**Structure Of Thesis**

**Abstract**

* Summarize entire thesis and the END

**Introduction**

- *this is to get the reader interest and he/she should get an idea of where she can find relevant information (i.e. points to reviews, or field leaders)*

* Brief historical review of microbes in science
* How did microbe research lead to the advent of microbiome research, i.e. what is a microbiome?
* What are the effects on speficic hosts and why this research is important
  + Environmental effects
  + Human-gut, diseased states, mental-health
  + Plant-health

*- convince the reader why more research remains to be done... what is missing in this field or where are we trying to take the field.*

* What are outstanding questions in this field (problem domain) and how can we possibly use the knowledge
  + What drives microbiome establishment?
  + What governs their composition?
  + What answering those questions means for the Us as humans

*- What specific questions are you asking and how you attempt to answer them, i.e. what tools will you need to answer them without going into too much detail, and what contributions that*

* Which questions and what tools you will be using, describe briefly
  + *NGS, Bioinfor. CompBio. Metagenomics*
* Contributions
  + New throughput model / research applies to plants
  + New genomes, new insights
  + Advancing computational biology & biology
  + Futre impact of this work...?

*-* ***summarize what is found inside this Thesi****s*

**Theory/State of the Art**

*- used to help the reader understand the theories on which your work relies*

* How are host-microbe interactions studied, i.e. how is the data generated
  + What does it take to retrieve a sample
* How are theose microbiome samples studied
  + NGS
  + What is Metagenomics
  + What is Metatranscriptomics
* Computational Biology / In-Silico Methods
  + What are GEMs in general and how thy’re used, describe the math behind them and their parts
  + What tools are they used
  + How we will use them
    - Predict metabolites
    - FBA
* What is Chlamy and how does it help us understand plants
  + Why Chlamy vs Arabidopsis?
  + Compare & contrast

**Methods**