Course Outcome (Theory and Practical)

Course Title	GNT101- Cell Biology And Genetics	
Co.Nos	**Course Outcome**	**PSO**
CO1	By the end of the course the students will be able to Understand the structure and function of all the cell organelles. Students will know about the chromatin structure and its location	**PSO3**
CO2	Students will learn in detail about Molecular basis cell cycle, cell division, cell senescence and cell death. To develop the basic knowledge of Cancer biology.	**PSO1**
CO3	The students will be able to understand the Mendel‟s laws and its deviations. Students will get indepth knowledge about gene Interactions & multiple alleles.	**PSO4**
CO4	Students will learn in detail about Linkage group in Drosophila and man & mechanism of crossing over. The students can apply this in the identification od parents and recombinants	**PSO2**

Course Title	GNP101- Cell Biology And Genetics	
Co.Nos	**Course Outcome**	**PSO**
CO1	By the end of the course the students will be able to learn techniques in cytogenetics	**PSO3**

CO2	Students will be able to solve problems on mendelian genetics and its deviation	**PSO1**
CO3	Students get hands on experience in prepare and analyse the karyotype of normal and syndromic individuals.	**PSO4**
CO4	Students will be able to solve problems on Linkage and crossing over.	**PSO2**

Course Title	**GNT201- Bioinstrumentation And Animal Cell Culture**	
Co.Nos	**Course Outcome**	**PSO**
CO1	At the end of the course, the students will be able to understand the basic principles of different laboratory equipments.	**PSO3**
CO2	Students will know the uses of the analytical equipments in various biological applications	**PSO1**
CO3	Understand the cell lines and culture media and cell culture methods.	**PSO4**
CO4	Students will learn Principle and applications of electrophoresis	**PSO2**

Course Title	**GNP201- Bioinstrumentation And Animal Cell Culture**	
Co.Nos	**Course Outcome**	**PSO**

CO1	At the end of the course, the students will be able to understand the lab safety and maintenance of different laboratory equipments	**PSO3**
CO2	Students will get hands on experience of operate different laboratory equipments	**PSO1**
CO3	Students will learn to handle and culture different cell lines.	**PSO4**
CO4	Students learn to colorimetric estimation of proteins	**PSO2**

Course Title	**GNT301- Cytogenetics**	
Co.Nos	**Course Outcome**	**PSO**
CO1	At the end of the course, the students will be able to understand the basis of Inheritance	**PSO3**
CO2	Students will know the special types of Chromosomes	**PSO1**
CO3	Students will learn Extra Chromosomal Inheritance / Cytoplasmic Inheritance	**PSO4**
CO4	Students will learn Chromosomal aberrations	**PSO2**

Course Title	**GNP301- Cytogenetics**

Co.Nos	Course Outcome	PSO
CO1	At the end of the course, the students will get hands on experience of culturing and handling of Drosophila	**PSO3**
CO2	Students will learn morphology and sexual dimorphism	**PSO1**
CO3	Students will able to do Morphology and Sexual dimorphism	**PSO4**
CO4	Students will be able to slove Genetic Problems on Linkage and Crossing over	**PSO2**

Course Title	GNT401- Molecular Genetics	
Co.Nos	**Course Outcome**	**PSO**
CO1	At the end of the course, the students will be able to understand basics of Heredity	**PSO3**
CO2	Students will learn in detail about Genome organization and Gene expression.	**PSO1**
CO3	Understand the Transposable elements	**PSO4**
CO4	Students will learn Introduction and Types of Gene mutations	**PSO2**

Course Title	GNP401- Molecular Genetics	
Co.Nos	**Course Outcome**	**PSO**
CO1	At the end of the course, the students will be able to understand Extraction of DNA.	**PSO3**
CO2	Students will get hands experiences of Instruments (Centrifuge, Ultra centrifuge, pH meter, Electrophoretic unit, Micropipette, Glass homogenizer, Autoclave, Shaker incubator)	**PSO1**
CO3	Students will study of examples of mutations	**PSO4**
CO4	Students will learn Gene regulation, Bacterial Genetics.	**PSO2**

Course Title	GNT501- R-DNA Technology	
Co.Nos	**Course Outcome**	**PSO**
CO1	To understand the need of rDNA technology, various enzymes used as key instruments in rDNA technology	**PSO3**
CO2	To comprehensively understand the various vector systems used for prokaryotes and eukaryotes.	**PSO1**
CO3	To rigorously study the techniques involved in creation of genomic libraries, understand the various transformation techniques.	**PSO4**
CO4	To study the different screening methods involved in selection of recombinant molecules, understand the principle involved in the use ofbasic techniques in rDNA technology	**PSO2**

Course Title	GNP501- R-DNA Technology	
Co.Nos	**Course Outcome**	**PSO**
CO1	To understand Instrumentation	**PSO3**
CO2	To comprehensively understand the Vectors.	**PSO1**
CO3	To study the Quantification of RNA by Orcinol method	**PSO4**
CO4	To study the Quantification of DNA by DPA method	**PSO2**

Course Title	GNT502- Basic Human Genetics	
Co.Nos	**Course Outcome**	**PSO**
CO1	To understand the Normal Human Karyotype	**PSO3**
CO2	To comprehensively understand the Genetic Diseases and Inheritance Pattern	**PSO1**
CO3	To rigorously study the Pedigree studies and Genetic Counselling	**PSO4**
CO4	To learn the application of Genetics and Society.	**PSO2**

Course Title	GNP502- Basic Human Genetics	
Co.Nos	**Course Outcome**	**PSO**
CO1	To understand Pedigree analysis and construction	**PSO3**
CO2	Students will able to do Barr body in the Buccal epithelial cells	**PSO1**
CO3	To understand the Dermatoglyphics	**PSO4**
CO4	To study the Blood Cell counting using Haemocytometer.	**PSO2**

Course Title	GNT601- DEVELOPMENTAL, EVOLUTIONARY AND BIOMETRICAL GENETICS	
Co.Nos	**Course Outcome**	**PSO**
CO1	To understand the Developmental Genetics	**PSO3**
CO2	To comprehensively understand the Switching genes on and off during development	**PSO1**
CO3	To rigorously study the Evolutionary and Population Genetics.	**PSO4**

CO4	To study the Quantitative characters and inheritance	**PSO2**

Course Title	**GNP601- DEVELOPMENTAL, EVOLUTIONARY AND BIOMETRICAL GENETICS**	
Co.Nos	**Course Outcome**	**PSO**
CO1	At the end of the course, the students will be able to understand Early embryonic development in Frog	**PSO3**
CO2	Students will learn Quantitative inheritance in Kernel colour in Wheat/Skin colour in man	**PSO1**
CO3	Students will be able to solve Biometrical problems	**PSO4**
CO4	To study the Quantitative characters and inheritance	**PSO2**

Course Title	**GNT602- APPLIED AND BEHAVIORAL GENETICS**	
Co.Nos	**Course Outcome**	**PSO**
CO1	To understand the Genetics in Medicine and Industry & DNA Fingerprinting	**PSO3**
CO2	To understand the Heterosis in animal and plants	**PSO1**
CO3	To rigorously study the Molecular markers as diagnostic tools	**PSO4**

CO4	To study the analysis of Bioinformatics	**PSO2**

Course Title	**GNP602- APPLIED AND BEHAVIORAL GENETICS**	
Co.Nos	**Course Outcome**	**PSO**
CO1	To understand the Study of hybrid plants & animals.	**PSO3**
CO2	Students will study of Diagnostic kits -WIDAL and VDRL.	**PSO1**
CO3	Students do project work on Bioinformatics, Biodiversity, Behavioral Genetics Drosophila Animal/Plant breeding	**PSO4**
CO4	Students will learn to Gene bank and cryopreservation.	**PSO2**