



These data notes accompany the [MLDS Center Dashboard](#) and Data Download on *Maryland Public High School Graduates: College and Workforce Outcomes*.

Dashboard Definitions

- **Enrollment:**
 - **Immediate** college enrollment is limited to high school graduates who enroll in college full-time in a degree-seeking program in the fall immediately following high school.
 - **Complete** college enrollment is defined as a high school graduate who enrolls in college either full-time or part-time as degree-seeking or non-degree seeking at any point after high school graduation. College enrollment is reported for Complete enrollees once three years have lapsed since high school graduation. The totals reported in the **Complete** enrollment category is impacted by the number of years that have passed since high school graduation. The totals reported for college enrollment should not be interpreted as declines in college enrollment as not all cohorts have been out of high school for the same number of years.
 - **Within One Year College Enrollment** includes high school graduates who enroll in college either full-time or part-time as degree-seeking or non-degree seeking students within one year of high school graduation.
 - **Within Two Years College Enrollment** includes high school graduates who enroll in college either full-time or part-time as degree-seeking or non-degree seeking students within two years of high school graduation. Enrollment data are not reported until two years have lapsed since high school graduation.
 - **Non-Traditional** college enrollment includes high school graduates that either delayed degree-seeking enrollment in college until age 20, or enrolled for the first time as part-time degree-seeking. Non-Traditional College Enrollment is not reported until two years have lapsed since high school graduation. The totals reported in the **Non-Traditional** enrollment category are impacted by the number of years that have passed since high school graduation. The totals reported for college enrollment should not be interpreted as declines in college enrollment as not all cohorts have been out of high school for the same number of years.
 - The enrollment groups are not mutually exclusive. A high school graduate is counted in each category for which the graduate's college enrollment meets the corresponding definition. For example, a student who meets the definition of Immediate, also meets the definition of Complete. A student who meets the definition of Non-Traditional, also meets the definition of Complete.
- **High School Program Completion Type:** Maryland public high school graduates have four options for fulfilling high school graduation requirements:
 1. USM – fulfills the admissions course requirements for the University System of Maryland (USM);
 1. CTE – completes the course requirements for an approved Career and Technical Education (CTE) program of study;
 2. USM & CTE – fulfills the requirements for both USM admission and a CTE program; or
 3. Other – earns the minimum credits in each required subject.

The USM admission requirements vary by graduation year, but generally, the requirements include: four or more years of English, three or more years of natural science, three or more years of social science/history, two or more years of a foreign language, and four or more years of math (which include Algebra, Algebra II, and Geometry). Note, this program completion

does not guarantee students admission to the USM institutions but is meant to signify, through its high school course requirements, college readiness that aligns to USM admissions standards.

Program completion type is identified by each school. It is possible that some graduates identified as “other” actually met the USM, CTE or USM/CTE requirements but the school did not identify the student with one of the three flags in the data submitted.

Students identified as non-completers but with a diploma are reported in the Other category. This group represents <25 records per year. Students who receive a certificate of high school completion are omitted from the analysis.

- **Labor Sector:** Wage data in the MLDS include North American Industry Classification System (NAICS) codes for employers. This system classifies employers. The MLDS does not have occupation classifications for employees. For example, a hospital may use classification, NAICS 62 is Health Care and Social Assistance, and NAICS 6221 is General Medical and Surgical Hospitals. All individuals who are employed by the hospital would have the same NAICS code; including doctors, hospital administrators, dietitians, accountants, and janitorial staff. Employers select the sector and may change their sector designation at any time. Information on NAICS codes can be found here: <https://www.census.gov/naics/>.

Students with full-quarter wages (for more information see **Full-Quarter Wages** footnote below) at age 25 are assigned to the labor sector group that their employer designates. If a student has more than one employer and therefore more than one NAICS code during the fiscal quarter of interest, the NAICS code with the highest wage is reported and the wages for both codes are summed for inclusion in the median quarterly wage calculation.

NAICS codes were grouped into labor sectors based upon the following:

1. Goods Producing: NAICS 11, 21, 23, and 31-33
2. Trade, Transportation and Utilities: NAICS 22, 42-45 and 48-49
3. Professional and Business: NAICS 52, 53, 54, 55 and 56
4. Education and Health: NAICS 61 and 62
5. Leisure and Hospitality: NAICS 71 and 72
6. Public Administration and Other Services: NAICS 81, 82 and 92

Any student whose employer's NAICS code is unknown is included in the Other Services group.

- **College Completion:** Students are assigned to one and only one degree type based upon the student's highest degree completed at age 25. Students who are still actively enrolled in college at age 25 are reported with their highest degree attained. Some college graduates are missing degree level information. These students are excluded from the wage analysis. The following degree designations are used:
 1. **Lower Division Degree** means the student completed a Certificate or Associate's degree. Certificates are postsecondary credentials, typically 9 to 12 months in length. Associate's degrees may be either career-focused, intended to enter the labor market, or be transfer-focused, intended to be articulated into a Bachelor's degree. Students reported as completing a Lower Division degree may or may not have attended more than one institution over their academic career and may have completed more than one lower division degree concurrently.
 2. **Bachelor's Degree** means the student completed a Bachelor's degree, either by directly enrolling in a Bachelor's degree program at a four-year institution of higher education, in-state or out-of-state, or by beginning at a community college and transferring to a four-year institution of higher education to complete the Bachelor's degree. Students reported as earning a Bachelor's degree may or may not have attended more than one institution over their academic career. Students reported as having completed a Bachelor's degree may have completed more than one Bachelor's degree concurrently or completed a double-major or dual degree program.

3. **Graduate Degree** means the student completed a post-baccalaureate certificate, Master's degree, post-Master's certificate or doctorate. The student may or may not have earned an undergraduate degree in Maryland. Students reported as having completed a graduate degree may have completed more than one graduate degree concurrently or completed a joint Bachelor's-Master's program.
 4. **Some College** means the student has completed some college but, by age 25, has not earned any postsecondary degree. Those with Some College may have discontinued their education at any degree level (Lower Division, Bachelor's, etc.). Note, some students with Some College may have earned a degree out-of-state. MLDS Center evaluates college graduation from out-of-state colleges and in-state private colleges using data from National Student Clearinghouse. National Student Clearinghouse reports college graduation for the five-year period after high school graduation, which is approximately age 23. It is possible additional students graduate from out-of-state colleges or in-state private career colleges after five years. Those records are not available to include in this analysis.
 5. **Still in College** means the student is still actively enrolled in college at age 25 but has not earned any degree.
- **College Majors:** Students are assigned to one and only one college major (academic discipline list below) based upon the student's highest degree completed at age 25. Students who are still actively enrolled in college at age 25 are reported with the major from their highest degree attained. The first record is retained for students who concurrently completed more than one major in more than one discipline (<1% of records). Some college graduates are missing college major information. These students are excluded from the wage analysis.
 - Arts & Humanities:
 - HEGIS: 1000, 1100, 1500, 4910, 5007, 5009, 5012, 5502, 5603, 5610, 5611, 5615, 5623, 5649, and 5699
 - CIP Codes: 16, 23, 38 and 50
 - Business:
 - HEGIS: 500, 4970, 5001, 5002-5005, and 5099
 - CIP Codes: 52
 - Public and Social Services:
 - HEGIS: 1400, 2101-2105, 2199, 5501, 5505, 5506, 5507, 5508 and 5599
 - CIP Codes: 22, 28, 29, 43 and 44
 - Science, Math and Technology:
 - HEGIS: 100, 200, 400, 700, 900, 1700, 1900, 4902, 4904, 4920, 4940, 4980, 5101, 5101-5199, 5300, 5401-5403, 5406-5499, 5601, 5602, 5604, 5609, 5617, and 5619
 - CIP Codes: 1, 3, 4, 11, 14, 15, 26, 27, 34, 40, and 41
 - Health & Medicine:
 - HEGIS: 1200 and 5200
 - CIP Codes: 51, 60 and 61
 - Multi/Interdisciplinary Studies:
 - HEGIS: 300, 4900, 4901, 4950 and 4999
 - CIP Codes: 5, 24 and 30
 - Social Sciences:
 - HEGIS: 600, 800, 1300, 1600, 2000, 2200-2211, 2214, 2215, 2299, 2300, 4903, 4930, 4960, 5008, 5405, 5503, 5504, 5606, 5608, 5613, 5620 and 5622
 - CIP Codes: 9, 10, 13, 19, 25, 31, 33, 35, 36, 39, 42, 45 and 54
 - Trade and Personal Services (including Other)
 - HEGIS: 5006, 5010, 5011, 5404 and 5600
 - CIP Codes: 12, 32, 34, 37, 46, 47, 48, 49 and 53

MLDS Center uses two sources of information on college major.

- The Maryland Higher Education Commission (MHEC) assigns a Higher Education General Information Survey (HEGIS) code upon approval of a program. Six digit HEGIS codes are assigned based upon program, degree level

and degree type. Due to the limitations of the HEGIS coding scheme, a HEGIS code may not always uniquely identify a program as the code does not always distinguish between variations in curriculum across institutions or within the same institution. The HEGIS code structure limits the ability to uniquely identify the program of study and may result in understating or overstating the number of enrollments and graduates for any one program across the State. For more information on MHEC academic programs:
https://mhec.maryland.gov/institutions_training/pages/HEPrograms.aspx.

- The National Center for Education Statistics (NCES) replaced the HEGIS coding scheme with the Classification of Instructional Programs coding scheme (CIP Codes) for reporting college enrollment and college degrees through the Integrated Postsecondary Education Data System (IPEDS) surveys. CIP Codes are included in the National Student Clearinghouse data received by MLDS Center for students who graduate from out-of-state colleges or private Maryland colleges. For more information on CIP Codes:
<https://nces.ed.gov/ipeds/cipcode/browse.aspx?y=55>.

Data Limitations, Caveats, and Notes:

The aggregated, suppressed table provides data on college enrollment and college graduation patterns for high school graduates. Reporting on college degree attainment and wages is limited to those cohorts that have reached the age of 25.

Due to data suppression policies, data from some school systems or schools may not be displayed for one or more cohorts.

The dashboard includes:

- 12th grade graduates and eliminates any duplicate graduation records.
- College graduation for each enrollment type is limited to those cohorts that have reached the age of 25.
- College enrollment and graduation from Maryland's community colleges, four-year public institutions and state-aided independent institutions is evaluated using data from the Maryland Higher Education Commission. From the 2008-09 to 2012-13 academic years the Maryland Higher Education Commission (MHEC) only collected enrollment data on students that were enrolled in a Fall term. This may result in some students who were enrolled being excluded from reporting.
- College enrollment and graduation from out-of-state colleges and in-state private colleges is evaluated using data from the National Student Clearinghouse. Data received from the National Student Clearinghouse reports enrollment and college graduation for the five-year period after high school graduation from a Maryland public high school, which is approximately age 23. It is possible additional students graduate from out-of-state colleges or in-state private career colleges after five years. Those records are not available to include in this analysis. Additionally, participation in the National Student Clearinghouse is optional. Some institutions may not participate and some students may opt-out of having their records reported to the Clearinghouse. This may result in some students who were enrolled being excluded from reporting.
- College degree is defined as a postsecondary Certificate or an Associate's, Bachelor's, or Master's degree or higher. Some students may have earned more than one degree by age 25. Other students who earned a degree by age 25 may still be enrolled in college pursuing an additional postsecondary degree. Students reported as "No College Degree by Age 25" may be actively pursuing a college degree at age 25 or earn a college degree after age 25.
- **Full-Quarter Wage Method:** The high school graduates included in the wage analysis are selected by using the U. S. Census Bureau Stable or Full-Quarter Employment Methodology (hereinafter Full-Quarter). This methodology excludes individuals from the median calculation who do not have wage data in either the fiscal quarter before or after the period of interest. The period of interest for wages is fiscal quarter 4 of the calendar year that occurs six years after high school graduation. Accordingly, individuals were included in the median wage calculation if, in addition to having wages in quarter 4, they also had wages in the prior (quarters 3) and subsequent (quarter 1) quarters. For the 2010 cohort of high school graduates, full quarter wages must include quarter 4 of 2016 (the quarter of interest), quarter 3 of 2016 (prior quarter) and quarter 1 of 2017 (subsequent quarter). The Full-Quarter Methodology provides a standardized method of determining whose wages to

include in the analysis. Restricting analysis to “stable wage earners” provides a clearer picture of wage outcomes for workers fully engaged in the workforce and eliminates the potential to deflate median wage calculations by including the wages, or lack of wages, of workers who are absent, transient, or not fully engaged in the workforce. This method also reduces the impact of UI wage data limitations by excluding wages that may be incorrect due to incomplete or late filings.

- The MLDS includes workforce data from quarterly Unemployment Insurance (UI) wages beginning in 2008 for individuals with a Maryland educational record (see the MLDS Data Inventory Student Data section for a definition educational record at <https://mldscenter.maryland.gov/DataInventory.html>). UI filings are only available for Marylanders who work for an in-state employer required to file UI. Examples of employers that are not required to file UI include the federal government (including the military), certain non-profits, and self-employed and independent contractors. Individuals working in temporary employment, including federal postsecondary work-study programs, are also not subject to UI filings. These omissions mean it is incorrect to assume that individuals not counted as “employed” in this report are unemployed.
- The UI wages reported reflect the compensation paid during the quarter, not when the compensation was earned. UI wages reflect the sum of all compensation, including bonuses, commissions, tips and other forms of compensation. The UI wage data do not distinguish between part-time and full-time employment, hourly and salaried wages, regular wages and commissions, bonuses and other incentive pay. The UI wage data provided do not indicate the number of days or the number of hours a person worked in a particular fiscal quarter. UI filings for a fiscal quarter may be incomplete. Employers may have filed UI wages after the data have been transmitted to the MLDS Center or have omitted individuals from their file. Missing wage data and/or corrections to previously reported wages may be provided in subsequent fiscal quarters. While there is no time limit on correcting UI filings, most changes (additions or corrections) are completed within one fiscal quarter. See <https://www.dlr.state.md.us/employment/empfaq.shtml> for more information.
- Median quarterly wages are reported for cohorts who have reached age 25. Wages are presented contemporaneous to the year each cohort turns 25. The majority of high school graduates are 18 at graduation; however, some high school graduates may be as young as 16 or as old as 23. Degree attainment and wages for these graduates are also evaluated six years after graduation making some high school graduates younger than 25 or older than 25 when reporting college degree attainment and wages.
- The percentages above/below the living wage are calculated by dividing the difference between the median quarterly wage and the living wage by the living wage. For example, if the median quarterly wage is \$10,098 and the living wage is \$8,206, the difference, \$1,892, is divided by \$8,206 which yields the quotient of 23%. A positive percentage indicates the median quarterly wage exceeds the living wage, creating a wage surplus. A negative percentage indicates the median quarterly wage is below the living wage, creating a wage deficit.
- The Massachusetts Institute of Technology has developed a living wage calculator which includes data on the cost of living in various geographic areas across the United States. The living wage calculator incorporates the cost of food, housing, health insurance, transportation, taxes, clothing, and other personal items to derive the minimum annual income required for basic self-sufficiency. It is more comprehensive than traditional poverty measures, which do not incorporate these broader costs of living. The living wage selected for this dashboard is the wage for one adult with no dependent children in Maryland and each county or the City of Baltimore.
- High school graduates were assigned to one racial group. Assignment to racial groups was made based upon the methodology used by the U. S. Census for its Current Population Survey (CPS) and the U. S. Bureau of Labor Statistics (BLS) both of which report race independent of ethnicity. Further, under BLS standards, data are reported for three racial groups: Black or African-American Alone, Asian Alone, and White Alone. Each racial group consists of individuals that identify with a single race but may be of any ethnicity. All other racial groups, including individuals identifying with two or more races, are omitted from BLS reports due to the small population size. Small populations limit the conclusions that can be drawn from the data and may compromise the quality of any research. For the purposes of this dashboard series, all high school graduates identifying with 1) other individual racial groups, 2) more than one racial group, or 3) an unknown racial group are pooled and reported as Other regardless of ethnicity.

- High school graduates were assigned to one ethnic group: Hispanic = Yes or Hispanic = No. Assignment was made based upon the methodology used by the U. S. Census for its Current Population Survey (CPS) and the U. S. Bureau of Labor Statistics (BLS) both of which report race independent of ethnicity. Each ethnic group consists of individuals that identify as one or more of the following races: American Indian/Alaska Native, Native Hawaiian/Pacific Islander, Asian, Black/African-American, Two or More Races, Unknown Race, or White.
- This dashboard uses student-level data on free or reduced-price meals (FARMS) eligibility. FARMS is part of the National School Lunch Program (NSLP), administered by the United States Department of Agriculture (USDA). Students may be eligible for free or reduced-price meals through participation in certain need-based Federal Assistance Programs or if their family's income falls below a specified poverty threshold. Eligibility status may be determined through annual household applications or through direct certification. Students living in households with incomes at or below 130% of the federal poverty level are eligible for free meals, while students living in households with incomes between 130% and 185% of the federal poverty level are eligible for reduced-priced meals. Some students are directly certified based on participation in certain programs (e.g., migrant education program, education of homeless children and youth, foster care) rather than exclusively on income-based eligibility for free/reduced priced meals. The method selected for determining FARMS participation can produce quite different results. This dashboard evaluates FARMS status during 12th grade. As such, it likely underrepresents the number of students experiencing poverty in a given cohort, students living in poverty for longer durations, and does not include students cycling in and out of poverty throughout their elementary and secondary education. Using FARMS participation as a proxy for student poverty has a number of known limitations:
 - Using FARMS participation does not identify all students experiencing poverty and treats all students experiencing the same level of poverty. The USDA has determined the number of children applying for FARMS declines in middle and high school due to the stigma associated with FARMS. Student eligibility for FARMS can also change over time. Identifying FARMS participation in a single year may omit students who participated in FARMS in previous years. Additionally, not all students that participate in FARMS have identical levels of poverty. FARMS eligibility ranges from 130% to 185% of the federal poverty level.
 - Individual schools with 40% or more FARMS eligible students can elect to participate in the FARMS community eligibility provision (CEP). This election will report all students as FARMS even though some students do not meet the poverty threshold. The local school systems that adopt CEP may change annually. For example, between 2013-14 and 2018-19, 11 districts in Maryland adopted CEP. As of 2020-21, 14 local school systems have at least one school participating in CEP.
 - Sources on FARMS:
 - <https://www.fns.usda.gov/cn/income-eligibility-guidelines>
 - <https://msa.maryland.gov/msa/mdmanual/01glance/economy/html/income.html>
 - <http://www.marylandpublicschools.org/programs/Pages/School-Community-Nutrition/FreeReducedPriceMealStatistics.aspx>
 - <https://www.fns.usda.gov/cnp/fr-032019>
 - <https://nces.ed.gov/blogs/nces/post/free-or-reduced-price-lunch-a-proxy-for-poverty>
 - <https://fns-prod.azureedge.net/sites/default/files/cn/CEPfactsheet.pdf>
 - <http://www.k12.wa.us/LegisGov/2012documents/PovertyAdjustmentFactor.pdf>
 - Harwell, M., & LeBeau, B., Student eligibility for a free lunch as an SES measure in education research. *Educational Researcher*, 39(2), 120-131.

**Suppression Standards:**

*Values less than 10 are suppressed to protect identities. Additional cell values are suppressed to prevent the calculation of other suppressed cell values. The MLDS Center uses a variety of suppression methods, including rounding and perturbing.

^^Values greater than 10 are suppressed to ensure small population sizes that require suppression cannot be calculated.

^Value is suppressed as it is too soon to report. The cohort year does not yet meet the definition for the data point being reported.

◇The selected high school had no graduates in the given year.

‡ Based on filter selections, values are not displayed as they would represent duplicated or conflicting data.

Suggested Citation:

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