



(Affiliated to ANDHRA UNIVERSITY, VISAKHAPATNAM)

**COURSE PLAN-** One copy to be submitted to the HOD one week before commencement of the Semester

Subject Code	Name of the Subject	Class/ Semester	Name of the Faculty/ Designation	No. of Students	Total periods per Semester / Year	
					Lectures	Tutorials
BP-605T	PHARMACEUTICAL BIOTECHNOLOGY (THEORY)	3-2 [Sec-B]	LVASAVI	51	46	12

Lecture No.	Topic	E.T. Gadgets used, if any (LCD/OHP/Charts/Models)	Date on which completed*
L1	Introduction to Biotechnology with reference to pharmaceutical sciences.	CHALK & TALK	3/4/24
T1	<b>Tutorial</b>	<b>Handouts</b>	4/4/24
L2	Enzyme Biotechnology- enzyme immobilization	CHALK & TALK	6/4/24
L3	Methods of applications	CHALK & TALK	8/4/24
L4	Biosensors	CHALK & TALK	10/4/24
L5	Protein engineering	CHALK & TALK	12/4/24
L6	Production of enzymes-Amylase, Carilase	CHALK & TALK	15/5/24
T2	<b>Tutorial</b>	<b>Handouts</b>	18/4/24
L7	Peroxidase, Lipase	CHALK & TALK	19/4/24
L8	Protease, Penicillinase	CHALK & TALK	20/4/24
L9	Basic principles of genetic engineering	CHALK & TALK	22/4/24
L10	Cloning vectors	CHALK & TALK	24/4/24
T3	<b>Tutorial</b>	<b>Handouts</b>	25/4/24
L11	Restriction endonucleases, DNA Ligases	CHALK & TALK	26/4/24
L12	R-DNA technology, Applications in medicine Interferon	CHALK & TALK	27/4/24
L13	Humulin	CHALK & TALK	29/4/24
L14	Hepatitis-B	CHALK & TALK	1/5/24
T4	<b>Tutorial</b>	<b>Handouts</b>	2/5/24
L15	PCR	CHALK & TALK	3/5/24
L16	Humoral Immunity, Cell-mediated Immunity	CHALK & TALK	4/5/24
L17	MHC	CHALK & TALK	6/5/24
L18	Structure of immunoglobulins	CHALK & TALK	8/5/24
T5	<b>Tutorial</b>	<b>Handouts</b>	9/5/24
L19	Immune stimulation	CHALK & TALK	10/5/24
L20	Immune suppressions	CHALK & TALK	13/5/24
L21	Method of preparation of bacterial vaccines, other products related to immunity	CHALK & TALK	17/6/24



L22	Storage and stability of official vaccines	CHALK & TALK	19/6/24
T6	<b>Tutorial</b>	<b>Handouts</b>	<b>20/6/24</b>
L23	Hybridoma technology	CHALK & TALK	21/6/24
L24	blood products, Plasma substitutes	CHALK & TALK	22/6/24
L25	Immunoblotting techniques - ELISA	CHALK & TALK	24/6/24
L26	Western blotting & Southern blotting	CHALK & TALK	26/6/24
T7	<b>Tutorial</b>	<b>Hand outs</b>	<b>27/6/24</b>
L27	Genetic organization of Eukaryotes & prokaryotes	CHALK & TALK	28/6/24
L28	Microbial genetics- transformation	CHALK & TALK	29/6/24
L29	conjugation	CHALK & TALK	1/7/24
L30	Transduction	CHALK & TALK	3/7/24
T8	<b>Tutorial</b>	<b>Hand outs</b>	<b>4/7/24</b>
L31	Plasmids & Transposons	Handouts	5/7/24
L32	Microbial biotransformations & applications	CHALK & TALK	6/7/24
L33	Mutations	CHALK & TALK	8/7/24
L34	Fermentation methods	CHALK & TALK	10/7/24
T9	<b>Tutorial</b>	<b>Handouts</b>	<b>11/7/24</b>
L35	Fermentation methods-General requirements	CHALK & TALK	12/7/24
L36	Penicillins, Vitamin B12	CHALK & TALK	15/7/24
T10	<b>Tutorial</b>	<b>Handouts</b>	<b>18/7/24</b>
L37	whole human blood,	CHALK & TALK	19/7/24
L38	Design of bioreactor	CHALK & TALK	20/7/24
L39	Dried human plasma	CHALK & TALK	22/7/24
L40	Glutamic acid	CHALK & TALK	24/7/24
T11	<b>Tutorial</b>	<b>Hand outs</b>	<b>25/7/24</b>
L41	Griseofulvin	Handouts	26/7/24
L42	Plasma substitutes	CHALK & TALK	27/7/24
L43	Media preparation	CHALK & TALK	29/7/24
L44	Design of bioreactor	CHALK & TALK	31/7/24
T12	<b>Tutorial</b>	<b>Handouts</b>	<b>1/8/24</b>
L45	citric acid	CHALK & TALK	2/8/24
L46	Revision	CHALK & TALK	3/8/24

B. Vafari

Signature of the Faculty Member

Date: 18/5/24



Signature of the Principal

Date: