

GUJARAT TECHNOLOGICAL UNIVERSITY

Pharm.D.

1st year

Subject Name: Biology

Subject Code: 818806

Teaching Scheme (Hours)				Evaluation Scheme (Marks)				Total marks
Theory	Tutorial	Practical	Total	Theory		Practical		
				External	Internal	External	Internal	
3	1	3	7	70	30	70	30	200

Sr. No.	Course Contents	Hours	Module Weightage
Part- A			
1	Introduction	2	2%
2	General organization of plants and its inclusions	4	4.5%
3	Plant tissues	4	4.5%
4	Plant kingdom and its classification	4	4.5%
5	Morphology of plants	5	5.5%
6	Root, Stem, Leaf and Its modifications	8	9%
7	Inflorescence and Pollination of flowers	6	6.5%
8	Morphology of fruits and seeds	6	6.5%
9	Plant physiology	4	4.5%
10	Taxonomy of Leguminosae, umbelliferae, Solanaceae, Lilliaceae, Zinziberaceae, Rubiaceae	8	9%
11	Study of Fungi, Yeast, Penicillin and Bacteria	10	11%
Part- B			
1	Study of Animal cell	4	4.5%
2	Study animal tissues	4	4.5%
3	Detailed study of frog	6	6.5%
4	Study of Pisces, Raptiles, Aves	8	9%
5	Geneeral organization of mammals	4	4.5%
6	Study of poisonous animals	3	3.5%

Course Materials:

Text books

1. Text book of Biology by S.B.Gokhale b. A Text book of Biology by Dr.Thulajappa and Dr. Seetaram.

Reference books

1. A Text book of Biology by B.V.Sreenivasa Naidu
2. A Text book of Biology by Naidu and Murthy
3. Botany for Degree students By A.C.Dutta.
4. Outlines of Zoology by M.Ekambaranatha ayyer and T.N.Ananthakrishnan.
5. A manual for pharmaceutical biology practical by S.B.Gokhale and C.K.Kokate.

Pharm.D. 1st year BIOLOGY

Practical (3 Hours/ Week, 6 Credits, 90 Hours)

Sr. No.	Experiments
1	Introduction of biology experiments.
2	Study of cell wall constituents and cell inclusions.
3	Study of Stem modifications.
4	Study of Root modifications.
5	Study of Leaf modifications.
6	Identification of Fruits and seeds.
7	Preparation of Permanent slides.
8	T.S. of Senna, Cassia, Ephedra, Podophyllum.
9	Simple plant physiological experiments.
10	Identification of animals
11	Detailed study of Frog
12	Computer based tutorials \

Scheme of Practical Examination

	Internal/ Sessional	External
Identification	04	10
Synopsis	04	10
Major Experiment	07	20
Minor Experiment	03	15
Viva	02	15
Max. marks	20	70
Duration	3 hours	4 hours

Note: Total sessional marks is 30 (20 for practical sessional plus 10 marks for regularity, promptness, viva-voce and record maintenance)