Lecture #13 – DNA structure

References: Griffiths et al. 11th edition, Chapter 7

**Key Words Defined :**

1. Purine
2. Pyrimidine
3. DNA
4. Nucleotide
5. Nucleoside

**Take Home Messages :**

* DNA is the genetic material of all living organisms (some viruses use RNA)
* DNA is a polymer made up of nucleotides
  + These nucleotides are heald together by phosphodiesrer bonds
* Each nucleotide contains a *base* (A, C, G, T), a *2’ deoxyribose sugar*, and a *phosphate*
* DNA consists of two, anti-parallel polynucleotide chains (parallel and anti-parallel strands of DNA)
  + Together they associate together via base pairs to form a right handed helix
* Base pairing follows strict rules:
  + A(purine) pairs with T(pyrimidine) via 2 H bonds
  + G(purine) pairs with C(Pyrimidine) via 3 H bonds
* The Watson-Crick model of DNA nicely explains all the characteristics of the genetic material
* DNA must be packed into higher order structures to fit into cells

**Processes:**

**Key Images (Not in Scrip)t:**

**Difficult Subjects:**

**Script:**