ACADEMIC ORGANISER (2017-2018)
Genetics Paper I – SemesterI
(MiGC+BtGC)

Month And Number Of Teaching Days	Syllabus Proposed To Be Covered Month Wise	Remarks
June (4) classes allotted 3	UNIT I: Mendelian Inheritance- Terminology. (1 classes) UNIT II: Cell Division and Chromosome segregation- Cytoplasmic Rhythms. (2 classes)	
July (23) Classes allotted 21	UNIT I: Mendelian Inheritance- Mendelian inheritance in Man .(9 classes) UNIT II. Cell Division and Chromosome segregation- Spermatogenesis. (12 classes)	
August(20) Classes allotted 17	UNIT I: Mendelian Inheritance- X-linked pedigrees. (2 classes) UNIT II: Cell Division and Chromosome segregation. (5 classes) UNIT III: Extension to Mendelian Segregation- Variation to Dominance. (5 classes) UNIT IV:Linkage, Recombination and mapping of genes in Eukaryotes- 3-point test cross- problems.(5 classes)	
September (16) Classes allotted 15	UNIT III: Extension to Mendelian Segregation- Paramutation. (7 classes) UNIT IV: Linkage, Recombination and mapping of genes in Eukaryotes- Tetrad analysis. (8 classes)	
October (9) classes allotted 6	UNIT III: Extension to Mendelian Segregation- Self incompatibility in plants. (2 classes) UNIT III: Extension to Mendelian Segregation-Mitotic Recombination in Aspergillus. (4 Classes)	

ACADEMIC ORGANISER (2017-2018)
Genetics Paper II – SemesterII
(MiGC+BtGC)

Month And Number Of Teaching Days	Syllabus Proposed To Be Covered Month Wise	Remarks
November (18) Classes allotted 14	UNITI: Polygenes and multifactorial inheritance- Phenocopies. (6 classes) UNIT-II: Chromosome structure , chromatin organization and variation – Deletions (8 classes) .	
December (16) Classes allotted 14	UNIT I: Polygenes and multifactorial inheritance- Diabetes mellitus (6 classes) UNIT-II: Chromosome structure : chromatin organization and variation – numerical aberrations . (8 classes)	
January (17) Classes allotted 14	UNIT-II: Chromosome structure : Chromatin organization and Variation. (3 classes) UNIT III: Genetics of sex determination and sex linked inheritance- sex linked inheritance (6 classes) UNIT-IV: Recombination and mapping of genes in Bacteria and Viruses-recombination in viruses. (5 classes)	
February (18) Classes allotted 15	UNIT III: Genetics of sex determination and sex linked inheritance- PAR region in man. (7 classes) UNIT-IV: Recombination and mapping of genes in Bacteria and Viruses- Maternal Inheritance. (8 classes)	

ACADEMIC ORGANISER (2017-2018)
Genetics Paper III – SemesterIII
(MiGC+BtGC)

Month And Number Of Teaching Days	Syllabus Proposed To Be Covered Month Wise
June (14) classes allotted 11	UNIT I: Nucleic Acids- structure of mRNA. (7 classes) UNIT III : Genome organization-Organellar genomes. (4 classes)
July (23) Classes allotted 20	UNIT I: Nucleic Acids- Replication in Eukaryotes.(12 classes) UNIT III : Genome organization-Analysis of rII locus.(8 classes)
August(20) Classes allotted 19	UNIT I: Nucleic Acids. (6 classes) UNIT II: Genome Organisation- Kinetic classes . (5 classes) UNIT III: Genome organization- Intracodon recombination. (2 classes) UNIT IV: Gene Expression-Translation prokaryotes. (6 classes)
September (16) Classes allotted 15	UNIT III Genome organization- Organisation of Eukaryotic gene. (8 classes) UNIT IV: Gene Expression- Translation in Eukaryotes.(10 classes)
October (3)	

ACADEMIC ORGANISER (2017-2018)
Genetics Paper IV – SemesterIV
(MiGC+BtGC)

Month And Number Of Teaching Days	Syllabus Proposed To Be Covered Month Wise	Remarks
November (18) Classes allotted 14	UNIT-I: Regulation of Gene expression- Lytic cascade in phage. (5 classes) UNIT-III: Gene mutations- Chemical & Physical mutagens. (9 classes)	
December (16) Classes allotted 15	UNIT- I:Regulation of Gene expression- Transcription motifs.(7 classes) UNIT III: Gene mutations.(5 classes) UNIT-IV:DNA damage and repair mechanisms- Excision repair.(3 classes)	
January (17) Classes allotted 17	UNIT II:Gene regulation in higher Eukaryotes and r DNA technology- Gene expression in development of Drosophila. (8 classes) UNIT-IV:DNA damage and repair mechanisms- Bacterial Transposons. (9 classes)	
February (18) Classes allotted 18	UNIT II:Gene regulation in higher Eukaryotes and r DNA technology- genomic and cDNA libraries. (4classes + 3 extra classes) UNIT-IV:DNA damage and repair mechanisms- Transposable elements- Ty elements in Yeast . (8 classes + 3 extra classes)	

ACADEMIC ORGANISER (2017-2018)
Genetics Paper V – Semester V
(MiGC+BtGC)

Month And Number Of Teaching Days	Syllabus Proposed To Be Covered Month Wise	Remarks
June (14) Classes allotted 9	UNIT-I: Proof of Hardy Weinberg Law and graphical representation of HWE (9 classes).	
July (23) Classes allotted 13	UNIT- II: Application of HWL for X-linked loci (13 classes).	
August (20) Classes allotted 10	UNIT II: Evolutionary significance of Mutation (5 classes) UNIT-III:Selection against recessive homozygotes (5 classes).	
September(16) Classes allotted 9	UNIT III: Selection at the phenotypic level(4 classes). UNIT-IV: Extreme cases of Drift- Founder effect and Bottleneck effect (5 classes).	
October (3)	-------	

ACADEMIC ORGANISER (2017-2018)
Genetics Paper VA – Semester V
(MiGC+BtGC)

Month And Number Of Teaching Days	Syllabus Proposed To Be Covered Month Wise	Remarks
June (14) Classes allotted 8	UNIT-I: Biophysical Techniques- PCR- Principles and applications.(8 classes)	
July (23) Classes allotted 12	UNIT-I: Biophysical Techniques – Autoradiography. (3 classes) UNIT-II: Advanced Techniques in Genome Analysis – Chromosome banding.(9 classes)	
August(18) Classes allotted 8	UNIT-II: Advanced Techniques in Genome Analysis – DNA Fingerprinting. (3 classes) UNIT-III: Strategies of Gene Transfer - Engineered embryonic stem cells. (5 classes)	
September (16) Classes allotted 16	UNIT-III: Genetic Engineering of Plants – stress tolerant plants. (5 classes) UNIT IV: Genetic Engineering of Animals- transgenic mice as animal models for genetic diseases.(11 classes)	
October Classes allotted	-----	

ACADEMIC ORGANISER (2017-2018)
Genetics Paper VI – Semester VI
(MiGC+BtGC)

Month And Number Of Teaching Days	Syllabus Proposed To Be Covered Month Wise	Remarks
November (18) Classes allotted 12	UNIT-I:Inbreeding in small populations or isolates (10 classes) UNIT-II: Mass selection and Pureline selection (2 classes)	
December (16) Classes allotted 10	UNIT- II: Marker Assisted Selection and Quantitative Trait Loci (10 classes)	
January (17) Classes allotted 12	UNIT III: Criteria for selection of individual animals (12 classes).	
February (18) Classes allotted 12	UNIT-IV: Applications of Molecular Phylogenetics (12 classes).	

ACADEMIC ORGANISER (2017-2018)
Genetics Paper VIA – Semester VI
(MiGC+BtGC)

Month and Number of Teaching days	Syllabus proposed to be covered Month wise	Remarks
November(18) Classes allotted 12	UNIT I: Management of inherited Human Diseases – Prenatal diagnosis. (12 classes)	
December(16) Classes allotted 9	UNIT II: Gene Therapy, Genome projects & Bioinformatics- Bioinformatics. (9 classes)	
January (17) Classes allotted 12	UNIT III: Genetic Engineering of Industrial Products- Bioremediation. (12 classes)	
February (18) classes allotted 10	UNIT III: Genetic Engineering of Industrial Products- Xenobiotics. (3 classes) UNIT VIII: Statistical analysis in Genetics- Probability, Regression. (7 classes)	