

# Lesson Plan

**Name of the Faculty:** Vandana yadav

**Discipline:** CSE,ME,EEE

**Semester:**2nd

**Subject:** Biotechnology

**Lesson Plan Duration:** 15 weeks (from January, 2018 to April, 2018)

Week	Theory	Work Load (Lecture/Practical) Per Week (in hours): Lecture - 03, Tutorial – 01, Practical – 02	Practical	
	Lecture Day	Topic including Assignment/Test)	Practical Day Topic	
1	1	Concept and definition of biology, characteristic feature of living organisms.	-	-
	2	Cell ultra structure.	-	
	3	Cell organelles like nucleus, mitochondria	-	
2	1	Assignment	-	-
	2	Chloroplast, ribosome.	-	
	3	Endoplasmic reticulum		
3	1	Difference between prokaryotic and eukaryotic cell, animal and plant cell.		-
	2	Classification and important functions of carbohydrates.		
	3	Lipids		
4	1	Proteins		-
	2	Nucleic acids (DNA STRUCTURE)		
	3	RNA structure and forms		
5	1	Vitamins		-
	2	Hormones, Enzymes		
	3	Assignment		
6	1	Cell division- Mitosis and its utility in living organisms.		-
	2	Meiosis and its genetic significance		
	3	Gene- Concept, definition and structure		
7	1	Introduction to replication		-
	2	Transcription		
	3	Translation		
8	1	Mutations, Genetics disorders		-
	2	Genetics of blood groups.		

	3	Diabetics type 1&11		
9	1	Assignment		-
	2	Morphology of bacteria		
	3	Fungi, virus and protozoa		
10	1	Definition; Tools used in recombinant DNA technology.		-
	2	Plasmids		
	3	Restriction enzymes		
11	1	Vectors as gene transfer vehicles		-
	2	Production and significance of transgenic plants.		
	3	Production and significance of transgenic plants.		
12	1	Concept of genetically modified organisms.		-
	2	Applications of genetic engineering		
	3	Definition of biotechnology-application of biotechnology in agriculture.		
13	1	Agriculture, medicine		-
	2	Environment industry		
	3	Forensic science		-
14	1	Role of biology in information technology.		
	2	Nanotechnology		-
	3	Bio- MEMS		
15	1	Biosensors		-
	2	Ethical issues related in biotechnology		
	3	Recapitulation		-