

Space Needs Calculations: What Changed Now that Noncredit Hours Are Counted?

November 8, 2024



Background

1. MHEC has guidelines regarding how much of different kinds of spaces colleges should have based on enrollment/usage
 - Calculated need is used to justify capital projects proposed and to prioritize (rank) proposed projects
 - COMAR 13B.07.05 is where these guidelines are listed
 - Prior to 2016, could not count noncredit hours, but amendments in now say we “may” count noncredit
 - This is the first year we counted certain noncredit hours
2. S-6 Form is used to report data used to calculate space needs
 - Previously there was an S-6 form (due in Fall) and S-6 Supplemental form (due in July)
 - Nothing was due fall of 2023; revised S-6 will be due every July 1st starting 7/1/2024
3. Changes to S-6 Form
 - Format now unique for community colleges
 - Instructions changed to hopefully capture better data
 - Reporting of noncredit hours clarified based on how data will be used in space needs calculations campus-wide



Topics to Discuss

1. How are space needs calculated?
2. Understanding what “surplus” and “deficit” represent
3. How are noncredit hours counted now?
4. Look at some tables that show how space needs calculations and “surplus” and “deficit” calculations changed now that we count noncredit hours



Classroom Space Factor Development

- For small schools (below 3,000 FTDE), assume 18 NASF station size, target room utilization rate of 20 hours per week (M to F before 5pm), and 60% seat occupancy

$$18 / (20 \times 0.60) = 1.50$$

Station size

Hours room is used (M to F before 5pm)

Multiple this by *WSCH-lecture** to show how many NASF of classroom space are needed

% of seats in room that should be filled

- For large schools it is the same except assume that they will be able to more efficiently schedule classes so target room utilization rate is 27 hours

$$18 / (27 \times 0.60) = 1.11$$



*Previously only credit WSCH were counted

What is a Weekly Student Contact Hour (WSCH)?

- Different from credit hours (or billable hours); may or may not be equal to # of credit hours
- Hours of contact a student has in a in a space with an instructor
- Classified as WSCH-lab or WSCH-lecture (or other) depending on type of instruction
 - WSCH-lecture are hours that require a classroom (HEGIS 100) type of space to provide instruction
 - WSCH-lab are hours that require a class laboratory (HEGIS 210) type of space to provide instruction
 - WSCH-other are hours of instruction that do not require either of those two types of space (examples are fully remote instruction, practica/internships, and CDL instruction that takes place in a vehicle on the road)
- Example: physics class has 5 hours of instruction scheduled during a week (3 hours of lecture, 2 hours in lab)
 - Each enrolled student generates a total of 5 WSCHs (3 WSCH-lecture and 2 WSCH-lab)



Class Lab Space Factor Development (Small Schools)

- Assume 50 NASF station size for science/social science labs, 115 station size for technical/career labs; assume 80% of WSCH-lab are generated in science labs versus 20% in career/tech labs; target room utilization rate of 15 hours per week (M to F before 5pm), and 60% seat occupancy

$$\frac{\text{Science lab station size} \times \text{\% of lab hours} + \text{Tech lab station size} \times \text{\% of lab hours}}{\text{Hours room is used (M to F before 5pm)} \times \text{\% of seats in room that should be filled}} = \frac{40 + 23}{9} = 7.00$$

Multiple this by *WSCH-lab** to show how many NASF of class lab space are needed

*Previously only credit WSCH were counted



“Surplus” and “Deficit”

- Simply subtract the calculated “need” from the inventory
- If you have a positive number, you have more space than you “need” and so have a surplus
 - For instructional space, this basically means you have some space that is being used less than the targeted number of hours in peak time and/or when room is being used, the seats are not at least 60% full
 - Growth in enrollment can fit into existing with larger classes and/or more classes being held in the empty rooms
- If you have a negative number, you have less space than you “need” and so have a deficit
 - For instructional space, this basically means you have some space that is being used more than the targeted number of hours in peak time and/or when room is being used, the seats more than 60% full
 - It starts to become difficult to schedule more classes and/or fit additional students into existing classes, so you can perhaps justify adding more space



“Eligible” Noncredit WSCHs

- State now uses WSCHs associated with eligible noncredit class when calculating space needs
- For purposes of space needs calculations, eligible noncredit contact hours are:
 - Generated by classes approved by MHEC on the CC-10 form
 - Generated by noncredit classes coinciding (fully or in part) by the regular semester
- Note, this is different from what is Cade “eligible” or not
 - Example: non-state residents are ineligible for Cade
 - For space planning purposes, we do not care where student is from; everyone in the class is counted if the class is counted
- As with credit contact hours, peak time noncredit hours are used what is used in space needs calculations, but data will be collected annually to monitor if peak time is still during weekdays before 5pm or not



“Eligible” Noncredit WSCHs *(continued)*

- Contact hours for eligible non-credit will be adjusted for duration of class by multiplying hours by a factor of [number of weeks in duration of the class / 16]
- Eligible noncredit “FTEs” will be approximated by dividing eligible adjusted contact hours by 15 and this will be added to credit FTE to determine FTE used in space needs calculations
- “FTDE” will be approximated in a similar manner and added to credit FTDE for space needs calculations



Counting Noncredit Hours Now.....

- If you are counting more hours than previously, you expect there will be a greater “need” for space calculated
- Want to examine what the need is now vs. what it would have been if not counting noncredit hours (as was the case before this year)
- Can't simply compare this year's needs to last year's because there are many factors that changed:
 - Enrollment increases
 - Inventory changes (won't affect need but will affect surplus/deficit numbers)
 - Changed/better reporting of WSCH-lecture vs. WSCH-lab
 - Instructions/forms improved to ensure we no longer count hours that occurred with high school setting
 - Now counting eligible noncredit hours



Counting Noncredit Hours Now.....

- To isolate changes caused by the noncredit hours alone, simply revised all CC-tables and subtracted out the eligible noncredit hours reported on S-6 (and associated FTE or FTDE)
- Did the same for projected numbers
- Tables that follow are meant to summarize how much more space is “needed” statewide and at each school now that noncredit hours are factored into the mix
- Generally the increased need was modest, but there were some interesting changes at certain schools, including some things were perhaps counter-intuitive



Calculated Space Needs – All Colleges

	NOT Counting Noncredit WSCHs	Counting Noncredit WSCHs	% Difference
2023 NASF Need	5,457,999	5,682,261	4.1%
2033 NASF Need	8,682,636	8,747,724	0.7%



Calculated Surplus/Deficit – All Colleges

	NOT Counting Noncredit WSCHs	Counting Noncredit WSCHs	% Difference
2023 Surplus (Deficit)	1,788,771	1,564,509	-12.5%
2033 Surplus (Deficit)	(598,867)	(663,955)	10.9%



2023 Calculated Space Needs – Small Colleges

College	NOT Counting Noncredit WSCHs	Counting Noncredit WSCHs	% Difference
Allegany College of Maryland	178,609	188,905	5.8%
Baltimore City Community College	194,595	200,054	2.8%
Carroll Community College	182,985	184,354	0.7%
Cecil College	147,697	151,108	2.3%
Chesapeake College	136,172	148,242	8.9%
Garrett College	111,672	113,214	1.4%
Wor-Wic Community College	175,233	184,269	5.2%



2023 Calculated Space Needs – Medium Colleges

College	NOT Counting Noncredit WSCHs	Counting Noncredit WSCHs	% Difference
College of Southern Maryland	229,165	237,203	3.5%
Frederick Community College	332,748	342,647	3.0%
Hagerstown Community College	221,486	229,340	3.5%
Harford Community College	278,440	289,612	4.0%
Howard Community College	430,185	467,524	8.7%



2023 Calculated Space Needs – Large Colleges

College	NOT Counting Noncredit WSCHs	Counting Noncredit WSCHs	% Difference
Anne Arundel Community College	545,820	545,068	-0.1%
Community College of Baltimore County	895,010	967,724	8.1%
Montgomery College	1,073,248	1,096,974	2.2%
Prince George's Community College	324,934	336,023	3.4%



2033 Calculated Space Needs – Small Colleges

College	NOT Counting Noncredit WSCHs	Counting Noncredit WSCHs	% Difference
Allegany College of Maryland	293,716	280,807	-4.4%
Baltimore City Community College	304,001	309,274	1.7%
Carroll Community College	275,182	274,174	0.0%
Cecil College	213,456	215,038	0.7%
Chesapeake College	207,428	217,181	4.7%
Garrett College	122,532	126,628	3.3%
Wor-Wic Community College	223,236	228,387	2.3%



2033 Calculated Space Needs – Medium Colleges

College	NOT Counting Noncredit WSCHs	Counting Noncredit WSCHs	% Difference
College of Southern Maryland	509,009	509,840	0.2%
Frederick Community College	590,956	591,738	0.1%
Hagerstown Community College	403,310	399,411	-1.0%
Harford Community College	449,413	459,892	2.3%
Howard Community College	804,921	820,157	1.9%



2033 Calculated Space Needs – Large Colleges

College	NOT Counting Noncredit WSCHs	Counting Noncredit WSCHs	% Difference
Anne Arundel Community College	972,322	1,001,838	3.0%
Community College of Baltimore County	1,166,922	1,148,813	-1.6%
Montgomery College	1,551,841	1,567,404	1.0%
Prince George's Community College	594,391	596,142	0.3%



2023 Surplus (Deficit) – Small Colleges

College	NOT Counting Noncredit WSCHs	Counting Noncredit WSCHs	% Difference
Allegany College of Maryland	112,303	102,007	-9.2%
Baltimore City Community College	124,471	119,012	-4.4%
Carroll Community College	14,883	13,514	-9.2%
Cecil College	41,823	38,412	-8.2%
Chesapeake College	78,499	66,429	-15.4%
Garrett College	89,005	87,463	-1.7%
Wor-Wic Community College	8,400	(596)	flipped



2023 Surplus (Deficit) – Medium Colleges

College	NOT Counting Noncredit WSCHs	Counting Noncredit WSCHs	% Difference
College of Southern Maryland	221,155	213,117	-3.6%
Frederick Community College	(35,458)	(45,357)	27.9%
Hagerstown Community College	85,127	77,273	-9.2%
Harford Community College	61,597	50,425	-18.1%
Howard Community College	63,522	26,183	-58.8%



2023 Surplus (Deficit) – Large Colleges

College	NOT Counting Noncredit WSCHs	Counting Noncredit WSCHs	% Difference
Anne Arundel Community College	125,955	126,747	0.6%
Community College of Baltimore County	185,818	113,104	-39.1%
Montgomery College	295,611	271,885	-8.0%
Prince George's Community College	315,980	304,891	-3.5%



2023 HEGIS 100 Space Needs – Small Colleges

College	NOT Counting Noncredit WSCHs	Counting Noncredit WSCHs	% Difference
Allegany College of Maryland	16,775	21,521	28.3%
Baltimore City Community College	21,737	24,179	11.2%
Carroll Community College	17,213	17,777	3.3%
Cecil College	10,809	11,604	7.4%
Chesapeake College	7,412	8,187	10.5%
Garrett College	5,564	6,574	18.2%
Wor-Wic Community College	14,393	17,087	18.7%

Note: The % Difference for all colleges was 6.3%



2023 HEGIS 100 Space Needs – Medium Colleges

College	NOT Counting Noncredit WSCHs	Counting Noncredit WSCHs	% Difference
College of Southern Maryland	15,086	15,422	2.2%
Frederick Community College	21,359	22,575	6.2%
Hagerstown Community College	18,980	21,698	14.3%
Harford Community College	29,057	30,122	3.7%
Howard Community College	21,341	24,784	16.1%

Note: The % Difference for all colleges was 6.3%



2023 HEGIS 100 Space Needs – Large Colleges

College	NOT Counting Noncredit WSCHs	Counting Noncredit WSCHs	% Difference
Anne Arundel Community College	51,999	40,455	-22.1%
Community College of Baltimore County	44,486	52,034	17.6%
Montgomery College	96,772	100,586	4.2%
Prince George's Community College	28,125	32,301	14.8%

Note: The % Difference for all colleges was 6.3%



2023 HEGIS 200 Space Needs – Small Colleges

College	NOT Counting Noncredit WSCHs	Counting Noncredit WSCHs	% Difference
Allegany College of Maryland	22,023	23,808	8.1%
Baltimore City Community College	18,207	18,728	2.9%
Carroll Community College	21,563	21,722	0.7%
Cecil College	13,390	15,098	12.8%
Chesapeake College	7,291	16,216	122.4%
Garrett College	6,552	6,741	2.9%
Wor-Wic Community College	18,452	22,037	19.4%

Note: The % Difference for all colleges was 8.4%



2023 HEGIS 200 Space Needs – Medium Colleges

College	NOT Counting Noncredit WSCHs	Counting Noncredit WSCHs	% Difference
College of Southern Maryland	39,642	45,468	14.7%
Frederick Community College	120,602	125,840	4.3%
Hagerstown Community College	48,058	50,340	4.7%
Harford Community College	56,542	63,087	11.6%
Howard Community College	158,413	179,469	13.3%

Note: The % Difference for all colleges was 8.4%



2023 HEGIS 200 Space Needs – Large Colleges

College	NOT Counting Noncredit WSCHs	Counting Noncredit WSCHs	% Difference
Anne Arundel Community College	156,936	156,047	-0.6%
Community College of Baltimore County	261,933	304,212	16.1%
Montgomery College	304,507	312,641	2.7%
Prince George's Community College	27,339	28,116	2.8%

Note: The % Difference for all colleges was 8.4%



Questions/Comments?

Suggestions for other things to look at?

