

## ABSTRACT

The rapid development of military technology demands innovative solutions to improve the performance of military vehicles, particularly in the context of reducing radar cross-section technology for military defense. This research was conducted to design and analyze a metasurface absorber prototype, focusing primarily on its structural specifications, dimensions, absorptivity level, and S, C, and X-band frequency ranges.

The research method used in this final project was an experimental one. This was done to ensure the metasurface absorber achieved results in accordance with the initial targets. Using computer simulation technology (CST) software, the patch design was optimized until it was suitable. It was then manufactured and tested.

This final project found the metasurface absorber to have the highest performance at 9.6 GHz with a result of -28 dB. This value yields an absorption rate of 99.8%.

**Keywords:** *Metasurface absorber, Radar Cross Section.*