ACADEMIC ORGANISER (2016-2017)
Genetics Paper I
Semester - I

Month And Number Of Teaching Days	Syllabus Proposed To Be Covered Month Wise	Remarks
June (10) 8	UNIT-I: Mendelian Inheritance- Terminology and definitions. (3 classes) UNIT-II: Cell Division and Chromosome segregation- role of p53.(5 classes)	
July(22) Classes allotted - 19	UNIT-I: Mendelian Inheritance- Construction of Pedigrees. (8 classes) UNIT-II: Cell Division and Chromosome segregation- Gametogenesis.(11 classes)	
August(18) Classes allotted 15	UNIT-I: Mendelian Inheritance- Pedigree Analysis. (4 classes) UNIT-IV: Linkage, Recombination and mapping of genes in Eukaryotes – Co efficient of co incidence. (8 classes)	
September (20) Classes allotted 18	UNIT-III: Extensions to Mendelian Inheritance patterns- paramutation. (10 classes + 2 extra) UNIT-IV: Linkage, Recombination and mapping of genes in Eukaryotes – Tetrad Analysis. (8classes)	
October(5) Classes allotted 4	UNIT-III: Extensions to Mendelian Inheritance patterns- self incompatibility. (2 classes + 1 extra) UNIT-IV: Linkage, Recombination and mapping of genes in Eukaryotes – mitotic recombination. (2 classes)	

Head of The Department
Dept. of Botany, Genetics & Biotechnology
BVC, Saliikpuri

ACADEMIC ORGANISER (2016-2017)
Genetics Paper II
Semester - II

Month And Number Of Teaching Days	Syllabus Proposed To Be Covered Month Wise	Remarks
November(17) Classes allotted - 14	UNIT I: Polygenes and Multifactorial inheritance-phenocopies(6 classes) UNIT-II: Chromosome structure, chromatin organization and variation- deletions.(8 classes)	
December(19) Classes allotted 13	UNIT-I: Polygenes and Multi-factorial Inheritance- Diabetes mellitus. (5 classes) UNIT-II: Chromosome structure, chromatin organization and variation- numerical aberrations. (6classes) UNIT- IV: Recombination and mapping of genes in Bacteria and Viruses- Transformation (2 classes)	
January (19) Classes allotted 16	UNIT-III: Genetics of sex-determination and sex-linked inheritance- Sex-linked inheritance. (7 classes) UNIT- IV: Recombination and mapping of genes in Bacteria and Viruses- recombination in viruses(9 classes)	
February(15) Classes allotted 14	UNIT-III: Genetics of sex-determination and sex-linked inheritance- PAR region in Man. (5 classes) UNIT-IV: Recombination and mapping of genes in Bacteria and Viruses- Maternal Inheritance(9 classes)	
March(7) Classes allotted 2	UNIT-III: Genetics of sex-determination and sex-linked inheritance- Sex-influenced characters. (2 classes)	

Head of The Department
Dept. of Botany, Genetics & Biotechnolo...
BVC, Sainikpuri

ACADEMIC ORGANISER (2016-2017)
Genetics Paper III
Semester - III

Month And Number Of Teaching Days	Syllabus Proposed To Be Covered Month Wise	Remarks
June (19) 19	UNIT-I: Nucleic Acids- transforming principle. (11 classes) UNIT-III: Gene familes, Organellar genomes and Fine structure analysis- one gene one enzyme hypothesis.(8 classes)	
July(22) Classes allotted - 17	UNIT-I: Nucleic Acids- enzymes in DNA replication. (4 classes+ 3extra) UNIT-II: Genome organization- Gene and Gene numbers.(4 classes) UNIT III: Gene familes, Organellar genomes and Fine structure analysis- Intracodon recombination.(6 classes)	
August(19) Classes allotted 15	UNIT-II: Genome organization- tandem repeats(8 classes) UNIT-IV: Gene expression in Prokaryotes and Eukaryotes- Reverse transcription (7 classes)	
September (18) Classes allotted 15	UNIT II: Genome Organization- Eukaryotic genes(8classes) UNIT-IV:Gene expression in Prokaryotes and Eukaryotes- polypeptide synthesis (7classes)	
October	----	

Head of The Department
Dept. of Botany, Genetics & Biotechnol...
BVC, Sainikpuri

ACADEMIC ORGANISER (2016-2017)
Genetics Paper IV
Semester - IV

Month And Number Of Teaching Days	Syllabus Proposed To Be Covered Month Wise	Remarks
November(17) Classes allotted - 14	UNIT I: Regulation of Gene expression- Lytic cascade in phage(7 classes) UNIT-III:Gene mutations- transitions.(7classes)	
December(19) Classes allotted 15	UNIT-I: Regulation of Gene expression – mating types in Yeast(5 classes) UNIT-II:Gene regulation in higher Eukaryotes and rDNA technology- Hemoglobin genes. (2classes) UNIT-III:Gene mutations- SLRL test in Drosophila.(8 classes)	
January (19) Classes allotted 14	UNIT-II:Gene regulation in higher Eukaryotes and rDNA technology- vectors used for gene transfer(5 classes) UNIT- IV: DNA damage and repair mechanisms ;Transposable elements- bacterial transposons(9 classes)	
February(15) Classes allotted 13	UNIT-II:Gene regulation in higher Eukaryotes and rDNA technology – cloning strategies (4classes+3extra) UNIT-IV: DNA damage and repair mechanisms ;Transposable elements- Ty elements in Yeast(9 classes + 3 extra classes)	
March(7) Classes allotted 4	UNIT-II:Gene regulation in higher Eukaryotes and rDNA technology – genomic and cDNA libraries (4classes)	

Head of The Department
Dept. of Botany, Genetics & Biotechnology
BVC, Sainikpuri

ACADEMIC ORGANISER (2016-2017)
Genetics Paper III (Annual)

Month And Number Of Teaching Days	Syllabus Proposed To Be Covered Month Wise	Remarks
June(19) 8	UNIT-I: Structure of Populations –diallelic locus.(8 classes)	
July(22) 7	UNIT-I: Structure of Populations- X- linked genes (4 classes) UNIT-II: Mutation- attainment of equilibrium.(3 classes)	
August(22) 8	UNIT-III: Selection- Joint effects of mutation and selection(8)	
September(13) 2	UNIT-III: Selection- selection in favour of heterozygotes(2)	
October(8) 3	UNIT-III: Selection – selection against heterozygotes (3 classes+1extra)	
November (24) 8	UNIT-IV: Migration- founder effect. (6 classes) UNIT-V: -UNIT V:Inbreeding and its effects-Inbreeding coefficient (2+3 extraclasses)	
December (19) 8	UNIT VI: Selection and breeding methods in plants (7 classes) UNIT VII: Selection and breeding methods in animals – line breeding.(1 class+4 extra)	
January(16) 6	UNIT VII: Selection and breeding methods in animals- artificial selection.(2 classes) UNIT-VIII: Genome evolution and Population variation.(4 classes + 4 extra)	

Head of The Department
Dept. of Botany, Genetics & Biotechnol...
BVC, Sainikpuri

ACADEMIC ORGANISER (2016-2017)
Genetics Paper IV(Annual)

Month And Number Of Teaching Days	Syllabus Proposed To Be Covered Month Wise	Remarks
June(19) 12	UNIT-I:Advanced Techniques in Genome Analysis – Hybridization techniques(12 classes)	
July(22) 9	UNIT-I:Advanced Techniques in Genome Analysis – DNA fingerprinting (6 classes) UNIT II: Strategies of Gene transfer: Methods of gene transfer(3)	
August(22) 13	UNIT-II: Strategies of Gene Transfer- Engineered embryonic stem cells.(6+ 2 extra classes) UNIT III: Genetic Engineering of Plants: Transgenic plants (5 Classes).	
September(13) 9	UNIT-III: Genetic Engineering of Plants –stress tolerant plants. (3 classes) UNIT IV: Genetic Engineering of animals: animal models of genetic diseases. (6 classes).	
October(8)		
November(24) 14	UNIT-V: Management of inherited Human Diseases –Gene Therapy and ethical issues.(6 +8classes) UNIT VI ;Genetic Engineering and Industrial Products: Commercial enzymes (4 extra classes)	
December(19) 10	UNIT-VI: Genetic Engineering & Industrial Products – biodegradation of xenobiotics.(4 classes) UNIT VII: Statistical analysis in Genetics – Probability, Regression (6 classes)	
January(16) 8	UNIT-VIII: Genome projects and their scope–emergence of Bioinformatics.(6+ 2 Revision classes)	

Head of The Department
Dept. of Botany, Genetics & Biotechnology
BVC, Saiaikpuri