

# Junior Cyber Corps

## Introduction

Cybersecurity is critical to the national security and economic prosperity of the U.S. By many accounts, there is a severe shortage of trained cybersecurity professionals to meet the current demand in industry, academia, and government. Cyberseek.org currently estimates the shortage at 285,000. Other studies provide estimates that range far higher. These estimates also assume a minimum of a 2 year degree in cybersecurity, a four year technical degree with a cybersecurity focus, and/or cybersecurity certifications such as CISSP, Certified Ethical Hacker, and Security+ to name a few.

Colleges, universities, and other post-secondary education can't solve the problem alone. They are already serving as many applicants as they can and the need for additional faculty at these levels is now becoming a demand. There are programs in place to grow the post-secondary education capacity. Yet even these measure are not projected to meet the growing demands of employers. As this new capability comes online, it is not clear there will be enough interested and qualified students to make effective use of it, thus creating a likely shortage of students applying to participate in cybersecurity programs at the post-secondary level.

We have both an absolute shortage of students applying, and few of those applying are as prepared as they could be with minimal involvement from primary and secondary educators. We need more students interested in and prepared to pursue post-secondary education in cybersecurity.

To address this shortage will require primary and secondary school students to be more knowledgeable about cybersecurity principles and about the wide variety of career opportunities in cybersecurity. We propose a combination of in-school and

extracurricular activities similar to a Junior Reserve Officer Training Corps (JROTC), named something like Junior Cyber Corps.

## Junior Cyber Corps

A junior cyber corps is proposed to introduce primary and secondary school students to the field of cybersecurity, as it applies across the many disciplines that it touches (e.g., ethics, law, business, IT, computer science, engineering) and the “soft skills” (e.g. communication skills, people skills, leadership skills). The junior cyber corps will not only introduce foundational knowledge as it relates to these disciplines, but will also introduce students to the career opportunities that exist, along with the pathways that are available to them to take towards these careers.

Such programs could vary in intensity from extracurricular clubs to significant components of a military school or many points in-between. Such variety could require as little as a STEM-capable member of the community willing to volunteer to be a club mentor or a teacher taking on coach-like responsibilities, all the way up to a dedicated staff supporting an entire curriculum.

The cyber corps programs would include in-school classes, after school clubs, competition teams, seminars/tutorials/conferences, and mentoring from cybersecurity professionals.

-- National Cryptologic School, College of Cyber