

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B. PHARMACY III YEAR COURSE STRUCTURE AND SYLLABUS

Effective from Academic Year 2017-18 Admitted Batch

III Year I Semester

S. No.	Course Code	Course Title	L	T	P	Credits
1	PS501	Medicinal Chemistry II	3	1	0	4
2	PS502	Industrial Pharmacy - I	3	1	0	4
3	PS503	Pharmacology II	3	1	0	4
4	PS504	Pharmacognosy and Phytochemistry - II	3	1	0	4
5		Open Elective - I	3	1	0	4
	PS505	I. Generic Product Development				
	PS506	II. Green Chemistry				
	PS507	III. Cell and Molecular Biology				
	PS508	IV. Cosmetic science				
6	PS509	Industrial Pharmacy lab	0	0	4	2
7	PS510	Pharmacology - II lab	0	0	4	2
8	PS511	Pharmacognosy and Phytochemistry - II lab	0	0	4	2
9	*MC500	Environmental sciences	1	0	0	0
Total			16	05	12	26

III Year II Semester

S. No.	Course Code	Course Title	L	T	P	Credits
1	PS601	Medicinal Chemistry - III	3	1	0	4
2	PS602	Pharmacology - III	3	1	0	4
3	PS603	Herbal Drug Technology	3	1	0	4
4	PS604	Biopharmaceutics and Pharmacokinetics	3	1	0	4
5		Open Elective - II	3	1	0	4
	PS605	I. Pharmaceutical Quality Assurance				
	PS606	II. Pharmaceutical Biotechnology				
	PS607	III. Bioinformatics				
	PS608	IV. Screening Methods in Pharmacology				
6	PS609	Medicinal chemistry - III lab	0	0	4	2
7	PS610	Pharmacology - III lab	0	0	4	2
8	PS611	Herbal Drug Technology lab	0	0	4	2
9	*MC600	Human Values and Professional Ethics	1	0	0	0
Total			16	05	12	26

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B. PHARMACY IV YEAR COURSE STRUCTURE AND SYLLABUS

Effective from Academic Year 2017-18 Admitted Batch

IV Year I Semester

S.No	Course Code	Course Title	L	T	P	Credits
1	PS701	Instrumental Methods of Analysis	3	1	0	4
2	PS702	Industrial Pharmacy-II	3	1	0	4
3	PS703	Pharmacy Practice	3	1	0	4
4	PS704	Novel Drug Delivery Systems	3	1	0	4
5		Open Elective - III	3	1	0	4
	PS705	i. Pharmaceutical Marketing				
	PS706	ii. Pharmaceutical Regulatory Science				
	PS707	iii. Pharmacovigilance				
	PS708	iv. Quality Control and Standardization of Herbals				
6	PS709	Instrumental Methods of Analysis Lab	0	0	4	2
7	PS710	Practice School	0	0	4	2
8	PS711	Industrial Training	0	0	2	1
		Total	15	5	10	25

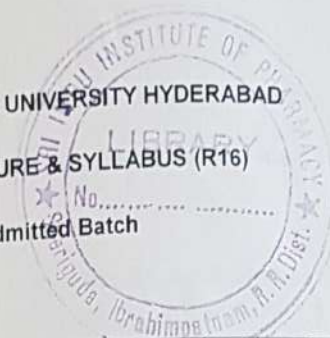
IV Year II Semester

S.No	Course Code	Course Title	L	T	P	Credits
1	PS801	Biostatistics and Research Methodology	3	1	0	4
2	PS802	Social and Preventive Pharmacy	3	1	0	4
3	PS803	Pharmaceutical Jurisprudence	3	0	0	3
4		Open Elective - IV	3	1	0	4
	PS804	i. Computer Aided Drug Design				
	PS805	ii. Nano Technology				
	PS806	iii. Experimental Pharmacology				
	PS807	iv. Advanced Instrumentation Techniques				
5	PS808	Project Work	0	0	6	3
		Total	12	3	6	18

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B.PHARM. III YEAR COURSE STRUCTURE & SYLLABUS (R16)

Applicable From 2016-17 Admitted Batch



III YEAR I SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1	PS501	Pharmaceutical Microbiology	4	1	0	4
2	PS502	Pharmaceutical Technology - I	4	1	0	4
3	PS503	Pharmacology - I	4	1	0	4
4	PS504	Pharmacognosy - II	3	1	0	3
5		Open Elective - II	3	0	0	3
	PS505	Drug Regulatory Affairs				
	PS506	Active Pharmaceutical Ingredient Process Development				
	MS507	Entrepreneurship and Small Business Enterprises				
6	PS508	Pharmaceutical Microbiology Lab	0	0	3	2
7	PS509	Pharmaceutical Technology - I Lab	0	0	3	2
8	PS510	Pharmacology - I Lab	0	0	3	2
9	*MC500	Professional Ethics	3	0	0	0
		Total	21	4	9	24

III YEAR II SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1	PS601	Medicinal Chemistry - I	3	1	0	3
2	PS602	Pharmaceutical Technology - II	3	1	0	3
3	PS603	Pharmacology - II	4	1	0	4
4	PS604	Chemistry of Natural Products	3	1	0	3
5		Open Elective - III	3	0	0	3
	PS605	Generic Product Development				
	PS606	Drug Design and Discovery				
	PS607	Screening Methods in Pharmacology				
6	PS608	Medicinal Chemistry - I Lab	0	0	3	2
7	PS609	Pharmaceutical Technology - II Lab	0	0	3	2
8	PS610	Pharmacology - II Lab	0	0	3	2
9	HS611	Advanced English Communication skills Lab	0	0	3	2
		Total	16	04	12	24

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B.PHARM. IV YEAR COURSE STRUCTURE & SYLLABUS (R16)

Applicable From 2016-17 Admitted Batch

IV Year I Semester

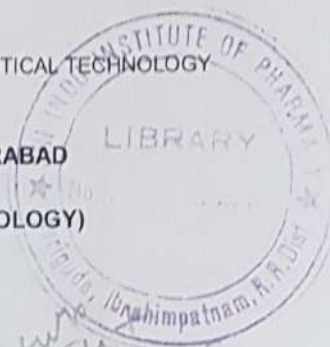
S. No.	Course Code	Course Title	L	T	P	Credits
1	PS701	Pharmaceutical Analysis – II	4	1	0	4
2	PS702	Biopharmaceutics and Pharmacokinetics	4	1	0	4
3	PS703	Pharmacology - III	3	1	0	3
4	PS704	Medicinal Chemistry – II	4	1	0	4
5	HS705	Pharmacy Administration	3	1	0	3
6	PS706	Pharmaceutical Analysis – II Lab	0	0	3	2
7	PS707	Biopharmaceutics and Pharmacokinetics Lab	0	0	3	2
8	PS708	Medicinal Chemistry – II Lab	0	0	3	2
9	PS709	Seminar and Industrial visit	0	0	2	1
Total			18	5	11	25

IV Year II Semester

S. No.	Course Code	Course Title	L	T	P	Credits
1	PS801	Novel Drug Delivery Systems	3	1	0	3
2	PS802	Clinical Pharmacy	3	1	0	3
3	PS803	Pharmaceutical Biotechnology	3	1	0	3
4	PS804	Pharmacognosy – III	3	1	0	3
5		Open Elective - III				
	PS805	1. Nano Technology				
	PS806	2. ✓ Pharmacoeconomics and pharmacovigilance				
	PS807	3. Medicinal Plant Biotechnology				
6	PS808	Novel Drug Delivery Systems and Regulatory Affairs Lab	0	0	3	2
7	PS809	Pharmacognosy – III Lab	0	0	3	2
8	PS810	Major Project	0	0	10	5
Total			15	5	16	24

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

M.PHARMACY (PHARMACEUTICS / PHARMACEUTICAL TECHNOLOGY)

R19 COURSE STRUCTURE AND SYLLABUS
Effective from Academic Year 2019-20 Admitted Batch

Lecture
1-4
- 1st

I YEAR I Semester

Course Code	Course Title	L	T	P	Credits
Professional Core-I	Modern Pharmaceutics-I	3	0	0	3
Professional Core-II	Applied Biopharmaceutics and Pharmacokinetics	3	0	0	3
Professional Elective-I	1. Advanced Physical Pharmaceutics 2. Drug Regulatory affairs 3. Total Quality Management	3	0	0	3
Professional Elective-II	1. Cosmetics and Cosmeceuticals 2. Pharmaceutical Validation 3. Stability of Drugs and Dosage Forms	3	0	0	3
MC	Research methodology and IPR	2	0	0	2
Laboratory- I	Modern Pharmaceutics – I Lab	0	0	4	2
Laboratory- II	Applied Biopharmaceutics and Pharmacokinetics Lab	0	0	4	2
Audit	Audit Course- I - English	2	0	0	0
TOTAL		16	0	8	18

-4
-6
-3

I YEAR II Semester

Course Code	Course Title	L	T	P	Credits
Professional Core-III	Modern Pharmaceutics-II	3	0	0	3
Professional Core-IV	Advanced Drug Delivery Systems	3	0	0	3
Professional Elective-III	1. Industrial Pharmacy ✓ 2. Herbal Cosmetics 3. Pharmaceutical Management	3	0	0	3
Professional Elective-IV	1. Nano based Drug Delivery Systems ✓ 2. Nutraceuticals 3. Clinical Research and Pharmacovigilance	3	0	0	3
Laboratory- III	Modern Pharmaceutics – II Lab *	0	0	4	2
Laboratory- IV	Advanced Drug Delivery System Lab *	0	0	4	2
--	Mini project with seminar	2	0	0	2
Audit	Audit Course- II * - Personality Dev	2	0	0	0
Total		16	0	8	18



JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

M.PHARMACY (PHARMACEUTICAL ANALYSIS)

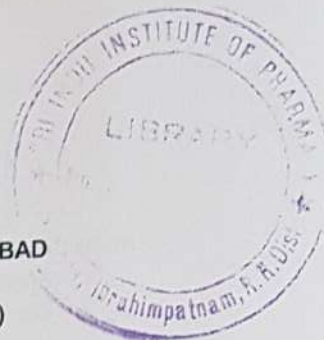
COURSE STRUCTURE AND SYLLABUS
Effective from Academic Year 2019-20 Admitted Batch

I YEAR I Semester

Course Code	Course Title	L	T	P	Credits
Professional Core-I	Modern Pharmaceutical Analytical Techniques	3	0	0	3
Professional Core-II	Pharmaceutical and Food Analysis	3	0	0	3
Professional Elective-I	1. Advanced Pharmaceutical Analysis 2. Drug Regulatory Affairs 3. Phytochemistry	3	0	0	3
Professional Elective-II	1. Quality control and Quality Assurance 2. Cosmetics and Cosmeceuticals 3. Stability of Drugs and Dosage forms	3	0	0	3
MC	Research Methodology & Intellectual Property Rights	2	0	0	2
Laboratory-I	Modern Pharmaceutical Analytical Techniques lab	0	0	4	2
Laboratory-II	Pharmaceutical and food Analysis Lab	0	0	4	2
Audit	Audit course- I	2	0	0	0
TOTAL		16	0	8	18

I YEAR II Semester

Course Code	Course Title	L	T	P	Credits
Professional Core-III	Advanced Instrumental Analysis I	3	0	0	3
Professional Core-IV	Modern Bio-analytical Techniques	3	0	0	3
Professional Elective-III	1. Pharmaceutical Validation ✓ 2. Herbal Cosmetics 3. Pharmacoepidemiology and Pharmacoconomics	3	0	0	3
Professional Elective-IV	1. Advanced Instrumental Analysis - II ✓ 2. Nutraceuticals 3. Clinical Research and Pharmacovigilance	3	0	0	3
Laboratory-III	Advanced Instrumental Analysis I Lab	0	0	4	2
Laboratory-IV	Modern Bio analytical Techniques Lab	0	0	4	2
--	Mini Project with Seminar	2	0	0	2
Audit	Audit Course- II	2	0	0	0
TOTAL		16	0	8	18



JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

M.PHARMACY (PHARMACEUTICAL REGULATORY AFFAIRS)

R19 COURSE STRUCTURE AND SYLLABUS
Effective from Academic Year 2019-20 Admitted Batch

I YEAR I Semester

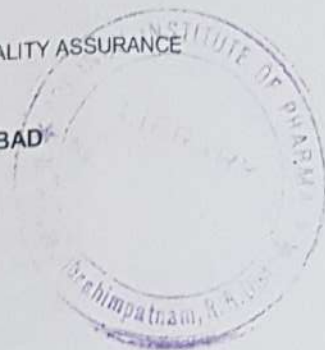
Course Code	Course Title	L	T	P	Credits
Professional Core-I	Good Regulatory Practice ✓	3	0	0	3
Professional Core-II	Drug Regulatory Affairs ✓	3	0	0	3
Professional Elective-I	1. Intellectual Property Rights 2. Total Quality Management 3. Pharmaceutical Validation ✓	3	0	0	3
Professional Elective-II	1. Stability of Drugs and Dosage forms ✓ 2. Pharmaceutical Formulation Technology 3. Documentation and Regulatory Writing	3	0	0	3
MC	Research methodology and IPR ✓	2	0	0	2
Laboratory- I	Regulatory Practice and Documentation Lab	0	0	4	2
Laboratory- II	Drug Regulation and Registration Lab	0	0	4	2
Audit	Audit Course- I	2	0	0	0
TOTAL		16	0	8	18

I YEAR II Semester

Course Code	Course Title	L	T	P	Credits
Professional Core-III	Regulatory aspects of medical devices	3	0	0	3
Professional Core-IV	Regulatory aspects of herbals and biologicals	3	0	0	3
Professional Elective-III	1. Regulatory aspects of food and Nutraceuticals ✓ 2. Biostatistics and Research Methodology 3. Nano based Drug delivery systems	3	0	0	3
Professional Elective-IV	1. Clinical research and Pharmacovigilance 2. Nutraceuticals ✓ 3. Advanced Drug Delivery Systems	3	0	0	3
Laboratory- III	Regulatory aspects of herbals and biologicals Lab	0	0	4	2
Laboratory- IV	Regulatory aspects of medical devices Lab	0	0	4	2
--	Mini Project with Seminar	2	0	0	2
Audit	Audit Course- II	2	0	0	0
Total		16	0	8	18

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

M.PHARMACY (PHARMACEUTICAL QUALITY ASSURANCE)

R19 COURSE STRUCTURE AND SYLLABUS
Effective from Academic Year 2019-20 Admitted Batch

I YEAR I Semester

Course Code	Course Title	L	T	P	Credits
Professional Core-I	Modern Pharmaceutical Analytical Techniques	3	0	0	3
Professional Core-II	Quality control and Quality Assurance	3	0	0	3
Professional Elective-I	1. Quality Management Systems 2. Pharmaceuticals and food Analysis 3. Drug Regulatory Affairs ✓	3	0	0	3
Professional Elective-II	1. Product Development and Technology Transfer 2. Advanced Pharmaceutical Analysis 3. Pharmaceutical Management ✓	3	0	0	3
MC	Research Methodology & IPR	2	0	0	2
Laboratory-I	Modern Pharmaceutical Analytical Techniques Lab	0	0	4	2
Laboratory-II	Quality Control and Quality Assurance Lab	0	0	4	2
Audit	Audit course - I	2	0	0	0
TOTAL		16	0	8	18

I YEAR II Semester

Course Code	Course Title	L	T	P	Credits
Professional Core-III	Pharmaceutical Validation	3	0	0	3
Professional Core-IV	Pharmaceutical Manufacturing Technology	3	0	0	3
Professional Elective-III	1. Hazards and Safety Management 2. Spectral Analysis ✓ 3. Screening Methods in Pharmacology	3	0	0	3
Professional Elective-IV	1. Audits and Regulatory compliance ✓ 2. Herbal Drug Technology 3. Stability of drugs and Dosage forms	3	0	0	3
Laboratory-III	Pharmaceutical Validation Lab	0	0	4	2
Laboratory-IV	Pharmaceutical Manufacturing Technology Lab	0	0	4	2
--	Mini Project with Seminar	2	0	0	2
Audit	Audit Course - II	2	0	0	0
TOTAL		16	0	8	18

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

M.PHARMACY (PHARMACY PRACTICE)

R19 COURSE STRUCTURE AND SYLLABUS
Effective from Academic Year 2019-20 Admitted Batch

I YEAR I Semester

Course Code	Course Title	L	T	P	Credits
Professional Core-I	Pharmacotherapeutics – I	3	0	0	3
Professional Core-II	Clinical Pharmacy Practice	3	0	0	3
Professional Elective-I	1. Clinical Toxicology 2. Hospital and Community Pharmacy 3. Clinical Research and Pharmacovigilance	3	0	0	3
Professional Elective-II	1. Molecular Biology 2. Advances in Preclinical Evaluation 3. Drug Regulatory Affairs	3	0	0	3
MC	Research methodology and IPR	2	0	0	2
Laboratory-I	Pharmacotherapeutics – I Lab	0	0	4	2
Laboratory-II	Clinical Pharmacy Practice Lab	0	0	4	2
Audit	Audit Course - I	2	0	0	0
TOTAL		16	0	8	18

I YEAR II Semester

Course Code	Course Title	L	T	P	Credits
Professional Core-III	Pharmacotherapeutics – II	3	0	0	3
Professional Core-IV	Clinical Pharmacokinetics and Drug monitoring	3	0	0	3
Professional Elective-III	1. Biopharmaceutics and Pharmacokinetics 2. Clinical Research ✓ 3. Quality use of Medicines	3	0	0	3
Professional Elective-IV	1. Principles of Drug Discovery 2. Cellular and molecular pharmacology 3. Nutraceuticals ✓	3	0	0	3
Laboratory- III	Pharmacotherapeutics – II Lab	0	0	4	2
Laboratory- IV	Clinical Pharmacokinetics and Drug monitoring Lab	0	0	4	2
--	Mini Project with Seminar	2	0	0	2
Audit	Audit Course- II	2	0	0	0
Total		16	0	8	18

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

M. Pharmacy (PHARMACEUTICS / PHARMACEUTICAL TECHNOLOGY)

COURSE STRUCTURE AND SYLLABUS
Effective from Academic Year 2017-18 Admitted Batch

I Year – I Semester

Category	Course Title	Int. marks	Ext. marks	L	P	C
Core Course I	Advanced Physical Pharmaceutics	25	75	4	--	4
Core Course II	Modern Pharmaceutics-I	25	75	4	--	4
Core Course III	Applied Biopharmaceutics and Pharmacokinetics	25	75	4	--	4
Core Elective I	1. Modern Pharmaceutical Analytical Techniques 2. Intellectual Property Rights	25	75	4	--	4
Open Elective I	1. Pharmacoepidemiology and Pharmacoeconomics 2. Drug Regulatory Affairs 3. Herbal Cosmetics Technology 4. Pharmaceutical Validation 5. Pharmaceutical Management	25	75	4	--	4
Laboratory I	Advanced physical Pharmaceutics Lab	25	75	--	6	3
Laboratory II	Applied Biopharmaceutics and Pharmacokinetics Lab	25	75	--	6	3
Seminar I	Seminar	100	--	--	4	2
Total Credits		275	525	20	16	28

I Year – II Semester

Category	Course Title	Int. marks	Ext. marks	L	P	C
Core Course IV	Advanced Drug Delivery Systems	25	75	4	--	4
Core Course V	Industrial Pharmacy	25	75	4	--	4
Core Course VI	Modern Pharmaceutics-II	25	75	4	--	4
Core Elective II	1. Biostatistics And Research Methodology 2. Stability of Drugs and Dosage Forms	25	75	4	--	4
Open Elective II	1. Screening Methods in Pharmacology 2. Nano Based Drug Delivery Systems 3. Nutraceuticals 4. Entrepreneurship management 5. Clinical Research And Pharmacovigilance	25	75	4	--	4
Laboratory III	Advanced Drug Delivery Systems Lab	25	75	--	6	3
Laboratory IV	Modern Pharmaceutics Lab	25	75	--	6	3
Seminar II	Seminar	100	--	--	4	2
Total Credits		275	525	20	16	28

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

M. Pharmacy (PHARMACEUTICAL ANALYSIS)

COURSE STRUCTURE AND SYLLABUS
Effective from Academic Year 2018-19 Admitted Batch

I Year – I Semester

Category	Course Title	Int. marks	Ext. marks	L	P	C
Core Course I	Advanced Pharmaceutical Analysis	25	75	4	--	4
Core Course II	Food Analysis	25	75	4	--	4
Core Course III	Modern Pharmaceutical Analytical Techniques	25	75	4	--	4
Core Elective I	1. Pharmaceutical Validation 2. Intellectual Property Rights	25	75	4	--	4
Open Elective I	1. Drug Regulatory Affairs 2. Pharmacoepidemiology and Pharmacoeconomics 3. Pharmaceutical Management 4. Herbal Cosmetics Technology 5. Pharmaceutical Formulation Technology	25	75	4	--	4
Laboratory I	Modern Pharmaceutical Analytical Techniques Lab	25	75	-	-6	3
Laboratory II	Advanced Pharmaceutical Analysis Lab	25	75	--	6	3
Seminar I	Seminar	100	--	--	4	2
Total Credits		275	525	20	16	28

I Year – II Semester

Category	Course Title	Int. marks	Ext. marks	L	P	C
Core Course IV	Advanced Instrumental Analysis	25	75	4	--	4
Core Course V	Quality Control and Quality Assurance	25	75	4	--	4
Core Course VI	Modern Bio analytical Techniques	25	75	4	--	4
Core Elective II	1. Biostatistics And Research Methodology 2. Spectral Analysis	25	75	4	--	4
Open Elective II	1. Screening Methods in Pharmacology 2. Stability of Drugs and Dosage Forms 3. Entrepreneurship management 4. Nano Based Drug Delivery Systems 5. Herbal & Cosmetics Analysis	25	75	4	--	4
Laboratory III	Advanced Instrumental Analysis Lab	25	75	-	6	4
Laboratory IV	Quality Control and Quality Assurance Lab	25	75	--	6	2
Seminar II	Seminar	100	--	--	4	2
Total Credits		275	525	20	16	28

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

M. Pharmacy (PHARMACEUTICAL REGULATORY AFFAIRS)

COURSE STRUCTURE AND SYLLABUS
Effective from Academic Year 2018-19 Admitted Batch

I Year – I Semester

Category	Course Title	Int. marks	Ext. marks	L	P	C
Core Course I	Good regulatory practices	25	75	4	--	4
Core Course II	Documentation and regulatory writing	25	75	4	--	4
Core Course III	Drug regulatory affairs	25	75	4	--	4
Core Elective I	1. Total Quality Management 2. Intellectual Property Rights	25	75	4	--	4
Open Elective I	1. Pharmacoepidemiology and Pharmacoconomics 2. Herbal Cosmetics Technology 3. Phytochemistry 4. Pharmaceutical Formulation Technology 5. Pharmaceutical Validation	25	75	4	--	4
Laboratory I	Regulatory practices and documentation lab	25	75	--	6	3
Laboratory II	Drug regulations and registration lab	25	75	--	6	3
Seminar I	Seminar	100	--	--	4	2
Total Credits		275	525	20	16	28

I Year – II Semester

Category	Course Title	Int. marks	Ext. marks	L	P	C
Core Course IV	Regulatory aspects of herbals and biologicals	25	75	4	--	4
Core Course V	Regulatory aspects of medical devices	25	75	4	--	4
Core Course VI	Regulatory aspects of foods and nutraceuticals	25	75	4	--	4
Core Elective II	1. Biostatistics And Research Methodology 2. Stability of Drugs and Dosage Forms	25	75	4	--	4
Open Elective II	1. Screening Methods in Pharmacology 2. Nano Based Drug Delivery Systems 3. Nutraceuticals 4. Advanced Drug Delivery Systems 5. Clinical Research and Pharmacovigilance	25	75	4	--	4
Laboratory III	Regulatory aspects herbals and biological practical lab	25	75	--	6	3
Laboratory IV	Regulatory aspects food and medical devices practical lab	25	75	--	6	3
Seminar II	Seminar	100	--	--	4	2
Total Credits		275	525	20	16	28

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

M. Pharmacy (PHARMACEUTICAL QUALITY ASSURANCE)

COURSE STRUCTURE AND SYLLABUS
Effective from Academic Year 2018-19 Admitted Batch

I Year – I Semester

Category	Course Title	Int. marks	Ext. marks	L	P	C
Core Course I	Quality management systems	25	75	4	--	4
Core Course II	Quality control and quality assurance	25	75	4	--	4
Core Course III	Modern Pharmaceutical Analytical Techniques	25	75	4	--	4
Core Elective I	1. Pharmaceutical Validation 2. Intellectual Property Rights	25	75	4	--	4
Open Elective I	1. Drug Regulatory Affairs 2. Pharmacoepidemiology and Pharmacoconomics 3. Pharmaceutical Management 4. Herbal Cosmetics Technology 5. Pharmaceutical Formulation Technology	25	75	4	--	4
Laboratory I	Modern Pharmaceutical Analytical Techniques Lab	25	75	-	-6	3
Laboratory II	Quality control and quality assurance lab	25	75	--	6	3
Seminar I	Seminar	100	--	--	4	2
Total Credits		275	525	20	16	28

I Year – II Semester

Category	Course Title	Int. marks	Ext. marks	L	P	C
Core Course IV	Hazards and safety management	25	75	4	--	4
Core Course V	Audits and regulatory compliance	25	75	4	--	4
Core Course VI	Pharmaceutical manufacturing technology	25	75	4	--	4
Core Elective II	1. Biostatistics And Research Methodology 2. Spectral Analysis	25	75	4	--	4
Open Elective II	1. Screening Methods in Pharmacology 2. Stability of Drugs and Dosage Forms 3. Entrepreneurship management 4. Nano Based Drug Delivery Systems 5. Herbal & Cosmetics Analysis	25	75	4	--	4
Laboratory III	Advanced Instrumental Analysis Lab	25	75	-	6	4
Laboratory IV	Quality Assurance Lab	25	75	--	6	2
Seminar II	Seminar	100	--	--	4	2
Total Credits		275	525	20	16	28

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

M. Pharmacy (PHARMACY PRACTICE)

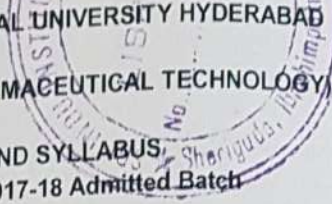
COURSE STRUCTURE AND SYLLABUS
Effective from Academic Year 2018-19 Admitted Batch

I Year – I Semester

Category	Course Title	Int. marks	Ext. marks	L	P	C
Core Course I	Pharmacotherapeutics-I	25	75	4	--	4
Core Course II	Clinical Pharmacy Practice	25	75	4	--	4
Core Course III	Hospital and Community Pharmacy	25	75	4	--	4
Core Elective I	1. Clinical Research and Pharmacovigilance 2. Pharmacoepidemiology and Pharmacoeconomics	25	75	4	--	4
Open Elective I	1. Pharmaceutical Management 2. Drug Regulatory Affairs 3. Herbal Cosmetics Technology 4. Pharmaceutical Validation 5. Phytochemistry	25	75	4	--	4
Laboratory I	Pharmacotherapeutics-I Lab	25	75	--	6	3
Laboratory II	Clinical Pharmacy Practice Lab	25	75	--	6	3
Seminar I	Seminar	100	--	--	4	2
Total Credits		275	525	20	16	28

I Year – II Semester

Category	Course Title	Int. marks	Ext. marks	L	P	C
Core Course IV	Clinical Pharmacokinetics and Therapeutic Drug Monitoring	25	75	4	--	4
Core Course V	Pharmacotherapeutics-II	25	75	4	--	4
Core Course VI	Principles of Quality use of Medicines	25	75	4	--	4
Core Elective II	1. Clinical Toxicology 2. Advanced Drug Delivery Systems	25	75	4	--	4
Open Elective II	1. Stability of Drugs and Dosage Forms 2. Principles of Drug Discovery 3. Biostatistics and Research Methodology 4. Screening Methods in Pharmacology 5. Entrepreneurship Management	25	75	4	--	4
Laboratory III	Pharmacotherapeutics-II Lab	25	75	--	6	3
Laboratory IV	Clinical Pharmacokinetics and Therapeutic Drug Monitoring Lab	25	75	--	6	3
Seminar II	Seminar	100	--	--	4	2
Total Credits		275	525	20	16	28



JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

M. Pharmacy (PHARMACEUTICS / PHARMACEUTICAL TECHNOLOGY)

COURSE STRUCTURE AND SYLLABUS

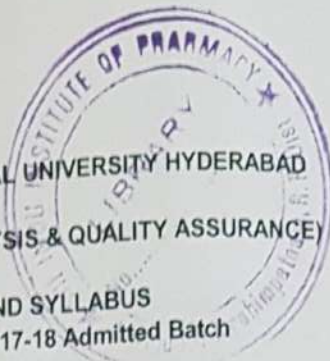
 Effective from Academic Year 2017-18 Admitted Batch

I Year – I Semester

Category	Course Title	Int. marks	Ext. marks	L	P	C
Core Course I	Advanced Physical Pharmaceutics	25	75	4	--	4
Core Course II	Modern Pharmaceutics-I	25	75	4	--	4
Core Course III	Applied Biopharmaceutics and Pharmacokinetics	25	75	4	--	4
Core Elective I	1. Modern Pharmaceutical Analytical Techniques 2. Intellectual Property Rights	25	75	4	--	4
Open Elective I	1. Pharmacoepidemiology and Pharmacoeconomics 2. Drug Regulatory Affairs 3. Herbal Cosmetic Technology 4. Pharmaceutical Validation 5. Pharmaceutical Management	25	75	4	--	4
Laboratory I	Advanced physical Pharmaceutics Lab	25	75	--	6	3
Laboratory II	Applied Biopharmaceutics and Pharmacokinetics Lab	25	75	--	6	3
Seminar I	Seminar	50	--	--	4	2
Total Credits				20	16	28

I Year – II Semester

Category	Course Title	Int. marks	Ext. marks	L	P	C
Core Course IV	Advanced Drug Delivery Systems	25	75	4	--	4
Core Course V	Industrial Pharmacy	25	75	4	--	4
Core Course VI	Modern Pharmaceutics-II	25	75	4	--	4
Core Elective II	1. Biostatistics And Research Methodology 2. Stability of Drugs and Dosage Forms	25	75	4	--	4
Open Elective II	1. Screening Methods in Pharmacology 2. Nano Based Drug Delivery Systems 3. Nutraceuticals 4. Entrepreneurship management 5. Clinical Research And Pharmacovigilance	25	75	4	--	4
Laboratory III	Advanced Drug Delivery Systems Lab	25	75	--	6	3
Laboratory IV	Modern Pharmaceutics Lab	25	75	--	6	3
Seminar II	Seminar	50	--	--	4	2
Total Credits				20	16	28



JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

M. Pharmacy (PHARMACEUTICAL ANALYSIS & QUALITY ASSURANCE)

COURSE STRUCTURE AND SYLLABUS

 Effective from Academic Year 2017-18 Admitted Batch

I Year – I Semester

Category	Course Title	Int. marks	Ext. marks	L	P	C
Core Course I	Advanced Pharmaceutical Analysis	25	75	4	--	4
Core Course II	Food Analysis	25	75	4	--	4
Core Course III	Modern Pharmaceutical Analytical Techniques	25	75	4	--	4
Core Elective I	1. Pharmaceutical Validation 2. Intellectual Property Rights	25	75	4	--	4
Open Elective I	1. Drug Regulatory Affairs 2. Pharmacoepidemiology and Pharmacoeconomics 3. Pharmaceutical Management 4. Herbal Cosmetics Technology 5. Pharmaceutical Formulation Technology	25	75	4	--	4
Laboratory I	Modern Pharmaceutical Analytical Techniques Lab	25	75	-	-6	3
Laboratory II	Advanced Pharmaceutical Analysis Lab	25	75	--	6	3
Seminar I	Seminar	50	--	--	4	2
Total Credits				20	16	28

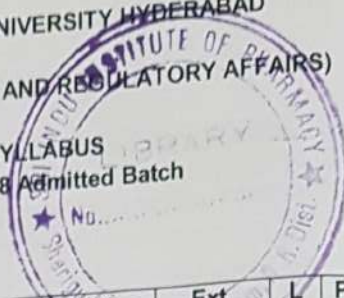
I Year – II Semester

Category	Course Title	Int. marks	Ext. marks	L	P	C
Core Course IV	Advanced Instrumental Analysis	25	75	4	--	4
Core Course V	Quality Control and Quality Assurance	25	75	4	--	4
Core Course VI	Modern Bio analytical Techniques	25	75	4	--	4
Core Elective II	1. Biostatistics And Research Methodology 2. Spectral Analysis	25	75	4	--	4
Open Elective II	1. Screening Methods in Pharmacology 2. Stability of Drugs and Dosage Forms 3. Entrepreneurship management 4. Nano Based Drug Delivery Systems 5. Herbal & Cosmetics Analysis	25	75	4	--	4
Laboratory III	Advanced Instrumental Analysis Lab	25	75	-	6	4
Laboratory IV	Quality Control and Quality Assurance Lab	25	75	--	6	2
Seminar II	Seminar	50	--	--	4	2
Total Credits				20	16	28

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

M. Pharmacy (PHARMACEUTICAL MANAGEMENT AND REGULATORY AFFAIRS)

COURSE STRUCTURE AND SYLLABUS
Effective from Academic Year 2017-18 Admitted Batch



I Year – I Semester

Category	Course Title	Int. marks	Ext. marks	L	P	C
Core Course I	Pharmaceutical Management –I (General and Personnel)	25	75	4	--	4
Core Course II	Drug Regulatory Affairs	25	75	4	--	4
Core Course III	Modern Pharmaceutical Analytical Techniques	25	75	4	--	4
Core Elective I	1. Total Quality Management 2. Intellectual Property Rights	25	75	4	--	4
Open Elective I	1. Pharmacoepidemiology and Pharmacoconomics 2. Herbal Cosmetics Technology 3. Phytochemistry 4. Pharmaceutical Formulation technology 5. Pharmaceutical Validation	25	75	4	--	4
Laboratory I	Modern Pharmaceutical Analytical Techniques Lab	25	75	--	6	3
Laboratory II	Pharmaceutical Management Lab	25	75	--	6	3
Seminar I	Seminar	50	--	--	4	2
Total Credits				20	16	28

I Year – II Semester

Category	Course Title	Int. marks	Ext. marks	L	P	C
Core Course IV	Pharmaceutical Management –II (Production, Marketing, Finance and Project)	25	75	4	--	4
Core Course V	Analytical Method Validation and Copyrights and Trademarks	25	75	4	--	4
Core Course VI	Pharmaceutical Market Research and Analysis	25	75	4	--	4
Core Elective II	1. Biostatistics And Research Methodology 2. Stability of Drugs and Dosage Forms	25	75	4	--	4
Open Elective II	1. Screening Methods in Pharmacology 2. Nano Based Drug Delivery Systems 3. Nutraceuticals 4. Advanced Drug Delivery Systems 5. Clinical Research and Pharmacovigilance	25	75	4	--	4
Laboratory III	Analytical Method Validation Lab	25	75	--	6	3
Laboratory IV	Pharmaceutical Market Research and Analysis Lab	25	75	--	6	3
Seminar II	Seminar	50	--	--	4	2
Total Credits				20	16	28

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
M. Pharmacy (QUALITY ASSURANCE AND PHARMA REGULATORY AFFAIRS)

COURSE STRUCTURE AND SYLLABUS
Effective from Academic Year 2017-18 Admitted Batch

I Year – I Semester

Category	Course Title	Int. marks	Ext. marks	L	P	C
Core Course I	Quality control and Quality assurance	25	75	4	--	4
Core Course II	Drug Regulatory Affairs	25	75	4	--	4
Core Course III	Modern Pharmaceutical Analytical Techniques	25	75	4	--	4
Core Elective I	1. Quality Management Systems 2. Intellectual Property Rights	25	75	4	--	4
Open Elective I	1. Pharmaceutical Validation 2. Pharmacoepidemiology and Pharmacoconomics 3. Pharmaceutical Management 4. Herbal Cosmetics Technology 5. Pharmaceutical Formulation Technology	25	75	4	--	4
Laboratory I	Modern Pharmaceutical Analytical Techniques Lab	25	75	--	6	3
Laboratory II	Principles and Practice of Quality Assurance-I Lab	25	75	--	6	3
Seminar I	Seminar	50	--	--	4	2
Total Credits				20	16	28

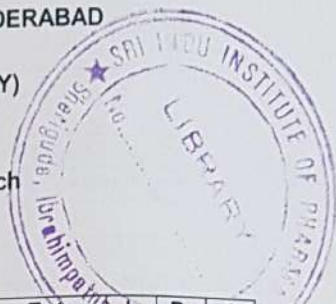
I Year – II Semester

Category	Course Title	Int. marks	Ext. marks	L	P	C
Core Course IV	Principles and Practice of Quality Assurance-II	25	75	4	--	4
Core Course V	Modern Pharmaceutical Technology	25	75	4	--	4
Core Course VI	Regulatory submissions: Drugs, Biologicals and Medical devices	25	75	4	--	4
Core Elective II	1. Biostatistics And Research Methodology 2. Stability of Drugs and Dosage Forms	25	75	4	--	4
Open Elective II	1. Screening Methods in Pharmacology 2. Spectral Analysis 3. Entrepreneurship management 4. Nano Based Drug Delivery Systems 5. Herbal & Cosmetics Analysis	25	75	4	--	4
Laboratory III	Principles and Practice of Quality Assurance-II Lab	25	75	--	6	3
Laboratory IV	Regulatory submissions: Drugs, Biological and Medical devices Lab	25	75	--	6	3
Seminar II	Seminar	50	--	--	4	2
Total Credits				20	16	28

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

M. Pharmacy (HOSPITAL AND CLINICAL PHARMACY)

COURSE STRUCTURE AND SYLLABUS
Effective from Academic Year 2017-18 Admitted Batch



I Year – I Semester

Category	Course Title	Int. marks	Ext. marks	L	P	C
Core Course I	Pharmacotherapeutics-I	25	75	4	--	4
Core Course II	Clinical Pharmacy Practice	25	75	4	--	4
Core Course III	Hospital and Community Pharmacy	25	75	4	--	4
Core Elective I	1. Clinical Research and Pharmacovigilance 2. Pharmacoepidemiology and Pharmacoeconomics	25	75	4	--	4
Open Elective I	1. Pharmaceutical Management 2. Drug Regulatory Affairs 3. Herbal Cosmetics Technology 4. Pharmaceutical Validation 5. Phytochemistry	25	75	4	--	4
Laboratory I	Pharmacotherapeutics-I Lab	25	75	--	6	3
Laboratory II	Clinical Pharmacy Practice Lab	25	75	--	6	3
Seminar I	Seminar	50	--	--	4	2
Total Credits				20	16	28

I Year – II Semester

Category	Course Title	Int. marks	Ext. marks	L	P	C
Core Course IV	Clinical Pharmacokinetics and Therapeutic Drug Monitoring	25	75	4	--	4
Core Course V	Pharmacotherapeutics-II	25	75	4	--	4
Core Course VI	Principles of Quality use of Medicines	25	75	4	--	4
Core Elective II	1. Clinical Toxicology 2. Advanced Drug Delivery Systems	25	75	4	--	4
Open Elective II	1. Stability of Drugs and Dosage Forms 2. Principles of Drug Discovery 3. Research Methodology 4. Screening Methods in Pharmacology 5. Entrepreneurship Management	25	75	4	--	4
Laboratory III	Pharmacotherapeutics-II Lab	25	75	--	6	3
Laboratory IV	Hospital Pharmacy Lab	25	75	--	6	3
Seminar II	Seminar	50	--	--	4	2
Total Credits				20	16	28



JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
M. Pharmacy (PHARMACEUTICS / PHARMACEUTICAL TECHNOLOGY)

I Year – I Semester

COURSE STRUCTURE AND SYLLABUS

Category	Course Title	Int. marks	Ext. marks	L	P	C
Core Course I	Applied Biopharmaceutics and Pharmacokinetics	25	75	4	--	4
Core Course II	Advanced Physical Pharmaceutics	25	75	4	--	4
Core Course III	Advanced Pharmaceutical Technology - Lachman	25	75	4	--	4
Core Elective I	1. Modern Pharmaceutical Analytical Technique 2. Intellectual Property Rights and Regulatory Affairs	25	75	4	--	4
Open Elective I	1. Pharmacoepidemiology, Pharmacoeconomics and Pharmacovigilance 2. Drug Regulatory Affairs (National & International) 3. Herbal Cosmetic Technology 4. Separation Methods 5. Pharmaceutical Management - I	25	75	4	--	4
Laboratory I	Modern Pharmaceutical Analytical Techniques Lab	25	75	4	--	4
Laboratory II	Advanced physical Pharmaceutics Lab	25	75	--	4	2
Seminar I	Seminar	50	--	--	4	2
Total Credits				24	8	28

I Year – II Semester

Category	Course Title	Int. marks	Ext. marks	L	P	C
Core Course IV	Advanced Drug Delivery Systems	25	75	4	--	4
Core Course V	Industrial Pharmacy	25	75	4	--	4
Core Course VI	Advanced Pharmaceutical Technology II	25	75	4	--	4
Core Elective II	1. Biostatistics And Research Methodology 2. Screening Methods & Clinical Research	25	75	4	--	4
Open Elective II	1. Stability of Drugs and Dosage Forms 2. Nano Based Drug Delivery Systems 3. Nutraceuticals. 4. Pharmaceutical Management-II	25	75	4	--	4
Laboratory III	Advanced Drug Delivery Systems Lab	25	75	4	--	4
Laboratory IV	Advanced Pharmaceutical Technology Lab	25	75	--	4	2
Seminar II	Seminar	50	--	--	4	2
Total Credits				24	8	28

II Year - I Semester

Course Title	Int. marks	Ext. marks	L	P	C
Comprehensive Viva-Voce	--	100	--	--	4
Project work Review I	50	--	--	24	12
Total Credits			--	24	16

II Year - II Semester

Course Title	Int. marks	Ext. marks	L	P	C
Project work Review II	50	--	--	8	4
Project Evaluation (Viva-Voce)	--	150	--	16	12
Total Credits			--	24	16

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
M. Pharmacy (PHARMACEUTICS / PHARMACEUTICAL TECHNOLOGY)

COURSE STRUCTURE AND SYLLABUS

I Year – II Semester

Category	Course Title	marks	xt. marks	L	P	C
		25	75	4	--	4
Core Course IV	Advanced Drug Delivery Systems	25	75	4	--	4
Core Course V	Industrial Pharmacy	25	75	4	--	4
Core Course VI	Advanced Pharmaceutical Technology II	25	75	4	--	4
Core Elective II	1. Biostatistics And Research Methodology 2. Screening Methods & Clinical Research	25	75	4	--	4
Open Elective II	1. Stability of Drugs and Dosage Forms 2. Nano Based Drug Delivery Systems 3. Nutraceuticals 4. Pharmaceutical Management-II	25	75	4	--	4
Laboratory III	Advanced Drug Delivery Systems Lab	25	75	--	4	2
Laboratory IV	Advanced Pharmaceutical Technology Lab	50	--	--	4	2
Seminar II	Seminar			24	8	28
Total Credits						



JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
PHARMACEUTICAL ANALYSIS AND QUALITY ASSURANCE / QA
COURSE STRUCTURE AND SYLLABUS

I Year – I Semester

Category	Course Title	Int. marks	Ext. marks	L	P	C
Core Course I	Separation Techniques	25	75	4	--	4
Core Course II	Advanced Pharmaceutical Analysis – I	25	75	4	--	4
Core Course III	Quality Control of Bulk Drugs and Formulations	25	75	4	--	4
Core Elective I	1. Modern Pharmaceutical Analytical Technique 2. Intellectual Property Rights and Regulatory Affairs	25	75	4	--	4
Open Elective I	1. Pharmacoepidemiology, Pharmacoeconomics and Pharmacovigilance 2. Drug Regulatory Affairs (National And International) 3. Herbal Cosmetics Technology 4. Pharmaceutical Management – I 5. Advanced Physical Pharmaceutics	25	75	4	--	4
Laboratory I	Modern Pharmaceutical Analytical Techniques Lab	25	75	4	--	4
Laboratory II	Advanced Pharmaceutical Analysis-I Lab	25	75	--	4	2
Seminar I	Seminar	50	--	--	4	2
Total Credits				24	8	28

I Year – II Semester

Category	Course Title	Int. marks	Ext. marks	L	P	C
Core Course IV	Advanced Pharmaceutical Analysis – II	25	75	4	--	4
Core Course V	Spectral Analysis	25	75	4	--	4
Core Course VI	Quality Assurance	25	75	4	--	4
Core Elective II	1. Biostatistics And Research Methodology 2. Screening Methods & Clinical Research	25	75	4	--	4
Open Elective II	1. Stability of Drugs and Dosage Forms 2. Nano Based Drug Delivery Systems 3. Nutraceuticals 4. Pharmaceutical Product development and Management 5. Pharmaceutical Management-II	25	75	4	--	4
Laboratory III	Advanced Pharmaceutical Analysis – II Lab	25	75	4	--	4
Laboratory IV	Spectral Analysis Lab	25	75	--	4	2
Seminar II	Seminar	50	--	--	4	2
Total Credits				24	8	28

II Year - I Semester

Course Title	Int. marks	Ext. marks	L	P	C
Comprehensive Viva-Voce	--	100	--	--	4
Project work Review I	50	--	--	24	12
Total Credits			--	24	16

II Year - II Semester

Course Title	Int. marks	Ext. marks	L	P	C
Project work Review II	50	--	--	8	4
Project Evaluation (Viva-Voce)	--	150	--	16	12
Total Credits			--	24	16

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
M. Pharmacy (PHARMACEUTICAL MANAGEMENT AND REGULATORY AFFAIRS)
COURSE STRUCTURE AND SYLLABUS

I Year – I Semester

Category	Course Title	Int. marks	Ext. marks	L	P	C
Core Course I	Pharmaceutical Management –I (General and Personnel)	25	75	4	--	4
Core Course II	Total Quality Management	25	75	4	--	4
Core Course III	Drug Regulatory Affairs (National and International Aspects)	25	75	4	--	4
Core Elective I	1. Modern Pharmaceutical Analytical Technique 2. Intellectual Property Rights and Regulatory Affairs	25	75	4	--	4
Open Elective I	1. Pharmacoepidemiology, Pharmacoconomics and Pharmacovigilance 2. Herbal Cosmetics Technology 3. Advanced Pharmaceutical Technology –I 4. Industrial Pharmaceutics 5. Separation Techniques	25	75	4	--	4
Laboratory I	Modern Pharmaceutical Analytical Techniques Lab	25	75	4	--	4
Laboratory II	Pharmaceutical Management Lab	25	75	--	4	2
Seminar I	Seminar	50	--	--	4	2
Total Credits				24	8	28

I Year – II Semester

Category	Course Title	Int. marks	Ext. marks	L	P	C
Core Course IV	Pharmaceutical Management –II (Production, Marketing, Finance and Project)	25	75	4	--	4
Core Course V	Analytical Method Validation and Copyrights and Trademarks	25	75	4	--	4
Core Course VI	Pharmaceutical Market Research and Analysis	25	75	4	--	4
Core Elective II	1. Biostatistics And Research Methodology 2. Screening Methods & Clinical Research	25	75	4	--	4
Open Elective II	1. Stability of Drugs and Dosage Forms 2. Nano Based Drug Delivery Systems 3. Nutraceuticals 4. Advanced Drug Delivery Systems 5. Advanced Pharmaceutical Technology -II	25	75	4	--	4
Laboratory III	Analytical Method Validation Lab	25	75	4	--	4
Laboratory IV	Pharmaceutical Market Research and Analysis Lab	25	75	--	4	2
Seminar II	Seminar	50	--	--	4	2
Total Credits				24	8	28

II Year - I Semester

Course Title	Int. marks	Ext. marks	L	P	C
Comprehensive Viva-Voce	--	100	--	--	4
Project work Review I	50	--	--	24	12
Total Credits			--	24	16

II Year - II Semester

Course Title	Int. marks	Ext. marks	L	P	C
Project work Review II	50	--	--	8	4
Project Evaluation (Viva-Voce)	--	150	--	16	12
Total Credits			--	24	16



JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
M. Pharmacy (QUALITY ASSURANCE AND PHARMA REGULATORY AFFAIRS)

COURSE STRUCTURE AND SYLLABUS

I Year – I Semester

Category	Course Title	Int. marks	Ext. marks	L	P	C	
Core Course I	Principles and Practice of Quality assurance-I	25	75	4	--	4	
Core Course II	Regulation of Drugs, Biological and Medicinal devices	25	75	4	--	4	
Core Course III	Pharmaceutical Regulatory affairs-I	25	75	4	--	4	
Core Elective I	1. Modern Pharmaceutical Analytical Technique 2. Intellectual Property Rights and Regulatory Affairs	25	75	4	--	4	
Open Elective I	1. Pharmacoepidemiology, Pharmacoeconomics and Pharmacovigilance 2. Drug Regulatory Affairs (National And International) 3. Herbal Cosmetics Technology 4. Clinical Research 5. Pharmaceutical Management-I	25	75	4	--	4	
Laboratory I	Modern Pharmaceutical Analytical Techniques Lab	25	75	4	--	4	
Laboratory II	Principles and Practice of Quality Assurance-I Lab	25	75	--	4	2	
Seminar I	Seminar	50	--	--	4	2	
Total Credits					24	8	28

I Year – II Semester

Category	Course Title	Int. marks	Ext. marks	L	P	C	
Core Course IV	Principles and Practice of Quality Assurance-II	25	75	4	--	4	
Core Course V	Modern Pharmaceutical Technology	25	75	4	--	4	
Core Course VI	Regulatory submissions: Drugs, Biologicals and Medical devices	25	75	4	--	4	
Core Elective II	1. Biostatistics And Research Methodology 2. Screening Methods & Clinical Research	25	75	4	--	4	
Open Elective II	1. Stability of Drugs and Dosage Forms 2. Nano Based Drug Delivery Systems 3. Nutraceuticals 4. Pharmaceutical Product development and Management 5. Pharmaceutical Management-II	25	75	4	--	4	
Laboratory III	Principles and Practice of Quality Assurance-II Lab	25	75	4	--	4	
Laboratory IV	Regulatory submissions: Drugs, Biological and Medical devices Lab	25	75	--	4	2	
Seminar II	Seminar	50	--	--	4	2	
Total Credits					24	8	28

II Year - I Semester

Course Title	Int. marks	Ext. marks	L	P	C
Comprehensive Viva-Voce	--	100	--	--	4
Project work Review I	50	--	--	24	12
Total Credits				24	16

II Year - II Semester

Course Title	Int. marks	Ext. marks	L	P	C
Project work Review II	50	--	--	8	4
Project Evaluation (Viva-Voce)	--	150	--	16	12
Total Credits				24	16

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

HOSPITAL AND CLINICAL PHARMACY

COURSE STRUCTURE AND SYLLABUS

I Year – I Semester

Category	Course Title	Int. marks	Ext. marks	L	P	C	
Core Course I	Pathophysiology and Applied Pharmacotherapeutics-I	25	75	4	--	4	
Core Course II	Advanced Clinical Pharmacy	25	75	4	--	4	
Core Course III	Community Patient Care / Community Pharmacy	25	75	4	--	4	
Core Elective I	1. Modern Pharmaceutical Analytical Technique 2. Intellectual Property Rights and Regulatory Affairs	25	75	4	--	4	
Open Elective I	1. Pharmacoepidemiology, Pharmacoeconomics and Pharmacovigilance 2. Drug Regulatory Affairs (National And International) 3. Herbal Cosmetics Technology 4. Clinical Research 5. Molecular Pharmacology	25	75	4	--	4	
Laboratory I	Modern Pharmaceutical Analytical Techniques Lab	25	75	4	--	4	
Laboratory II	Advanced Clinical Pharmacy Lab	25	75	--	4	2	
Seminar I	Seminar	50	--	--	4	2	
Total Credits					24	8	28

I Year – II Semester

Category	Course Title	Int. marks	Ext. marks	L	P	C	
Core Course IV	Clinical Pharmacokinetics and Therapeutic Drug Monitoring	25	75	4	--	4	
Core Course V	Pathophysiology and Applied Pharmacotherapeutics-II	25	75	4	--	4	
Core Course VI	Hospital Pharmacy	25	75	4	--	4	
Core Elective II	1. Biostatistics And Research Methodology 2. Screening Methods & Clinical Research	25	75	4	--	4	
Open Elective II	1. Stability of Drugs and Dosage Forms 2. Nano Based Drug Delivery Systems 3. Nutraceuticals 4. Clinical Toxicology 5. Advanced Drug Delivery Systems	25	75	4	--	4	
Laboratory III	Pathophysiology and Applied Pharmacotherapeutics Lab	25	75	4	--	4	
Laboratory IV	Hospital Pharmacy Lab	25	75	--	4	2	
Seminar II	Seminar	50	--	--	4	2	
Total Credits					24	8	28

II Year - I Semester

Course Title	Int. marks	Ext. marks	L	P	C
Comprehensive Viva-Voce	--	100	--	--	4
Project work Review I	50	--	--	24	12
Total Credits				24	16

II Year - II Semester

Course Title	Int. marks	Ext. marks	L	P	C
Project work Review II	50	--	--	8	4
Project Evaluation (Viva-Voce)	--	150	--	16	12
Total Credits				24	16