

## LIST OF FIGURES

Figure 1. Carbon Composite Application in An Aircraft .....	11
Figure 2. Helicoidal Structure in a Crustacean Dactyl Club .....	13
Figure 3. Composite Matrix and Reinforcement .....	18
Figure 4. Helicoidal Structure and Applications .....	19
Figure 5. Universal Testing Machine .....	21
Figure 6. Stress-Strain Curve.....	23
Figure 7. Conceptual Model .....	25
Figure 8. Systematic Problem Solving .....	26
Figure 9. Parameter of Helicoidal Structure .....	29
Figure 10. Specimen Design.....	32
Figure 11. Tensile Test Setting on Specimen .....	34
Figure 12. Mesh Settings on Specimen .....	35
Figure 13. Simulation Response a.) Whole Specimen b.) Detailed Contour .....	37
Figure 14. Stress-strain Curve from Simulation .....	38
Figure 15. Comparison of Stress-Strain Curves .....	39
Figure 16. Normality Test Results.....	41
Figure 17. ANOVA Test Results.....	42
Figure 18. Main Effect Plot of UTS .....	45