

May 1, 2015

To : Dr. Baule and Board of Education

From: Jake Hubert

RE: Explanation of Proposed Student GPA calculations to align with Board Policy 6:300

Do we want our students to take the minimum number of classes to get through high school or to explore the possibilities? Our current grade scale would reflect that we want our students to take the minimum number of classes due to the calculations.

For example, let's pretend student "A" takes two AP courses and four regular courses. For the sake of ease, we'll say student "A" earned the grade of an A in all courses. That student would then have a GPA of:

$$\frac{(2 \times 5.0) + (4 \times 4.0)}{6} = 4.33$$

If student "B" takes the same two AP courses and five regular courses and earned an A in all courses, then their equation would look like this:

$$\frac{(2 \times 5.0) + (5 \times 4.0)}{7} = 4.29$$

Student "B" actually took a more rigorous course load, but student "A" was rewarded simply because of the ratio of extended scale courses to regular courses. This type of calculation has penalized students at North Boone for a number of years. A more equitable grading scale has recently been brought to my attention that would encourage students to take the courses they want and would even the playing field for students who take a varying number of courses.

If student "C" takes six courses with no weight and earn an A in all courses, then their equation would look like this:

$$\frac{(0 \times 5.0) + (6 \times 4.0)}{6} = 4.00$$

If student "D" takes one weighted course and five courses with no weights, their equation would look like this:

$$\frac{(1 \times 5.0) + (5 \times 4.0)}{6} = 4.17$$

If you were to simply take the weighted courses away, it would not take reward students for taking more rigorous courses. While we want to be fair, we also want to be certain to reward those students who are performing well in the more challenging courses our students are taking. We also have students who are taking CEANCI courses, who due to travel time to and from CEANCI sites, are unable to take a full seven classes. We don't want to penalize those students. The proposed equation below rewards students for taking a rigorous course load, but does not penalize them for not being able to fit more classes in that simply don't fit into their schedule. We'll take a look at each of the four examples presented above.

$$\frac{(weighted\ courses\ x\ grade\ earned) + (non-weighted\ courses\ x\ grade\ earned) \left(\frac{Minimum\ credits - weighted\ credits}{actual\ non-weighted\ credits} \right)}{Minimum\ credits}$$

Given the last scenario, the calculations for student A would look like this:

$$\frac{(2 \times 5.0) + (4 \times 4.0) \left(\frac{6 - 2}{4} \right)}{6} = 4.33$$

The calculations for student B would look like this:

$$\frac{(2 \times 5.0) + (5 \times 4.0) \left(\frac{6 - 2}{5} \right)}{6} = 4.33$$

The calculations for student C would look like this:

$$\frac{(0 \times 5.0) + (6 \times 4.0) \left(\frac{6 - 0}{6} \right)}{6} = 4.00$$

The calculations for student D would look like this:

$$\frac{(1 \times 5.0) + (5 \times 4.0) \left(\frac{6 - 1}{5} \right)}{6} = 4.17$$

If you increase the course numbers over time, you will still get equitable results. Using an arbitrary example of Student "A" taking 7 weighted courses and 17 non-weighted courses overall and student "B" taking 7 weighted courses and 21 non-weighted courses over a four year period, we can do the comparison with our students needing a minimum of 24 courses to graduate. For the purpose of the example, we'll say each student earned an A in all courses.

Student A

$$\frac{(7 \times 5.0) + (17 \times 4.0) \left(\frac{24 - 7}{17} \right)}{24} = 4.29$$

Student B

$$\frac{(7 \times 5.0) + (21 \times 4.0) \left(\frac{24 - 7}{21} \right)}{24} = 4.29$$