

## **Streamlining Success: Modeling the Efficiency of the Special Forces Qualification Course**

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**Author Note:** Cadets Cerda, Knill, Liu, Rose, and Taber are seniors at the United States Military Academy at West Point in the Department of Systems Engineering. LTC Joshua Eaton is an Assistant Professor in the Department of Systems Engineering at the United States Military Academy at West Point. We extend our gratitude to the team at USSOCOM for the inspiration, aid, and commitment throughout this capstone project.

**Abstract:** The objective of this research project is to perform an analysis of the Special Forces Qualification Course (SFQC) to provide recommendations for improving the efficiency and effectiveness of training. The United States Army conducts special missions that require an elite group of individuals who are highly trained and proficient in an array of military skills. The initial training to mold soldiers into elite warfighters begins with the SFQC. To analyze the SFQC the research team leverages ProModel, a discrete modeling simulator. This tool allows the team to model the course and its phases, while also manipulating the variables and structure of the SFQC. From the research, the team identified periods within the course that have a back log of candidates, the causes for these backlogs, and important variables that impact the course's graduation rate. From this, the team was able to create and develop Courses of Action (COA) that mitigate, or eliminate, the inefficiencies for our client, the United States Special Operations Command (USSOCOM). The findings will provide the client with results that will influence change to improve the efficiencies of the SFQC. In conclusion, the project goals moving forward are to conduct further analysis of the training pipeline and recommend additional COAs that will facilitate the optimization of the SFQC.

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