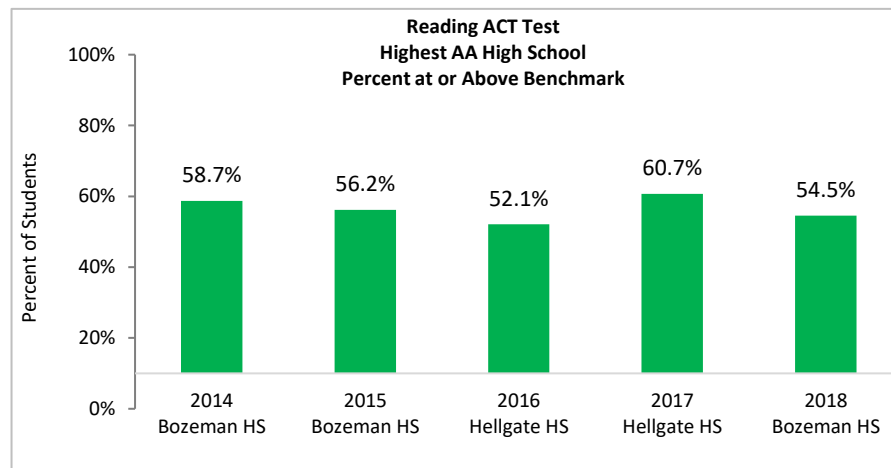
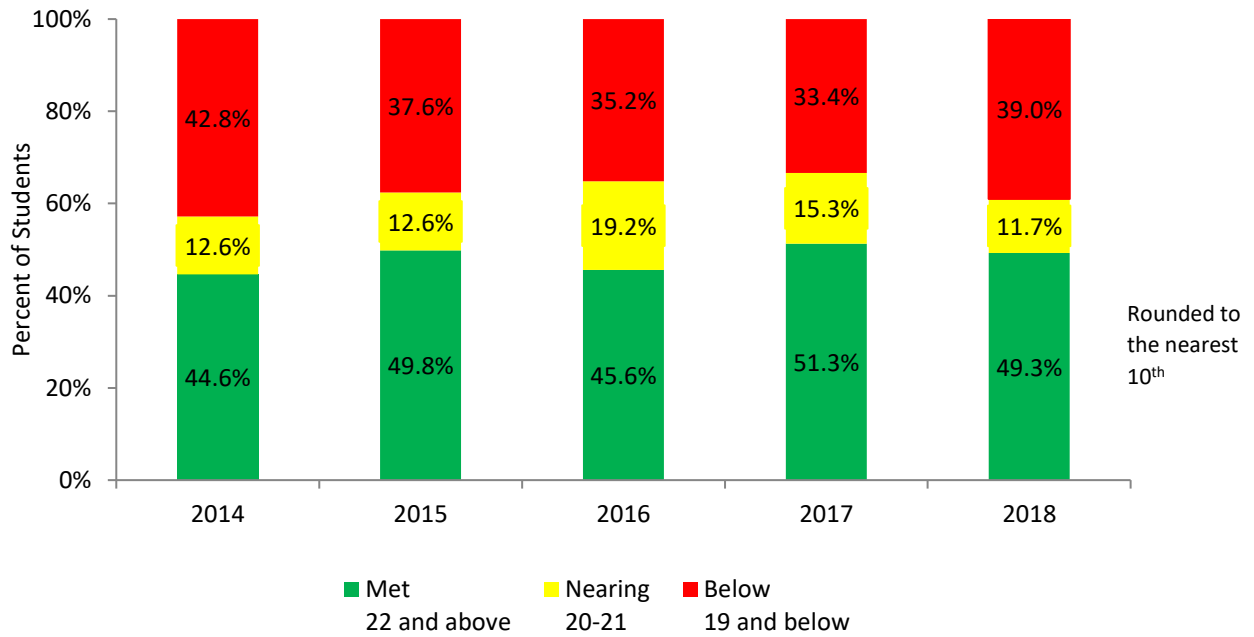
### District ACT Writing Test Percent at or Above MUS Admission Requirement



-- Montana Office of Public Instruction. Growth and Enhancement of Montana Students (GEMS), Student Achievement, ACT Test Scores Dashboard

The standard error of measurement is about 2 points above and below benchmark.

### District Reading ACT Test Percentage Distribution for ACT Benchmark



#### Course Patterns

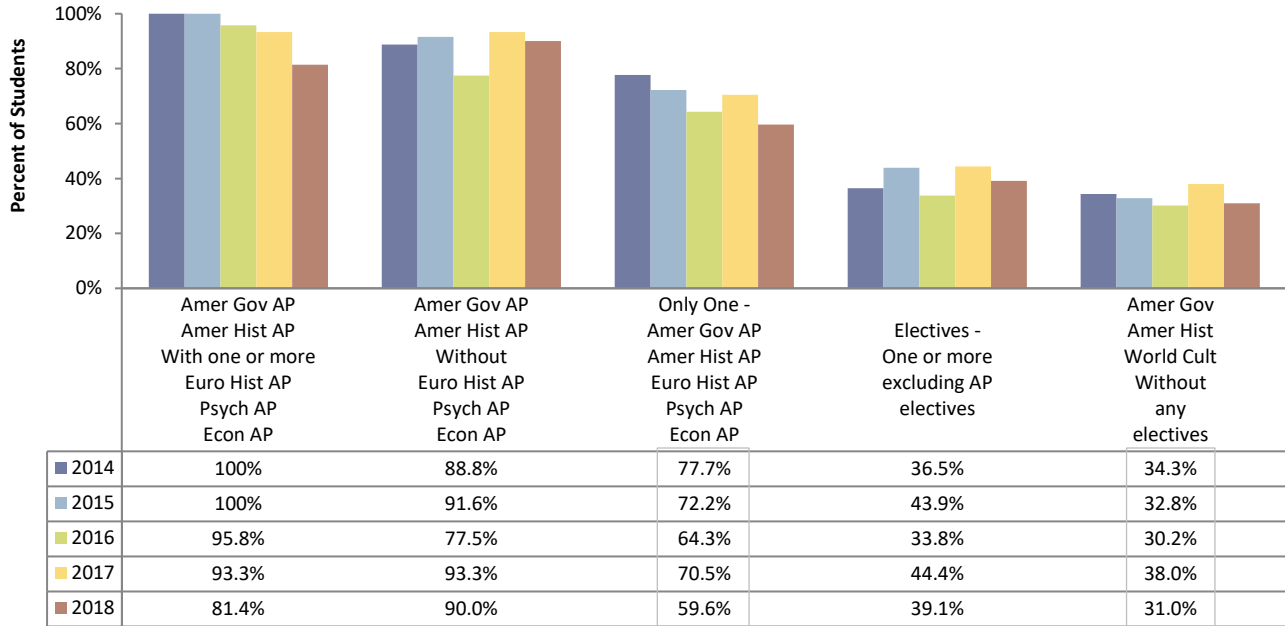
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-- Montana Office of Public Instruction. Growth and Enhancement of Montana Students (GEMS), Student Achievement, ACT College Readiness Dashboard

-- ACT, Inc., The ACT High School Report, Graduation Year: 2018

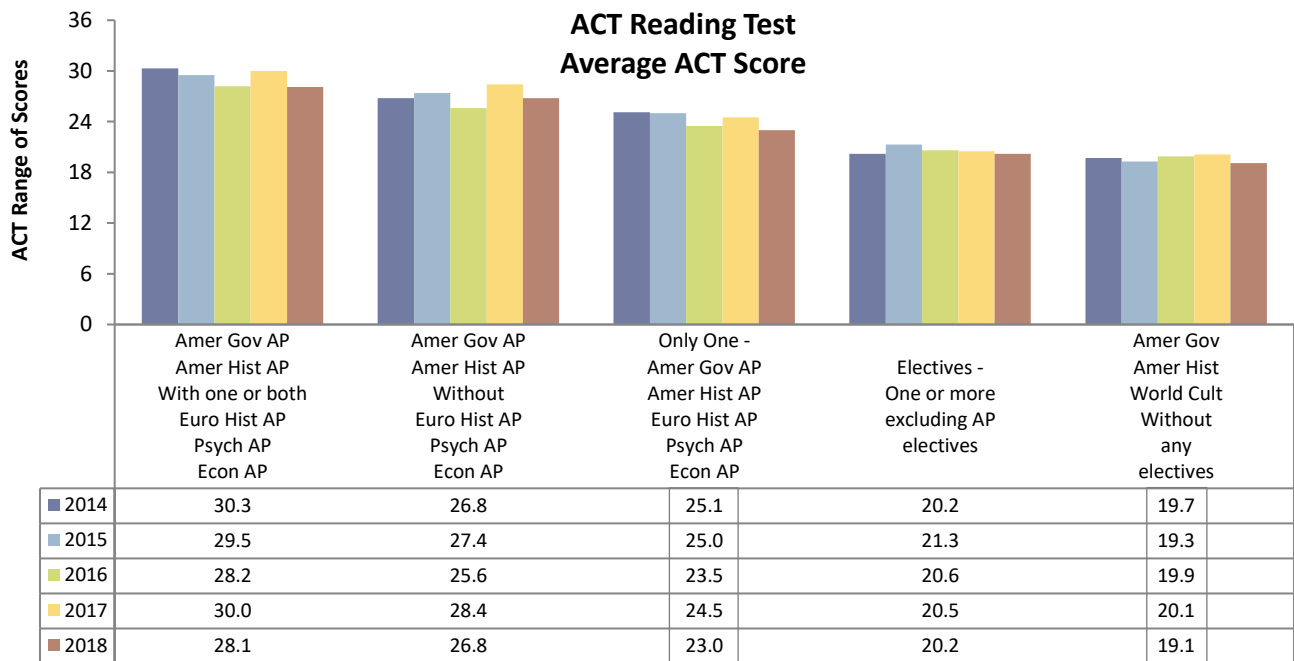


### District ACT Reading Test Percent at or Above Benchmark



Approximately **twice** as many students who take only one AP social studies course attained the benchmark as compared to students who took the minimum social studies requirement.

### District ACT Reading Test Average ACT Score

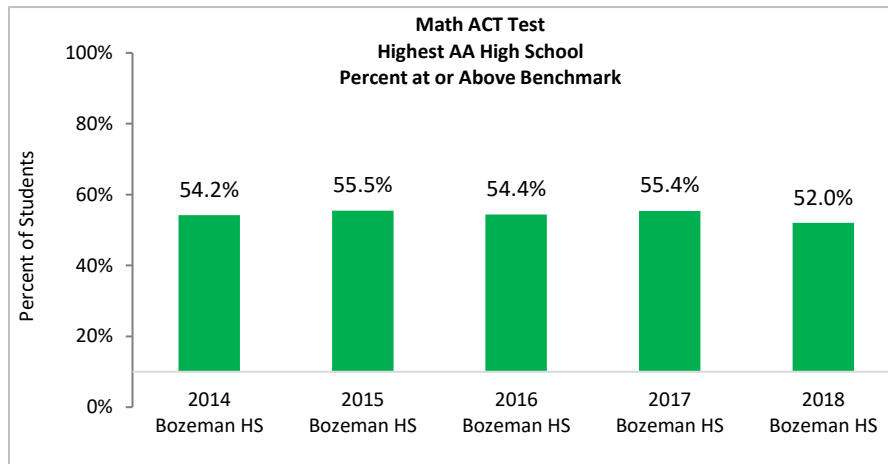
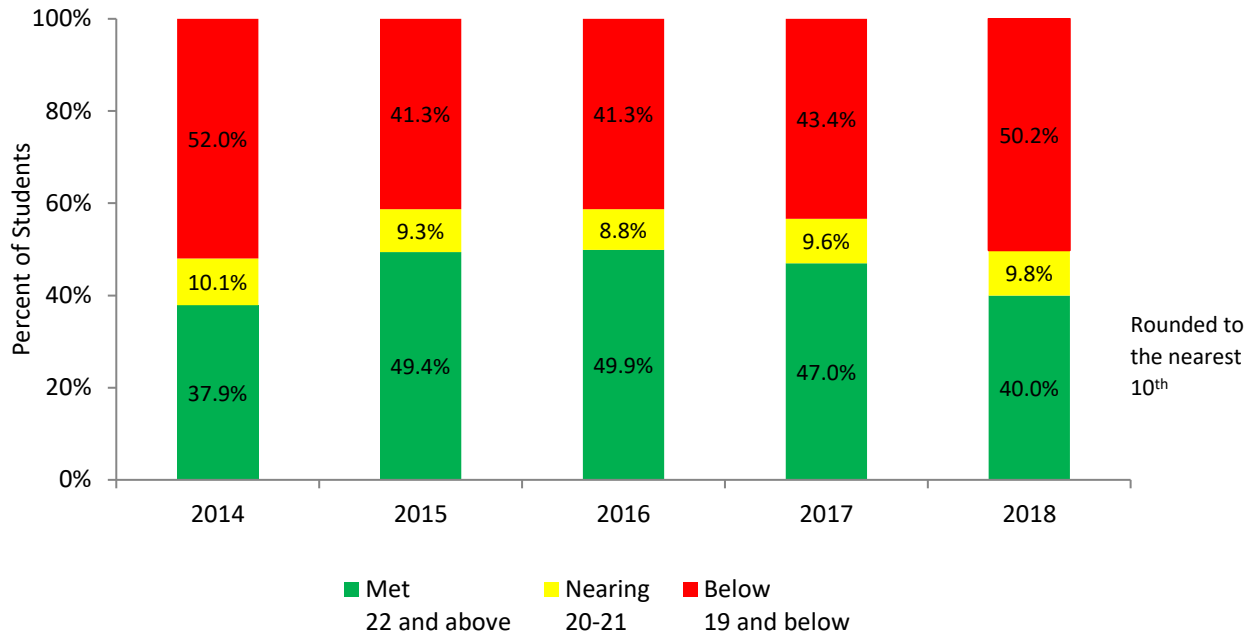


33 – 96th percentile	29 – 86th percentile	25 – 74th percentile	21 – 54th percentile
32 – 94th percentile	28 – 83rd percentile	24 – 71st percentile	20 – 48th percentile
31 – 91st percentile	27 – 80th percentile	23 – 66th percentile	19 – 42nd percentile
30 – 88th percentile	26 – 77th percentile	22 – 60th percentile	18 – 37th percentile

-- Act, Inc., National Distributions of Cumulative Percents for ACT Test Scores, ACT- Tested High School Graduates from 2015, 2016 and 2017

## District Math ACT Test Percentage Distribution for ACT Benchmark

The standard error of measurement is about 2 points above and below benchmark.



### Course Patterns

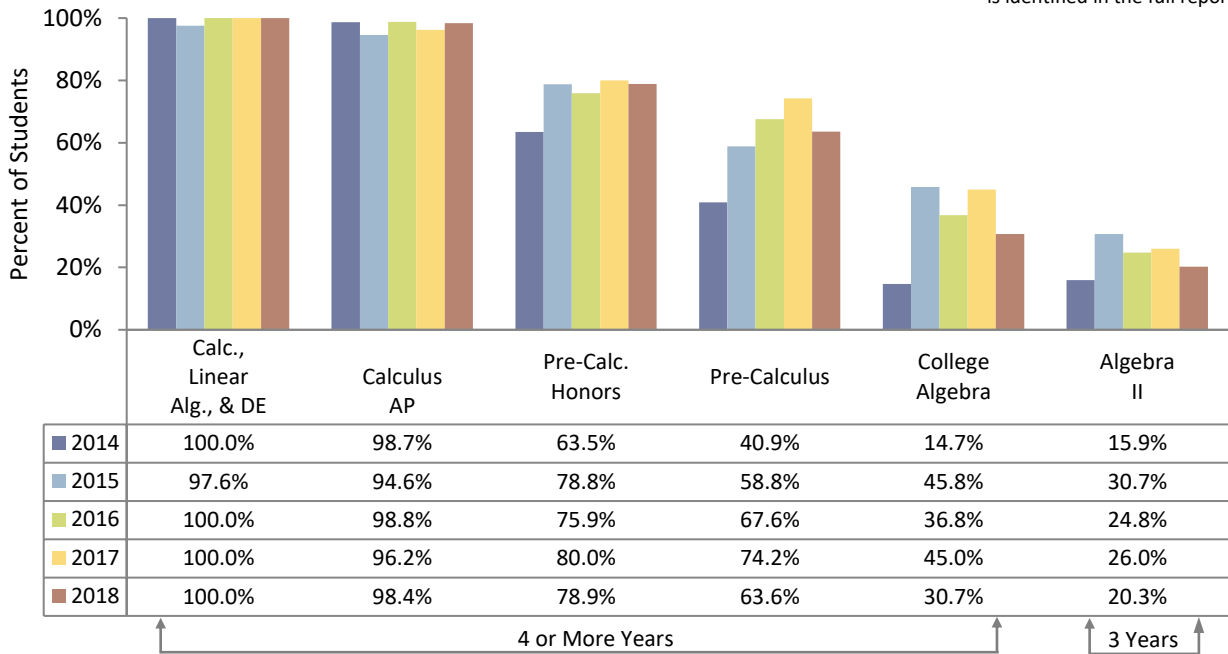
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-- Montana Office of Public Instruction. Growth and Enhancement of Montana Students (GEMS), Student Achievement, ACT College Readiness Dashboard

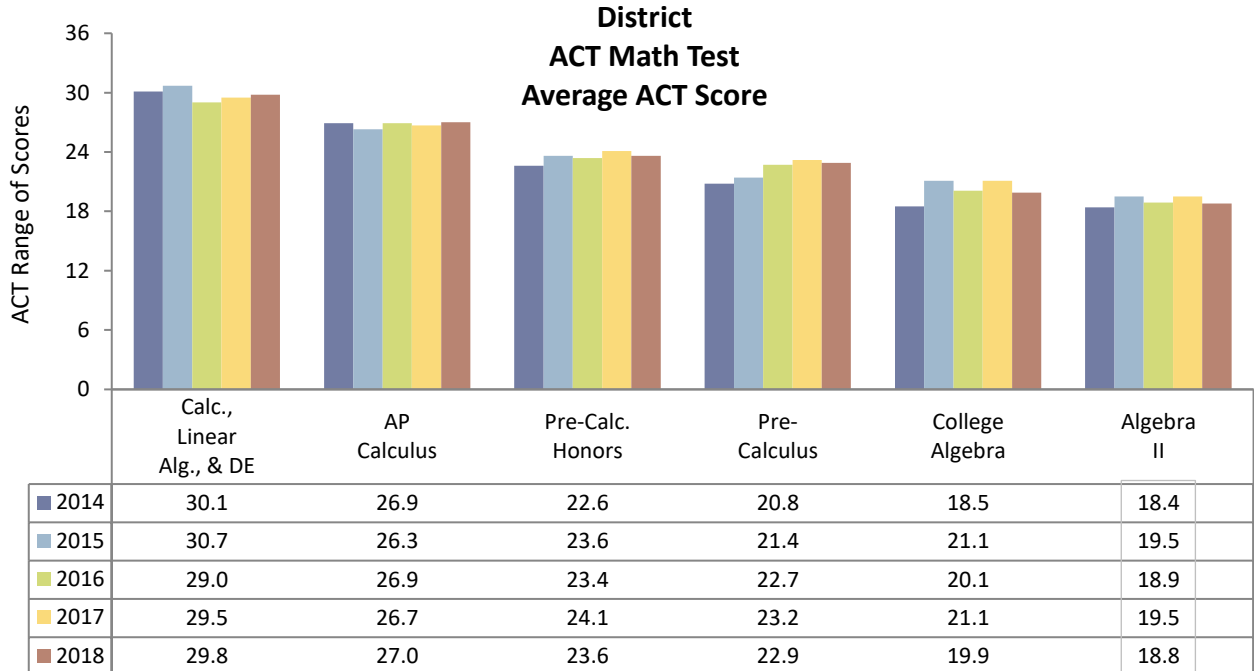
-- ACT, Inc., The ACT High School Report, Graduation Year: 2018

**District  
ACT Math Test  
Highest Math Class Taken  
Percent at or Above Benchmark**

There are mixed grade levels in all the courses except College Algebra and Calc., Linear Alg., and DE, which are typically taken senior year. The grade that students took the course is identified in the full report.



**51%** of students in the 2018 cohort took four or more years of math and **66%** of these students attained the benchmark. Students have the option of enrolling in accelerated math classes in middle school or in high school.

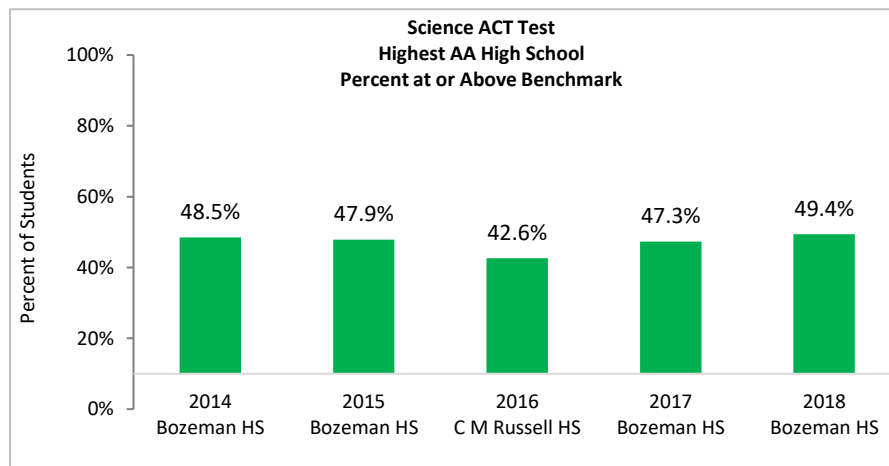
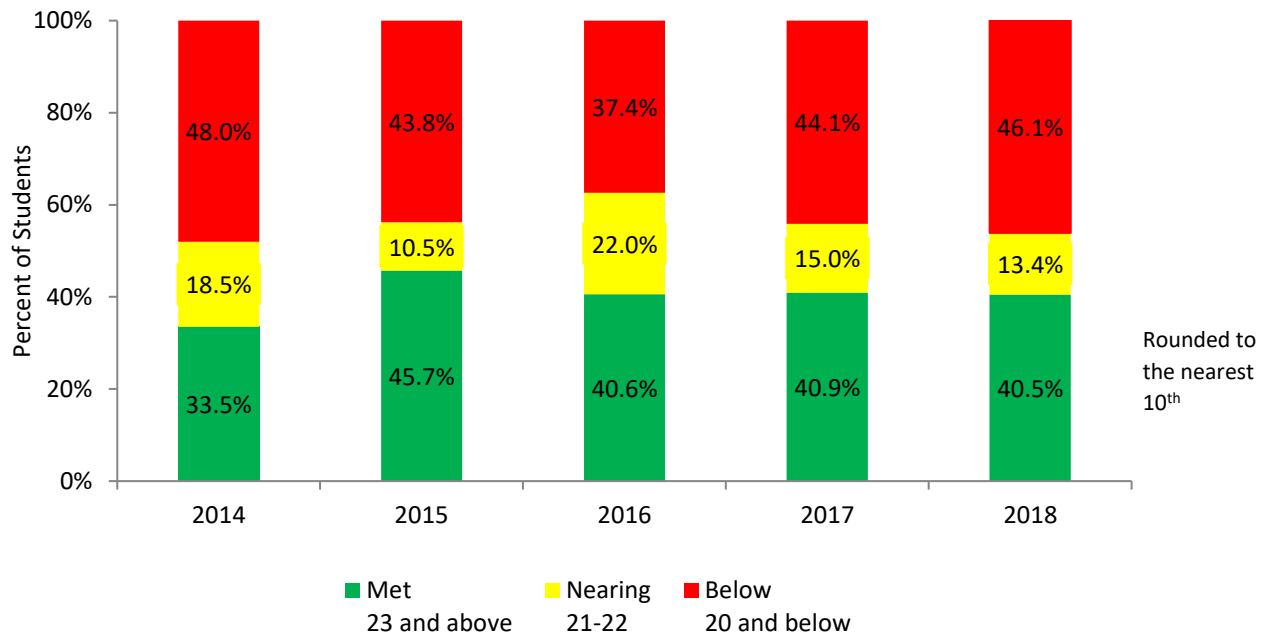


31 – 96th percentile	27 – 88th percentile	24 – 74th percentile	21 – 59th percentile
30 – 95th percentile	26 – 83rd percentile	23 – 68th percentile	20 – 55th percentile
29 – 93rd percentile	25 – 78th percentile	22 – 63rd percentile	19 – 51st percentile
28 – 91st percentile			18 – 45th percentile

-- Act, Inc., National Distributions of Cumulative Percents for ACT Test Scores, ACT- Tested High School Graduates from 2015, 2016 and 2017

The standard error of measurement is about 2 points above and below benchmark.

### District Science ACT Test Percentage Distribution for ACT Benchmark



### Course Patterns

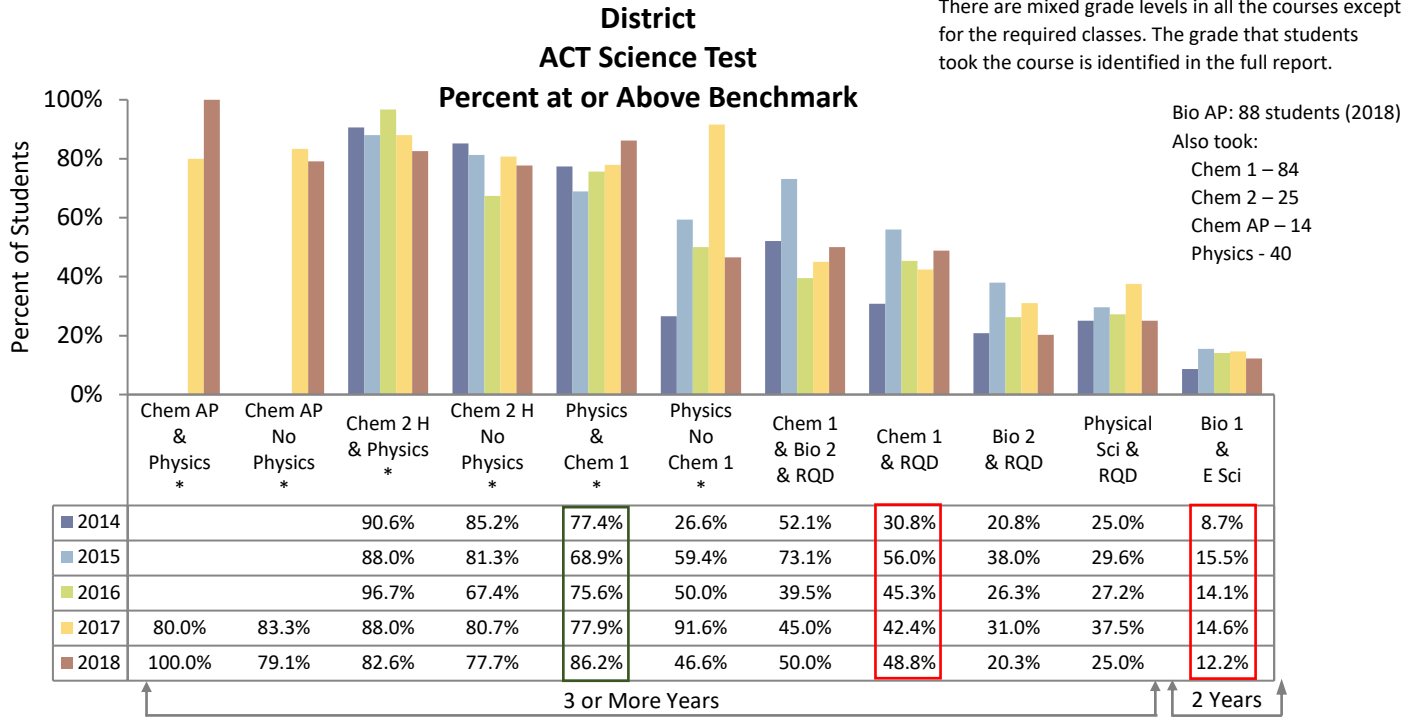
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-- Montana Office of Public Instruction. Growth and Enhancement of Montana Students (GEMS), Student Achievement, ACT College Readiness Dashboard

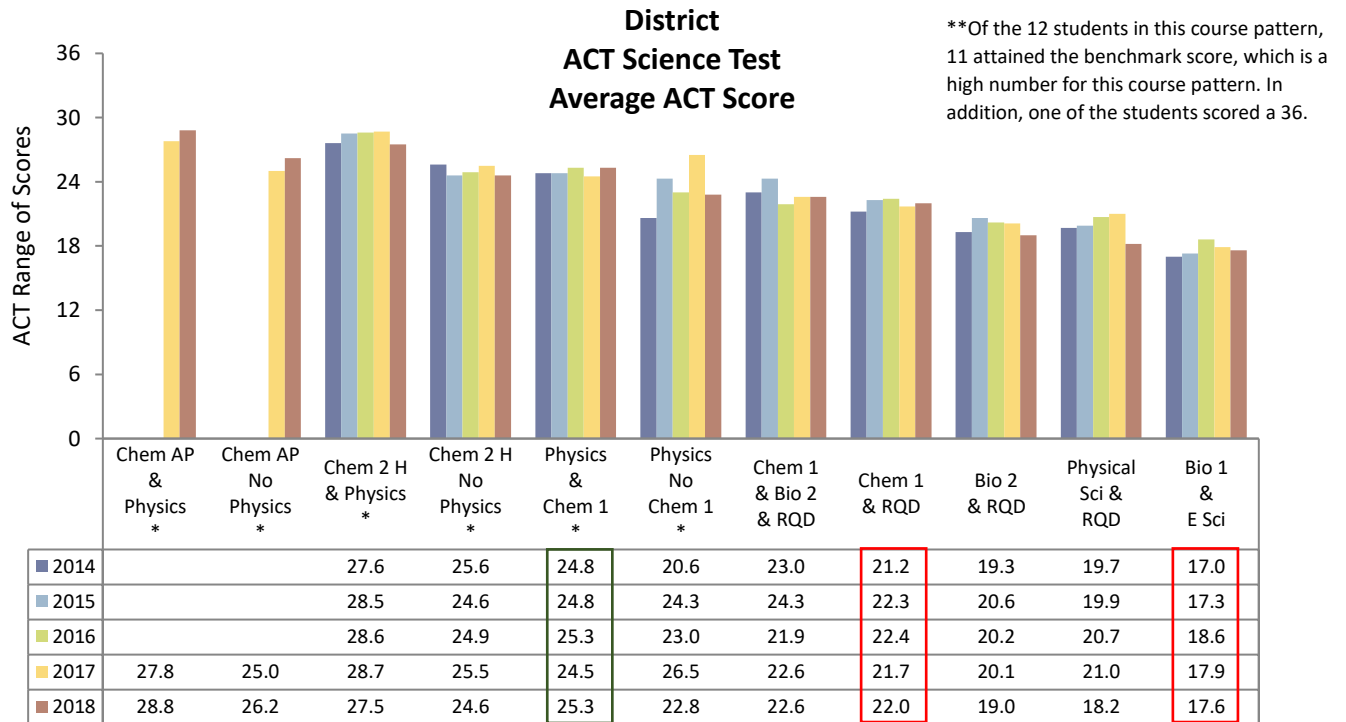
-- ACT, Inc., The ACT High School Report, Graduation Year: 2018

\*Includes required classes (Earth Science and Biology 1) and may or may not include Bio 2

There are mixed grade levels in all the courses except for the required classes. The grade that students took the course is identified in the full report.



The percent meeting benchmark is approximately **3 to 4 times** higher for students completing Chemistry 1 than it is for students completing Biology 1 as their highest class (red). Over the last five years, **77%** of students completing Physics and Chemistry attained the ACT benchmark for science (green).



32 – 96th percentile	28 – 91st percentile	24 – 77th percentile	20 – 49th percentile
31 – 95th percentile	27 – 89th percentile	23 – 70th percentile	19 – 41st percentile
30 – 94th percentile	26 – 86th percentile	22 – 63rd percentile	18 – 34th percentile
29 – 93rd percentile	25 – 82nd percentile	21 – 56th percentile	17 – 28th percentile

-- Act, Inc., National Distributions of Cumulative Percents for ACT Test Scores, ACT- Tested High School Graduates from 2015, 2016 and 2017

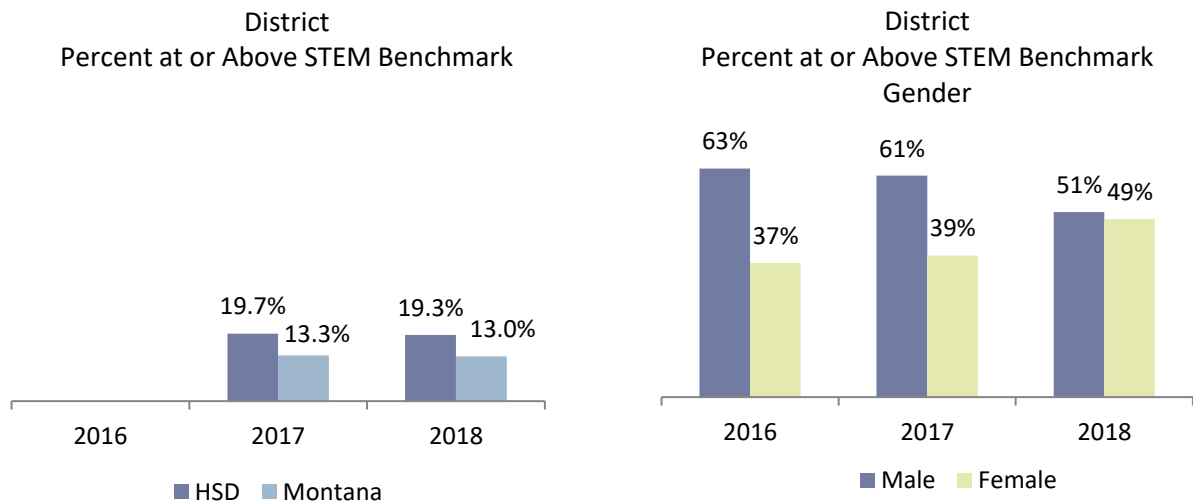
## The STEM Benchmark

The ACT Report for the graduating class of 2016 includes a new STEM score. Recent ACT research indicates that students who wish to pursue a STEM major in college will be better prepared if their level of achievement is higher than the current Science benchmark of 23 and Math benchmark of 22. First year science and math courses for STEM students are typically more rigorous than the courses required of other majors. Based on research, ACT has set the STEM benchmark at 26. This score is derived from the ACT Math and Science scores. Students who score a 26 have a 50% chance or higher of getting a B and a 75% chance or higher of getting a C in STEM first-year college courses (calculus, general biology, general chemistry, and physics).

In addition ACT research concludes that students who meet or exceed the STEM benchmark are more likely to earn a cumulative 3.0 GPA and complete a STEM-related bachelor’s degree as compared to students who do not meet the STEM benchmark.

-- ACT, Inc., The Condition of STEM 2016 - National, ACT

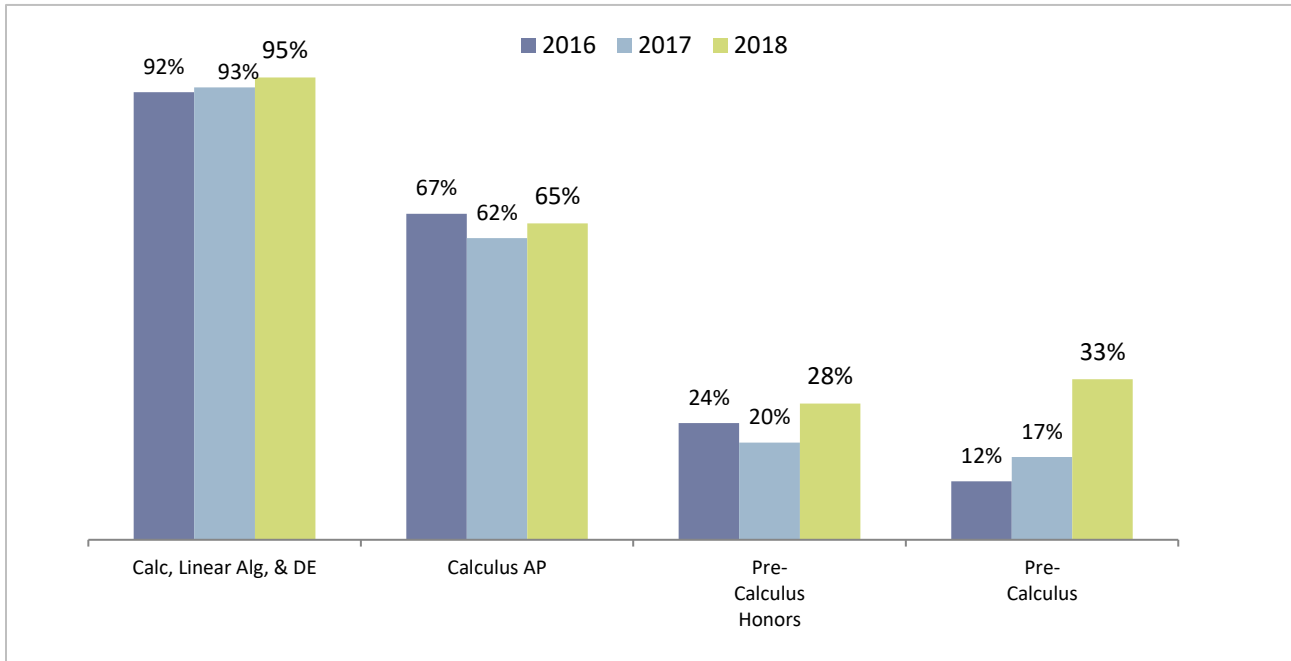
Cohort	Number Meeting STEM	Percent Meeting STEM	STEM Average	Number Meeting Stem Male	Number Meeting Stem Female	Percent Meeting Stem Male	Percent Meeting STEM Female
2016	118	20.4%	28.0	74	44	63%	37%
2017	123	19.7%	28.4	75	48	61%	39%
2018	117	19.3%	28.4	60	57	51%	49%



ACT added STEM score reporting starting with the 2016 cohort. The Montana Office of Public Instruction added ACT STEM scores to the GEMS website beginning with the 2017 cohort.

-- Montana Office of Public Instruction. Growth and Enhancement of Montana Students (GEMS), Student Achievement, ACT College Readiness Dashboard

**STEM - District**  
**Highest Course Pattern Taken**  
**Percent at or Above STEM Benchmark**



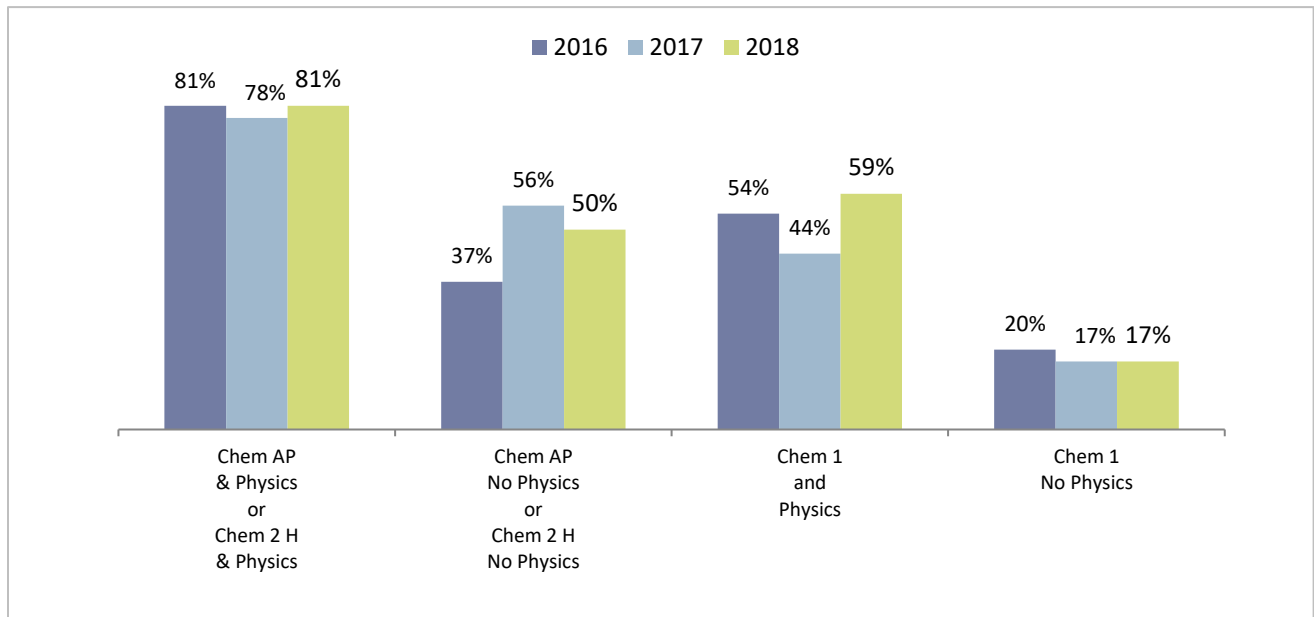
Highest Course Pattern  
Number Meeting STEM/Number Enrolled

2016 – 22/24  
2017 – 38/41  
2018 – 38/40

2016 – 58/87  
2017 – 50/81  
2018 – 42/65

2016 – 25/104  
2017 – 12/60  
2018 – 16/57

2016 – 4/34  
2017 – 6/35  
2018 – 11/33



Highest Course Pattern  
Number Meeting STEM/Number Enrolled

2016 – 25/31  
2017 – 25/32  
2018 – 26/32

2016 – 16/43  
2017 – 20/36  
2018 – 21/42

2016 – 22/41  
2017 – 30/68  
2018 – 30/51

2016 – 34/171  
2017 – 28/165  
2018 – 31/179

## References

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- ACT, Inc. (n. d.). *ACT CD: ACT Profile report – District – State testing 2016-2017 – Grade 11 tested students*.
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