

Semester Practical Plan

Name of the College: Government College of Arts, Science and Commerce, Sanquelim, Goa

Name of the Faculty: Mr. Mouvin Francisco Fernandes

Subject: Zoology

Paper Code: ZOO-201

Programme: B.Sc.

Course: Cell Biology and Genetics

Academic Year: 2025-2026

Semester: 3

Total Lectures: 30

- **Course Objectives:**
 - Imparting understanding of the cellular organisation
 - Understanding the genetic basis of inheritance
 - Analyze the structure and function of cells, organelles, and cellular components
 - Gain practical experience in laboratory techniques used in cell biology and genetics research
- **Course Outcomes:** At the end of the course, students will be able to:
 - Explain the cellular organization
 - Distinguish between prokaryotic and eukaryotic cells
 - Interpret the transmission of traits based on the laws of inheritance
 - Predict the outcome of monohybrid and dihybrid genetic crosses

Batch I

Sr. No.	Date	Experiment Name
1	8 July	Gram staining to observe bacteria from curd/tartar
2	15 July	Use of a suitable staining technique to mount buccal epithelial cells
3	22 July	Temporary mount of onion root tip cell to study mitotic stages
4	29 July	Use of photomicrographs/permanent slides to study meiotic stages
5	5 Aug	Study of polytene chromosomes

6	12 Aug	Study of cell organelles – Mitochondria, Endoplasmic reticulum, Golgi complex using Electron micrographs
7	19 Aug	Study of Human Karyotype – Normal Male / Female
8	2 Sep	Study of Human Karyotype – Down's syndrome/ Turner's syndrome/Cri-du-chat syndrome
9	9 Sep	Preparation of pedigree chart of tongue rolling, hitch hikers thumb, widows peak, folding of arms, clasping of hands, attached/free ear lobes
10	16 Sep	Problems of Mendelian monohybrid and dihybrid crosses using beads
11	23 Sep	Problems on multiple genes
12	30 Sep	Human Blood Grouping (Rh and ABO)
13	30 Sep	Human Blood Grouping (Rh and ABO)
14	7 Sep	Practical Exam
15	14 Sep	Practical exam