



## MONAD UNIVERSITY

Estd.Under U.P. Govt. University Act 23 of 2010 & U/S 2(f) of the U.G.C. Act 1956.  
N.H.24, Delhi Hapur Road, Village & Post – Kastla, Kasmabad,  
P.O. Pilkhuwa – 245101, District Hapur (U.P.) India  
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### Lesson Plan

Program- D.Pharm

Year - I

Course DPH-111 PHARMACEUTICS-I

Session - 2020-2021

S. No.	Day	Subject	L	T	P	Total
1	D Day					
2	D+1	<b>Introduction of different dosage forms</b>	1	0	0	1
3	D+2	<b>different dosage forms</b> classification with examples-their relative applications	1	0	0	1
4	D+3	Familiarization with new drug delivery systems	1	0	0	1
5	D+4	<b>Introduction to Pharmacopoeias</b> with special reference to the Indian Pharmacopoeia.	1	0	0	1
6	D+5	Tutorial (Problem solving session/ class test)	0	1	0	1
7	D+6	<b>Metrology</b> –Systems of weights and measures	1	0	0	1
8	D+7	Calculations including conversion from one to another system	1	0	0	1
9	D+8	Percentage calculations and adjustments	1	0	0	1
10	D+9	alligation method in calculations	1	0	0	1
11	D+10	Tutorial (Problem solving session/ class test)	0	1	0	1

		<b>TOTAL</b>	8	2	0	<b>10</b>
12	D+11	isotonic solutions.	1	0	0	1
13	D+12	<b>Packing of Pharmaceuticals</b>	1	0	0	1
14	D+13	Desirable features of a container	1	0	0	1
15	D+14	Study of glass and plastics as materials for containers	1	0	0	1
16	D+15	Tutorial (Problem solving session/ class test)	0	1	0	1
17	D+16	rubber as material for closures-their merits and demerits. Introduction to aerosol packaging	1	0	0	1
18	D+17	<b>Size reduction:</b> Objectives, and factors affecting size reduction, methods of size reduction	1	0	0	1
19	D+18	Study of Hammer mill, Ball mill, Fluid Energy, Mill and Disintegrator. <b>Size separation</b> –Size separation by sifting. Official Standard for powders	1	0	0	1
20	D+19	Sedimentation methods of size separation. Construction and working of cyclone separator.	1	0	0	1
21	D+20	Tutorial (Problem solving session/ class test)	0	1	0	1
		<b>TOTAL</b>	<b>8</b>	2	0	<b>10</b>
22	D+21	<b>Mixing and Homogenization</b> –Liquid mixing and powder mixing	1	0	0	
23	D+22	Mixing of semisolids, Study of Silverson Mixer– Homogenizer	1	0	0	1
24	D+23	Planetary Mixer; Agitated powder mixer; Triple Roller Mill	1	0	0	1
25	D+24	Propeller Mixer, Colloid Mill and Hand Homogenizer. Double cone mixer.	1	0	0	1
26	D+25	Tutorial (Problem solving session/ class test)	0	1	0	1
27	D+26	<b>Clarification and Filtration</b> –Theory of filtration, Filter media;	1	0	0	1

28	D+27	Filter aids and selection of filters	1	0	0	1
29	D+28	Study of the following filtration equipment	1	0	0	1
30	D+29	Filter Press, Sintered Filters	0	1	0	1
31	D+30	Tutorial (Problem solving session/ class test)	1	0	0	
		<b>TOTAL</b>	<b>8</b>	<b>2</b>	<b>0</b>	<b>10</b>
32	D+31	Filter Candles, Meta filter	1	0	0	1
33	D+32	<b>Extraction and Galenicals</b>	1	0	0	1
34	D+33	Study of percolation and maceration and their modification	1	0	0	1
35	D+34	continuous hot extraction–Applications in the preparation of tinctures and extracts	1	0	0	1
	D+35	Tutorial (Problem solving session/ class test)	0	1	0	1
36	D+36	Introduction to Ayurvedic dosage forms.	1	0	0	1
37	D+37	<b>Heat processes Evaporation</b> –Definition Factors affecting evaporation	1	0	0	1
38	D+38	Study of evaporating still and Evaporating Pan.	1	0	0	1
39	D+39	<b>Distillation</b> –Simple distillation and Fractional distillation	1	0	0	1
40	D+40	Tutorial (Problem solving session/ class test)	0	1	0	1
		<b>TOTAL</b>	<b>8</b>	<b>2</b>	<b>0</b>	<b>10</b>
41	D+41	Steam distillation and vacuum distillation	1	0	0	1
42	D+42	Study of vacuum still, preparation of Purified Water I.P. .	1	0	0	1
43	D+43	<b>Introduction to drying processes</b>	1	0	0	1
44	D+44	Study of Tray Dryers: Fluidized Bed Dryer	1	0	0	1
45	D+45	Tutorial (Problem solving session/ class test)	0	1	0	1
46	D+46	Vacuum Dryer and Freeze Dryer	1	0	0	1
47	D+47	water for injection I.P. Construction and working of the	1	0	0	1

		still used for the same				
<b>48</b>	D+48	<b>Sterilization</b> –Concept of sterilization	1	0	0	1
<b>49</b>	D+49	<b>Sterilization</b> its differences from disinfection Thermal resistance of micro– organisms	1	0	0	1
<b>50</b>	D+50	Tutorial (Problem solving session/ class test)	0	1	0	1
		<b>TOTAL</b>	<b>8</b>	<b>2</b>	<b>0</b>	<b>10</b>

<b>51</b>	D Day					
<b>52</b>	D+51	Detailed study of the following sterilization process,	1	0	0	1
<b>53</b>	D+52	Sterilization with moist heat	1	0	0	1
<b>54</b>	D+53	Sterilization by radiation	1	0	0	1
<b>55</b>	D+54	Sterilization by radiation	1	0	0	1
<b>56</b>	D+55	Tutorial (Problem solving session/ class test)	0	1	0	1
<b>57</b>	D+56	Sterilization by filtration	1	0	0	1
<b>58</b>	D+57	Gaseous sterilization.	1	0	0	1
<b>59</b>	D+58	<b>Aseptic techniques:</b> Application of sterilization processes	1	0	0	1
<b>60</b>	D+59	hospitals particularly with reference to surgical dressings and intravenous fluids	1	0	0	1
<b>61</b>	D+60	Tutorial (Problem solving session/ class test)	0	1	0	1
		<b>TOTAL</b>	<b>8</b>	<b>2</b>	<b>0</b>	<b>10</b>
<b>62</b>	D+61	Precautions for safe and effective handling of sterilization equipment.	1	0	0	1
<b>63</b>	D+62	<b>Processing of Tablets</b>	1	0	0	1
<b>64</b>	D+63	<b>Tablets</b> -Definition; Different types of compressed tablets and their properties	1	0	0	1

<b>65</b>	D+64	Processes involved in the production of tablets	1	0	0	1
<b>66</b>	D+65	Tutorial (Problem solving session/ class test)	0	1	0	1
<b>67</b>	D+66	Tablets excipients; Defects in tablets	1	0	0	1
<b>68</b>	D+67	Evaluation of Tablets; Physical Standards including Disintegration and Dissolution	1	0	0	1
<b>69</b>	D+68	Tablet coating–sugar coating; film coating,	1	0	0	1
<b>70</b>	D+69	enteric coating and microencapsulation	1	0	0	1
<b>71</b>	D+70	Tutorial (Problem solving session/ class test)	0	1	0	1
		<b>TOTAL</b>	<b>8</b>	<b>2</b>	<b>0</b>	<b>10</b>
<b>72</b>	D+71	<b>Processing of Capsules</b> –Hard and soft gelatin capsules	1	0	0	
<b>73</b>	D+72	<b>Processing of Capsule</b> filling of capsules	1	0	0	1
<b>74</b>	D+73	handling and storage of capsules	1	0	0	1
<b>75</b>	D+74	Special applications of capsules	1	0	0	1
<b>76</b>	D+75	Tutorial (Problem solving session/ class test)	0	1	0	1
<b>77</b>	D+76	<b>Study</b> of immunological products	1	0	0	1
<b>78</b>	D+77	<b>Study</b> of immunological products like sera vaccines,	1	0	0	1
<b>79</b>	D+78	<b>Study</b> of immunological products like sera vaccines, toxoids & their preparations.	1	0	0	1
<b>80</b>	D+79	reference to surgical dressings and intravenous fluids	0	1	0	1
<b>81</b>	D+80	Tutorial (Problem solving session/ class test)	1	0	0	
		<b>TOTAL</b>	<b>8</b>	<b>2</b>	<b>0</b>	<b>10</b>



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### **Lesoon Plan**

**Program- D.Pharm**

**Semester- I**

**Course DPH-111 PHARMACEUTICS-I**

**Session - 2020-2021**

S. No.	Day	Subject	L	T	P	Total
1	D Day					
2	D+1	To Prepare and Submit 10 ml of Chloroform Water IP.	0	0	4	4
3	D+2	To Prepare and Submit 20 ml of Rose Water NF.	0	0	4	4
4	D+3	To Prepare and Submit 20 ml of Aq. Iodine Solution IP.	0	0	4	4
5	D+4	To Prepare and Submit 10 ml of Camphor Water IP.	0	0	4	
6	D+5	To Prepare and Submit 20 ml of Strong Ammonium Acetate Solution BP	0	0	4	4
7	D+6	To Prepare and Submit 20 ml of Alcoholic Iodine Solution BP.	0	0	4	4
8	D+7	To Prepare and Submit 20 ml of Aromatic Ammonia Spirit USP.	0	0	4	4
9	D+8	To Prepare and Submit 20 ml of Camphor Spirit USP.	0	0	4	4
10	D+9	To Prepare and Submit 10 gm of Salicylic acid Cream.	0	0	4	4
11	D+10	To Prepare and Submit 20 gm of Cold Cream.	0	0	4	4
			0	0	4	4
12	D+11	To Prepare and Submit 20 gm of Shampoo.	0	0	4	4

<b>13</b>	D+12	To Prepare and Submit 10 ml of compound NaCl Mouth wash.	0	0	4	4
<b>14</b>	D+13	Formulation and Evaluation of PCM/ Aspirin Tablets by Granulation techniques.	0	0	4	4
<b>15</b>	D+14	To Prepare, submit and Evaluate 5 capsules of PCM.	0	0	4	4
<b>16</b>	D+15	To Prepare and Submit 10 ml of Zinc Sulphate Eye drops BP.	0	0	4	4
<b>17</b>	D+16	To Prepare and Submit 10 ml of Sodium Chloride Eye drops BP.	0	0	4	4
<b>18</b>	D+17	Sterilization of Prepared Eye drop of Zinc Sulphate Eye drops BP and Sodium Chloride Eye drops BP by Autoclaving Method.	0	0	4	4
<b>19</b>	D+18	To Prepare and Submit 20 ml of Liquorice Liquid Extract BP.	0	0	4	4
<b>20</b>	D+19	To Prepare and Submit 20 ml of Strong Ginger Tincture BP.	0	0	4	4
<b>21</b>	D+20	To Prepare and Submit 20 ml of Iodine Tincture USP.	0	0	4	4
<b>22</b>	D+21	Preparation and Sterilization of Nutrient Broth.	0	0	4	4
<b>23</b>	D+22	Preparation of Glassware and sterilization equipment for microbiological work by Autoclaving.	0	0	4	4
<b>24</b>	D+23	To cultivate the Micro-organism in Nutrient broth medium.	0	0	4	4
<b>25</b>	D+24	To Prepare and Submit 10 ml of Sodium Chloride Eye drops BP.	0	0	4	4
<b>26</b>	D+25	Sterilization of Prepared Eye drop of Zinc Sulphate Eye drops BP and Sodium Chloride Eye drops BP by Autoclaving Method.	0	0	4	4

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## MONAD UNIVERSITY

Program- D.Pharm

year- 1<sup>st</sup> year

Course DPH-112PHARMACEUTICAL CHEMISTRY-I

Session - 2020-21

S. No.	Day	Subject	L	T	P	Total
1	D Day	<b>General discussion</b> on the following inorganic compounds including important physical and chemical properties	1	0	0	1
2	D+1	medicinal and Pharmaceutical uses, storage conditions and chemical incompatibility	1	0	0	1
3	D+2	<b>(A) Acids, bases and buffers</b> Boric acid*, Hydrochloric acid,	1	0	0	1
4	D+3	strong ammonium hydroxide	1	0	0	1
5	D+4	<b>Tutorial</b>	0	1	0	1
6	D+5	Calcium hydroxide	1	0	0	1
7	D+6	Sodium hydroxide and official buffers	1	0	0	1
8	D+7	<b>(B) Antioxidants</b> —Hypo phosphorous acid, Sulphur dioxide	1	0	0	1
9	D+8	Sodium bisulphite, Sodium Meta bisulphite,	1	0	0	1
10	D+9	Sodium thiosulphate, Nitrogen and Sodium Nitrite	1	0	0	1
11	D+10	<b>Tutorial</b>	0	1	0	1
12	D+11	<b>(C) Gastrointestinal agents—</b>	1	0	0	1



		(i) Acidifying agents Dilute hydrochloric acid				
13	D+12	(ii)Antacids-Sodium bicarbonate, Aluminium hydroxide gel	1	0	0	1
14	D+13	Aluminium Phosphate	1	0	0	1
15	D+14	Calcium carbonate Magnesium carbonate	1	0	0	1
16	D+15	Tutorial	0	1	0	1
17	D+16	Magnesium trisilicate, Magnesium oxide	1	0	0	1
18	D+17	Combinations of antacid preparations	2	0	0	1
19	D+18	Protectives and Adsorbents –Bismuth subcarbonate and Kaolin.	1	0	0	1
20	D+19	Saline Cathartics –Sodium potassium tartrate	2	0	0	1
21	D+20	Protectives and Adsorbents Magnesium sulphate.	1	0	0	1
22	D+21	Tutorial	0	1	0	1
		Total	19	4	0	23
23	D+22	General discussion on the following inorganic compounds including important physical and chemical properties, medicinal and Pharmaceutical uses, storage conditions and chemical incompatibility	1	0	0	1
24	D+23	Topical Agents- i. Protectives-Talc, Zinc Oxide, Calamine,	1	0	0	1
25	D+24	i. Zinc stearate, Titanium dioxide, Silicone polymers	1	0	0	1
26	D+25	Tutorial	0	1	0	1
27	D+26	(ii) Antimicrobials and Astringents–Hydrogen peroxide*, Potassium permanganate,	1	0	0	1
28	D+27	Chlorinated lime	1	0	0	1
29	D+28	Iodine, Solutions of Iodine, Povidone-iodine	1	0	0	1
30	D+29	Boric acid, Borax. Silver nitrate, Mild silver protein,	1	0	0	1

31	D+30	Mercury, Yellow mercuric oxide, Ammoniated mercury	1	0	0	1
32	D+31	Tutorial	0	1	0	1
33	D+32	Sulphur and its compounds–Sublimed sulphurprecipitated sulphur, selenium sulphide	1	0	0	1
34	D+33	selenium sulphide	1	0	0	1
35	D+34	Astringents:-Alum	1	0	0	1
36	D+35	Zinc Sulphate	1	0	0	1
37	D+36	Tutorial	0	1	0	1
38	D+37	<b>Dental Products–Sodium</b> Fluoride, Stannous Flouride, Calcium carbonate	1	0	0	1
39	D+38	Sodium metaphosphate, Dicalcium phosphate,	1	0	0	1
40	D+39	Strontium chloride, Zinc chloride	1	0	0	1
41	D+40	<b>(F) Inhalants–</b> Oxygen, Carbon dioxide, Nitrous oxide	1	0	0	1
42	D+41	<b>(G) Respiratory stimulants–</b> Ammonium Carbonate	1	0	0	1
43	D+42	Tutorial	0	1	0	1
44	D+43	<b>(H) Expectorants and Emetics–</b> Ammonium chloride, *Potassium iodide, Antimony potassium tartrate.	2	0	0	1
45	D+44	<b>(I) Antidotes-</b> Sodium nitrate	1	0	0	1
		<b>Total</b>	20	4		24
46	D+45	<b>Major Intra and Extracellular electrolytes-</b> (A) Electrolytes used for replacement therapy –Sodium chloride and its preparations	1	0	0	1
47	D+46	Potassium chloride and its preparations	1	0	0	1
48	D+47	Revision	1	0	0	1
49	D+48	Tutorial	0	1	0	1
50	D+49	(B) Physiological acid-base balance and electrolytes used- Sodium acetate,	1	0	0	1
51	D+50	Potassium acetate, Sodium bicarbonate injection,	1	0	0	1

52	D+51	Tutorial	0	1	0	1
53	D+52	Sodium citrate	1	0	0	1
54	D+53	Potassium citrate, Sodium lactate injection	1	0	0	1
55	D+54	Ammonium chloride and its injection.	1	0	0	1
56	D+55	(C) Combination of oral electrolyte powders and solutions cont....	1	0	0	1
57	D+56	(C) Combination of oral electrolyte powders and solutions.	1	0	0	1
58	D+57	Tutorial	0	1	0	1
59	D+58	Class test	1	0	0	1
60	D+59	<b>Inorganic Official</b> compounds of Iron	1	0	0	1
61	D+60	<b>Inorganic Official</b> compounds of Calcium Ferrous Sulfate	1	0	0	1
62	D+61	<b>Inorganic Official</b> compounds of Calcium gluconate	1	0	0	1
63	D+62	Revision	2	0	0	1
64	D+63	Class test	1	0	0	1
65	D+64	Tutorial	0	1	0	1
		Total	18	4		22
66	D+65	<b>Radio pharmaceuticals and Contrast media-</b> Radio activity-Alpha,	1	0	0	1
67	D+66	<b>Radio pharmaceuticals and Contrast media-</b> Beta and Gamma Radiations,	1	0	0	1
68	D+67	Biological effects of radiations	1	0	0	1
69	D+68	Measurement of radio activity, G. M. Counter Radio isotopes their uses, storage and precautions with special reference to the official preparations cont....	1	0	0	1
70	D+69	Tutorial	0	1	0	1

71	D+70	Measurement of radio activity, G. M. Counter Radio isotopes their uses, storage and precautions with special reference to the official preparations	1	0	0	1
72	D+71	Radio opaque Contrast media–Barium sulfate.	1	0	0	1
73	D+72	Revision	1	0	0	1
74	D+73	Quality control of Drugs and Pharmaceuticals-Importance of quality control, significant errors	1	0	0	1
75	D+74	Tutorial		1		1
76	D+75	methods used for quality control, sources of impurities in Pharmaceuticals	1	0	0	1
77	D+76	Limit tests for Arsenic, chloride	1	0	0	1
78	D+77	sulphate, Iron and Heavy metals.	1	0	0	1
79	D+78	Class test	1	0	0	1
80	D+79	Tutorial	0	1	0	1
81	D+80	Limit tests for mercury.	1	0	0	1
82	D+81	significant errors in quality control of drugs	1	0	0	1
83	D+82	Revision	2	0	0	1
84	D+83	Identification tests for cations as per Indian Pharmacopoeia	1	0	0	1
85	D+84	Identification tests for anions as per Indian Pharmacopoeia	1	0	0	1
86	D+85	Tutorial		1		1
		Total	18	4		22



**Monad University**

**Program- D.Pharm**

**year- 1<sup>st</sup> year**

**Course DPH-112P PHARMACEUTICAL CHEMISTRY-I**

**Session - 2020-21**

S. No.	Day	Subject	L	T	P	Total
1	D Day					
2	D+1	General Introduction of Glassware.	0	0	4	4
3	D+2	To perform the assay of Boric acid.	0	0	4	4
4	D+3	To perform assay of Hydrogen peroxide.	0	0	4	4
5	D+4	To perform assay of potassium iodide.	0	0	4	4
6	D+5	To perform the standardization of 0.1 N Sulphuric Acid.	0	0	4	4
7	D+6	To perform the standardization of 0.1 N Sodium Hydroxide.	0	0	4	4
8	D+7	To perform assay of sodium bicarbonate.	0	0	4	4
9	D+8	To perform assay of calcium gluconate.	0	0	4	4
10	D+9	To perform assay of Magnesium sulphate.	0	0	4	4
11	D+10	To perform assay of NaCl.	0	0	4	4
		<b>TOTAL</b>				<b>40</b>
12	D+11	To perform assay of potassium chloride.	0	0	4	4
13	D+12	To perform assay of ferrous sulphate.	0	0	4	4
14	D+13	To perform the limit test of Chloride.	0	0	4	4
15	D+14	To perform the limit test of Sulphate.	0	0	4	4
16	D+15	To perform the limit test of Iron.	0	0	4	4

<b>17</b>	D+16	To perform the limit test of Heavy Metals.	0	0	4	4
<b>18</b>	D+17	To perform the limit test of Arsenic.	0	0	4	4
<b>19</b>	D+18	To perform the Salt analysis of Unknown sample.	0	0	4	4
<b>20</b>	D+19	To perform the Salt analysis of Unknown sample.	<b>0</b>	<b>0</b>	4	4
<b>21</b>	D+20	To perform the Salt analysis of Unknown sample	<b>0</b>	<b>0</b>	4	4
<b>22</b>	D+21	To perform the Salt analysis of Unknown sample	<b>0</b>	<b>0</b>	4	4
		<b>Total</b>				<b>44</b>



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## Lesson Plan

**Program- D.Pharm**

**year- 1<sup>st</sup> year**

**Course DPH-113PHARMACOGNOSY**

**Session - 2020-21**

S. No.	Day	Subject	L	T	P	Total
1	D Day					
2	D+1	Introduction of Pharmacognosy, scope of Pharmacognosy.	1	0	0	1
3	D+2	indigenous system of medicine.	1	0	0	1
4	D+3	Various systems of classification of drugs of natural origin.	1	0	0	1
5	D+4	Adulteration and drug evaluation.	1	0	0	1
6	D+5	significance of Pharmacopoeial standards	1	0	0	1
7	D+6	Tutorial	0	1	0	1
8	D+7	Brief outline of occurrence	1	0		1
9	D+8	distribution, and outline of isolation	1	0	0	1
10	D+9	identification tests, therapeutic effects and pharmaceutical applications of alkaloids,	1	0	0	1
11	D+10	Tutorial	0	1	0	1
12	D+11	terpenoids, glycosides, volatile oils, tannins and resins.	1	0	0	1
13	D+12	<b>Occurrence, distribution, organoleptic evaluation, chemical constituents including tests wherever applicable and therapeutic efficacy of following</b>	1	0	0	1

		<b>categories of drugs.</b> (a) Laxatives: Aloes, Rhuburb, Castor oil, Ispaghula, Senna.				
<b>14</b>	D+13	Tutorial	0	1	0	1
<b>15</b>	D+14	(b) Cardiotonics-Digitalis, Arjuna.	1	0	0	1
<b>16</b>	D+15	(c) Carminatives & G.I. regulators –Umbelliferous fruits,	1	0	0	1
<b>17</b>	D+16	Coriander, Fennel, Ajowan, Cardamom Ginger	1	0	0	1
<b>18</b>	D+17	Black pepper, Asafoetida, Nutmeg, Cinnamon, Clove.	1	0	0	1
<b>19</b>	D+18	(d) Astringents–Catechu.	1	0	0	1
<b>20</b>	D+19	Tutorial	0	1	0	1
<b>21</b>	D+20	(e) Drugs acting on nervous system- Hyoscyamus, Belladonna, .	1	0	0	1
<b>22</b>	D+21	Aconite, Ashwagandha	1	0	0	1
<b>23</b>	D+22	Ephedra, Opium	1	0	0	0
<b>24</b>	D+23	Cannabis, Nux vomica	1	0	0	0
		<b>TOTAL</b>	<b>19</b>	<b>4</b>		23
<b>25</b>	D+24	(f) Antihypertensives-Rauwolfia.	1	0	0	0
<b>26</b>	D+25	(g) Antitussives-Vasaka, Tolu balsam, Tulsi.	1	0	0	1
<b>27</b>	D+26	(h) Antirheumatics-Guggul, Colchicum.	1	0	0	1
<b>28</b>	D+27	(i) Antitumour-Vinca.	1	0	0	1
<b>29</b>	D+28	Tutorial	0	1	0	1
<b>30</b>	D+29	(j) Antileprotics-Chaulmoogra Oil.	1	0	0	1
<b>31</b>	D+30	<b>Occurrence, distribution, organoleptic evaluation,</b>	1	0	0	1



		<b>chemical constituents including tests wherever applicable and therapeutic efficacy of following categories of drugs.</b> (k) Antidiabetics -Pterocarpus, Gymnema, Sylvestro.				
<b>32</b>	D+31	(l) Diuretics–Gokhru, Punarnava.	1	0	0	1
<b>33</b>	D+32	(m) Antidysentrics-Ipecacuanha.	1	0	0	1
<b>34</b>	D+33	Tutorial	0	1	0	1
<b>35</b>	D+34	(n) Antiseptics and disinfectants Benzoin, Myrrh. Nim, curcuma.	1	0	0	1
<b>36</b>	D+35	(o) Antimalarials–Cinchona.	1	0	0	1
<b>37</b>	D+36	(p) Oxytocics-Ergot.	1	0	0	1
<b>38</b>	D+37	(q) Vitamines-Shark liver Oil and Amla.	1	0	0	1
<b>39</b>	D+38	Tutorial	0	1	0	1
<b>40</b>	D+39	(r) Enzymes-Papaya, Diastase, Yeast.	1	0	0	1
<b>41</b>	D+40	(s) Perfumes and flavouring agents –Peppermint Oil, Lemon Oil, Orange Oil	1	0	<b>0</b>	1
<b>42</b>	D+41	Lemon grass Oil, Sandalwood.	1	0	0	1
<b>43</b>	D+42	(t) Pharmaceutical aids-Honey, Arachis Oil,	1	0	0	1
<b>44</b>	D+43	Starch, Kaolin, Pectin, Olive oil,	1	0	0	1
<b>45</b>	D+44	Lanolin, Beeswax, Acacia,	1	0	0	1
<b>46</b>	D+45	Tutorial	0	1	0	1
		<b>TOTAL</b>	<b>18</b>	<b>4</b>		<b>22</b>
<b>47</b>	D+46	Tragacanth, Sodium alginate	1	0	0	1
<b>48</b>	D+47	Agar, Guar gum, Gelatin.	1	0	0	1

<b>49</b>	D+48	(u) Miscellaneous–Liquorice, Garlic,	1	0	0	1
<b>50</b>	D+49	Picrorhiza, Dioscorea,	1	0	0	1
<b>51</b>	D+50	Linseed, Shatavari,	1	0	0	1
<b>52</b>	D+50	Shankhapusphi, Pyrethrum, Tobacco.	1	0	0	1
<b>53</b>	D+51	<b>Tutorial</b>	0	1	0	1
<b>54</b>	D+52	Collection and preparation of crude drug for the market as exemplified by Ergot, opium, Rauwolfia, Digitalis, Senna.	1	0	0	1
<b>55</b>	D+53	Study of source, preparation and identification of fibres.....	1	0	0	1
<b>56</b>	D+53	used in sutures and surgical dressings—cotton, silk,	1	0	0	1
<b>57</b>	D+54	wool and regenerated fibre.	1	0	0	1
<b>58</b>	D+55	<b>Tutorial</b>	0	1	0	1
<b>59</b>	D+56	Gross anatomical studies of Senna, Datura,	1	0	0	1
<b>60</b>	D+57	Cinnamon, Cinchona,	1	0	0	1
<b>61</b>	D+58	Fennel, Clove, Ginger, Nux vomica	1	0	0	1
<b>62</b>	D+59	Ipecacuanha.	1	0	<b>0</b>	1

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## Lesson Plan

**Program- D.Pharm**

**year- 1<sup>st</sup> year**

**Course DPH-113 PHARMACOGNOSY**

**Session - 2020-21**

S. No.	Day	Subject	L	T	P	Total
1	D Day	To study the parts of compound microscope.	0	0	0	0
2	D+1	To study the morphology of Rauwolfia and Vinca.	0	0	4	4
3	D+2	To study the morphology of Coriander and Fennel.	0	0	4	4
4	D+3	To study the morphorlogy of Rhubarb and Isphagula.	0	0	4	4
5	D+4	To study the morphology of Ashwagandha and Nux-vomica.	0	0	4	4
6	D+5	To study the morphology of Gokhru and Black pepper.	0	0	4	4
7	D+6	To study the morphology of Aloe and Castor oil.	0	0	4	4
8	D+7	To study the morphology of Clove and Ginger.	0	0	4	4
9	D+8	To perform the identification tests for alkaloids.	0	0	4	4
10	D+9	To study the morphology of Tulsi and Neem.	0	0	4	4
11	D+10	To study the morphology of Guggul and Amla.	0	0	4	4
		<b>TOTAL</b>				<b>40</b>
12	D+11	To study the transverse section of Clove.	0	0	4	<b>4</b>
13	D+12	To study the microscopy of Datura leaf.	0	0	4	4
14	D+13	To study the transverse section of Fennel.	0	0	4	4

15	D+14	To study the transverse section of Senna leaf.	0	0	4	4
16	D+15	To study the transverse section of Nux-vomica seed.	0	0	4	4
17	D+16	To study the transverse section of Ipecacuanha.	0	0	4	4
18	D+17	To study the morphorlogy of Senna and Belladona.	0	0	4	4
19	D+18	To study the morphorlogy of Ipecac and Punarnava.	0	0	4	4
20	D+19	To study the morphorlogy of Shatavari and Shankhpushpi.	0	0	4	4
21	D+20	To study the morphorlogy of Digitalis and Arjuna.	0	0	4	4
22	D+21	To study the morphorlogy of Datura and Liquorice.	0	0	4	4
23	D+22	To perform the identification tests for starch, tragacanth and agar.	0	0	4	4
24	D+23	To study the various types of calcium oxalate crystals in powdered drug.i.e. Liquorice& Rhubarb.	0	0	4	4
25	D+24	To study the morphological and microscopical (powder) characters of Liquorice along with its chemical test.	0	0	4	4
26	D+25	To study the morphological and microscopical (powder) characters of Rhubarb along with its chemical test.	0	0	4	4
27	D+26	To determine the swelling index of Isabgol seeds.	0	0	4	4
28	D+27	To determine the ash value, total ash for given plant sample-Cinchona.	0	0	4	4
29	D+28	To determine the LOD (Loss on Drying) for given powder sample i.e. Coriander and Liquorice.	0	0	4	4
<b>TOTAL</b>						<b>72</b>

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### **Lesson plan**

**Program- DIPLOMA IN PHARMACY**

**Course- BIOCHEMISTRY AND CLINICAL PATHOLOGY**

**Course Code- DPH-114T**

**Session- 2020-2021**

S. No.	Day	Subject	L	T	P	Total
1	D Day					
2	D+1	Introduction about biochemistry	1	0	0	1
3	D+2	Chemistry of proteins and qualitative test for proteins	1	0	0	1
4	D+3	Role and functions of proteins and its deficiency diseases	1	0	0	1
5	D+4	Role and functions of proteins and its deficiency diseases	1	0	0	1
6	D+5	Problem Solving Session/ class test	0	1	0	1
7	D+6	Chemistry of polypeptides and amino acids	1	0	0	1
8	D+7	Classification of amino acids and polypeptides	1	0	0	1
9	D+8	Qualitative tests of amino acids	1	0	0	1
10	D+9	Deficiency Diseases of amino acids and polypeptides	1	0	0	1
11	D+10	Problem Solving Session/ class test	0	1	0	1
12	D+11	Chemistry of carbohydrates	1	0	0	1
13	D+12	Role of carbohydrates	1	0	0	1

14	D+13	Qualitative tests for carbohydrates	1	0	0	1
15	D+14	Diseases related to carbohydrates metabolism	1	0	0	1
16	D+15	Problem Solving Session/ class test	0	1	0	1
17	D+16	Classification of carbohydrates	1	0	0	1
18	D+17	Diseases related to deficiency of amino acids	1	0	0	1
19	D+18	Chemistry of amino acids	1	0	0	1
20	D+19	Chemistry of polypeptides	1	0	0	1
21	D+20	Qualitatively test for carbohydrates	1	0	0	1
22	D+21	Problem Solving Session/class test	0	1	0	1
		TOTAL	17	04	0	21
23	D+22	Chemistry of lipids	1	0	0	1
24	D+23	Role of lipids	1	0	0	1
25	D+24	Classification of lipids	1	0	0	1
26	D+25	Problem Solving Session/ class test	0	1	0	1
27	D+26	Diseases related to lipid metabolism	1	0	0	1
28	D+27	Qualitative test for lipids	1	0	0	1
29	D+28	Qualitative test for lipids	1	0	0	1
30	D+29	Important and function of lipids	1	0	0	1
31	D+30	Problem Solving Session/ class test	0	1	0	1

S. No.	Day	Subject	L	T	P	Total
32	D Day					
33	D+31	chemistry of Vitamins	1	0	0	1
34	D+32	Problem Solving Session/ class test	0	1	0	1
35	D+33	Importance and function of Vitamins	1	0	0	1
36	D+34	Important types of vitamin body required balance diet	1	0	0	1
37	D+35	Problem Solving Session/ class test	0	1	0	1
38	D+36	Chemistry of Coenzymes	1	0	0	1
39	D+37	Importance of Coenzymes	1	0	0	1
40	D+38	Functions of Coenzymes	1	0	0	1
41	D+39	Role of Vitamins	1	0	0	1
42	D+40	Problem Solving Session/ class test	0	1	0	1
43	D+41	Role of minerals in life processes	1	0	0	1
44	D+42	Classification of minerals	1	0	0	1
45	D+43	Functions of minerals and its uses	1	0	0	1
46	D+44	Importance of water and its resources	1	0	0	1
47	D+45	Problem Solving Session/ class test	0	1	0	1
48	D+46	Functions of Water	1	0	0	1

<b>49</b>	D+47	Role of Water in life processes	1	0	0	1
<b>50</b>	D+48	Problem Solving Session/ class test	0	1	0	1
		TOTAL	20	07	0	27

<b>S. No.</b>	<b>Day</b>	<b>Subject</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>Total</b>
<b>51</b>	D Day					
<b>52</b>	D+49	Enzymes and its types	1	0	0	1
<b>53</b>	D+50	Functions of enzymes	1	0	0	1
<b>54</b>	D+51	Factor affecting enzymatic action	1	0	0	1
<b>55</b>	D+52	Therapeutic and pharmaceutical importance of enzymes	1	0	0	1
<b>56</b>	D+53	Problem Solving Session/ class test	0	1	0	1
<b>57</b>	D+54	Concept of normal and abnormal metabolism of proteins	1	0	0	1
<b>58</b>	D+55	Concept of Metabolism of Carbohydrates	1	0	0	1
<b>59</b>	D+56	Concept of Metabolism of Lipids	1	0	0	1
<b>60</b>	D+57	Importance of balance diet	1	0	0	1
<b>61</b>	D+58	Problem Solving Session/ class test	0	1	0	1
		TOTAL	08	2	0	10
<b>62</b>	D+59	Introduction, pathology of blood	1	0	0	1
<b>63</b>	D+60	Introduction and pathology of urine	1	0	0	1
<b>64</b>	D+61	Lymphocytes their role in health and disease	1	0	0	1
<b>65</b>	D+62	Platelets their role in health and disease	1	0	0	1
<b>66</b>	D+63	Problem Solving Session/ class test	0	1	0	1
<b>67</b>	D+64	Function of erythrocytes	1	0	0	1
<b>68</b>	D+65	Erythrocytes abnormal cells and their significance	1	0	0	1
<b>69</b>	D+66	Concept of abnormal constituents of urine and their significance in diseases.	1	0	0	1
<b>70</b>	D+67	Erythrocytes importance and function	1	0	0	1
<b>71</b>	D+68	Problem Solving Session/ class test	0	1	0	1
		TOTAL	08	2	0	10

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### Lesson plan

**Program- DIPLOMA OF PHARMACY**

**D.Pharma- Ist Year**

**Course- BIOCHEMISTRY AND CLINICAL PATHOLOGY**

**Course Code- DPH-114**

**Session- 2020-2021**

S. No.	Day	Subject	L	T	P	Total
1	D Day					
2	D+1	To determine the identification test for carbohydrate (Glucose).	0	0	4	4
3	D+2	To determine the identification test for carbohydrate (fructose).	0	0	4	4
4	D+3	To determine the identification test for protein.	0	0	4	4
5	D+4	To determine the identification test for lipid (Paraffin oil)	0	0	4	4
6	D+5	To determine the identification test for lipid (peppermint oil).	0	0	4	4
7	D+6	To determine the identification test for carbohydrates in unknown solution.	0	0	4	4
8	D+7	To perform physical test for urine.	0	0	4	4
9	D+8	To identify the normal inorganic constituents in the urine.	0	0	4	4
10	D+9	To identify the normal organic constituents in the urine.	0	0	4	4
11	D+10	To perform the qualitative test for abnormal constituents in the urine.	0	0	4	4
12	D+11	To analyze the sample of saliva.	0	0	4	4
13	D+12	To calculate the Rf value to given amino acid by the thin layer chromatography.	0	0	4	4
	D+12	To perform the identification test for the given sample.				



<b>16</b>	D+15	To perform the chemical and physical test for cholesterol ( stearic acid ).	0	0	4	4
<b>17</b>	D+ 17	To perform the identification test for the given lipid sample ( Bee Wax).	0	0	4	4
<b>18</b>	D+18	To perform the study of estimation of glucose in the blood.	0	0	4	4
<b>19</b>	D+19	To perform the study of determination of creatinine in the blood.	0	0	4	4
<b>20</b>	D+20	To perform the identification test for carbohydrates (Dextrose).	0	0	4	4
<b>21</b>	D+21	To perform the practice in injecting the drug by I.V and I.M.	0	0	4	4
		<b>TOTAL</b>	0	0	84	84

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### **Lesson Plan**

**Program:- D.Pharm**

**Year :- 1<sup>st</sup> year**

**Course:- HUMAN ANATOMY AND PHYSIOLOGY**

**Course code (DPH-115)**

**Session:- 2020-21**

S. No.	Day	Subject	L	T	P	Total
1	D Day					
2	D+1	Scope of Anatomy and Physiology.	1	0	0	1
3	D+2	Definition of various terms used in anatomy.	1	0	0	1
4	D+3	Structure and functions of cell.	1	0	0	1
5	D+4	Cell Membrane	1	0	0	1
6	D+5	Cell organelles	1	0	0	1
7	D+6	Tutorial	0	1	0	1
8	D+7	Structure of cytoplasm and nucleus.	1	0		1
9	D+8	Structure and function of mitochondria and golgi complex.	1	0	0	1
10	D+9	Structure and functions of lysosomes and ribosomes	1	0	0	1
11	D+10	Tutorial	0	1	0	1

12	D+11	Difference between prokaryotic and eukaryotic cell	1	0	0	1
13	D+12	<b>Elementary tissues of the body</b>	1	0	0	1
14	D+13	Tutorial	0	1	0	1
15	D+14	Epithelial tissue	1	0	0	1
16	D+15	Muscular tissue,	1	0	0	1
17	D+16	Connective tissue,	1	0	0	1
18	D+17	Nervous tissue	1	0	0	1
19	D+18	Structure and function of skeleton.	1	0	0	1
20	D+19	Tutorial	0	1	0	1
21	D+20	Classification of joints	1	0	0	1
22	D+21	Functions of joints	1	0	0	1
23	D+22	Joint disorders	1	0	0	0
		<b>TOTAL</b>	<b>18</b>	<b>4</b>		22
24	D+23	<b>Description about blood</b>	1	0	0	0
25	D+24	Composition of blood	1	0	0	1
26	D+25	RBC, WBC and Platelets	1	0	0	1
27	D+26	Functions of blood elements.	1	0	0	1
28	D+27	<b>Tutorial</b>	0	1	0	1
29	D+28	Blood group.	1	0	0	1
30	D+29	Coagulation of blood	1	0	0	1
31	D+30	Brief information regarding disorders of blood	1	0	0	1
32	D+31	Name of lymph glands	1	0	0	1
33	D+32	Tutorial	0	1	0	1
34	D+33	Functions of lymph glands	1	0	0	1
35	D+34	Structure of various parts of heart	1	0	0	1
36	D+35	Functions of various parts of heart	1	0	0	1
37	D+36	Arterial system of heart with reference to name of main arteries	1	0	0	1

38	D+37	Tutorial	0	1	0	1
39	D+38	Venous system of heart with reference to name of main veins	1	0	0	1
40	D+39	Blood pressure and its recording	1	0	0	1
41	D+40	Brief information about cardiovascular disorders	1	0	0	1
42	D+41	Cardiovascular disorders	1	0	0	1
43	D+42	<b>Various parts of respiratory system and their functions</b>	1	0	0	1
44	D+43	Structure and functions of respiratory tract	1	0	0	1
45	D+44	Tutorial	0	1	0	1
46	D+45	Class test	1	0	0	1
47	D+46	Physiology of respiration	1	0	0	1
		<b>TOTAL</b>	<b>20</b>	<b>4</b>		<b>24</b>
48	D+47	Urinary system	1	0	0	1
49	D+48	<b>Various parts of urinary system and their functions</b>	1	0	0	1
50	D+49	Structure and function of kidney	1	0	0	1
51	D+50	Physiology of urine formation	1	0	0	1
52	D+51	<b>Tutorial</b>	0	1	0	1
53	D+52	Pathophysiology of renal diseases	1	0	0	1
54	D+53	Pathophysiology of edema	1	0	0	1
55	D+54	Class test	1	0	0	1
56	D+55	<b>Structure of skeletal muscle</b>	1	0	0	1
57	D+56	<b>Tutorial</b>	0	1	0	1
58	D+57	Physiology of muscle contraction	1	0	0	1
59	D+58	Names and position of various skeletal muscles	1	0	0	1
60	D+59	Class test	1	0	0	1
61	D+60	Attachment and functions of various skeletal muscles	1	0	0	1
62	D+61	<b>Tutorial</b>	0	1	0	1

63	D+62	Physiology of neuromuscular junction	1	0	0	1
64	D+63	<b>Various parts of central nervous system</b>	1	0	0	1
65	D+64	Brain and its parts	1	0	0	1
66	D+65	Class test	1	0	0	1
67	D+66	Functions and reflex action	1	0	0	1
68	D+67	Anatomy and physiology of autonomic nervous system	1	0	0	1
69	D+68	<b>Tutorial</b>	0	1	0	1
		Total	18	4		22
70	D+69	<b>Elementary knowledge of structure and functions of the organs of taste and smell</b>	1	0	0	1
71	D+70	Structure and functions of the organs of ear, eye and skin continue...	1	0	0	1
72	D+71	Structure and functions of the organs of ear, eye and skin	1	0	0	1
73	D+72	Physiology of pain	1	0	0	1

74	D+73	<b>Tutorial</b>	0	1	0	1
75	D+74	<b>Digestive system</b>	1	0	0	1
76	D+75	Names of various parts of digestive system and their functions	1	0	0	1
77	D+76	Class test	1	0	0	1
78	D+77	Structure and functions of liver	1	0	0	1
79	D+78	<b>Tutorial</b>	0	1	0	1
80	D+79	Physiology of digestion	1	0	0	1
81	D+80	And physiology of absorption	1	0	0	1
82	D+81	Class test	1	0	0	1
83	D+82	<b>Endocrine glands and hormones. location of glands</b>	1	0	0	1
84	D+83	Location and functions of pituitary gland	1	0	0	1

85	D+84	Tutorial	0	1	0	1
86	D+85	Class test	1	0	0	1
87	D+86	Location and function of thyroid gland and its hormones	1	0	0	1
88	D+87	Location and functions of adrenal gland	1	0	0	1
89	D+88	Location and functions of Pancreas and its hormones	1	0	0	1
90	D+89	Tutorial	0	1	0	1
91	D+90	<b>Reproductive system-</b> Anatomy and Physiology of Reproductive system continue...	1	0	0	1
92	D+91	Anatomy and physiology of reproductive system	1	0	0	1
93	D+92	Tutorial	0	1	0	1
		Total	19	5		24

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### **Lesson plan**

#### **Program- D.Pharm**

**year- 1st year**

**Course code DPH-115-P**

**Course name HUMAN ANATOMY AND PHYSIOLOGY**

#### **Session - 2020-21**

S. No.	Day	Subject	L	T	P	Total
1	D Day	To study the human skeleton system with the help of charts and models.	0	0	0	0
2	D+1	To study the compound microscope.	0	0	4	4
3	D+2	To find the bleeding time of our own sample.	0	0	4	4
4	D+3	To find the clotting time of our own sample.	0	0	4	4
5	D+4	To determine the blood pressure of a person.	0	0	4	4
6	D+5	To estimate the own body temperature.	0	0	4	4
7	D+6	To record the pulse rate.	0	0	4	4
8	D+7	To determine the amount of haemoglobin in human blood sample.	0	0	4	4
9	D+8	To count the RBCs in our own blood sample by haemocytometer.	0	0	4	4
10	D+9	To count the WBCs in our own blood sample.	0	0	4	4
11	D+10	To study the blood glucose level with the help of glucometer.	0	0	4	4

		<b>TOTAL</b>				<b>44</b>
<b>13</b>	D+12	To study the respiratory system.	0	0	4	4
<b>14</b>	D+13	To study the Nervous system.	0	0	4	4
<b>15</b>	D+14	To study the digestive system.	0	0	4	4
<b>16</b>	D+15	To study the cardiovascular system.	0	0	4	4
<b>17</b>	D+16	To study the urinary system.	0	0	4	4
<b>18</b>	D+17	To study the special sense organs (Ear & Eye).	0	0	4	4
<b>19</b>	D+18	To study smooth muscle with the help of microscope .	0	0	4	4
<b>20</b>	D+19	To study cardiac muscle with the help of microscope.	0	0	4	4
<b>21</b>	D+20	To study the nervous and muscular tissue with the help of microscope.	0	0	4	4
<b>22</b>	D+21	To study the Epithelial and connective tissue with the help of microscope.	0	0	4	4
<b>23</b>	D+22	To study the histology of taste buds and salivary glands.	0	0	4	4
<b>24</b>	D+23	To study the histology of endocrine glands.	0	0	4	4
		<b>TOTAL</b>				<b>48</b>

Signature faculty





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### Lesson Plan

**Program-DIPLOMA IN PHARMACY**

**Year - 1<sup>st</sup>yr**

**Course Code-DPH116T**

**Course-HEALTH EDUCATION & COMMUNITY PHARMACY**

**Session-2020-21**

S. No.	Day	Subject	L	T	Total
1	D+1	Definition of physical health, mental health, social health, spiritual health	1	0	1
2	D+2	Determinants of health, indicators of health	1	0	1
3	D+3	Concept of disease	1	0	1
4	D+4	Discussion Session/ Revision/Class Test	0	1	1
5	D+5	Natural history of diseases	1	0	1
6	D+6	The disease agents	1	0	1
7	D+7	Concept of prevention of diseases	1	0	1
8	D+8	Discussion Session/ Revision/Class Test	0	1	1
9	D+9	Classification of foods requirements	1	0	1
10	D+10	Disease induced due to deficiency of Proteins	1	0	1
11	D+11	Disease induced due to deficiency of Vitamins	1	0	1
12	D+12	Discussion Session/ Revision/Class Test	0	1	1
13	D+13	Disease induced due to deficiency of minerals	1	0	1
14	D+14	Treatment and prevention	1	0	1
15	D+15	Treatment and prevention	1	0	1
16		<b>TOTAL CLASS</b>	<b>12</b>	<b>3</b>	<b>15</b>
17	D+16	Discussion Session/ Revision/Class Test	0	1	1
18	D+17	Demography cycle, fertility, family planning	1	0	1
19	D+18	Contraceptive methods	1	0	1
20	D+19	Behavioral methods	1	0	1
21	D+20	Discussion Session/ Revision/Class Test	0	1	1
22	D+21	Natural family planning method	1	0	1
23	D+22	Hormonal contraceptives	1	0	1
24	D+23	Emergency treatment in shock, snake-bite, burns poisoning, heart disease	1	0	1

25	D+24	Discussion Session/ Revision/Class Test	0	1	1
26	D+25	Fractures and resuscitation methods	1	0	1
27	D+26	Sources of water supply, water pollution, purification of water, health and air	1	0	1
28	D+27	Noise light–solid waste disposal and control –medical entomology	1	0	1
29	D+28	Discussion Session/ Revision/Class Test	0	1	1
30	D+29	Arthropod borne diseases and their control	1	0	1
31	D+ 30	Rodents, animals and diseases	1	0	1
32	D+31	Chemical method, mechanical methods	1	0	1
33	D+32	Elements of minor surgery and dressings	1	0	1
34	D+33	Discussion Session/ Revision/Class Test	0	1	1
35	D+34	Population problem of India	1	0	1
36	D+35	Discussion Session/ Revision/Class Test	0	1	1
37		<b>Total Class</b>	<b>14</b>	<b>6</b>	<b>20</b>
38	D+36	Fundamental principles of microbiology classification of microbes	1	0	1
39	D+37	isolation, staining techniques of organisms of common diseases	1	0	1
40	D+38	Communicable diseases,Causative agents	1	0	1
41	D+39	Discussion Session/ Revision/Class Test	0	1	1
42	D+40	Modes of transmission and prevention	1	0	1
43	D+41	Respiratory infections—Chicken pox, measles	1	0	1
44	D+42	Influenza, diphtheria, whooping cough, Tuberculosis	1	0	1
45	D+43	Discussion Session/ Revision/Class Test	0	1	1
46	D+44	Arthropod borne infections –plague, Malaria, Filariasis	1	0	1
47	D+45	Surface infections –Rabies, Trachoma, Tetanus, and Leprosy	1	0	1
48	D+46	Sexually transmitted diseases –Syphilis. Gonorrhoea. AIDS	1	0	1
49	D+47	Discussion Session/ Revision/Class Test	0	1	1
50	D+48	Typhoid, Food poisoning, Hookworm infection.	1	0	1
51		Total Class	<b>10</b>	<b>3</b>	<b>13</b>
52	D+49	Non-communicable diseases –Causative agents, prevention, care and control	1	0	1
53	D+50	Cancer, Diabetes, Blindness	1	0	1
54	D+51	Cardiovascular diseases	1	0	1
55	D+52	Discussion Session/ Revision/Class Test	0	1	1

<b>56</b>	D+53	Epidemiology– Its scope, methods, uses, and dynamics of disease transmission	1	0	1
<b>57</b>	D+54	Immunity and immunization	1	0	1
<b>58</b>	D+55	Immunological products and their dose schedule	1	0	1
<b>59</b>	D+56	Discussion Session/ Revision/Class Test	0	1	1
<b>60</b>	D+57	Principles of disease control and prevention, hospital acquired infection, prevention and control	1	0	1
<b>61</b>	D+58	Disinfection, types of disinfection, disinfection procedures, for faeces, urine, sputum	1	0	<b>1</b>
<b>62</b>	D+59	Room linen, dead –bodies, instruments	1	0	1
<b>63</b>	D+60	Discussion Session/ Revision/Class Test	0	1	1
<b>64</b>		<b>Total Class</b>	<b>9</b>	<b>3</b>	<b>12</b>

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### **Lesson Plan**

**Program- D.Pharm**

**year- 2<sup>nd</sup> year**

**Course DPH-211 PHARMACEUTICS-II**

**Session - 2020-21**

S. No.	Day	Subject	L	T	P	Total
1	D Day	<b>1. Dispensing Pharmacy:</b> (i) <b>Prescriptions</b> –Reading and understanding of prescription;	1	0	0	1
2	D+1	Latin terms commonly used (Detailed study is not necessary),	1	0	0	1
3	D+2	Modern methods of prescribing,	1	0	0	1
4	D+3	adoption of metric system.	1	0	0	1
5	D+4	Calculations involved in dispensing.	1	0	0	1
6	D+5	(ii) <b>Incompatibilities in Prescriptions</b> –Study of various types of incompatibilities –physical, chemical	1	0	0	1
7	D+6	<b>Tutorial</b>	0	1	0	1
8	D+7	and therapeutic.	1	0	0	1
9	D+8	(iii) <b>Posology</b> —Dose and Dosage of drugs, Factors influencing dose,	1	0	0	1
10	D+9	Calculations of doses on the basis of age sex and surface area. Veterinary doses.	1	0	0	1
11	D+10	<b>2. Dispensed Medications:</b> (Note: A detailed study of the following dispensed	1	0	0	1

		<b>medication is necessary. Methods of preparation with theoretical and practical aspects, use of appropriate containers and closures. Special labelling requirements and storage conditions should be high –lighted).</b>				
<b>12</b>	D+11	<b>Tutorial</b>	0	1	0	1
<b>13</b>	D+12	<b>(i) Powders</b> –Types of powders –Advantages and disadvantages of powders, Granules, Cachets	1	0	0	1
<b>14</b>	D+13	and Tablet triturates.	1	0	0	1
<b>15</b>	D+14	Preparation of different types of powders encountered in prescriptions.	1	0	0	1
<b>16</b>	D+15	Weighing methods, possible errors in weighing,	1	0	0	1
<b>17</b>	D+16	minimum weighable amounts and weighing of material below the minimum weighable amount,	1	0	0	1
<b>18</b>	D+17	<b>Tutorial</b>	0	1	0	1
<b>19</b>	D+18	geometric dilution and proper usage and care of dispensing <b>balance.</b>	1	0	0	1
<b>20</b>	D+19	<b>(ii) Liquid Oral Dosage Forms:</b> <b>(a). Monophasic</b> –Theoretical aspects including commonly used vehicles, essential adjuvant like stabilizers,	1	0	0	1
<b>21</b>	D+20	, colourants and flavours, with examples.	1	0	0	1
<b>22</b>	D+21	<b>Tutorial</b>	0	1	0	<b>0</b>
<b>23</b>	D+22	Review of the following monophasic liquids with details of formulation and practical methods. <ul style="list-style-type: none"><li>Liquids for internal administration</li></ul>	1	0	0	1
<b>24</b>	D+23	<ul style="list-style-type: none"><li>Liquids for external administration or used on mucus membranes.</li></ul>	1	0	0	1
<b>25</b>	D+24	<ul style="list-style-type: none"><li>Mixtures and concentrates</li><li>Gargles</li></ul>	1	0	0	1
<b>26</b>	D+25	<ul style="list-style-type: none"><li>Syrups</li><li>Mouth washes Throat –paints Douches</li></ul>	1	0	0	1
<b>27</b>	D+27	<b>Tutorial</b>	0	1	0	1
<b>28</b>	D+28	<ul style="list-style-type: none"><li>Elixirs</li></ul>	1	0	0	1

29	D+29	• Ear Drops Nasal drops & Sprays Liniments, Lotions.	1	0	0	1
30	D+30	<b>(b) Biphasic Liquid Dosage Forms:</b> <b>(i) Suspension (elementary study)-</b> Suspensions containing diffusible solids	1	0	0	1
31	D+31	and liquids and their preparations.	1	0	0	1
32	D+32	Tutorial	0	1	0	1
33	D+33	Study of the adjuvants used like thickening agents, wetting agents,	1	0	0	1
34	D+34	their necessity and quantity to be incorporated.	1	0	0	1
35	D+35	Suspensions of precipitate forming liquids like, tinctures, their preparations and stability.	1	0	0	1
36	D+36	Suspensions produced by chemical reaction	1	0	0	1
37	D+37	Tutorial	0	1	0	1
38	D+38	An introduction to flocculated, non-flocculated suspension system.	1	0	0	1
39	D+39	<b>(b) Biphasic Liquid Dosage Forms:</b> <b>(ii) Emulsions</b> –Types of emulsions, identification of emulsion system,	1	0	0	1
40	D+40	formulation of emulsions, selection of emulsifying agents.	1	0	0	1
41	D+41	Instabilities in emulsions. Preservation of emulsions.	1	0	0	1
42	D+42	Tutorial	0	1	0	1
43	D+43	<b>(iii) Semi –Solid Dosage Forms:</b>	1	0	0	1
44	D+44	<b>(a) Ointments</b> –Types of ointments, classification and selection of dermatological vehicles.	1	0	0	1
45	D+45	Preparation and stability of ointments by the following processes: (i) Trituration (ii) Fusion	1	0	0	1
46	D+46	(iii) Chemical reaction (iv) Emulsification.	1	0	0	1
47	D+47	<b>Total</b>	<b>38</b>	<b>8</b>		<b>46</b>
48	D+48	<b>(b) Pastes---</b> Difference between ointments and pastes, bases of pastes.	1	0	0	1
49	D+49	Preparation of pastes and their preservation.	1	0	0	1

50	D+50	(c) <b>Jellies</b> –An introduction to the different types of jellies	1	0	0	1
51	D+51	and their preparation.	1	0	0	1
52	D+52	<b>Tutorial</b>	0	1	0	1
53	D+53	(d) <b>An elementary study of poultice.</b>	1	0	0	1
54	D+54	(e) <b>Suppositories and pessaries</b> –Their relative merits and demerits,	1	0	0	1
55	D+55	types of suppositories,	1	0	0	1
56	D+56	<b>Tutorial</b>	0	1	0	1
57	D+57	suppository bases, classification, properties,	1	0	0	1
58	D+58	Preparation and packing of suppositories.	1	0	0	1
59	D+59	Use of suppositories for drug absorption	1	0	0	1
60	D+60	<b>Tutorial</b>	0	1	0	1
61	D+61	(iv) <b>Dental and Cosmetic Preparations:</b> Introduction to Dentrifices,	1	0	0	1
62	D+62	Facial cosmetics,	1	0	0	1
63	D+63	Deodorants, Antiperspirants, Shampoos,	1	0	0	1
64	D+64	Hair dressing and Hair removers.	1	0	0	1
65	D+65	(v) <b>Sterile Dosage Forms:</b>	1	0	0	1
66	D+66	<b>Tutorial</b>	0	1	0	1
67	D+67	(a) <b>Parenteral dosage forms</b> —Definitions	1	0	0	1
68	D+68	, General requirements for parenteral dosage forms.	1	0	0	1
69	D+69	Types of parenteral formulations,	1	0	0	1
70	D+70	vehicles, adjuvants, processing,	1	0	0	1
71	D+71	personnel, facilities and Quality control.	1	0	0	1
72	D+72	<b>Tutorial</b>	0	1	0	1
73	D+73	Preparation of Intravenous fluids and admixtures –	1	0	0	1
74	D+74	Total parenteral nutrition, Dialysis fluids.	1	0	0	1

<b>75</b>	D+75	<b>(b) Sterility testing, particulate matter monitoring –</b> Faulty seal packaging.	1	0	0	1
<b>76</b>	D+76	<b>(c) Ophthalmic Products –</b> Study of essential characteristics of different ophthalmic preparations.	1	0	0	1
		<b>Total</b>	<b>24</b>	<b>5</b>		<b>29</b>

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### Lesson Plan

Program- D.Pharm

year- 2<sup>nd</sup> year

Course DPH-211 P PHARMACEUTICS-II

Session - 2020-21

S. No.	Day	Subject	L	T	P	Total
1	D Day					
2	D+1	To prepare & submit 20 ml of Simple Syrup.	0	0	4	4
3	D+2	To prepare 20 gm of Zinc Oxide and Starch Dusting powder.	0	0	4	4
4	D+3	To prepare and pack 20 gm of Talc dusting powder.	0	0	4	4
5	D+4	To prepare and pack 20 gm of Kaolin Powder.	0	0	4	4
6	D+5	To prepare & pack 20 ml of Pottasium Permagnate gargles.	0	0	4	4
7	D+6	To prepare & submit 20ml Mouth Wash.	0	0	4	4
8	D+7	To prepare & submit 20ml of Magnesium Sulphate Oral Suspension.	0	0	4	4
9	D+8	To prepare & submit 20ml of Calamine Lotion.	0	0	4	4
10	D+9	To prepare & submit 20ml of Milk of Magnesia suspension.	0	0	4	4
11	D+10	To prepare & submit 20ml of Calamine lotion.	0	0	4	4
		<b>Total</b>				<b>40</b>
12	D+11	To prepare & pack 20gm of Tooth Powder.	0	0	4	4
13	D+12	To prepare & pack 20gm Clear Liquid Shampoo.	0	0	4	4
14	D+13	To prepare & pack 20gm of After Shaving Lotion.	0	0	4	4

15	D+14	To prepare & pack 20ml of Ferrous Sulphate Syrup USP.	0	0	4	4
16	D+15	To prepare & pack 20gm Zinc Oxide Ointment.	0	0	4	4
17	D+16	To prepare & submit 10ml Chloramphenicol Ear Drop.	0	0	4	4
18	D+17	To prepare & submit 10 ml of Elixir as non-aqueous preparation.	0	0	4	4
19	D+18	To prepare & submit 10ml Ephedrine Nasal Drops.	0	0	4	4
20	D+19	To prepare & submit 10ml Turpentine Liniment.	0	0	4	4
21	D+20	To prepare & submit 20ml Methyl Salicylate Liniment B.P.	0	0	4	4
		<b>Total</b>				40
22	D+21	To prepare & submit 20gm of Sodium Alginate Beads.	0	0	4	4
23	D+22	To prepare & submit Zinc Sulphate Eye Drop.	0	0	4	4
24	D+23	To prepare & submit 20gm Toothpaste.	0	0	4	4
25	D+24	To prepare & submit 20gm clear liquid Shampoo.	0	0	4	4
26	D+25	To prepare & submit 20gm of Glycerin Suppositories.	0	0	4	4
27	D+26	To prepare & submit 30 gm insufflations.	0	0	4	4
28	D+27	To demonstrate physical incompatibility (immiscibility) & its method of correction.	0	0	4	4
29	D+28	To prepare & submit 20gm of Glycero gelatin Jelly.	0	0	4	4
30	D+29	To prepare & submit 20gm Mixture.	0	0	4	4
31	D+30	To demonstrate chemical incompatibility (immiscibility) & its method of correction.	0	0	4	4
		<b>Total</b>				40

Signature of faculty



## Monad university

**Program- D.Pharma**

**year- 2<sup>nd</sup> year**

**Course code DPH-212**

**Course name PHARMACEUTICAL CHEMISTRY-II**

**Session - 2020-21**

S. No.	Day	Subject	L	T	P	Total
1	D Day					
2	D+1	<b>Introduction to the nomenclature</b> of organic chemical systems with particular reference	1	0	0	1
3	D+2	heterocyclic system containing up to 3 rings continue.....	1	0	0	1
4	D+3	heterocyclic system containing up to 3 rings	1	0	0	1
5	D+4	<b>Antiseptics and Disinfectants</b> –Proflavine, * Benzalkoniumchloride,	1	0	0	1
6	D+5	Cetrimide, Chlorocresol	1	0	0	1
7	D+6	<b>Tutorial</b>	0	1	0	1
8	D+7	Chloroxylyene	1	0	0	1
9	D+8	Formaldehyde solution,	1	0	0	1
10	D+9	Liquified	1	0	0	1
11	D+10	phenol	1	0	0	1
12	D+11	Nitrofurantoin	1	0	0	1
13	D+12	<b>Tutorial</b>	0	1	0	<b>0</b>
14	D+13	<b>Sulfonamides-Sulfadiazine,</b>	1	0	0	1
15	D+14	Sulfaguanidine*,	1	0	0	1
16	D+15	Phthalysulfathiazole,	1	0	0	1
17	D+16	Succinylsulfathiazole	1	0	0	1

18	D+17	Class test	1	0	0	1
19	D+18	Tutorial	0	1	0	1
20	D+19	Sulfadimethoxine,	1	0	0	1
21	D+20	Sulfamethoxypridazine,	1	0	0	1
22	D+21	co-trimoxazole, Sulfacetamide	1	0	0	
23	D+22	Tutorial	0	1	0	1
24	D+23	<b>Antileprotic Drugs</b> –Clofazimine,	1	0	0	1
25	D+24	Thiambutosine, Dapsone*, Solapsone	1	0	0	1
26	D+25	<b>Anti-tubercular Drugs</b> –Isoniazid*, PAS	1	0	0	1
27	D+26	Streptomycin, Rifampicin, Ethambutol*,	1	0	0	1
28	D+27	Tutorial	0	1	0	1
29	D+28	Thiacetazone, Ethionamide,	1	0	0	1
30	D+29	Cycloserine, Pyrazinamide	1	0	0	1
		<b>Total</b>	<b>25</b>	<b>5</b>		<b>30</b>
31	D+30	<b>Antiamoebic and Anthelmintic Drugs-</b> Emetine, Metronidazole	1	0	0	1
32	D+31	Halogenated hydroxyquinolines,	1	0	0	1
33	D+32	diloxanidefuroate, Paramomycin,	1	0	0	1
34	D+33	Piperazine*, Mebendazole	1	0	0	1
35	D+34	<b>Tutorial</b>	0	1	0	1
36	D+35	<b>Antibiotics</b> –Benzyl Penicillin*, Phenoxy methyl Penicillin*,	1	0	0	1
37	D+36	Benzathine Penicillin Ampicillin	1	0	0	1
38	D+37	Tutorial	0	1	0	1
39	D+38	Cloxacillin, Carbenicillin, Gentamicin,	1	0	0	1
40	D+39	Neomycin, Erythromycin, Tetracycline, Cephalexin, Cephaloridine,	1	0	0	1
41	D+40	Cephalothin, Griseofulvin, Chloramphenicol.	1	0	0	1
42	D+41	<b>Antifungal agents</b> –Undecylenic acid,	1	0	0	1
43	D+42	<b>Tutorial</b>	0	1	0	1
44	D+43	Tolnaftate, Nystatin,	1	0	0	1

45	D+44	Amphotericin, Hamycin	1	0	0	1
46	D+45	<b>Antimalarial</b> Drugs–Chloroquine*,	1	0	0	1
47	D+46	Amodiaquine, Primaquine,	1	0	0	1
48	D+47	<b>Tutorial</b>	0	1	0	1
49	D+48	Proguanil, Pyrimethamine*,	1	0	0	1
50	D+49	Quinine, Trimethoprim	1	0	0	1
51	D+50	<b>Tranquilizers</b> –Chlorpromazine*, Prochlorperazine,	1	0	0	1
52	D+51	TrifluoPerazine, Thiothixene, Haloperidol	1	0	0	1
53	D+52	Triperidol, Oxypertine, Chlordiazepoxide,	1	0	0	1
54	D+53	Diazepam*, Lorazepam, Meprobamate	1	0	0	1
55	D+54	<b>Tutorial</b>	0	1	0	1
56	D+55	<b>Hypnotics</b> —Phenobarbitone*, Butobarbitone, Cyclobarbitone, Nitrazepam, Glutethimide*, Methypylone, Paraldehyde, Triclofos sodium.	1	0	0	1
57	D+56	<b>General Anaesthetics</b> –Halothane*, Cyclopropane*, Diethyl ether*, Methohexital sodium, Thiopental sodium, Trichloroethylene.	1	0	0	1
58	D+57	<b>Antidepressant</b> <b>Drugs</b> —Amitriptyline, Nortriptyline, Imipramine*, Phenelzine, Tranylcypramine.	1	0	0	1
59	D+58	<b>Analeptics</b> –Theophylline, Caffeine*, Coramine*, Dextroamphetamine. <b>Adrenergic</b> <b>Drugs</b> –Adrenaline*, Noradrenaline, Isoprenaline*, Phenylephrine Salbutamol, Terbutaline, Ephedrine *, Pseudoephedrine.	1	0	0	1
		<b>Total</b>	<b>25</b>	<b>5</b>		<b>30</b>
60	D+59	<b>Adrenergic Antagoinst</b> –Tolazoline, Propranolol*, Practolol	1	0	0	1
61	D+60	<b>Cholinergic</b> <b>Drugs</b> –Neostigmine*, Pyridostigmine, Pralidoxime, Pilocarpine, Physostigmine*	1	0	0	1
62	D+61	<b>Cholinergic Antagonists</b> –Atropine*, Hysocine, Homatropine,	1	0	0	1
63	D+62	Propantheline*, Benztropine, Tropicamide, Biperiden.*	1	0	0	1

64	D+63	<b>Tutorial</b>	0	1	0	1
65	D+64	<b>Diuretic Drugs</b> –Furosemide*, Chlorothiazide, Hydrochlorothiazide*,	1	0	0	1
66	D+65	Benzthiazide, Urea*, Mannitol *, Ethacrynic Acid.	1	0	0	1
67	D+66	<b>Tutorial</b>	0	1	0	1
68	D+67	<b>Cardiovascular Drugs</b> –Ethyl nitrite*, Glyceryltrinitrate,	1	0	0	1
69	D+68	Alpha methyl dopa, Guanethidine,	1	0	0	1
70	D+69	Clofibrate, Quinidine	1	0	0	1
71	D+70	<b>Tutorial</b>	0	1	0	1
72	D+71	<b>Hypoglycemic Agents</b> –Insulin, Chlorpropamide*, Tolbutamide,	1	0	0	1

73	D+72	Glibenclamide, Phenformin *, Metformin.	1	0		1
74	D+73	<b>Coagulants and Anti –Coagulants</b> –Heparin, Thrombin, Menadione	1	0	0	1
75	D+74	Bishydroxycoumarin, Warfarin Sodium.	1	0	0	1
76	D+75	<b>Local Anesthetics</b> –Lignocaine*,	1	0	0	1
77	D+76	<b>Tutorial</b>	0	1	0	1
78	D+77	Procaine*,	1	0	0	1
79	D+78	Benzocaine	1	0	0	1
80	D+79	<b>Histamine and Anti–histaminic Agents</b> -Histamine cont.....	1	0	0	1
81	D+80	<b>Histamine and Anti–histaminic Agents</b> -Histamine,	1	0	0	1
82	D+81	Diphenhydramine*,	1	0	0	1
83	D+82	Promethazine,	1	0	0	1
84	D+83	<b>Tutorial</b>	0	1	0	1
85	D+84	<b>Analgesics and Anti-pyretics</b> –Morphine, Pethidine*, Codeine, Methadone	1	0	0	1
86	D+85	Aspirin*, Paracetamol*, Analgin,	1	0	0	1
87	D+86	Dextropropoxyphene, Pentazocine	1	0	0	1
88	D+87	Cyproheptadine, Mepyramine,	1	0	0	1

89	D+88	Pheniramine, Chlorpheniramine*.	1	0	0	1
		<b>Total</b>	<b>25</b>	<b>5</b>		<b>30</b>
90	D+89	<b>Non-steroidal anti-inflammatory Agents</b> – Indomethacin*, phenylbutazone* ,	1	0	0	1
91	D+90	Oxyphenbutazone, Ibuprofen,	1	0	0	1
92	D+91	Thyroxine and Antithyroids –Thyroxine* ,	1	0	0	1
93	D+92	Methimazole, Methylthiouracil, Propylthiouracil	1	0	0	1
94	D+93	<b>Tutorial</b>	0	1	0	1
95	D+94	<b>Diagnostic Agents</b> -Iopanoic Acid, Propyl iodone,	1	0	0	1
96	D+95	Sulfobromophthalein. Sodium indigotindisulfonate	1	0	0	1
97	D+96	Indigo Carmine, Evans blue, Congo Red, Fluorescein Sodium	1	0	0	1
98	D+97	<b>Tutorial</b>		1	0	1
99	D+98	<b>Anticonvulsants</b> , cardiac glycosides,	1	0	0	1
100	D+99	Antihypertensives, Antiarrhythmic	1	0	0	1
101	D+100	Vitamins	1	0	0	1
102	D+101	Class test	1	0	0	1
103	D+102	<b>Tutorial</b>	0	1	0	1

104	D+103	<b>Steroidal Drugs</b> –Betamethazone,	1	0	0	1
105	D+104	Cortisone, Hydrocortisone,	1	0	0	1
106	D+105	prednisolone,	1	0	0	1
107	D+106	<b>Anti- Neoplastic Drugs</b> –Actinomycins,	1	0	0	1
108	D+107	<b>Tutorial</b>	0	1	0	1
109	D+108	Azathioprine, Busulphan,	1	0	0	1
110	D+109	Chlorambucil, Cisplatin	1	0	0	1
111	D+110	Cyclophosphamide	1	0	0	1
112	D+111	<b>Tutorial</b>	0	1	0	1
113	D+112	Daunorubicin hydrochloride,	1	0	0	1

<b>114</b>	D+113	Fluorouracil, Mercaptopurine	1	0	0	1
<b>115</b>	D+114	Methotrexate, Mytomycin.	1	0	0	1
<b>116</b>	D+115	Class test	1	0	0	1
<b>117</b>	D+116	Progesterone,	1	0	0	1
<b>118</b>	D+117	Tutorial	0	1	0	1
<b>119</b>	D+118	Testosterone,	1	0	0	1
<b>120</b>	D+119	Oestradiol,Nandrolone.	1	0	0	1
		<b>Total</b>	<b>22</b>	<b>6</b>		<b>28</b>

Signature of faculty





## Monad university

Program- D.Pharm

year- 2<sup>nd</sup> year

Course DPH-212P

**Course name PHARMACEUTICAL CHEMISTRY-II**

Session - 2020 21

S. No.	Day	Subject	L	T	P	Total
1	D Day					
2	D+1	To identify the functional groups and elements in a given sample.	0	0	4	4
3	D+2	To identify the functional groups and elements in a given sample	0	0	4	4
4	D+3	To identify the functional groups and elements in a given sample	0	0	4	4
5	D+4	To perform the preliminary examination of unknown compound	0	0	4	4
6	D+5	To determine the melting point of unknown compound.	0	0	4	4
7	D+6	To determine the boiling point of unknown compound.	0	0	4	4
8	D+7	To determine the Solubility of an unknown compound.	0	0	4	4
9	D+8	To prepare and submit Aspirin & calculate it's percent yield.	0	0	4	4
10	D+9	To perform the Pharmacopoeial standardisation of Aspirin.	0	0	4	4
11	D+10	To prepare and submit 7 Hydroxyl 4-Methyl Coumarin and report its Percent yield and Melting point range.	0	0	4	4
		<b>TOTAL</b>				<b>40</b>
12	D+11	To Prepare and synthesize Benzoyl Peroxide and to calculate it's percent yield.	0	0	4	4

13	D+12	To perform Pharmacopoeial Standardization and analysis of Benzoyl peroxide.	0	0	4	4
14	D+13	To prepare and submit Paracetamol and report its percent yield.	0	0	4	4
15	D+14	To perform the Pharmacopoeial standardisation of Paracetamol.	0	0	4	4
16	D+15	To prepare and submit Methyl Salicylate and to calculate its percent yield.	0	0	4	4
17	D+16	To perform the Pharmacopoeial standardisation of Methyl Salicylate.	0	0	4	4
18	D+17	To perform the Pharmacopoeial standardisation of Ciprofloxacin.	0	0	4	4
19	D+18	To prepare and submit Phenacetin & calculate its percent yield.	0	0	4	4
20	D+19	To prepare and submit benzocaine & calculate its percent yield.	0	0	4	4
<b>Total</b>						<b>36</b>

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### **Lesson Plan**

**Program:- D.Pharm**

**Year :- 2<sup>nd</sup> year**

**Course:- PHARMACOLOGY AND TOXICOLOGY**

**Course code (DPH-213)**

### **Session:- 2020-21**

S. No.	Day	Subject	L	T	P	Total
1	D Day					
2	D+1	Introduction of Pharmacology, scope of Pharmacology.	1	0	0	1
3	D+2	Routes of administration of drugs, their advantages and disadvantages.	1	0	0	1
4	D+3	and their advantages and disadvantages.	1	0	0	1
5	D+4	Various processes of absorption of drugs and the factors affecting them	1	0	0	1
6	D+5	Metabolism	1	0	0	1
7	D+6	Tutorial	0	1	0	1
8	D+7	Distribution of drugs.	1	0		1
9	D+8	And excretion of drugs.	1	0	0	1
10	D+9	General mechanism of drugs action and the factors which modify drug action. Pharmacological classification of drugs.	1	0	0	1

11	D+10	Tutorial	0	1	0	1
12	D+11	(i) Drugs acting on the Central Nervous System: (a) General anaesthetics, adjuncts to anesthesia, intravenous anesthetics continue.....	1	0	0	1
13	D+12	<b>(i) Drugs acting on the Central Nervous System:</b> (a) General anaesthetics, adjunction to anesthesia, intravenous anesthetics.	1	0	0	1
14	D+13	Tutorial	0	1	0	1
15	D+14	b) Analgesic antipyretics	1	0	0	1
16	D+15	and non-steroidal anti –inflammatory drugs,	1	0	0	1
17	D+16	Narcotic analgesics,	1	0	0	1
18	D+17	Anti-rheumatic	1	0	0	1
19	D+18	antigout remedies,	1	0	0	1
20	D+19	Tutorial	0	1	0	1
21	D+20	(c)Centrally acting muscle relaxants	1	0	0	1
22	D+21	anti-parkinsonism agents	1	0	0	1
23	D+22	Sedatives and Hypnotics,	1	0	0	0
24	D+23	Psychopharmacological agents, anti convulsants, analeptics.	1	0	0	0
		<b>TOTAL</b>	<b>19</b>	<b>4</b>		<b>23</b>
25	D+24	<b>Pharmacological classification of drugs.</b> The discussion of drugs should emphasize the following aspect: <b>(ii) Local anaesthetics continue.....</b>	1	0	0	0
26	D+25	<b>Pharmacological classification of drugs.</b> The discussion of drugs should emphasize the following aspect: <b>(ii) Local anesthetics.</b>	1	0	0	1
27	D+26	<b>(iii) Drug acting on autonomic nervous system.</b> (a) Cholinergic drug, Anticholinergic drugs,	1	0	0	1
28	D+27	Anti-cholinesterase drugs continue.....	1	0	0	1
29	D+28	<b>Tutorial</b>	0	1	0	1
30	D+29	Anti-cholinesterase drugs.	1	0	0	1
31	D+30	(b) Adrenergic drugs	1	0	0	1
32	D+31	adrenergic receptor blockers	1	0	0	1
33	D+32	(c) Neurons	1	0	0	1

34	D+33	Tutorial	0	1	0	1
35	D+34	Neurons blockers	1	0	0	1
36	D+35	ganglion blockers	1	0	0	1
37	D+36	(d) Neuromuscular blockers	1	0	0	1
38	D+37	Drugs used in myasthenia gravis.	1	0	0	1
39	D+38	Tutorial	0	1	0	1
40	D+39	<b>Drugs acting on eye, mydriatics, drugs used in glaucoma.</b>	1	0	0	1
41	D+40	<b>Drugs acting on respiratory system</b> -Respiratory stimulants, Bronchodilators, Nasal decongestants, Expectorants and Antitussive agents overview	1	0	0	1
42	D+41	<b>Drugs acting on respiratory system –Respiratory stimulants,</b>	1	0	0	1
43	D+42	Bronchodilators	1	0	0	1
44	D+43	Nasal decongestants, Expectorants and Antitussive agents.	1	0	0	1
45	D+44	<b>Antacids, Physiological role of histamine and serotonin, Histamine and Antihistamines, Prostaglandins.</b>	1	0	0	1
46	D+45	Tutorial	0	1	0	1
		<b>TOTAL</b>	<b>18</b>	<b>4</b>		<b>22</b>
47	D+46	<b>Cardio Vascular drugs, Cardio tonics, Antiarrhythmic agents, Antianginal agents,</b>	1	0	0	1
48	D+47	Antihypertensive agents	1	0	0	1
49	D+48	Peripheral Vasodilators	1	0	0	1
50	D+49	drugs used in atherosclerosis	1	0	0	1
51	D+50	<b>Tutorial</b>	0	1	0	1
52	D+51	<b>Drugs acting on the blood</b>	1	0	0	1
53	D+52	<b>and blood forming organs</b>	1	0	0	1
54	D+53	Haematinics	1	0	0	1
55	D+54	Class test	1	0	0	1
56	D+55	<b>Tutorial</b>	0	1	0	1
57	D+56	Coagulants and anti-Coagulants, Haemostatics, Blood	1	0	0	1

		substitutes and plasma expanders				
<b>58</b>	D+57	<b>Drugs affecting renal function-Diuretics</b>	1	0	0	1
<b>59</b>	D+58	Antidiuretics	1	0	0	1
<b>60</b>	D+59	<b>Hormones and hormone antagonists –hypoglycemic agents,</b>	1	0	0	1
<b>61</b>	D+60	<b>Tutorial</b>	0	1	0	1
<b>62</b>	D+61	Antithyroid drugs,	1	0	0	1
<b>63</b>	D+62	sex hormones and oral contraceptives, corticosteroids	1	0	0	1
<b>64</b>	D+63	oral contraceptives, corticosteroids	1	0	0	1
<b>65</b>	D+64	<b>Drugs acting on digestive system-Carminatives, digestants Bitters, Antacids</b>	1	0	0	1
<b>66</b>	D+65	Tutorial	0	1	0	1
<b>67</b>	D+66	drugs used in Peptic ulcer	1	0	0	1
<b>68</b>	D+67	purgatives, and laxatives	1	0	0	1
<b>69</b>	D+68	Antidiarrheal, Emetics	1	0	0	1
<b>70</b>	D+69	Tutorial	0	1	0	1
		Total	20	5		25
<b>71</b>	D+70	<b>Chemotherapy of microbial disease: Urinary antiseptics,</b>	1	0	0	1
<b>72</b>	D+71	Sulphonamides,	1	0	0	1
<b>73</b>	D+72	Penicillins,	1	0	0	1
<b>74</b>	D+73	Streptomycin Tetracylines	1	0	0	1

<b>75</b>	D+74	antibiotics, Antitubercular agents	1	0	0	1
<b>76</b>	D+75	Tutorial	0	1	0	1
<b>77</b>	D+76	Antifungal agents,	1	0	0	1
<b>78</b>	D+77	antiviral drugs,	1	0	0	1
<b>79</b>	D+78	antileprotic drugs	1	0	0	1
<b>80</b>	D+79	Tutorial	0	1	0	1

<b>81</b>	D+80	Chemotherapy of protozoal	1	0	0	1
<b>82</b>	D+81	Anthelmintic drugs continue	1	0	0	1
<b>83</b>	D+82	Anthelmintic drugs	1	0	0	1
<b>84</b>	D+83	Chemotherapy of cancer continue.....	1	0	0	1
<b>85</b>	D+84	Chemotherapy of cancer	1	0	0	1
<b>86</b>	D+85	Tutorial	0	1	0	1
<b>87</b>	D+86	Class test	1	0	0	1
<b>88</b>	D+87	Disinfectants	1	0	0	1
<b>89</b>	D+88	Antiseptics continue.....	1	0	0	1
<b>90</b>	D+89	antiseptics.	1	0	0	1
<b>91</b>	D+90	Anti-spasmodics	1	0	0	1
<b>92</b>	D+91	Antiemetics	1	0	0	1
<b>93</b>	D+92	Tutorial	0	1	0	1
		Total	18	4		22



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### Program- D.Pharm

year- 2<sup>nd</sup> year

Course DPH-213-P

Course name PHARMACOLOGY AND TOXICOLOGY

### Session - 2020-21

S. No.	Day	Subject	L	T	P	Total
1	D Day	To study about common Lab animals.	0	0	0	0
2	D+1	To prepare physiological salt solutions	0	0	4	4
3	D+2	To study the various instruments & apparatus used in the pharmacology laboratory.	0	0	4	4
4	D+3	To study the anticonvulsant activity by using by electro-convulsometer in rats.	0	0	4	4
5	D+4	To study muscle relaxant activity of Diazepam by using Rota rod apparatus.	0	0	4	4
6	D+5	To study the effect of Local anaesthetic on Rabbit cornea.	0	0	4	4
7	D+6	To study various anaesthetic agents used in Laboratory animal.	0	0	4	4
8	D+7	To study the effect of pentobarbital sodium on righting reflex (hypnosis) in mice.	0	0	4	4
9	D+8	To study the effect of K <sup>+</sup> , Ca <sup>++</sup> ach. & adrenaline on frog's heart.	0	0	4	4
10	D+9	To study the biological standardization (bio assay) Methods.	0	0	4	4
11	D+10	To obtain a graded dose response curve of histamine &	0	0	4	4



		determine the concentration of the same in a solution (of unknown concentration) using matching bioassay.				
		<b>TOTAL</b>				<b>40</b>
<b>12</b>	D+11	To study Student Organ Bath.	0	0	4	4
<b>13</b>	D+12	To take normal DRC and to find out ceiling effect of acetylcholine.	0	0	4	4
<b>14</b>	D+13	To study the anticonvulsant property of diazepam against pentylenetetrazol induced colonic convulsion in mice.	0	0	4	4
<b>15</b>	D+14	To study the drug profile of chloramphenicol.	0	0	4	4
<b>16</b>	D+15	To study the drug profile of Sulphonamide drug.	0	0	4	4
<b>17</b>	D+16	To study the different types of routes of administration of the drugs.	0	0	4	4
<b>18</b>	D+17	To record the DRC of atropine using isolated chicken ileum preparation.	0	0	4	4
<b>19</b>	D+18	To study the CNS depressant property of diazepam on locomotor activity of mice using actophotometer.	0	0	4	4
		<b>TOTAL</b>				<b>32</b>

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## Lesson Plan

**Course -** DIPLOMA IN PHARMACY  
**Semester-** II<sup>nd</sup> Year  
**Subject Name -** PHARMACEUTICAL JURISPRUDENCE  
**Subject Code-**DPH-214  
**Session-** 2020-21

S. No.	Day	Subject	L	T	Total
1	D+1	<b>Origin and nature of Pharmaceutical legislation in India</b>	1	0	1
2	D+2	its scope and objectives	1	0	1
3	D+3	Evolution of the “Concept of Pharmacy” as an integral part of the Health Care System	1	0	1
4	D+4	Discussion Session/ Revision/Class Test	0	1	1
5	D+5	Evolution of the “Concept of Pharmacy” as an integral part of the Health Care System	1	0	1
6	D+6	<b>Principles and significance of Professional Ethics</b>	1	0	1
7	D+7	Critical study of the code of Pharmaceutical Ethics drafted by Pharmacy Council of India.	1	0	1
8	D+8	Discussion Session/ Revision/Class Test	0	1	1
9	D+9	Critical study of the code of Pharmaceutical Ethics drafted by Pharmacy Council of India.	1	0	1
10	D+10	<b>Pharmacy Act, 1948</b> –The General study of the Pharmacy Act with special reference to Education Regulations	1	0	1
11	D+11	<b>Pharmacy Act, 1948</b> –The General study of the Pharmacy Act with special reference to Education Regulations	1	0	1
12	D+12	Discussion Session/ Revision/Class Test	0	1	1
13	D+13	working of State and Central Councils	1	0	1
14	D+14	constitution of these councils and functions	1	0	1
15	D+15	Registration procedures under the Act.	1	0	1
16		<b>TOTAL CLASS</b>	<b>12</b>	<b>3</b>	<b>15</b>
17	D+16	Discussion Session/ Revision/Class Test	0	1	1
18	D+17	<b>The Drugs and Cosmetics Act, 1940</b> —General study of the Drugs and Cosmetics Act and the Rules thereunder.	1	0	1
19	D+18	General study of the Drugs and Cosmetics Act and the Rules thereunder.	1	0	1
20	D+19	Definitions and salient features related to retail and wholesale distribution of drugs.	1	0	1
21	D+20	Discussion Session/ Revision/Class Test	0	1	1
22	D+21	The powers of Inspectors	1	0	1

23	D+22	the sampling procedures and the procedure and formalities in obtaining licenses under the rule	1	0	1
24	D+23	the sampling procedures and the procedure and formalities in obtaining licenses under the rule	1	0	1
25	D+24	Discussion Session/ Revision/Class Test	0	1	1
26	D+25	Facilities to be provided for running a Pharmacy effectively	1	0	1
27	D+26	Facilities to be provided for running a Pharmacy effectively	1	0	1
28	D+27	General study of the Schedules with special reference of schedules C, C1 and salient features of labelling and storage condition of drugs.	1	0	1
29	D+28	Discussion Session/ Revision/Class Test	0	1	1
30	D+29	General study of the Schedules with special reference of schedules F, G, and salient features of labelling and storage condition of drugs.	1	0	1
31	D+30	General study of the Schedules with special reference of schedules J,H and salient features of labelling and storage condition of drugs.	1	0	1
32	D+31	General study of the Schedules with special reference of schedules P and X and salient features of labelling and storage condition of drugs.	1	0	1
33		<b>TOTAL CLASS</b>	12	4	16
34	D+32	Discussion Session/ Revision/Class Test	0	1	1
35	D+33	<b>The Drug and Magic Remedies (Objectionable Advertisement) Act, 1945</b>	1	0	1
36	D+34	General study of the Act Objectives	1	0	1
37	D+35	General study of the Act Objectives	1	0	1
38	D+36	Discussion Session/ Revision/Class Test	0	1	1
39	D+37	special reference to be laid on Advertisements	1	0	1
40	D+38	special reference to be laid on Advertisements	1	0	1
41	D+39	Magic remedies and objectionable and permitted advertisements	1	0	1
42	D+40	Discussion Session/ Revision/Class Test	0	1	1
43	D+41	Magic remedies and objectionable and permitted advertisements	1	0	1
44	D+42	disease which cannot be claimed to be cured.	1	0	1
45	D+43	disease which cannot be claimed to be cured.	1	0	1
46	D+44	Discussion Session/ Revision/Class Test	0	1	1
47	D+45	<b>Narcotic Drugs and Psychotropic Substances Act, 1985</b>	1	0	1
48	D+46	A brief study of the act with special reference to its objectives	1	0	1
49	D+47	A brief study of the act with special reference to its objectives	1	0	1

<b>50</b>	D+48	Discussion Session/ Revision/Class Test	0	1	1
<b>51</b>	D+49	offences and punishment	1	0	1
<b>52</b>		<b>TOTAL CLASS</b>	<b>12</b>	<b>4</b>	<b>16</b>
<b>53</b>	D+50	<b>Brief introduction to the study of the following acts.</b>	1	0	1
<b>54</b>	D+51	Latest Drugs (Price Control) Order in force.	1	0	1
<b>55</b>	D+52	Discussion Session/ Revision/Class Test	0	1	1
<b>56</b>	D+53	Latest Drugs (Price Control) Order in force.	1	0	1
<b>57</b>	D+54	Poisons Act 1919 (as amended to date)	1	0	1
<b>58</b>	D+55	Poisons Act 1919 (as amended to date)	1	0	1
<b>59</b>	D+56	Discussion Session/ Revision/Class Test	0	1	1
<b>60</b>	D+57	Medicinal and Toilet Preparations (Excise Duties) Act,1995 (as amended to date)	1	0	1
<b>61</b>	D+58	Medicinal and Toilet Preparations (Excise Duties) Act,1995 (as amended to date)	1	0	1
<b>62</b>	D+59	Medical Termination of Pregnancy Act, 1971 (as amended to date).	1	0	1
<b>63</b>	D+60	Discussion Session/ Revision/Class Test	0	1	1
<b>64</b>	D+61	Medical Termination of Pregnancy Act, 1971 (as amended to date).	1	0	1
		<b>TOTAL CLASS</b>	<b>9</b>	<b>3</b>	<b>12</b>

Signature faculty



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### **Lesson Plan**

**Program- D.Pharm**

**year- 2<sup>nd</sup> year**

**Course code- DPH-215**

**Course name- DRUG STORE AND BUSINESS MANAGEMENT**

**Session - 2020-2021**

S. No.	Day	Subject	L	T	P	Total
1	D Day					
2	D+1	Introduction of Trade, Industry and Commerce	1	0	0	1
3	D+2	Functions and subdivision of Commerce	1	0	0	1
4	D+3	Introduction of Elements of Economics and Management	1	0	0	1
5	D+4	Introduction of Elements of Economics and Management	1	0	0	1
6	D+5	Forms of Business Organizations.	1	0	0	1
7	D+6	Tutorial	0	1	0	1
8	D+7	Forms of Business Organizations.	1	0		1
9	D+8	Channels of Distribution.	1	0	0	1
10	D+9	Channels of Distribution.	1	0	0	1
11	D+10	Tutorial	0	1	0	1
12	D+11	<b>Drug House Management –Selection of Site</b>	1	0	0	1
13	D+12	Space Lay-out and legal requirements.	1	0	0	1
14	D+13	Tutorial	0	1	0	1
15	D+14	Space Lay-out and legal requirements.	1	0	0	1
16	D+15	Importance and objectives of Purchasing	1	0	0	1

17	D+16	selection of suppliers, credit information	1	0	0	1
18	D+17	selection of suppliers, credit information	1	0	0	1
19	D+18	tenders, contracts and price determination	1	0	0	1
20	D+19	Tutorial	0	1	0	1
21	D+20	tenders, contracts and price determination	1	0	0	1
22	D+21	legal requirements thereto	1	0	0	1
23	D+22	Codification, handling of drug stores and other hospital supplies.	1	0	0	0
24	D+23	Codification, handling of drug stores and other hospital supplies.	1	0	0	0
		<b>TOTAL</b>	<b>19</b>	<b>4</b>		23
25	D+24	<b>Inventory Control</b> –objects and importance	1	0	0	0
26	D+25	modern techniques like ABC, VED analysis	1	0	0	1
27	D+26	modern techniques like ABC, VED analysis	1	0	0	1
28	D+27	Class test	1	0	0	1
29	D+28	<b>Tutorial</b>	0	1	0	1
30	D+29	the lead time inventory carrying cost	1	0	0	1
31	D+30	safety stock	1	0	0	1
32	D+31	minimum and maximum stock levels	1	0	0	1
33	D+32	minimum and maximum stock levels	1	0	0	1
34	D+33	Tutorial	0	1	0	1
35	D+34	economic order quantity	1	0	0	1
36	D+35	economic order quantity	1	0	0	1
37	D+36	scrap and surplus disposal	1	0	0	1
38	D+37	scrap and surplus disposal	1	0	0	1
39	D+38	Tutorial	0	1	0	1
40	D+39	Class test/Revision	1	0	0	1
41	D+40	Market Research	1	0	0	1
42	D+41	Market Research	1	0	0	1

43	D+42	Salesmanship	1	0	0	1
44	D+43	qualities of a salesman	1	0	0	1
45	D+44	qualities of a salesman	1	0	0	1
46	D+45	Tutorial	0	1	0	1
		<b>TOTAL</b>	<b>18</b>	<b>4</b>		<b>22</b>
47	D+46	Advertising and Window Display	1	0	0	1
48	D+47	Advertising and Window Display	1	0	0	1
49	D+48	Advertising and Window Display	1	0	0	1
50	D+49	Recruitment, training	1	0	0	1
51	D+50	Tutorial	0	1	0	1
52	D+51	evaluation and compensation of the pharmacist	1	0	0	1
53	D+52	evaluation and compensation of the pharmacist	1	0	0	1
54	D+53	evaluation and compensation of the pharmacist	1	0	0	1
55	D+54	evaluation and compensation of the pharmacist	1	0	0	1
56	D+55	Tutorial	0	1	0	1
57	D+56	Banking and Finance Service	1	0	0	1
58	D+57	Banking and Finance Service	1	0	0	1
59	D+58	functions of the bank	1	0	0	1
60	D+59	functions of the bank	1	0	0	1
61	D+60	Tutorial	0	1	0	1
62	D+61	Finance Planning and sources of finance.	1	0	0	1
63	D+62	Finance Planning and sources of finance.	1	0	0	1
64	D+63	Finance Planning and sources of finance.	1	0	0	1
65	D+64	Introduction to the accounting concepts and conventions	1	0	0	1
66	D+65	Tutorial	0	1	0	1
67	D+66	Introduction to the accounting concepts and conventions	1	0	0	1
68	D+67	Introduction to the accounting concepts and conventions	1	0	0	1
69	D+68	Double entry Book keeping	1	0	0	1
70	D+69	Tutorial	0	1	0	1

		Total	20	5		25
<b>71</b>	D+70	Double entry Book keeping	1	0	0	1
<b>72</b>	D+71	Double entry Book keeping	1	0	0	1
<b>73</b>	D+72	Different kinds of accounts	1	0	0	1
<b>74</b>	D+73	Different kinds of accounts	1	0	0	1

<b>75</b>	D+74	Class test/ Revision	1	0	0	1
<b>76</b>	D+75	Tutorial	0	1	0	1
<b>77</b>	D+76	Class test/ Revision	1	0	0	1
<b>78</b>	D+77	Class test/ Revision	1	0	0	1
<b>79</b>	D+78	General Leger and Trial Balance	1	0	0	1
<b>80</b>	D+79	Tutorial	0	1	0	1
<b>81</b>	D+80	General Leger and Trial Balance	1	0	0	1
<b>82</b>	D+81	Profit and Loss Account	1	0	0	1
<b>83</b>	D+82	Profit and Loss Account	1	0	0	1
<b>84</b>	D+83	Balance Sheet	1	0	0	1
<b>85</b>	D+84	Balance Sheet	1	0	0	1
<b>86</b>	D+85	Tutorial	0	1	0	1
<b>87</b>	D+86	Simple technique of analyzing financial statements	1	0	0	1
<b>88</b>	D+87	Simple technique of analyzing financial statements	1	0	0	1
<b>89</b>	D+88	Introduction to Budgeting	1	0	0	1
<b>90</b>	D+89	Introduction to Budgeting	1	0	0	1
<b>91</b>	D+90	Class test/ Revision	1	0	0	1
<b>92</b>	D+91	Class test/ Revision	1	0	0	1
<b>93</b>	D+92	Tutorial	0	1	0	1
		Total	18	4		22

Signature of faculty





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### Lesson Plan

**Program- D.Pharm**

**Year - II**

**Course - HOSPITAL AND CLINICAL PHARMACY**

**Course code (DPH-216)**

**Session - 2020-21**

S. No.	Day	Subject	L	T	P	Total
1	D Day					
2	D+1	Definition of Hospitals and its Function	1	0	0	1
3	D+2	Classification of hospital based on organization	1	0	0	1
4	D+3	Classification of hospital based on Management and Health delivery system in India	1	0	0	1
5	D+4	Definition of Hospital Pharmacy	1	0	0	1
6	D+5	Tutorial(Discussion Session/Revision/Class Test)	0	1	0	1
7	D+6	Functions and objectives of Hospital Pharmaceutical services	1	0	0	1
8	D+7	Location, Layout, Flow chart of material and men for hospital	1	0	0	1
9	D+8	Personnel and facilities requirements including equipment based on individual and basic needs	1	0	0	1
10	D+9	Requirements and abilities required for Hospital pharmacists	1	0	0	1
11	D+10	Tutorial(Discussion Session/Revision/Class Test)	0	1	0	1
12	D+11	Drug Distribution system in Hospitals	1	0	0	1
13	D+12	Out –patient services in Hospitals	1	0	0	1
14	D+13	In-patient services – (a) types of services (b) detailed discussion of unit Dose system, Floor ward stock system	1	0	0	1
15	D+14	Satellite pharmacy services, Central sterile services, Bed Side Pharmacy	1	0	0	1
16	D+15	Tutorial(Discussion Session/Revision/Class Test)	0	1	0	1
17	D+16	Manufacturing type based hospitals	1	0	0	1

18	D+17	Economical considerations, estimation of demand	1	0	0	1
19	D+18	Sterile manufacture-large and small volume parenteral	1	0	0	1
20	D+19	Facilities and requirements for manufacturing parenteral	1	0	0	1
21	D+20	Tutorial(Discussion Session/Revision/Class Test)	0	1	0	1
22	D+21	Layout production and planning and man-power requirements	1	0	0	1
23	D+22	Non-sterile manufacture like Liquid orals	1	0	0	1
24	D+23	External preparations like bulk concentrates and Procurement of stores and testing of raw materials	1	0	0	1
		<b>Total</b>	<b>19</b>	<b>4</b>	<b>0</b>	<b>23</b>
25	D+24	Nomenclature and uses of surgical instruments	1	0	0	1
26	D+25	Hospital Equipment and health accessories	1	0	0	1
27	D+26	P.T.C (Pharmacy Therapeutic Committee) and its functions	1	0	0	1
28	D+27	Hospital Formulary System and their organization	1	0	0	1
29	D+28	Tutorial(Discussion Session/Revision/Class Test)	0	1	0	1
30	D+29	Hospital Formulary functioning and composition.	1	0	0	1
31	D+30	Drug Information service	1	0	0	1
32	D+31	Drug Information Bulletin and its role in hospitals	1	0	0	1
33	D+32	Surgical dressing like cotton.	1	0	0	1
34	D+33	Tutorial(Discussion Session/Revision/Class Test)	0	1	0	1
35	D+34	Adhesive tapes including their pharmacopoeial tests for quality	1	0	0	1
36	D+35	Other hospital supply e.g. I.V sets B.G sets, Ryals tubes, Catheters, Syringes etc	1	0	0	1
37	D+36	gauze, bandages and their quality control	1	0	0	1
38	D+37	Application of computer in maintenance of records	1	0	0	1
39	D+38	Tutorial(Discussion Session/Revision/Class Test)	0	1	0	1
40	D+39	inventory control and its role in hospital pharmacy	1	0	0	1
41	D+40	medication and monitoring	1	0	0	1
42	D+41	drug information and data storage	1	0	0	1
43	D+42	retrieval in hospital and its functions	1	0	0	1
44	D+43	Tutorial(Discussion Session/Revision/Class Test)	0	1	0	1
45	D+44	Retail pharmacy establishments.	1	0	0	1
46	D+45	Role of surgical instruments in hospital	1	0	0	1
47	D+46	Quality control of parenteral and its factors.	1	0	0	1

		<b>Total</b>	<b>19</b>	<b>4</b>	<b>0</b>	<b>23</b>
48	D+47	Introduction of Clinical Pharmacy Practice	1	0	0	1
49	D+48	Definition and scope of Clinical Pharmacy Practice	1	0	0	1
50	D+49	Modern dispensing aspects	1	0	0	1
51	D+50	Pharmacists and Patient counseling	1	0	0	1
52	D+51	Tutorial(Discussion Session/Revision/Class Test)	0	1	0	1
53	D+52	Pharmacist advice for the use of common drugs	1	0	0	1
54	D+53	Maintenance of medication history	1	0	0	1
55	D+54	Common daily terminology used in the Practice of Medicine	1	0	0	1
56	D+55	manifestation and pathophysiology including salient symptoms to understand the disease like Tuberculosis and Hepatitis	1	0	0	1
57	D+56	Tutorial(Discussion Session/Revision/Class Test)	0	1	0	1
58	D+57	Manifestation and pathophysiology including salient symptoms to understand the disease Rheumatoid and Arthritis	1	0	0	1
59	D+58	Manifestation and pathophysiology including salient symptoms to understand the disease Diabetes, Peptic Ulcer, Hypertension	1	0	0	1
60	D+59	Manifestation and pathophysiology including salient symptoms to understand the disease Cardiovascular diseases, Epilepsy	1	0	0	1
61	D+60	Physiological parameters with their significance	1	0	0	1
62	D+61	Tutorial(Discussion Session/Revision/Class Test)	0	1	0	1
63	D+62	Definition and introduction Drug Interactions	1	0	0	1
64	D+63	Mechanism of Drug Interaction	1	0	0	1
65	D+64	Drug –drug interaction with reference to analgesics, diuretics	1	0	0	1
66	D+65	Drug –drug interaction with reference to cardiovascular drugs	1	0	0	1
67	D+66	Tutorial(Discussion Session/Revision/Class Test)	0	1	0	1
68	D+67	Drug –drug interaction with reference to Gastro-intestinal agents	1	0	0	1
69	D+68	Drug –drug interaction of Vitamins and Hypoglycemic agents.	1	0	0	1
70	D+69	Drug –food interaction and Some common examples of food food interaction and drug drug interaction	1	0	0	1
		<b>Total</b>	<b>19</b>	<b>4</b>	<b>0</b>	<b>23</b>
71	D+70	Definition of Adverse Drug Reactions	1	0	0	1
72	D+71	Significance of Adverse Drug Reactions	1	0	0	1

73	D+72	Drug –induced diseases and Teratogenicity	1	0	0	1
74	D+73	Drugs in Clinical Toxicity	1	0	0	1
75	D+74	Tutorial(Discussion Session/Revision/Class Test)	0	1	0	1
76	D+75	Introduction, definition and effects of Drugs in Clinical Toxicity	1	0	0	1
77	D+76	General treatment of poisoning	1	0	0	1
78	D+77	Systematic antidotes with examples	1	0	0	1
79	D+78	Treatment of insecticide poisoning	1	0	0	1
80	D+79	Tutorial(Discussion Session/Revision/Class Test)	0	1	0	1
81	D+80	Heavy metal poison	1	0	0	1
82	D+81	Treatment of Narcotic drugs	1	0	0	1
83	D+82	Treatments of Barbiturate	1	0	0	1
84	D+83	Organophosphorus poisons	1	0	0	1
85	D+84	Tutorial(Discussion Session/Revision/Class Test)	0	1	0	1
86	D+85	Definition and introduction of Drug dependences	1	0	0	1
87	D+86	Introduction and causes of Drug abuse	1	0	0	1
88	D+87	Addictive drugs and their treatment	1	0	0	1
89	D+88	Drug complications and its treatment	1	0	0	1
90	D+89	Tutorial(Discussion Session/Revision/Class Test)	0	1	0	1
91	D+90	Definition of Bio–availability of drugs	1	0	0	1
92	D+91	Types of bioavailability	1	0	0	1
93	D+92	Factors affecting bioavailability	1	0	0	1
		<b>Total</b>	<b>19</b>	<b>4</b>	<b>0</b>	<b>23</b>

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Faculty



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## Lesson Plan

**Program- D.Pharm**

**Year - II**

**Course - HOSPITAL AND CLINICAL PHARMACY**

**Course code (DPH-216)**

**Session - 2020-21**

S. No.	Day	Subject	L	T	P	Total
1	D Day					
2	D+1	To prepare 100ml of compound sodium chloride i.v. infusion.	4	0	0	4
3	D+2	To prepare 100ml of compound sodium bicarbonate i.v. infusion.	4	0	0	4
4	D+3	To prepare 100ml of 5% w/v dextrose solution for injection I.P.	4	0	0	4
5	D+4	To prepare 100ml of normal saline solution for injection.	4	0	0	4
6	D+5	To sterilize various surgical instruments by dry heat sterilization.	4	0	0	4
7	D+6	To sterilize the following objects by moist heat sterilization method using Autoclave. <ul style="list-style-type: none"><li>● Rubber gloves</li><li>● Rubber closure</li><li>● Surgical dressing</li></ul>	4	0	0	4
8	D+7	To study various equipments, clothing and materials used in aseptic technique.	4	0	0	4
9	D+8	To perform the identification test for the absorbent cotton wool.	4	0	0	4

10	D+9	To perform the limit test for chloride & sulphate.	4	0	0	4
11	D+10	To find out the % variation in the length and width of given sample of bandage.	4	0	0	4
12	D+11	To prepare 100 ml of 20% w/v Mannitol I.V infusion.	4	0	0	4
13	D+12	To prepare 100 ml of compound sodium lactate for injection I.P.	4	0	0	4
14	D+13	To sterilize rubber gloves.	4	0	0	4
15	D+14	To prepare water for injection.	4	0	0	4
16	D+15	To determine the sinking time of absorbent cotton wool.	4	0	0	4
17	D+16	To determine the no. of threads per 10 cm of absorbent ribbon gauge.	4	0	0	4
18	D+17	To determine the loss on drying of absorbent cotton wool.	4	0	0	4
19	D+18	To evaluate the given sample of cotton wool by fluorescence test.	4	0	0	4
20	D+19	To prepare 50 ml of 5% dextrose solution and sterilize it by filtration method.	4	0	0	4
21	D+20	To study various components of computer	4	0	0	4
		<b>Total</b>	<b>80</b>	<b>0</b>	<b>0</b>	<b>80</b>

Signature faculty