

## `B.Sc. in Pharmaceutical Manufacturing & Quality- 3years

<b>Semester – I</b>						
<b>S. No.</b>	<b>Title of the Paper</b>	<b>No of Credits</b>	<b>Courses Credits</b>	<b>Marks Internal</b>	<b>Marks External</b>	<b>Total Marks</b>
1.	Environmental Health and Safety in Pharmaceutical Manufacturing	3	3	40	60	100
2.	GMP Compliance for Pharmaceutical Manufacturing	3	3	40	60	100
3.	General concept of Pharmacology	3	9	40	60	100
4.	Pharmaceutics	3	9	40	60	100
5.	Biochemistry	3	9	40	60	100
6.	English Language-I	3	5	40	60	100
7.	Environmental Science	2	5	40	60	100

<b>Semester – II</b>						
<b>S. No.</b>	<b>Title of the Paper</b>	<b>No of Credits</b>	<b>Courses Credits</b>	<b>Marks Internal</b>	<b>Marks External</b>	<b>Total Marks</b>
1.	Sterile Manufacturing in Pharma	3	3	40	60	100
2.	Pharmaceutical Packaging	3	3	40	60	100
3.	Pharmaceutical engineering -I	3	9	40	60	100
4.	Industrial Microbiology	3	9	40	60	100
5.	Engineering for Non-engineer	3	9	40	60	100
6.	Communication skill	3	5	40	60	100
7.	Diversity and Inclusion: Sensitivity towards All Genders and People with Disabilities	2	5	40	60	100

<b>Semester – III</b>						
<b>S. No.</b>	<b>Title of the Paper</b>	<b>No of Credits</b>	<b>Courses Credits</b>	<b>Marks Internal</b>	<b>Marks External</b>	<b>Total Marks</b>
1.	Production planning	3	3	40	60	100
2.	Pharmaceutical regulatory affair	3	3	40	60	100
3.	Bioprocess	3	9	40	60	100
4.	Pharmaceutical engineering - II	3	9	40	60	100
5.	Pharmaceutical Jurisprudence	3	9	40	60	100
6.	Biostatistics	3	5	40	60	100
7.	Computer Applications In Pharmacy	2	5	40	60	100

<b>Semester – IV</b>						
<b>S. No.</b>	<b>Title of the Paper</b>	<b>No of Credits</b>	<b>Courses Credits</b>	<b>Marks Internal</b>	<b>Marks External</b>	<b>Total Marks</b>
1.	Documentation for Production Control and Quality	3	3	40	60	100
2.	Complaint Handling and Product Recall	3	3	40	60	100
3.	Process Equipment Design	3	9	40	60	100
4.	Pharmaceutical Process Chemistry	3	9	40	60	100
5.	Water for Pharmaceutical use	3	9	40	60	100
6.	Design Thinking	3	5	40	60	100
7.	Vedic mathematics	2	5	40	60	100

<b>Semester – V</b>						
<b>S. No.</b>	<b>Title of the Paper</b>	<b>No of Credits</b>	<b>Courses Credits</b>	<b>Marks Internal</b>	<b>Marks External</b>	<b>Total Marks</b>
1.	In process Quality Assurance Pharmaceutical Manufacturing	3	3	40	60	100
2.	Reporting, Review and CAPA management	3	3	40	60	100
3.	Standards of Quality and Auditing	3	9	40	60	100
4.	Pharmaceutical Statistical	3	9	40	60	100
5.	Engineering controls for Pharma	3	9	40	60	100
6.	Organisational behaviour	3	5	40	60	100
7.	Indian Health Sciences	2	5	40	60	100

<b>Semester – VI</b>						
<b>S. No.</b>	<b>Title of the Paper</b>	<b>No of Credits</b>	<b>Courses Credits</b>	<b>Marks Internal</b>	<b>Marks External</b>	<b>Total Marks</b>
1.	Apprenticeship	20	20	100	300	400
2.	Dissertation Viva			40	60	100
	Total					500