

Senior Year Plus STEM Legislative Report



January 15, 2022

State of Iowa
Department of Education
Grimes State Office Building
400 E. 14th Street
Des Moines, IA 50319-0146

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LEGISLATIVE REQUIREMENT - IOWA CODE 261E.3 J

All eligible postsecondary institutions providing programming under this chapter shall include the unique student identifier assigned to students while in the kindergarten through grade twelve system as a part of the institution's student data management system. Eligible postsecondary institutions providing programming under this chapter shall cooperate with the department on data requests related to the programming. All eligible postsecondary institutions providing programming under this chapter shall collect data and report to the department on the proportion of females and minorities enrolled in science, technology, engineering, and mathematics-oriented educational opportunities provided in accordance with this chapter. The department shall submit the programming data and the department's findings and recommendations in a report to the general assembly annually by January 15.

ADVANCED PLACEMENT ENROLLMENT IN STEM

ADVANCED PLACEMENT COURSE ENROLLMENT BY RACE/ETHNICITY

Race/ Ethnicity	2018-19				2019-20				2020-21			
	Number of Courses	Percent*	Number of STEM	Percent *	Number of Courses	Percent*	Number of STEM	Percent*	Number of Courses	Percent	Number of STEM	Percent*
Asian	1,160	6.5%	486	8.5%	1,191	6.5%	486	8.5%	1,130	6.7%	493	8.5%
Black	891	5.0%	174	3.1%	919	5.0%	174	3.1%	828	4.9%	198	3.4%
Hispanic	1,574	8.8%	376	6.6%	1,489	8.8%	376	6.6%	1,404	8.3%	348	6.0%
Multi-racial	702	3.9%	190	3.3%	732	3.9%	190	3.3%	693	4.1%	191	3.3%
Native American	27	0.2%	5	0.1%	37	0.2%	5	0.1%	31	0.2%	8	0.1%
Pacific Islander	17	0.1%	7	0.1%	23	0.1%	7	0.1%	19	0.1%	9	0.2%
White	13,549	75.6%	4,451	78.2%	13,522	75.6%	4,451	78.2%	12,835	75.8%	4,540	78.5%
Total	17,920	100.0%	5,689	100.0%	17,913	100%	5,689	100%	16,940	100.0%	5,787	100.0%

Source: Iowa Department of Education, Student Reporting in Iowa collection

* May not equal 100% due to rounding

ADVANCED PLACEMENT COURSE ENROLLMENT BY GENDER

Gender	2018-19				2019-20				2020-21			
	Number of Courses	Percent*	Number of STEM	Percent*	Number of Courses	Percent*	Number of STEM	Percent*	Number of Courses	Percent*	Number of STEM	Percent*
Female	9,906	55.3%	2,651	46.6%	9,913	55.3%	2,825	47.9%	9,485	56.0%	2,826	48.8%
Male	8,014	44.7%	3,038	53.4%	8,000	44.7%	3,073	52.1%	7,455	44.0%	2,961	51.2%
Total	17,920	100%	5,689	100%	17,913	100%	5,898	100%	16,940	100.0%	5,787	100.0%

Source: Iowa Department of Education, Student Reporting in Iowa collection

* May not equal 100% due to rounding

CONCURRENT ENROLLMENT IN STEM

CONCURRENT ENROLLMENT BY RACE/ETHNICITY

Race/ Ethnicity	2018-19				2019-20				2020-21			
	Number of Courses	Percent*	Number of STEM	Percent*	Number of Courses	Percent*	Number of STEM	Percent *	Number of Courses	Percent *	Number of STEM	Percent*
Asian	1,442	3.0%	658	4.3%	1,289	2.9%	513	3.8%	1,114	2.7%	424	3.7%
Black	1,501	3.2%	584	3.8%	1,216	2.7%	449	3.3%	1,044	2.5%	336	2.9%
Hispanic	4,090	8.6%	1,432	9.4%	3,654	8.2%	1,345	9.8%	3,119	7.6%	986	8.6%
Multi-racial	1,293	2.7%	473	3.1%	1,202	2.7%	433	3.2%	1,102	2.7%	315	2.8%
Native American	120	0.3%	44	0.3%	125	0.3%	44	0.3%	86	0.2%	30	0.3%
Pacific Islander	75	0.2%	21	0.1%	66	0.1%	19	0.1%	48	0.1%	14	0.1%
White	39,123	82.1%	11,978	78.9%	37,080	83.1%	10,862	79.5%	34,640	84.2%	9,341	81.6%
Total	47,644	100%	15,190	100%	44,632	100%	13,665	100%	41,153	100.0%	11,446	100.0%

Source: Iowa Department of Education, Student Reporting in Iowa collection

* May not equal 100% due to rounding

CONCURRENT ENROLLMENT BY GENDER

Gender	2018-19				2019-20				2020-21			
	Number of Courses	Percent*	Number of STEM	Percent*	Number of Courses	Percent*	Number of STEM	Percent	Number of Courses	Percent*	Number of STEM	Percent*
Female	24,371	51.2%	6,913	45.5%	23,074	51.7%	6,441	47.1%	21,646	52.6%	5,563	48.6%
Male	23,273	48.8%	8,277	54.5%	21,558	48.3%	7,224	52.9%	19,507	47.4%	5,883	51.4%
Total	47,644	100.0%	15,190	100%	44,632	100%	13,665	100%	41,153	100.0%	11,446	100.0%

Source: Iowa Department of Education, Student Reporting in Iowa collection

* May not equal 100% due to rounding

POSTSECONDARY ENROLLMENT OPTIONS IN STEM

POSTSECONDARY ENROLLMENT OPTIONS BY RACE/ETHNICITY

Race/ Ethnicity	2018-19				2019-20				2020-21			
	Number of Courses	Percent*	Number of STEM	Percent	Number of Courses	Percent*	Number of STEM	Percent	Number of Courses	Percent *	Number of STEM	Percent*
Asian	72	7.1%	43	11.7%	65	11.0%	45	18.5%	74	15.0%	50	28.2%
Black	8	0.8%	1	0.3%	11	1.9%	3	1.2%	8	1.6%	1	0.6%
Hispanic	47	4.6%	18	4.9%	34	5.8%	12	4.9%	18	3.7%	4	2.3%
Multi-racial	32	3.2%	10	2.7%	19	3.2%	9	3.7%	25	5.1%	11	6.2%
Native American	-	0.0%	-	0.0%	2	0.3%	-	0.0%	1	0.2%	-	0.0%
Pacific Islander	-	0.0%	-	0.0%	1	0.2%	1	0.4%	-	0.0%	-	0.0%
White	855	84.3%	294	80.3%	459	77.7%	173	71.2%	367	74.4%	111	67.2%
Total	1,014	100.0%	366	100%	591	100%	243	100%	493	100.0%	177	100.0%

Source: Iowa Department of Education, Student Reporting in Iowa collection

May not equal 100% due to rounding

POSTSECONDARY ENROLLMENT OPTIONS BY GENDER

Gender	Number of Courses	2018-19		2019-20			2020-21					
		Percent*	Number of Courses	Percent*	Number of Courses	Percent*	Number of Courses	Percent*	Number of STEM	Percent*		
Female	595	58.7%	595	58.7%	595	58.7%	595	58.7%	274	55.6%	58	32.8%
Male	419	41.3%	419	41.3%	419	41.3%	419	41.3%	219	44.4%	139	67.2%
Total	1,014	100%	1,014	100%	1,014	100%	1,014	100%	493	100%	177	100%

Source: Iowa Department of Education, Student Reporting in Iowa collection

* May not equal 100% due to rounding

IOWA STUDENT DEMOGRAPHIC INFORMATION

2020-21 K-12 ENROLLMENT BY GENDER

Gender	Student Count	Percent
Female	232,575	48.5%
Male	246,688	51.5%
Total	479,263	100%

2020-21 K-12 ENROLLMENT BY RACE/ETHNICITY

Race/Ethnicity	Student Count	Percent
African American/Black	31,704	6.6%
American Indian	1,655	0.4%
Asian	12,196	2.5%
Hawaiian/Pacific Islander	1,888	0.4%
Hispanic	56,301	11.7%
Multi-racial	21,565	4.5%
White	353,955	73.9%
Total	479,264	100%

FINDINGS AND RECOMMENDATIONS

This report provides information about enrollment patterns of students by race/ethnicity and gender in Senior Year Plus opportunities. This report also includes information about the percent of students of color and gender enrollments in Senior Year Plus courses as well as STEM Senior Year Plus courses. In 2020-21, there was a drop across all three areas covered under Senior Year Plus including, Advanced Placement (AP), Concurrent Enrollment and Postsecondary Enrollment Options (PSEO). Further, decreases can be found in students of color participating across many of these course opportunities. This is not surprising considering the disruptions to the school year caused by the COVID-19 pandemic. This indicates fewer students were able to participate in Senior Year Plus and STEM courses during the 2020-21 school year.

In 2020-21, there were 16,940 AP course enrollments compared to 17,913 during the 2019-20 school year, which is a drop of about 1,000 courses over this period. Additionally, there were 41,153 concurrent enrollment courses taken in the 2020-21 school year compared to 44,632 in 2019-20. There were 6,491 fewer concurrent courses taken in the 2020-21 school year compared to prior to the pandemic that can be seen in the 2018-19 school year. Lastly, PSEO enrollments continue to also drop. There was a decrease of about 50% in course enrollments in 2020-21 (493) compared to 2018-19 (1,014).

While there was an overall downward trend in Senior Year Plus enrollments, there were also areas of strength that can be found. In 2020-21, there were increases in the percentage of female students that participated in AP and STEM AP courses. This same pattern can be found when examining concurrent enrollment courses. There was an increase in the percent of female students taking both Concurrent Enrollment and STEM Concurrent Enrollment courses between 2020-21 and 2019-20.

The largest component of the Senior Year Plus program is concurrent enrollment courses. This is due to the supplementary weighting incentive which was put in place to support college level course enrollment opportunities for Iowa students. While this incentive exists for Concurrent Enrollment, the additional weighted funding is not available for AP or PSEO courses. This lack of incentive has an impact on overall enrollment in these course areas.

The COVID-19 pandemic has created significant disruptions to districts and schools over the past two academic school years. Therefore, it is not surprising to see fewer students participating in Senior Year Plus courses during the time period covered in this report. It is important to see a return to the higher participation rates in these rigorous course opportunities for students in the coming school year.