**Problem Statement:** Establish correlation between marksmanship training and physical fitness and academic performance

**Objectives**

1. Compare marksmen and non-marksmen heart rates and blood oxygen saturation
2. Compare GPA before and after marksmanship training
3. Determine qualitative impact of marksmanship
4. Assess impact of heart rate and blood oxygen saturation on marksmanship score

**Methods**

- Pulse oximeter to measure pulse and blood oxygen saturation
- Subjects in sitting position
- Heart rates and blood oxygen saturation measured until consistent
- Marksmen pulses collected after training
- GPA’s self-reported at mid-term
- Mid-term survey to assess qualitative impact

**Results**

- Marksmen heart rates average 3.86 bpm higher
- Marksmen blood oxygen saturations average 0.15 higher
- Marksmen GPA’s average 0.07 higher
- Marksmen reported either no change or better ability to concentrate, confidence, and attention to detail
- Negative linear relationship between heart rate and score among more experienced marksmen
- Poor Positive linear relationship between blood oxygen saturation and score among more experienced marksmen

**Conclusions and Future Work**

- No apparent correlation between marksmanship and fitness
- No apparent correlation between marksmanship and academics
- Solidify conclusions with larger sample
- Sample professional marksmen