**Syllabus of Zoo-109**

* **Macromolecules**:
	+ Carbohydrates
	+ Lipids
	+ Proteins
	+ Nucleic acids
* **Viruses**
* **Prokaryotes**
* Bacteria & Archaea
* **Eukaryotes (Basics of cell Biology):**
	+ Cell types (plant & animal cell).
	+ Cell organelles (animal cell)
* **Cellular transport (active & passive)**
* **Enzymes and metabolic control**
* **Cellular respiration (production of ATP)**
* **Cell division (cell cycle)**
	+ Mitotic division
	+ Meiotic division (and sexual life cycle)
* **Molecular Biology (information codes and genes):**
	+ DNA and DNA-replication
	+ RNA and RNA-transcription
* From gene to protein (RNA translation)
* **Mendel and the gene idea:**
	+ First low of Mendel
	+ Second low of Mendel
	+ The genetic diseases, sex-linked disorders and mutations
	+ The chromosomal bases of inheritance
	+ **Chemical signals in animals (endocrine system and hormonal regulation).**

**Main book**

**Campbell, N. A. and Reece, J. B. (2011). Biology (9th edition). Pearson Education. Inc. USA.**