

## From Roots to STEM:

### Classical Education and the Convergence of STEM in the Secondary Latin Classroom

It is increasingly difficult to retain the best and the brightest students due to the inevitable pull toward STEM classes. While many American high schools require two years of a foreign language in preparation for college or as a graduation requirement (Shedivy, 2004), Latin teachers, in particular, are increasingly finding that their third- and fourth-year Latin courses, do not regularly consist of the highest achieving students. These classes include the often-rigorous translating of Latin III and Advanced Placement (AP) Latin. In addition, open enrollment of AP classes, in many cases, allows students to take as many AP classes as they like regardless of ability or, more importantly, class load (Winebrenner, 2006). Therefore, if and when Latin teachers retain the top percentile of Latin students from the first two years, these students may spread themselves too thin offering but so much to their language class. Considering my personal experience as a high school Latin teacher in a private Catholic school, this presentation will consider ways Latin pedagogy is not only beneficial in the classroom, but how it can complement preparation for STEM classes and careers in this ever-growing and important field.

To begin, the scope for this paper will discuss the argument for incorporating STEM into the Latin classroom as a means to keeping classical language learning relevant and applicable. The benefits of Latin, specifically, must remain at the forefront of educational counselors, parents, and students' minds as they prepare for future careers and educational pursuits. Chiefly among these arguments is the fact that skills applied to STEM courses are not dissimilar to those found in humanities. This is a false dichotomy that has been drawn between these two fields (Hamman, 2013) and unfortunately has led to potential decrease in classical language interest. In

fact, the very computational thinking skills found in mathematical, engineering, and scientific processes can be applied to classical education. To distinguish between the fields of STEM and a humanities field such as classics ignores the presence of computational thinking elements such as problem decomposition, problem solving, testing and debugging, and algorithmic thinking (Wing, 2006) in both disciplines. A second point of attention for this argument will suggest ways to implement STEM into the Latin classroom. Latin teachers may either elect to infuse STEM material into their curriculum or offer a separate course. These courses could consider centering the history of ancient medicine, medical terminology, and more. Finally, I will address the challenges with infusing STEM into a Latin curriculum and/or starting a new course. Attempting to do either at the high school level presents a unique set of obstacles absent from the middle school or collegiate levels. Ultimately, the premise outlined will consider ways in which Latin learning can and will benefit STEM courses, and how the two disciplines benefit each other and students aspiring to concentrate on college tracks in high school.

### Bibliography

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