

Hello World! Code Responsibly: Why Cyber is a Game Changer for Computer Science Education

Blair Taylor, Towson University

Cybersecurity continues to be a global crisis. In 2020, as the world's focus has shifted to the COVID-19 pandemic, hackers have not let up and they continue to wreak havoc across critical systems. Working from home has made us increasingly reliant on infrastructure and demands on new technologies and platforms have created the perfect storm for cyber attacks. Despite record numbers of unemployment, there is a huge, growing shortfall of cyber talent. Universities are challenged to produce a skilled cyber workforce. All students, and especially computer science students, need to learn cyber, and there is an acute shortage of cybersecurity faculty.

With every challenge comes opportunity. In my experience teaching cybersecurity to undergraduates, many students like and are inherently interested in cyber. When we introduced secure programming concepts to programming students, pre-survey results indicated a high interest in cybersecurity across both gender and ethnicity, unlike previous efforts in computer science, which historically attract more of the same. Can cybersecurity draw more students to Computer Science? Given the appropriate resources, can teaching cyber create opportunities for Computer Science educators to engage students and increase diversity? In this presentation, I will share my lessons learned teaching secure coding to computing students and my experience with the National Cybersecurity Curriculum Program.