



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

TO WHOMSOEVER IT MAY CONCERN

This is to certify that the information given in the attached documents are verified by me and is true to the best of my knowledge.

Dr. Sujith Varma.K **PRINCIPAL**
Principal **National College of Pharmacy**
Manassery, Kozhikode
National College of Pharmacy
Manassery, Mukkam, Kozhikode





NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

CRITERIA 2: TEACHING LEARNING AND EVALUATION

2.6.2: ATTAINMENT OF POs AND COs ARE EVALUATED

<u>SL NO</u>	<u>PARTICULARS</u>
1	MAPPING OF B.PHARM
2	MAPPING OF PHARM D
3	MAPPING OF PHARM D P.B
4	MAPPING OF M.PHARM
5	ATTAINMENT OF B.PHARM
6	ATTAINMENT OF PHARM D
7	ATTAINMENT OF PHARM D P.B
8	ATTAINMENT OF M.PHARM



S. J. S. S.
PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode

KMCT Medical College Campus, Manassery, P.O, Mukkam Ph:-04952297440, Email:-pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

GA PO MAPPING- B.PHARM

PROGRAM OUTCOME	GA 1	GA 2	GA 3	GA 4	GA 5	GA 6	GA 7	GA 8	GA 9	GA 10
PO1	2	1	1	2	1	2	-	1	2	1
PO2	2	2	1	2	-	1	2	-	1	2
PO3	2	2	1	2	-	-	1	1	1	1
PO4	2	1	1	-	1	-	1	-	2	2
PO5	1	1	2	2	-	1	1	2	1	2
PO6	2	1	2	1	1	2	1	1	2	1
PO7	2	1	2	1	-	3	1	2	-	-
PO8	2	2	2	3	1	-	1	-	1	2
PO9	2	2	2	2	1	1	-	1	2	1
PO10	1	1	1	1	3	1	-	-	-	-
PO11	2	2	-	1	-	1	1	-	3	1



Sujitha
PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode

KMCT Medical College Campus, Manassery, P.O, Mukkam Ph:-04952297440, Email:-pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

GA PO MAPPING- PHARM D

PROGRAM OUTCOME	GA 1	GA 2	GA 3	GA 4	GA 5	GA 6	GA 7	GA 8	GA 9	GA1 0
PO1	2	1	1	2	1	1	1	-	2	2
PO2	2	2	2	2	1	3	1	1	2	3
PO3	2	1	1	2	1	1	1	1	2	2
PO4	1	-	2	2	1	3	-	1	1	1
PO5	1	2	2	2	-	2	2	2	2	1
PO6	2	2	2	2	-	2	1	1	2	2
PO7	2	1	1	2	1	2	1	1	1	2
PO8	2	2	1	2	-	2	-	1	2	2
PO9	2	1	2	2	2	1	-	1	3	2



Sujitha
PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode

KMCT Medical College Campus, Manassery, P.O, Mukkam Ph:-04952297440, Email:-pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

GA PO MAPPING- PHARM D P.B

PROGRAM OUTCOME	GA 1	GA 2	GA 3	GA 4	GA 5	GA 6	GA 7	GA 8	GA 9	GA1 0
PO1	2	1	1	2	1	1	1	-	2	2
PO2	2	2	2	2	1	3	1	1	2	3
PO3	2	1	1	2	1	1	1	1	2	2
PO4	1	-	2	2	1	3	-	1	1	1
PO5	1	2	2	2	-	2	2	2	2	1
PO6	2	2	2	2	-	2	1	1	2	2
PO7	2	1	1	2	1	2	1	1	1	2
PO8	2	2	1	2	-	2	-	1	2	2
PO9	2	1	2	2	2	1	-	1	3	2



Sujitha
PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode

KMCT Medical College Campus, Manassery, P.O, Mukkam Ph:-04952297440, Email:-pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

GA PO MAPPING- M. PHARM

PROGRAM OUTCOME	GA 1	GA 2	GA 3	GA 4	GA 5	GA 6	GA 7	GA 8	GA 9	GA 10
PO1	2	1	2	2	1	1	1	1	1	1
PO2	2	2	2	2	-	2	2	-	-	2
PO3	2	1	2	2	1	1	1	-	-	1
PO4	1	1	2	2	-	-	1	1	2	1
PO5	2	2	1	2	-	-	1	1	-	1
PO6	2	2	2	2	2	1	1	1	1	1
PO7	2	2	1	2	1	2	2	1	1	1
PO8	2	2	1	2	1	1	1	-	2	2
PO9	1	1	2	2	1	2	1	2	2	1
P10	2	2	2	2	2	1	1	1	1	1
P11	2	1	2	2	1	1	1	1	3	1



Sujitha
PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode

KMCT Medical College Campus, Manassery, P.O, Mukkam Ph:-04952297440, Email:-pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

MAPPING OF B.PHARM



[Signature]
PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode

KMCT Medical College Campus, Manassery, P.O, Mukkam Ph: 04952267440, Email: pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

B.PHARM CO PO PSO MAPPING

B.PHARM

FIRST SEMESTER

BP101T HUMAN ANATOMY AND PHYSIOLOGY I(T)

CO PO MAPPING

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
C01	3	1	1	3	1	3	3	3	1	3	1	C01	2	2	2	2
C02	3	1	1	2	1	2	2	3	1	3	2	C02	1	3	1	3
C03	3	1	1	3	1	3	2	2	3	1	1	C03	1	2	2	2
C04	3	1	3	3	1	3	3	2	3	1	3	C04	3	2	2	2
AVERAGE	3	1	1.5	2.75	1	2.75	2.5	2.5	2	2	1.75	AVERAGE	2	2.25	1.75	2.25

CO PSO MAPPING

BP102T PHARMACEUTICAL ANALYSIS I (T)

CO PO MAPPING

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
C01	3	2	3	3	2	3	1	1	1	1	1	C01	2	2	2	1
C02	3	2	3	3	2	3	1	1	1	1	1	C02	3	3	3	2
C03	3	2	3	3	1	2	1	1	1	1	1	C03	2	3	2	2
C04	2	2	3	3	2	2	1	1	1	1	1	C04	2	1	3	3
AVERAGE	2.75	2	3	3	1.75	2.5	1	1	1	1	1	AVERAGE	2.25	2.5	2.5	2

CO PSO MAPPING

BP103T PHARMACEUTICS I (T)

CO PO MAPPING

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
C01	3	1	2	1	1	3	1	2	1	1	1	C01	2	1	1	1
C02	3	2	2	3	1	3	1	2	3	1	1	C02	2	2	2	2
C03	3	3	2	1	1	3	1	3	2	1	1	C03	2	1	2	1
C04	2	1	2	1	1	3	1	3	3	1	2	C04	3	1	1	1
AVERAGE	2.75	1.5	2	1.5	1	3	1	2.5	2.25	1	1.25	AVERAGE	2.25	1.25	1.5	1.25

CO PSO MAPPING

BP104T PHARMACEUTICAL INORGANIC CHEMISTRY (T)

CO PO MAPPING

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
----------------	-----	-----	-----	-----	-----	-----	-----	-----	-----	------	------	----	------	------	------	------

CO PSO MAPPING



Principal
Principal
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
C01	2	3	2	2	3	3	3	3	3	3	3	C01	2	1	2	1
C02	3	3	2	2	3	3	3	3	3	3	3	C02	3	2	2	2
C03	2	3	2	2	3	3	3	3	3	3	3	C03	1	2	1	2
C04	3	3	2	2	3	3	3	3	3	3	3	C04	1	1	1	3
AVERAGE	2.5	3	2	2	3	3	3	3	3	3	3	AVERAGE	1.75	1.5	1.5	2
BP105T COMMUNICATION SKILLS(T)																
CO PO MAPPING												CO PSO MAPPING				
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
C01	-	-	-	-	-	3	-	3	-	-	-	C01	2	3	2	3
C02	-	-	-	-	-	3	-	3	-	-	-	C02	3	3	1	3
C03	-	-	-	-	-	3	-	3	-	-	-	C03	2	2	2	3
C04	-	-	-	-	-	3	-	3	-	-	-	C04	1	2	2	3
AVERAGE	-	-	-	-	-	3	-	3	-	-	-	AVERAGE	2	2.5	1.75	3
BP107P HUMAN ANATOMY AND PHYSIOLOGY I(P)																
CO PO MAPPING												CO PSO MAPPING				
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
C01	1	2	1	1	1	1	2	2	2	1	1	C01	1	-	-	-
C02	3	2	2	2	1	1	1	2	1	2	2	C02	1	-	1	-
C03	3	3	3	1	1	1	2	2	2	1	1	C03	2	-	1	2
C04	1	2	1	1	2	2	2	2	2	2	2	C04	1	-	-	1
AVERAGE	2	2.25	1.75	1.25	1.25	1.25	1.75	2	1.75	1.5	1.5	AVERAGE	1.25	-	0.5	0.75
BP108P PHARMACEUTICAL ANALYSIS I (P)																
CO PO MAPPING												CO PSO MAPPING				
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
C01	3	2	3	3	1	3	1	1	1	1	1	C01	2	2	2	1
C02	3	2	3	3	3	3	1	1	1	1	1	C02	1	1	1	2
C03	3	2	3	3	3	3	1	1	1	1	1	C03	1	2	2	1



[Signature]
PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

CO4	2	2	3	3	2	2	1	1	1	1	1	CO4	2	2	1	1
AVERAGE	2.75	2	3	3	1.25	2.5	1	1	1	1	1	AVERAGE	1.5	1.75	1.5	1.25
BP109P PHARMACEUTICS I (P)																
CO-PO MAPPING												CO-PSO MAPPING				
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
CO1	3	1	2	1	1	3	1	2	1	1	1	CO1	3	2	1	1
CO2	3	2	2	3	1	3	1	2	3	1	1	CO2	2	1	2	2
CO3	3	2	2	1	1	3	1	2	2	1	1	CO3	2	2	2	1
CO4	2	1	2	1	1	3	1	2	3	1	2	CO4	1	1	1	2
AVERAGE	2.75	1.5	2	1.5	1	3	1	2	2.25	1	1.25	AVERAGE	2	1.5	1.5	1.5
BP110P PHARMACEUTICAL INORGANIC CHEMISTRY (P)																
CO-PO MAPPING												CO-PSO MAPPING				
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
CO1	3	1	2	1	2	2	3	1	2	1	2	CO1	2	1	1	1
CO2	3	1	1	1	2	2	3	2	2	1	2	CO2	1	1	1	1
CO3	3	2	2	1	2	2	3	2	2	1	1	CO3	1	2	2	1
CO4	3	1	2	1	3	2	2	1	2	1	1	CO4	2	1	1	2
AVERAGE	3	1.25	1.75	1	2.25	2	2.75	1.5	2	1	1.5	AVERAGE	1.5	1.25	1.25	1.25
BP111P COMMUNICATION SKILLS																
CO-PO MAPPING												CO-PSO MAPPING				
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
CO1	1	-	-	-	-	3	-	3	-	-	-	CO1	1	-	1	3
CO2	-	-	-	-	-	3	-	3	-	-	-	CO2	1	-	-	3
CO3	-	-	-	-	-	3	-	3	-	-	-	CO3	1	-	1	3
CO4	-	-	-	-	-	3	-	3	-	-	-	CO4	1	-	1	3
AVERAGE	-	-	-	-	-	3	-	3	-	-	-	AVERAGE	1	-	0.75	3
SECOND SEMESTER																
BP201T HUMAN ANATOMY AND PHYSIOLOGY II																
CO-PO MAPPING												CO-PSO MAPPING				
Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4



Principal
PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode



Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences. Accredited by NBA

Outcome																
C01	3	3	3	2	2	1	3	2	1	2	2	C01	2	2	1	2
C02	3	3	3	2	1	3	2	1	3	1	3	C02	1	1	2	1
C03	3	3	3	2	2	2	3	3	3	1	1	C03	1	1	1	2
C04	3	2	2	2	1	1	2	2	3	1	2	C04	1	1	2	1
AVERAGE	3	2.75	2.75	2	1.5	1.75	2.5	2	2.5	1.25	2	AVERAGE	1.25	1.25	1.5	1.5

BP202T PHARMACEUTICAL ORGANIC CHEMISTRY I

CO-PO MAPPING												CO-PSO MAPPING				
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
CO1	2	2	2	2	2	2	2	2	2	2	1	CO1	1	2	1	2
CO2	2	2	1	1	1	2	2	2	2	2	2	CO2	1	1	1	1
CO3	2	3	1	1	1	1	2	2	2	2	1	CO3	1	1	2	1
CO4	3	2	3	2	1	3	1	1	2	1	1	CO4	1	1	1	1
AVERAGE	2.25	2.25	1.75	1.5	1.25	2	1.75	1.75	2	1.75	1.25	AVERAGE	1	1.25	1.25	1.25

BP203T BIOCHEMISTRY

CO-PO MAPPING											CO-PSO MAPPING					
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
CO1	3	3	2	3	3	3	3	3	3	2	3	CO1	1	1	1	1
CO2	2	3	2	1	2	3	3	2	3	3	3	CO2	1	1	1	1
CO3	3	3	2	3	3	3	3	2	-	3	3	CO3	1	1	2	1
CO4	2	3	2	2	2	3	2	3	3	2	3	CO4	2	2	2	1
AVERAGE	2.5	3	2	2.25	2.5	3	2.75	2	2.25	2.25	3	AVERAGE	1.25	1.25	1.5	1

BP204T PATHOPHYSIOLOGY

CO-PO MAPPING											CO-PSO MAPPING					
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
CO1	2	2	3	3	3	2	3	2	3	-	1	CO1	1	1	1	1
CO2	2	3	3	3	3	-	3	2	2	1	3	CO2	1	2	1	2
CO3	2	2	3	3	3	3	3	2	2	3	3	CO3	2	1	2	1
CO4	2	3	3	3	2	-	3	2	2	1	-	CO4	1	2	1	2



Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences. Accredited by NBA

C05	2	2	3	2	1	2	1	2	1	1	-	C05	1	1	2	1
AVERAGE	2	2.4	3	2.2	2.2	1.4	2.6	2	2	1.2	1.2	AVERAGE	1.2	1.4	1.4	1.4
BP205T COMPUTER APPLICATIONS IN PHARMACY																
CO-PO MAPPING											CO-PSO MAPPING					
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
C01	-	-	-	-	-	-	-	-	-	-	3	C01	1	2	1	2
C02	-	-	-	-	-	-	-	-	-	-	3	C02	2	1	2	2
C03	-	-	-	-	-	-	-	-	-	-	3	C03	1	2	1	2
C04	-	-	-	-	-	-	-	-	-	-	3	C04	2	1	1	2
AVERAGE	-	-	-	-	-	-	-	-	-	-	3	AVERAGE	1.5	1.5	1.25	2
BP206T ENVIRONMENTAL SCIENCES																
CO-PO MAPPING											CO-PSO MAPPING					
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
C01	-	-	-	-	-	-	-	-	3	-	-	C01	-	-	-	-
C02	-	-	-	-	-	-	-	-	3	-	-	C02	-	-	-	-
C03	-	-	-	-	-	-	-	-	3	-	-	C03	-	-	-	-
C04	-	-	-	-	-	-	-	-	3	-	-	C04	-	-	-	-
AVERAGE	-	-	-	-	-	-	-	-	3	-	-	AVERAGE	-	-	-	-
BP207P HUMAN ANATOMY AND PHYSIOLOGY II																
CO-PO MAPPING											CO-PSO MAPPING					
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
C01	2	2	2	2	2	1	1	2	2	1	1	C01	1	-	-	1
C02	2	1	1	1	1	1	1	2	1	1	1	C02	1	-	1	1
C03	2	2	1	2	2	2	2	2	2	2	2	C03	2	-	2	2
C04	2	1	1	1	1	1	1	1	1	1	1	C04	1	-	-	1
AVERAGE	2	1.5	1.25	1.25	1.25	1.25	1.25	1.75	1.5	1.25	1.25	AVERAGE	1.25	-	0.75	1.25
BP208P PHARMACEUTICAL ORGANIC CHEMISTRY I																
CO-PO MAPPING											CO-PSO MAPPING					
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4

PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

CO1	2	2	2	2	0	2	1	2	2	1	1	CO1	1	2	1	1
CO2	2	2	1	2	2	1	1	1	1	1	1	CO2	1	1	2	2
CO3	2	3	2	1	2	1	2	3	3	1	1	CO3	2	2	1	1
CO4	3	2	1	2	3	2	1	2	1	1	1	CO4	1	1	1	1
AVERAGE	2.25	2.25	1.5	1.75	1.75	1.5	1.25	2	1.75	1	1	AVERAGE	1.25	1.5	1.25	1.25

BP209P BIOCHEMISTRY

CO-PO MAPPING

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
CO1	2	2	3	3	3	2	3	2	3	-	1	CO1	1	2	1	2
CO2	2	3	3	-	3	-	3	2	2	1	3	CO2	2	1	1	1
CO3	2	2	3	3	2	3	3	2	2	3	2	CO3	2	2	1	2
CO4	2	3	3	3	2	-	3	2	2	1	-	CO4	1	2	2	1
AVERAGE	2	2.5	3	2.25	2.5	1.25	3	2	2.25	1.25	1.5	AVERAGE	1.5	1.75	1.25	1.5

THIRD SEMESTER

BP301T PHARMACEUTICAL ORGANIC CHEMISTRY II

CO-PO MAPPING

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
CO1	3	3	2	2	3	3	2	3	3	3	3	CO1	1	1	1	1
CO2	3	3	2	2	3	3	2	3	3	3	3	CO2	1	2	1	1
CO3	3	3	2	2	3	3	2	3	3	3	3	CO3	2	1	1	1
CO4	3	3	2	2	3	3	2	3	3	3	3	CO4	1	2	2	1
AVERAGE	3	3	2	2	3	3	2	3	3	3	3	AVERAGE	1.25	1.5	1.25	1

BP302T PHYSICAL PHARMACEUTICS I

CO-PO MAPPING

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
CO1	3	3	3	2	2	2	1	2	1	-	3	CO1	1	2	1	1
CO2	3	3	3	3	1	2	1	2	2	-	3	CO2	1	1	2	1
CO3	3	3	3	2	1	2	1	2	2	-	3	CO3	2	2	2	2
CO4	3	3	3	1	2	2	1	2	2	-	3	CO4	1	2	1	1



Singh
PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

CO5	3	3	3	2	1	2	1	1	3	-	3	CO5	1	1	1	2
AVERAGE	3	3	3	2	1.4	2	1	1.8	2	-	3	AVERAGE	1.2	1.6	1.4	1.8
BP303T PHARMACEUTICAL MICROBIOLOGY																
CO-PO MAPPING												CO-PSO MAPPING				
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
CO1	3	2	1	3	1	3	2	1	3	1	3	CO1	1	1	1	1
CO2	3	3	2	3	1	3	2	2	2	1	3	CO2	1	1	1	1
CO3	3	2	1	3	2	3	2	2	2	1	3	CO3	1	1	1	1
CO4	3	2	2	3	2	3	2	1	2	1	3	CO4	2	2	1	2
CO5	3	1	3	3	1	3	2	2	2	1	3	CO5	1	1	1	1
AVERAGE	3	2	1.8	3	1.4	3	2	1.5	2.2	1	3	AVERAGE	1.2	1.2	1	1.2
BP304T PHARMACEUTICAL ENGINEERING																
CO-PO MAPPING												CO-PSO MAPPING				
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
CO1	3	-	2	3	-	3	2	-	-	2	2	CO1	1	1	1	1
CO2	3	1	2	3	-	3	2	-	-	2	2	CO2	2	2	1	1
CO3	3	2	3	3	-	3	3	-	-	3	3	CO3	2	1	2	1
CO4	3	1	3	2	-	3	3	-	1	3	2	CO4	2	1	1	1
AVERAGE	3	1	2	2.75	-	3	2.5	-	0.75	2.5	2.25	AVERAGE	1.75	1.25	1.25	1
BP305P PHARMACEUTICAL ORGANIC CHEMISTRY II																
CO-PO MAPPING												CO-PSO MAPPING				
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
CO1	2	2	1	1	1	3	2	2	3	2	3	CO1	1	-	2	-
CO2	2	-	1	-	-	-	-	-	1	-	3	CO2	1	-	1	-
CO3	3	-	-	-	1	-	2	-	1	-	3	CO3	2	-	2	-
CO4	3	2	1	1	-	3	2	2	3	2	3	CO4	2	-	2	-
AVERAGE	2	1	0.75	0.5	0.75	0.75	1.33	1	1	1	3	AVERAGE	1.5	-	1.75	-
BP306P PHYSICAL PHARMACEUTICS I																



S. S. S. S.
PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

CO-PO MAPPING												CO-PSO MAPPING				
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
C01	3	3	0	0	3	2	0	0	0	0	0	C01	3	-	2	-
C02	3	3	0	0	3	2	0	0	0	0	0	C02	3	-	1	-
C03	3	3	0	0	3	2	0	0	0	0	0	C03	3	-	2	-
C04	3	3	0	0	3	2	0	0	0	0	0	C04	3	-	1	-
AVERAGE	3	3	0	0	3	2	0	0	0	0	0	AVERAGE	3	-	1.5	-

BP307P PHARMACEUTICAL MICROBIOLOGY

CO-PO MAPPING												CO-PSO MAPPING				
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
C01	3	1	3	3	1	2	2	0	3	1	3	C01	1	1	2	1
C02	3	2	3	3	2	3	1	1	2	2	3	C02	1	1	1	1
C03	3	1	2	3	1	2	1	1	2	3	3	C03	-	2	1	1
C04	3	2	2	3	2	3	1	0	2	1	3	C04	-	1	1	1
C05	3	1	3	3	1	3	1	2	2	2	3	C05	1	-	1	2
AVERAGE	3	1.4	2.6	3	1.4	2.6	1.3	0.8	2.2	1.8	3	AVERAGE	0.6	1	1.2	1.2

BP307P PHARMACEUTICAL ENGINEERING

CO-PO MAPPING												CO-PSO MAPPING				
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
C01	3	-	2	3	-	3	2	-	-	2	2	C01	1	2	1	2
C02	3	1	2	3	-	3	2	-	-	2	2	C02	1	2	2	1
C03	3	2	3	3	-	3	3	-	-	3	3	C03	1	1	2	1
C04	3	1	3	2	-	3	3	-	3	3	2	C04	1	2	1	1
AVERAGE	3	1	2.5	2.75	-	3	2.5	-	0.75	2.5	2.25	AVERAGE	1	1.75	1.5	1.25

FOURTH SEMESTER

BP401P PHARMACEUTICAL ORGANIC CHEMISTRY III

CO-PO MAPPING												CO-PSO MAPPING				
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
C01	3	2	3	2	3	2	3	2	3	2	3	C01	2	1	2	1



[Signature]
PRINCIPAL
National College of Pharmacy



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

CO2	3	2	3	2	3	2	3	2	3	2	3	CO2	2	1	2	1
CO3	3	2	3	2	3	2	3	2	3	2	3	CO3	1	1	2	1
CO4	3	2	3	2	3	2	3	2	3	2	3	CO4	2	1	2	1
AVERAGE	3	2	3	2	3	2	3	2	3	2	3	AVERAGE	1.75	1	2	1

BP402T MEDICINAL CHEMISTRY I

CO-PO MAPPING

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
CO1	2	3	0	2	1	2	2	1	2	1	3	CO1	2	2	3	1
CO2	2	0	2	2	0	2	2	1	2	2	3	CO2	2	2	2	1
CO3	2	0	2	2	1	2	2	1	2	0	3	CO3	2	1	3	1
CO4	2	2	2	3	2	2	2	1	0	1	3	CO4	2	1	2	2
AVERAGE	2	1	1.5	2.25	1	2	2	1	1.5	1	3	AVERAGE	2	1.5	2.5	1.25

BP403T PHYSICAL PHARMACEUTICS II

CO-PO MAPPING

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
CO1	3	3	2	3	1	2	2	2	3	1	3	CO1	1	1	2	1
CO2	3	3	3	3	1	2	2	1	2	1	3	CO2	1	2	1	1
CO3	3	3	3	3	2	2	2	2	3	1	3	CO3	1	1	1	1
CO4	3	3	3	3	2	2	3	1	2	-	3	CO4	1	1	1	2
CO5	3	3	3	3	3	3	3	3	3	1	3	CO5	1	1	1	1
AVERAGE	3	3	2.8	3	1.8	2.2	2.4	1.8	2.6	0.8	3	AVERAGE	1	1.5	1.5	1.5

BP404T PHARMACOLOGY I

CO-PO MAPPING

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
CO1	3	1	0	0	1	2	1	2	1	0	1	CO1	3	3	3	2
CO2	3	0	0	1	1	1	0	1	1	0	1	CO2	3	3	3	2
CO3	3	0	0	1	1	1	0	1	1	0	1	CO3	3	3	3	2
CO4	3	0	0	1	1	1	0	1	1	0	1	CO4	3	3	3	2
AVERAGE	3	0.25	0	0.75	0.75	1.25	0.25	1.25	1	0	1	AVERAGE	3	3	3	2



PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

BP405T PHARMACOGNOSY AND PHYTOCHEMISTRY I											
CO-PO MAPPING											
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3	3	3	3	1	1	1	1	1	0	1
CO2	3	3	3	3	1	1	1	1	1	2	1
CO3	3	3	3	3	1	1	1	1	1	1	1
CO4	3	3	2	3	1	1	1	1	3	1	1
AVERAGE	3	3	3	3	1	1	1	1	1.5	1	1
BP406P MEDICINAL CHEMISTRY I											
CO-PO MAPPING											
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	2	2	0	2	1	2	2	1	2	1	3
CO2	2	0	2	2	0	2	2	1	2	2	3
CO3	2	0	2	2	1	2	2	1	2	0	3
CO4	2	2	2	3	2	2	2	1	0	1	3
AVERAGE	2	1	1.5	2.5	1	2	2	1	1.5	1	3
BP407P PHYSICAL PHARMACEUTICS II											
CO-PO MAPPING											
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3	2	2	2	2	2	1	1	2	-	3
CO2	3	3	3	2	2	2	2	2	2	2	3
CO3	3	2	2	2	2	2	1	1	2	-	3
CO4	3	2	2	2	2	2	2	2	1	-	3
AVERAGE	3	2.25	2.25	1.75	2	2	1.5	1.5	1.75	0.5	3
BP408P PHARMACOLOGY I											
CO-PO MAPPING											
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	2	0	0	1	0	0	2	0	0	1	1

Sujitha
PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode





NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

CO2	2	1	0	3	0	0	0	0	0	1	1	CO2	2	-	3	-
CO3	2	1	0	3	0	0	0	0	0	1	1	CO3	2	-	2	-
CO4	2	1	0	3	0	0	0	0	0	1	1	CO4	2	-	2	-
AVERAGE	2	0.75	0	2.5	0	0	0.5	0	0	1	1	AVERAGE	2	-	2.5	-
BP409P PHARMACOGNOSY AND PHYTOCHEMISTRY I																
CO-PO MAPPING												CO-PSO MAPPING				
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
CO1	3	2	3	3	2	1	3	1	1	2	3	CO1	1	-	1	-
CO2	1	3	3	3	2	1	3	1	2	2	3	CO2	1	-	-	-
CO3	1	3	3	3	2	2	3	1	2	2	3	CO3	2	-	-	-
CO4	3	3	3	3	2	1	3	1	1	2	3	CO4	2	2	2	1
AVERAGE	3	3	3	3	2	1.25	3	1	1.5	2	3	AVERAGE	1.5	0.5	0.75	0.25
FIFTH SEMESTER																
BP501T MEDICINAL CHEMISTRY II																
CO-PO MAPPING												CO-PSO MAPPING				
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
CO1	2	2	0	2	1	2	2	1	2	1	3	CO1	2	2	1	1
CO2	2	0	2	2	0	2	2	1	2	2	3	CO2	1	1	1	-
CO3	2	0	2	2	1	2	2	1	2	0	3	CO3	1	1	1	-
CO4	2	2	2	3	2	2	2	1	0	1	3	CO4	2	2	1	-
AVERAGE	2	1	1.5	2.25	1	2	2	1	1.5	1	3	AVERAGE	1.5	1.5	1	0.25
BP502T FORMULATIVE PHARMACY																
CO-PO MAPPING												CO-PSO MAPPING				
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
CO1	2	3	2	1	1	1	1	1	1	1	1	CO1	2	-	1	1
CO2	3	1	1	2	1	3	3	3	3	1	2	CO2	2	-	1	-
CO3	3	1	1	1	1	3	3	3	3	1	1	CO3	2	-	2	-
CO4	3	2	1	2	2	3	3	3	3	1	2	CO4	2	-	3	-
CO5	3	1	2	2	2	2	2	3	3	2	2	CO5	2	-	2	-

[Signature]
PRINCIPAL
National College of Pharmacy,
Manassery, Kozhikode

KOZHIKODE
871002



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

AVERAGE	2.8	1.6	1.4	1.6	1.4	2.4	2.4	2.6	2.6	1.2	1.6	AVERAGE	2	-	1.6	0.6
BP503T PHARMACOLOGY II																
CO-PO MAPPING												CO-PSO MAPPING				
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
C01	3	0	0	2	1	1	0	1	1	0	1	C01	3	3	3	2
C02	3	0	0	2	1	1	0	1	1	0	1	C02	3	3	3	2
C03	3	0	0	2	1	1	0	1	1	0	1	C03	3	2	3	2
C04	3	0	0	2	1	1	0	1	1	0	1	C04	3	2	3	2
AVERAGE	3	0	0	2	1	1	0	1	1	0	1	AVERAGE	3	2.5	3	2
BP504T PHARMACOGNOSY AND PHYTOCHEMISTRY II																
CO-PO MAPPING												CO-PSO MAPPING				
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
C01	1	2	3	3	-	1	2	1	2	2	3	C01	2	1	2	1
C02	2	1	3	2	-	1	1	-	2	-	3	C02	2	1	1	1
C03	2	2	2	1	-	1	2	-	3	1	3	C03	2	1	2	1
C04	1	1	1	2	-	1	1	-	2	1	3	C04	1	1	1	1
AVERAGE	1.5	1.5	2.25	2	0	1	1.5	0.25	2.25	1.25	3	AVERAGE	1.75	1	1.5	1
BP505T PHARMACEUTICAL JURISPRUDENCE																
CO-PO MAPPING												CO-PSO MAPPING				
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
C01	2	2	1	1	1	1	1	1	2	1	1	C01	-	2	-	1
C02	2	2	1	1	2	1	3	2	3	1	2	C02	-	2	-	1
C03	2	2	2	2	1	1	1	1	3	2	3	C03	-	1	-	1
C04	2	2	2	3	3	3	2	2	3	2	3	C04	-	1	-	1
AVERAGE	2	2	1.5	1.75	1.75	1.5	1.75	1.5	2.75	1.5	2.25	AVERAGE	-	1.5	-	1
BP506P FORMULATIVE PHARMACY																
CO-PO MAPPING												CO-PSO MAPPING				
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4



S. J. S. S. S.
PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

C01	2	3	2	1	1	1	1	1	1	1	1	C01	2	-	2	1
C02	3	1	1	2	1	3	3	3	3	1	2	C02	2	-	1	-
C03	3	1	1	1	1	3	3	3	3	1	1	C03	2	-	1	-
C04	3	2	1	2	2	3	3	3	3	1	2	C04	2	-	1	-
AVERAGE	2.75	1.75	1.25	1.5	1.25	2.5	2.5	2.5	2.5	1	1.5	AVERAGE	2	-	1.25	0.25

BP507P PHARMACOLOGY II

CO-PO MAPPING

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PS01	PS02	PS03	PS04
C01	2	0	1	3	1	1	1	0	1	0	2	C01	2	-	2	-
C02	2	0	1	3	1	1	1	0	1	0	2	C02	2	-	2	-
C03	2	0	1	3	1	1	1	0	1	0	2	C03	2	-	2	-
C04	2	0	1	3	1	1	1	0	1	0	2	C04	2	-	2	-
AVERAGE	2	0	1	3	1	1	1	0	1	0	2	AVERAGE	2	-	2	-

CO-PSO MAPPING

BP508P PHARMACOLOGY AND PHYTOCHEMISTRY II

CO-PO MAPPING

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PS01	PS02	PS03	PS04
C01	2	2	1	1	-	-	1	-	2	2	3	C01	1	-	1	2
C02	2	2	1	-	-	-	1	-	2	-	3	C02	2	-	1	-
C03	2	2	2	-	-	-	1	-	2	1	3	C03	2	-	2	2
C04	2	2	-	-	-	-	1	-	2	1	3	C04	2	2	2	1
AVERAGE	2	2	1	0.25	0	0	1	0	2	1	3	AVERAGE	1.75	0.5	1.5	1.25

CO-PSO MAPPING

SIXTH SEMESTER

BP601T MEDICINAL CHEMISTRY III

CO-PO MAPPING

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PS01	PS02	PS03	PS04
C01	2	2	0	2	1	2	2	1	2	1	3	C01	3	-	3	-
C02	2	0	2	2	0	2	2	1	2	2	3	C02	2	-	3	-
C03	2	0	2	2	1	2	2	1	2	0	3	C03	3	2	3	1
C04	2	2	2	3	2	2	2	1	0	1	3	C04	2	-	2	-

CO-PSO MAPPING



[Signature]
PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

AVERAGE	2	1	1.5	2.25	1	2	2	1	1.5	1	3	AVERAGE	2.5	0.5	2.5	0.25
BP602T PHARMACOLOGY III																
CO-PO MAPPING												CO-PSO MAPPING				
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
CO1	3	0	0	2	1	1	0	1	1	0	1	CO1	3	2	2	2
CO2	3	0	0	2	1	1	0	1	1	0	1	CO2	3	1	2	2
CO3	3	0	0	2	1	1	0	1	1	0	1	CO3	3	1	2	2
CO4	3	0	0	2	1	1	0	1	1	0	1	CO4	3	1	2	2
AVERAGE	3	0	0	2	1	1	0	1	1	0	1	AVERAGE	3	1.25	2	2
BP603T HERBAL DRUG TECHNOLOGY																
CO-PO MAPPING												CO-PSO MAPPING				
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
CO1	1	1	1	2	-	-	1	-	1	3	2	CO1	3	1	2	1
CO2	3	3	-	3	-	2	2	-	3	-	3	CO2	3	2	1	2
CO3	3	1	2	3	-	1	1	-	1	-	3	CO3	3	2	-	1
CO4	3	-	-	-	-	-	-	-	3	1	2	CO4	2	-	-	-
AVERAGE	2.5	1.25	0.75	2	0	0.75	0.0	0	2	1	2.5	AVERAGE	2.75	1.25	0.75	1
BP604T BIOPHARMACEUTICS AND PHARMACOKINETICS																
CO-PO MAPPING												CO-PSO MAPPING				
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
CO1	3	2	3	2	-	3	2	-	2	-	3	CO1	2	-	2	1
CO2	3	1	2	2	-	3	1	-	3	-	3	CO2	2	-	2	-
CO3	3	2	3	2	-	3	2	-	3	-	3	CO3	2	-	2	-
CO4	3	2	3	2	-	3	2	-	3	-	3	CO4	2	-	1	-
AVERAGE	3	1.75	2.75	2	-	3	1.75	-	2.75	-	3	AVERAGE	2	-	1.75	0.25
BP605T PHARMACEUTICAL BIOTECHNOLOGY																
CO-PO MAPPING												CO-PSO MAPPING				



Sujitha
PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
C01	3	3	2	3	2	2	1	2	2	2	3	C01	3	-	2	-
C02	3	2	2	3	3	2	2	3	1	1	3	C02	3	-	2	-
C03	3	2	2	2	3	2	3	3	2	1	3	C03	2	-	1	-
C04	3	1	1	2	2	2	2	2	1	1	3	C04	3	-	2	-
AVERAGE	3	2	1.75	2.5	2.5	2	2	2.5	1.75	1.25	3	AVERAGE	2.75	-	1.75	-

BP606T QUALITY ASSURANCE

CO-PO MAPPING

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
C01	3	2	2	3	-	1	2	3	-	1	2	C01	3	2	1	1
C02	1	2	3	-	1	2	3	2	2	3	-	C02	2	2	1	1
C03	2	1	2	3	2	2	3	2	2	3	-	C03	3	1	2	1
C04	3	2	2	3	-	1	2	3	-	1	2	C04	3	1	2	1
AVERAGE	2.25	1.75	2.25	2.25	0.75	1.5	2.5	2.5	1	2	1	AVERAGE	2.75	1.5	1.5	1

CO-PSO MAPPING

BP607P MEDICINAL CHEMISTRY III

CO-PO MAPPING

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
C01	2	2	0	2	1	2	2	1	2	1	3	C01	2	1	2	-
C02	2	0	2	2	0	2	2	1	2	2	3	C02	2	2	2	-
C03	2	0	2	2	1	2	2	1	2	0	3	C03	2	2	2	-
C04	2	2	2	3	2	2	2	1	0	1	3	C04	2	2	2	-
AVERAGE	2	1	1.5	2.25	1	2	2	1	1.5	1	3	AVERAGE	2	1.75	2	-

CO-PSO MAPPING

BP608P PHARMACOLOGY III

CO-PO MAPPING

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
C01	2	0	1	3	1	1	1	0	1	0	2	C01	2	-	1	-
C02	2	0	1	3	1	1	1	0	1	0	2	C02	2	-	1	-
C03	2	0	1	3	1	1	1	0	1	0	2	C03	2	-	1	-

CO-PSO MAPPING



Principal
Principal
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

CO4	2	0	1	3	1	1	1	0	1	0	2	CO4	2	-	1	-
AVERAGE	2	0	1	3	1	1	1	0	1	0	2	AVERAGE	2	-	0.75	-
BP609P HERBAL DRUG TECHNOLOGY																
CO-PO MAPPING												CO-PSO MAPPING				
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
CO1	3	2	1	-	-	1	1	-	2	1	2	CO1	1	-	-	-
CO2	3	2	-	1	-	1	-	-	2	-	3	CO2	1	-	-	-
CO3	3	2	1	2	-	2	-	-	2	-	3	CO3	1	-	-	-
CO4	3	1	-	2	-	1	1	-	1	-	2	CO4	1	-	-	-
AVERAGE	3	1.75	0.5	1.25	0	1.25	0.5	0	1.75	0.25	2.5	AVERAGE	1	-	-	-
SEVENTH SEMESTER																
BP701T INSTRUMENTAL METHODS OF ANALYSIS																
CO-PO MAPPING												CO-PSO MAPPING				
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
CO1	3	3	3	3	1	2	1	1	-	-	3	CO1	3	-	2	-
CO2	3	1	2	3	1	2	1	2	1	-	3	CO2	3	-	2	2
CO3	3	3	3	3	2	3	1	1	1	1	3	CO3	3	-	3	-
CO4	3	3	3	3	2	3	-	2	-	-	3	CO4	3	-	2	-
AVERAGE	3	2.5	2.75	3	1.5	2.5	0.75	1.5	0.5	0.25	3	AVERAGE	3	-	2.25	0.5
BP702T INDUSTRIAL PHARMACY																
CO-PO MAPPING												CO-PSO MAPPING				
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
CO1	3	3	3	2	2	2	1	2	2	1	3	CO1	3	2	2	1
CO2	3	2	2	1	2	2	2	2	2	1	3	CO2	3	2	2	1
CO3	3	2	3	1	2	2	3	2	2	1	3	CO3	3	2	3	1
CO4	3	2	2	3	3	2	2	2	1	2	3	CO4	3	2	2	1
AVERAGE	3	2.25	2.5	1.75	2.25	2	2	2	1.75	1.25	3	AVERAGE	3	2	2.25	1
BP703T PHARMACY PRACTICE																
CO-PO MAPPING												CO-PSO MAPPING				
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4



Signature
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

Outcome																
C01	2	2	2	3	2	2	3	3	2	2	2	C01	3	2	3	3
C02	2	3	2	2	2	3	2	2	3	1	2	C02	3	2	3	3
C03	1	2	2	3	2	2	3	2	2	3	2	C03	3	2	3	3
C04	3	2	3	2	2	2	1	2	3	3	2	C04	3	2	3	3
AVERAGE	2	2.25	2.25	2.5	2	2.25	2.25	2.25	2.25	2.25	2	AVERAGE	3	2	3	3

BP704T NOVEL DRUG DELIVERY SYSTEM

CO-PO MAPPING

CO-PSO MAPPING

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
C01	3	3	3	3	1	2	3	3	3	1	3	C01	3	-	2	-
C02	3	3	3	3	2	2	3	2	3	1	3	C02	3	-	2	-
C03	3	3	3	3	2	2	3	2	3	1	3	C03	3	-	2	-
C04	3	3	3	3	2	2	3	2	3	1	3	C04	3	-	3	-
C05	3	3	3	3	2	2	3	2	3	1	3	C05	3	-	3	-
AVERAGE	3	3	3	3	1.8	2	3	2	3	1	3	AVERAGE	3	-	2.4	-

BP705P INSTRUMENTAL METHODS OF ANALYSIS

CO-PO MAPPING

CO-PSO MAPPING

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
C01	3	1	3	2	1	1	3	2	3	2	1	C01	3	-	3	-
C02	3	1	1	2	2	1	3	1	2	1	1	C02	3	-	3	-
C03	3	1	1	1	1	1	2	1	1	1	1	C03	3	-	3	-
C04	3	1	1	1	1	1	2	1	1	1	1	C04	3	-	3	-
AVERAGE	3	1	1.5	1.75	1.25	1	2.5	1.25	1.75	1.75	1	AVERAGE	3	-	3	-

EIGHTH SEMESTER

BP801T BIOSTATISTICS AND RESEARCH METHODOLOGY

CO-PO MAPPING

CO-PSO MAPPING

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
C01	3	3	3	3	2	3	2	2	1	2	3	C01	2	-	-	-
C02	3	3	3	3	2	3	3	2	2	2	3	C02	2	-	1	-



S. J. Thomas
PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

C03	3	3	3	3	2	2	3	2	2	1	3	C03	2	-	-	-
C04	3	3	3	3	2	1	3	2	1	0	3	C04	2	-	-	-
AVERAGE	3	3	3	2.75	2	2.25	2.75	2	1.5	1.25	3	AVERAGE	2	-	0.25	-

BP802T SOCIAL AND PREVENTIVE PHARMACY

CO-PO MAPPING

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PS01	PS02	PS03	PS04
C01	2	2	2	2	2	3	2	2	2	2	2	C01	3	3	3	3
C02	2	2	-	2	2	3	1	2	2	1	1	C02	3	3	3	3
C03	2	2	2	2	-	2	2	2	2	2	1	C03	3	3	3	3
C04	2	2	2	2	2	2	2	2	2	2	1	C04	3	3	3	3
AVERAGE	2	2	1.5	2	1.5	2.5	1.75	2	2	1.75	1.25	AVERAGE	3	3	3	3

CO-PSO MAPPING

BP805ET PHARMACOVIGILANCE

CO-PO MAPPING

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PS01	PS02	PS03	PS04
C01	2	3	2	2	1	2	2	3	2	2	2	C01	2	3	3	3
C02	2	1	2	1	3	2	1	2	2	2	2	C02	2	3	3	3
C03	3	3	2	3	3	2	3	2	3	1	2	C03	2	3	3	3
C04	2	2	2	2	2	2	2	2	2	3	2	C04	2	3	3	3
AVERAGE	2.25	2.25	2	2	2.25	2	2	2.25	2.25	2	2	AVERAGE	2	3	3	3

CO-PSO MAPPING

BP806ET QUALITY CONTROL AND STANDARDISATION OF HERBS

CO-PO MAPPING

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PS01	PS02	PS03	PS04
C01	3	2	3	3	2	2	2	2	2	2	2	C01	2	1	-	-
C02	3	2	3	3	2	2	2	2	2	2	2	C02	2	1	-	-
C03	3	1	3	2	2	3	3	3	3	1	1	C03	2	1	-	-
C04	3	2	3	3	2	2	2	2	2	2	2	C04	2	1	-	-
AVERAGE	3	1.75	3	2.75	2	2.25	2.25	2.25	2.25	1.75	1.75	AVERAGE	2	1	-	-

CO-PSO MAPPING

BP808ET CELL AND MOLECULAR BIOLOGY

CO-PO MAPPING

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PS01	PS02	PS03	PS04
----------------	-----	-----	-----	-----	-----	-----	-----	-----	-----	------	------	----	------	------	------	------

CO-PSO MAPPING



Srinivasan
PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

Outcome																	
CO1	2	1	1	2	-	1	2	2	2	1	2	CO1	2	-	-	-	-
CO2	2	1	1	2	-	1	2	2	2	1	2	CO2	2	-	-	-	-
CO3	2	1	1	2	-	1	2	2	2	1	2	CO3	2	-	-	-	-
CO4	2	1	1	2	-	1	2	2	2	1	2	CO4	2	-	-	-	-
AVERAGE	2	1	1	2	-	1	2	2	2	1	2	AVERAGE	2	-	-	-	-
BP809ET COSMETIC SCIENCE																	
CO-PO MAPPING												CO-PSO MAPPING					
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4	
CO1	3	2	3	3	2	2	2	2	3	2	2	CO1	3	2	3	1	
CO2	3	2	3	3	2	2	2	2	3	2	2	CO2	3	2	3	1	
CO3	3	2	3	3	2	3	3	2	2	1	2	CO3	3	3	2	1	
CO4	3	2	3	3	2	2	2	2	3	2	2	CO4	3	3	2	1	
AVERAGE	3	2	3	3	2	2.25	2.25	2	2.75	1.75	2	AVERAGE	3	2.5	2.5	1	
BP811ET ADVANCED INSTRUMENTATION TECHNIQUES																	
CO-PO MAPPING												CO-PSO MAPPING					
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4	
CO1	1	1	3	3	1	1	3	2	3	2	1	CO1	3	2	3	-	
CO2	3	1	1	2	2	1	3	1	2	1	1	CO2	3	2	3	-	
CO3	3	1	1	1	1	1	2	1	1	1	1	CO3	3	2	2	-	
CO4	3	1	1	1	1	1	2	1	1	1	1	CO4	3	1	2	-	
AVERAGE	3	1	1.5	1.75	1.25	1	2.5	1.25	1.75	1.25	1	AVERAGE	3	1.75	2.5	-	



S. Jithu
PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

MAPPING OF PHARM D



Srijith
PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode

KMCT Medical College Campus, Manassery, P.O, Mukkam Ph:-04952297440, Email:-pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

HUMAN ANATOMY AND PHYSIOLOGY THEORY-I.1														
CO-PO MAPPING										CO-PSOMAPPING				
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CO	PS01	PS02	PS03	PS04
C101	3	-	2	-	1	2	2	1	2	C101	3	-	2	1
C102	2	-	2	-	1	1	2	3	1	C102	2	2	1	2
C103	3	1	1	1	1	1	-	3	3	C103	2	3	2	2
C104	1	-	1	2	2	3	1	1	1	C104	1	2	3	2
C105	3	3	2	3	3	1	1	2	1	C105	2	2	2	2
C106	3	1	1	2	-	1	1	1	1	C106	2	1	3	1
AVERAGE	2.5	0.83	1.5	1.3	1.3	1.5	1.16	1.8	1.5	AVERAGE	2	1.6	2.1	1.6
HUMAN ANATOMY AND PHYSIOLOGY PRACTICAL-I.1														
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CO	PS01	PS02	PS03	PS04
C101	3	2	2	3	3	2	2	3	1	C101	3	2	2	3
C102	3	1	1	2	2	1	2	1	3	C102	2	3	1	2
C103	3	1	2	3	1	1	3	3	1	C103	3	2	2	2
C104	2	2	3	1	3	2	2	2	3	C104	2	2	3	1
C105	3	1	3	3	2	2	3	1	2	C105	3	2	1	3
C106	2	2	1	3	2	3	3	2	2	C106	2	3	3	2
AVERAGE	2.6	2	2.5	2.5	2.1	1.8	2.5	2	2	AVERAGE	2.5	2.3	2	2.1
PHARMACEUTICS THEORY I.2														
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CO	PS01	PS02	PS03	PS04
C101	3	3	2	1	2	2	1	3	2	C101	3	3	3	3
C102	3	3	-	2	1	1	2	1	1	C102	3	2	2	3



S. J. Mathew
PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

C103	3	3	1	1	3	2	2	2	1	C103	2	3	3	3
C104	2	1	2	2	2	2	1	2	3	C104	3	3	3	3
C105	3	3	3	2	3	1	2	2	2	C105	3	3	2	3
C106	2	2	1	1	2	2	1	1	2	C106	2.8	2.8	2.6	3
AVERAGE	2.6	2.6	1.8	1.5	2.1	1.8	1.5	2	1.8	AVERAGE	3	3	3	3

PHARMACEUTICS PRACTICAL 1.2

Course/Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CO	PS01	PS02	PS03	PS04
C101	3	2	2	1	2	2	1	3	2	C101	3	3	3	3
C102	3	2	1	2	3	1	2	1	1	C102	3	3	3	3
C103	3	3	1	1	3	1	2	2	1	C103	2	3	3	3
C104	2	1	2	2	2	2	1	3	3	C104	3	3	3	3
C105	3	3	3	2	3	2	2	2	2	C105	2	2	2	3
C106	2	2	1	1	2	2	1	1	3	C106	2.6	2.8	2.8	3
AVERAGE	2.6	2.1	1.6	1.5	2.5	1.8	1.5	2	2	AVERAGE	3	3	3	3

MEDICINAL BIOCHEMISTRY THEORY 1.3

Course/Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CO	PS01	PS02	PS03	PS04
C101	2	1	1	1	2	1	3	1	2	C101	2	2	2	3
C102	3	1	3	2	1	2	2	2	1	C102	3	2	2	3
C103	1	2	1	3	1	2	1	2	2	C103	2	3	3	3
C104	2	2	2	2	3	2	2	1	2	C104	3	2	1	2
C105	3	3	3	1	1	3	1	2	1	C105	2	3	3	2
C106	2	1	1	1	2	1	2	1	1	C106	2	2	2	1
AVERAGE	2.1	1.6	1.8	1.6	1.6	1.8	1.8	1.5	1.6	AVERAGE	2.3	2.3	2.1	2.3

MEDICINAL BIOCHEMISTRY PRACTICAL-1.3



S. S. S. S.
PRINCIPAL
National College of Pharmacy
Kozhikode, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

Course/Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CO	PSO1	PSO2	PSO3	PSO4
C101	3	3	3	2	2	2	2	2	2	C101	1	2	2	1
C102	3	2	2	2	2	2	2	2	2	C102	2	3	2	2
C103	3	3	3	2	2	2	2	2	2	C103	3	3	2	2
C104	3	3	3	2	2	3	3	3	3	C104	1	2	2	1
C105	3	3	3	2	2	2	2	2	3	C105	2	2	3	2
C106	3	3	3	2	2	3	3	3	3	C106	2	2	1	2
AVERAGE	3	2.8	2.8	2	2	2.3	2.3	2.3	2.5	AVERAGE	1.8	2.3	2	1.6
PHARMACEUTICAL ORGANIC CHEMISTRY THEORY I.4														
Course/Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CO	PSO1	PSO2	PSO3	PSO4
C101	3	2	3	2	3	1	1	1	1	C101	2	2	2	2
C102	3	3	2	2	2	2	2	2	2	C102	3	3	3	3
C103	3	2	2	2	3	3	2	1	1	C103	2	2	2	1
C104	2	2	3	2	2	2	2	1	1	C104	3	3	2	3
C105	2	3	3	3	3	2	2	2	2	C105	2	3	3	3
AVERAGE	2.6	2	2.6	2.2	2.6	2	1.8	1.4	1.4	AVERAGE	2.4	2.2	2.4	2.4
PHARMACEUTICAL ORGANIC CHEMISTRY PRACTICAL I.4														
Course/Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CO	PSO1	PSO2	PSO3	PSO4
C101	3	3	2	2	2	2	1	1	1	C101	2	1	3	3
C102	3	2	3	1	2	2	2	2	2	C102	3	1	3	3
C103	3	3	3	3	2	3	2	2	2	C103	2	1	3	3
C104	2	2	3	3	2	3	2	1	1	C104	3	2	3	3
C105	3	3	3	3	3	3	2	2	2	C105	3	2	2	2



Signature
PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

CI6	3	3	2	3	2	3	3	1	1	CI6	3	2	2	2
AVERAGE	2.83	2.66	2.5	2.5	2.3	2.66	2	1.5	1.5	AVERAGE	2.83	1.5	2.66	2.66
PHARMACEUTICAL INORGANIC CHEMISTRY THEORY 1.5														
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CO	PSO1	PSO2	PSO3	PSO4
CI01	3	3	3	3	1	2	1	1	-	CI01	1	2	1	2
CI02	3	1	2	3	1	2	1	2	1	CI02	-	-	1	-
CI03	3	3	3	3	2	3	1	1	1	CI03	2	-	2	2
CI04	3	3	3	3	2	3	-	2	-	CI04	1	2	1	3
CI05	3	2	2	1	3	2	3	2	2	CI05	1	1	2	1
AVERAGE	3	2.4	2.6	2.6	1.8	2.4	1.4	1.8	0.8	AVERAGE	1	1	1.4	1.6
PHARMACEUTICAL INORGANIC CHEMISTRY PRACTICAL 1.5														
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CO	PSO1	PSO2	PSO3	PSO4
CI01	1	2	2	1	1	2	1	1	-	CI01	1	3	2	2
CI02	-	1	2	-	1	-	1	-	1	CI02	-	-	1	-
CI03	2	-	-	1	2	2	1	-	1	CI03	2	-	2	2
CI04	1	2	1	2	-	3	-	1	-	CI04	-	1	1	2
CI05	2	1	1	1	1	1	2	-	2	CI05	1	1	2	1
AVERAGE	1	1.2	1.2	1	1	1.6	1	0.4	0.8	AVERAGE	0.8	1	1.6	1.4



S. J. S. S. S.
PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

SECOND YEAR														
PATHOPHYSIOLOGY THEORY-2.1														
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CO	PS01	PS02	PS03	PS04
CI01	2	3	3	1	1	2	1	3	3	CI01	3	2	2	1
CI02	3	2	3	2	1	2	1	2	3	CI02	2	2	2	2
CI03	3	2	3	2	1	2	2	3	2	CI03	2	3	2	2
CI04	3	2	3	3	1	3	2	3	3	CI04	2	2	3	2
CI05	3	2	3	2	-	3	2	3	3	CI05	2	2	2	2
CI06	2	3	2	2	1	2	2	3	3	CI06	2	2	3	1
AVERAGE	2.6	2.3	2.8	2.1	0.83	2.3	1.6	2.8	2.8	AVERAGE	2.1	2.1	2.3	1.6



S. S. S. S.
PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

PHARMACEUTICAL MICROBIOLOGY THEORY 2.2														
Course/Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CO	PSO1	PSO2	PSO3	PSO4
C101	3	2	3	2	2	3	3	3	2	C101	3	2	3	2
C102	3	2	3	2	2	3	2	3	3	C102	3	2	3	3
C103	3	3	3	2	3	3	2	2	2	C103	3	2	3	3
C104	3	2	3	3	3	3	2	3	3	C104	3	2	3	3
C105	3	2	3	3	2	3	2	3	3	C105	3	2	3	3
C106	3	3	3	3	2	3	3	3	3	C106	3	2	3	3
AVERAGE	3	2.3	3	2.5	2.3	3	2.3	2.8	2.3	AVERAGE	3	2	3	2.8
PHARMACEUTICAL MICROBIOLOGY PRACTICAL 2.2														
Course/Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CO	PSO1	PSO2	PSO3	PSO4
C101	3	3	3	2	2	2	2	2	2	C101	3	2	2	2
C102	3	2	2	2	2	2	2	2	2	C102	3	2	2	2
C103	3	3	3	2	2	2	2	2	2	C103	3	2	2	2
C104	3	3	3	2	2	3	3	3	3	C104	3	3	3	3
C105	3	3	3	2	2	2	2	2	3	C105	3	2	2	2
C106	3	3	3	2	2	3	3	3	3	C106	3	3	3	2
AVERAGE	3	2.8	2.8	2	2	2.3	2.3	2.3	2.5	AVERAGE	3	2.3	2.3	2.1
PHARMACOGNOSY AND PHYTOPHARMACEUTICALS THEORY 2.3														
Course/Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CO	PSO1	PSO2	PSO3	PSO4
C101	2	1	-	-	-	1	-	-	-	C101	1	2	1	2
C102	2	2	1	-	-	1	-	-	-	C102	-	-	1	-
C103	2	1	1	-	-	1	1	-	-	C103	2	-	2	2
C104	3	1	1	-	-	1	-	-	-	C104	1	2	1	3



S. S. S. S.
PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

C105	2	1	1	-	-	1	1	-	-	C105	1	1	2	1
C106	2	2	1	-	-	1	-	-	-	C106	2	1	2	3
AVERAGE	2.1	1.3	0.83	-	-	1	0.33	-	-	AVERAGE	1.1	1	1.5	1.8
PHARMACOGNOSY AND PHYTOPHARMACEUTICALS PRACTICAL 2.3														
Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CO	PS01	PS02	PS03	PS04
C101	1	-	1	1	-	-	-	-	1	C101	1	2	1	2
C102	1	-	2	1	-	-	-	-	1	C102	-	-	1	-
C103	1	-	1	1	-	-	-	-	1	C103	2	-	2	2
C104	1	-	1	1	-	-	-	-	1	C104	1	2	1	1
C105	1	-	1	1	-	-	-	-	1	C105	1	1	2	1
AVERAGE	1	-	1	1	-	-	-	-	1	AVERAGE	0.83	0.33	1.16	1.3
PHARMACOLOGY-I THEORY 2.4														
Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CO	PS01	PS02	PS03	PS04
C101	-	1	2	2	-	3	3	-	-	C101	1	1	-	-
C102	-	3	2	2	-	3	3	-	-	C102	1	1	-	-
C103	-	3	2	2	-	3	3	-	-	C103	2	1	-	-
C104	-	3	2	2	-	3	3	-	-	C104	2	1	-	-
C105	-	3	2	2	-	3	3	-	-	C105	2	1	-	-
C106	-	3	2	2	-	3	3	-	-	C106	2	1	-	-
AVERAGE	-	2.83	2	2	-	3	3	-	-	AVERAGE	1.6	1	-	-
COMMUNITY PHARMACY THEORY 2.5														
Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CO	PS01	PS02	PS03	PS04
C101	3	3	-	1	3	2	-	-	1	C101	1	3	2	3



[Signature]
PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

CH2	2	3	2	1	2	3	2	-	1	CH2	2	3	1	1
CH3	3	1	-	-	-	-	-	-	-	CH3	3	3	1	2
CH4	-	-	-	-	-	-	-	-	-	CH4	1	3	2	3
CH5	-	-	-	-	-	-	-	-	-	CH5	2	1	2	2
CH6	3	1	-	3	2	2	-	-	1	CH6	-	3	-	1
AVERAGE	1.8	1.2	0.3	0.8	1.16	1.16	0.3	-	0.5	AVERAGE	1.8	2.5	1.3	1

PHARMACOTHERAPEUTICS I THEORY 2.6

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CO	PS01	PS02	PS03	PS04
CH1	3	3	3	3	3	3	3	3	3	CH1	3	3	3	3
CH2	3	2	2	2	3	3	3	2	3	CH2	3	3	3	3
CH3	3	3	2	2	3	3	3	3	3	CH3	3	2	3	3
CH4	2	3	3	3	3	2	2	3	2	CH4	2	3	3	3
CH5	3	3	3	3	3	2	3	2	3	CH5	3	3	3	3
CH6	3	3	3	3	3	3	3	3	3	CH6	3	3	3	3
AVERAGE	2.8	2.8	2.6	2.6	3	2.6	2.8	2.6	2.8	AVERAGE	2.8	2.8	3	2.8

PHARMACOTHERAPEUTICS I PRACTICAL 2.6

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CO	PS01	PS02	PS03	PS04
CH1	2	2	3	0	0	1	1	1	1	CH1	2	3	1	3
CH2	3	3	2	0	0	2	2	1	3	CH2	3	2	3	2
CH3	3	3	3	0	1	3	2	2	3	CH3	3	2	3	3
CH4	2	2	1	0	1	3	3	2	2	CH4	2	3	3	2
CH5	2	2	1	0	2	3	1	4	3	CH5	3	2	3	3
CH6	3	3	2	0	2	3	2	2	3	CH6	3	3	3	2
AVERAGE	2.5	2.5	2.16	0	1	2.5	1.83	2	2.5	AVERAGE	2.5	2.5	2.6	2



PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

THIRD YEAR														
PHARMACOLOGY II THEORY 3.1														
Course/Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CO	PSO1	PSO2	PSO3	PSO4
C101	-	3	2	-	-	3	3	-	-	C101	1	-	2	2
C102	-	3	2	-	-	3	3	-	-	C102	2	-	2	2
C103	-	3	2	-	-	3	3	-	-	C103	2	-	2	2
C104	-	3	2	-	-	3	3	-	-	C104	2	-	2	2
C105	-	3	2	-	-	3	3	-	-	C105	2	-	2	2
C106	-	2	2	-	-	2	2	-	-	C106	2	-	2	2
AVERAGE	-	2.83	2	-	-	2.83	2.83	-	-	AVERAGE	1.8	-	2	2
PHARMACOLOGY II PRACTICAL 3.1														
Course/Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CO	PSO1	PSO2	PSO3	PSO4
C101	-	-	3	-	-	3	-	-	-	C101	1	-	-	-
C102	-	-	3	-	-	3	-	-	-	C102	1	-	-	-
C103	-	-	3	3	-	3	-	-	-	C103	1	-	-	-
C104	-	-	3	3	-	3	-	-	-	C104	1	-	-	-
C105	-	-	3	3	-	3	-	-	-	C105	1	-	-	-
C106	-	-	3	3	-	3	-	-	-	C106	1	-	-	-
AVERAGE	-	-	3	2	-	3	-	-	-	AVERAGE	1	-	-	-
PHARMACEUTICAL ANALYSIS THEORY 3.2														
Course/Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CO	PSO1	PSO2	PSO3	PSO4
C101	1	1	1	1	1	1	1	1	1	C101	2	1	1	1
C102	1	1	1	1	1	1	1	1	1	C102	2	1	1	1
C103	1	1	1	1	1	1	1	1	1	C103	2	1	1	1



Signature
PRINCIPAL
National College of Pharmacy,
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

C104	1	1	1	1	1	1	1	1	1	1	C104	2	1	1	1
C105	1	1	1	1	1	1	1	1	1	1	C105	2	1	1	1
C106	1	1	1	1	1	1	1	1	1	1	C106	2	1	1	1
AVERAGE	1	1	1	1	1	1	1	1	1	1	AVERAGE	2	1	1	1

PHARMACEUTICAL ANALYSIS PRACTICAL 3.2

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CO	PS01	PS02	PS03	PS04
C101	1	1	1	1	1	1	1	1	1	C101	2	1	1	1
C102	1	1	1	1	1	1	1	1	1	C102	2	1	1	1
C103	1	1	1	1	1	1	1	1	1	C103	2	1	1	1
C104	1	1	1	1	1	1	1	1	1	C104	2	1	1	1
C105	1	1	1	1	1	1	1	1	1	C105	2	1	1	1
C106	1	1	1	1	1	1	1	1	1	C106	2	1	1	1
AVERAGE	1	1	1	1	1	1	1	1	1	AVERAGE	2	1	1	1

PHARMACOTHERAPEUTICS II THEORY 3.3

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CO	PS01	PS02	PS03	PS04
C101	3	2	2	3	3	3	3	3	3	C101	2	3	1	3
C102	3	2	2	2	3	3	3	2	3	C102	3	2	3	2
C103	3	3	2	2	3	3	3	3	3	C103	2	2	3	3
C104	2	3	3	3	3	2	2	3	2	C104	2	3	3	2
C105	3	3	2	3	3	2	3	2	3	C105	3	2	3	3
C106	2	3	3	2	3	2	2	3	2	C106	2	3	3	2
AVERAGE	2.6	2.6	2.3	2.5	3	2.5	2.6	2.6	2.5	AVERAGE	2.3	2.5	2.6	2

PHARMACOTHERAPEUTICS II PRACTICAL 3.3

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CO	PS01	PS02	PS03	PS04
----------------	-----	-----	-----	-----	-----	-----	-----	-----	-----	----	------	------	------	------



PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

C101	3	3	3	2	2	3	2	3	3	C101	3	2	3	3
C102	2	3	3	3	2	3	2	3	3	C102	3	2	3	3
C103	3	3	3	3	2	3	2	3	3	C103	3	2	3	3
C104	3	3	3	2	2	3	2	3	3	C104	3	3	3	3
C105	2	2	2	2	2	3	2	3	3	C105	2	2	3	2
C106	2	2	3	3	2	3	3	3	2	C106	3	3	3	2
AVERAGE	2.5	2.6	2.8	2.5	2.0	3.0	2.1	3	2.8	AVERAGE	2.8	2.3	3.0	2.6

PHARMACEUTICAL JURISPRUDENCE THEORY 3.4

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CO	PSO1	PSO2	PSO3	PSO4
C101	2	1	3	3	1	2	1	1	3	C101	2	3	3	2
C102	2	2	2	3	2	3	2	2	3	C102	3	3	2	3
C103	1	2	2	3	2	3	2	2	3	C103	2	2	3	2
C104	1	1	2	2	2	1	1	1	1	C104	2	2	2	2
C105	1	2	2	3	2	2	2	3	3	C105	3	3	3	3
C106	1	1	2	2	2	3	3	3	3	C106	3	3	3	3
AVERAGE	1.3	1.5	2.2	2.7	1.8	2.3	1.8	2	2.7	AVERAGE	2.3	2.7	2.7	2.5

MEDICINAL CHEMISTRY THEORY 3.5

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CO	PSO1	PSO2	PSO3	PSO4
C101	2	2	-	2	1	2	2	1	2	C101	3	-	3	-
C102	2	-	2	2	-	2	2	1	-	C102	1	-	2	-
C103	2	-	2	2	1	2	2	1	1	C103	3	2	1	3
C104	2	2	2	3	2	2	2	1	2	C104	3	-	1	3
C105	2	1	2	2	1	2	2	1	1	C105	1	1	2	3
C106	2	2	2	1	1	2	2	1	2	C106	1	-	2	3



Sujitha
PRINCIPAL
National College of Pharmacy
Manassery, Kottukode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

AVERAGE	2				2	2				AVERAGE				
MEDICINAL CHEMISTRY PRACTICAL 3.5														
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CO	PS01	PS02	PS03	PS04
C001	2	2	-	2	1	2	2	1	2	C001	2	-	3	-
C002	2	-	2	2	-	2	2	1	2	C002	2	-	2	-
C003	2	-	2	2	1	2	2	1	2	C003	1	-	2	-
C004	2	2	2	3	2	2	2	1	-	C004	1	-	2	-
AVERAGE	2	1	1.5	2.5	1	2	2	1	1.5	AVERAGE	1.5	-	2.25	-
PHARMACEUTICAL FORMULATIONS THEORY 3.6														
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CO	PS01	PS02	PS03	PS04
C001	3	3	3	2	3	2	2	3	3	C001	3	3	3	3
C002	3	3	3	2	3	2	2	3	3	C002	3	2	2	3
C003	3	3	3	3	3	3	3	3	3	C003	2	3	3	3
C004	3	3	3	2	3	2	2	3	3	C004	3	3	3	3
C005	3	3	3	3	3	3	3	3	3	C005	3	3	2	3
AVERAGE	3	3	3	2.4	3	2.4	2.4	3	3	AVERAGE	2.8	2.8	2.6	3
PHARMACEUTICAL FORMULATIONS PRACTICAL 3.6														
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CO	PS01	PS02	PS03	PS04
C001	3	3	3	2	3	2	2	3	3	C001	3	3	3	3
C002	3	3	3	2	3	2	2	3	3	C002	3	3	3	3
C003	3	2	3	3	3	3	3	3	3	C003	2	3	3	3
C004	3	3	2	2	3	2	2	3	3	C004	3	3	2	3



Signature
PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

C105	3	3	3	3	3	3	3	3	3	C106	2	2	2	3
AVERAGE	3	2.8	2.8	2.4	3	2.4	2.4	3	3	AVERAGE	2.6	2.8	2.8	3
FOURTH YEAR														
PHARMACOTHERAPEUTICS III THEORY 4.1														
Course/Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CO	PSO1	PSO2	PSO3	PSO4
C101	2	3	3	2	1	3	2	3	3	C101	3	2	3	3
C102	2	3	3	2	1	3	2	3	3	C102	3	2	3	3
C103	2	3	3	2	1	3	2	3	3	C103	3	2	3	3
C104	2	3	3	2	1	3	2	3	3	C104	3	3	3	3
C105	2	3	3	2	1	3	2	3	3	C105	3	2	3	3
C106	2	2	3	3	-	3	3	3	2	C106	3	3	3	2
AVERAGE	2.0	2.8	3.0	2.1	0.83	3.0	2.1	3.0	2.8	AVERAGE	3.0	2.3	3.0	2.8
PHARMACOTHERAPEUTICS III PRACTICAL 4.1														
Course/Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CO	PSO1	PSO2	PSO3	PSO4
C101	3	3	3	2	2	3	2	3	3	C101	3	2	3	3
C102	2	3	3	3	2	3	2	3	3	C102	3	2	3	3
C103	3	3	3	2	2	3	2	3	3	C103	3	2	3	3
C104	3	3	3	2	2	3	2	3	3	C104	3	3	3	3
C105	3	3	3	2	2	3	2	3	3	C105	3	2	3	3
C106	2	2	3	3	2	3	3	3	2	C106	3	3	3	2
AVERAGE	2.6	2.8	3	2.5	2.0	3.0	2.1	3	2.8	AVERAGE	3.0	2.3	3.0	2.8
HOSPITAL PHARMACY THEORY 4.2														
Course/Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CO	PSO1	PSO2	PSO3	PSO4
C101	3	2	3	2	3	1	3	2	2	C101	3	3	2	3



PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

C102	2	3	2	2	2	2	2	3	3	C102	2	2	2	3
C103	3	2	2	3	2	2	2	2	3	C103	3	3	3	2
C104	2	1	2	1	1	2	2	2	2	C104	3	2	2	2
C105	3	2	3	2	2	3	1	2	2	C105	2	3	3	1
C106	2	3	2	1	2	2	2	2	1	C106	2	3	3	3
AVERAGE	2.5	2.1	2.3	2	2	2	2	2.1	2.1	AVERAGE	2.3	2.5	2.5	2.3

HOSPITAL PHARMACY PRACTICAL 4.2

Course/Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CO	PSO1	PSO2	PSO3	PSO4
C101	3	1	2	1	2	2	3	2	2	C101	2	3	3	1
C102	2	2	3	2	3	3	2	3	3	C102	3	2	1	2
C103	3	2	2	1	2	2	3	2	2	C103	3	1	3	2
C104	2	2	2	2	3	2	2	3	3	C104	2	1	3	3
C105	2	2	2	3	2	3	3	2	2	C105	2	3	2	1
C106	3	2	1	3	2	2	2	2	2	C106	2	3	1	3
AVERAGE	2.5	1.8	2	2	2.3	2.3	2.5	2.3	2.3	AVERAGE	2.3	2.1	2.1	2

CLINICAL PHARMACY THEORY 4.3

Course/Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CO	PSO1	PSO2	PSO3	PSO4
C101	2	2	3	2	2	2	2	3	2	C101	3	2	3	3
C102	2	3	1	3	3	2	3	3	3	C102	3	3	3	2
C103	2	2	3	3	3	2	1	2	3	C103	2	3	3	2
C104	1	1	1	3	3	2	2	3	3	C104	3	3	1	2
C105	1	2	2	2	2	1	1	3	2	C105	3	2	3	2
C106	3	3	3	3	3	2	3	1	2	C106	1	2	3	2
AVERAGE	2.0	2.3	2.5	2.7	2.7	1.8	1.7	2.6	2.5	AVERAGE	2.8	2.5	3.0	2.3



S. S. S. S.
PRINCIPAL
National College of Pharmacy
Manassery, Kuttuvayal



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

CLINICAL PHARMACY PRACTICAL -4.3

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CD	PS01	PS02	PS03	PS04
C101	2	2	2	2	2	2	3	2	2	C101	3	3	3	3
C102	2	1	2	3	2	2	2	2	2	C102	3	3	3	3
C103	2	2	2	2	2	2	2	2	2	C103	3	3	3	3
C104	2	2	2	2	2	2	2	2	2	C104	3	3	3	3
AVERAGE	2	1.75	2	2.25	2	2	2.25	2	2	AVERAGE	3	3	3	3

BIOSTATISTICS AND RESEARCH METHODOLOGY THEORY 4.4

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CD	PS01	PS02	PS03	PS04
C101	-	1	2	-	1	-	-	-	1	C101	-	3	1	-
C102	1	-	3	1	-	-	-	1	-	C102	-	2	2	-
C103	1	-	1	-	-	-	-	1	-	C103	-	1	1	-
C104	-	-	3	-	-	-	-	1	-	C104	-	-	-	-
C105	3	1	3	-	-	2	-	-	-	C105	-	-	1	-
C106	3	3	3	-	-	3	2	3	1	C106	2	2	2	2
AVERAGE	1.3	0.83	2.5	0.16	0.16	0.83	0.3	1	0.33	AVERAGE	0.3	1.3	1.1	0.3

BIOPHARMACEUTICS AND PHARMACOKINETICS THEORY 4.5

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CD	PS01	PS02	PS03	PS04
C101	3	3	3	2	1	3	3	3	3	C101	3	3	3	2
C102	3	3	3	3	1	3	3	3	3	C102	3	3	3	2
C103	3	3	3	3	1	3	3	3	3	C103	3	3	2	2
C104	3	3	3	3	1	3	3	3	3	C104	3	3	3	2



Sigthanya
PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

C105	3	3	3	1	2	3	3	3	3	C106	3	3	3	2
AVERAGE	3	3	3	2.8	1.2	3	3	3	3	AVERAGE	3	3	2.8	2
BIOPHARMACEUTIC AND PHARMACOKINETICS PRACTICAL 4.5														
Course/Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CO	PS01	PS02	PS03	PS04
C101	3	3	3	2	1	2	1	1	1	C101	1	1	2	1
C102	3	3	3	2	1	2	1	1	1	C102	2	2	2	1
C103	3	3	3	2	1	3	2	3	3	C103	3	2	3	2
C104	3	3	3	2	1	3	2	3	3	C104	3	1	3	3
C105	3	3	3	2	1	3	2	3	3	C105	3	1	3	3
AVERAGE	3	3	3	2	1	2.6	1.6	2.2	2.2	AVERAGE	2.4	1.4	2.6	2
CLINICAL TOXICOLOGY THEORY 4.6														
Course/Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CO	PS01	PS02	PS03	PS04
C101	2	2	3	2	1	2	2	2	1	C101	2	2	1	3
C102	3	2	2	1	2	1	2	2	1	C102	2	2	1	3
C103	2	3	1	2	2	3	2	2	3	C103	3	2	3	2
C104	2	2	2	2	2	3	3	2	2	C104	2	2	2	2
C105	2	2	1	1	3	2	2	2	2	C105	1	3	3	1
C106	3	2	3	2	1	1	2	3	2	C106	2	2	2	2
AVERAGE	2.3	2.1	2	1.6	1.8	2	2.1	2.1	1.9	AVERAGE	2	2.1	2	2.1
FIFTH YEAR														
CLINICAL RESEARCH THEORY 5.1														
Course/Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CO	PS01	PS02	PS03	PS04



PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

C101	3	2	3	3	2	2	2	2	2	C101	3	2	2	2
C102	2	3	2	2	1	3	2	3	3	C102	2	3	2	3
C103	2	3	2	3	1	3	2	3	2	C103	2	2	3	3
C104	2	3	3	2	3	2	3	2	3	C104	3	2	3	3
C105	2	1	2	1	2	2	2	2	2	C105	2	3	2	1
AVERAGE	2.2	2.4	2.4	2.2	2.2	2.4	2.2	2.4	2.4	AVERAGE	2.4	2.4	2.4	2.4
PHARMACOEPIDEMOLOGY AND PHARMACOECONOMICSTHEORYS.2														
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CO	PSO1	PSO2	PSO3	PSO4
C101	3	2	3	2	3	2	3	3	2	C101	1	1	1	1
C102	2	3	3	3	3	2	3	3	3	C102	3	2	1	1
C103	2	2	3	3	2	2	1	1	3	C103	2	2	1	1
C104	2	2	2	3	3	2	2	3	3	C104	2	3	1	2
AVERAGE	2.25	2.25	2.25	2.7	2.75	2	2.25	2.5	2.75	C105	2	2	1	1.25
CLINICAL PHARMACOKINETICS & PHARMACOTHERAPEUTIC DRUG MONITORING THEORYS.3														
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CO	PSO1	PSO2	PSO3	PSO4
C101	3	2	3	3	2	2	2	2	2	C101	3	2	2	3
C102	2	3	2	2	2	3	2	3	3	C102	2	3	2	3
C103	2	3	2	3	2	3	2	3	2	C103	2	3	3	2
C104	2	3	3	2	3	2	3	2	3	C104	3	2	3	3
C105	2	1	2	1	2	2	2	2	2	C105	2	3	2	3



Sri. Thiruvalluvar
Principal
National College of Pharmacy
Manassery, Kottayam



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

CIN	3	2	3	1	3	2	3	1	3	CIN	2	3	3	3
AVERAGE	2.3	2.3	2.5	2.1	2.3	2.3	2.3	2.3	2.5	AVERAGE	2.3	2.6	2.5	2.8



PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

MAPPING OF PHARM D PB




PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode

KMCT Medical College Campus, Manassery, P.O, Mukkam Ph:-04952297440, Email:-pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

PHARM D F B														
FIRST YEAR														
PHARMACOTHERAPEUTICS I & II THEORY 1.1														
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CO	PS01	PS02	PS03	PS04
C101	2	3	3	2	1	3	2	3	3	C101	3	2	3	3
C102	2	3	3	2	1	3	2	3	3	C102	3	2	3	3
C103	2	3	3	2	1	3	2	3	3	C103	3	2	3	3
C104	2	3	3	2	1	3	2	3	3	C104	3	3	3	3
C105	2	3	3	2	1	3	2	3	3	C105	3	2	3	3
C106	2	2	3	3	-	3	3	3	2	C106	3	3	3	2
AVERAGE	2.0	2.8	3.0	2.1	0.83	3.0	2.1	3.0	2.8	AVERAGE	3.0	2.3	3.0	2.8
PHARMACOTHERAPEUTICS I & II PRACTICAL 1.1														
C101	3	3	3	2	2	3	2	3	3	C101	3	2	3	3
C102	2	3	3	3	2	3	2	3	3	C102	3	2	3	3
C103	3	3	3	3	2	3	2	3	3	C103	3	2	3	3
C104	3	3	3	2	2	3	2	3	3	C104	3	3	3	3
C105	3	3	3	2	2	3	2	3	3	C105	3	2	3	3
AVERAGE	2.8	3	3	2.4	2.0	3.0	2	3	3	AVERAGE	3.0	2.2	3.0	3.0
PHARMACOTHERAPEUTICS III THEORY 1.2														
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CO	PS01	PS02	PS03	PS04
C101	2	3	3	2	1	3	2	3	3	C101	3	2	3	3



PRINCIPAL

Manassery, Kothikode
Pharmacy



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

CIR2	2	3	3	2	1	3	2	3	3	CIR2	3	2	3	3
CIR3	2	3	3	2	1	3	2	3	3	CIR3	3	2	3	3
CIR4	2	3	3	2	1	3	2	3	3	CIR4	3	3	3	3
CIR5	2	3	3	2	1	3	2	3	3	CIR5	3	2	3	3
CIR6	2	2	3	3	-	3	3	3	2	CIR6	3	3	3	2
AVERAGE	2.0	2.8	3.0	2.1	0.83	3.0	2.1	3.0	2.8	AVERAGE	3.0	2.3	3.0	2.8
PHARMACOTHERAPEUTICS III PRACTICAL I.2														
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CO	PSO1	PSO2	PSO3	PSO4
CIR1	3	3	3	2	2	3	2	3	3	CIR1	3	2	3	3
CIR2	2	3	3	3	2	3	2	3	3	CIR2	3	2	3	3
CIR3	3	3	3	3	2	3	2	3	3	CIR3	3	2	3	3
CIR4	3	3	3	2	2	3	2	3	3	CIR4	3	3	3	3
CIR5	3	3	3	2	2	3	2	3	3	CIR5	3	2	3	3
CIR6	2	2	3	3	2	3	3	3	2	CIR6	3	3	3	2
AVERAGE	2.6	2.8	3	2.5	2.0	3.0	2.1	3	2.8	AVERAGE	3.0	2.3	3.0	2.8
HOSPITAL PHARMACY THEORY I.3														
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CO	PSO1	PSO2	PSO3	PSO4
CIR1	3	2	3	2	3	1	3	2	2	CIR1	2	3	2	3



Srija
PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

CI02	2	3	2	2	2	2	2	3	3	CI02	2	2	2	3
CI03	3	2	2	3	2	2	2	2	3	CI03	3	3	3	2
CI04	2	1	2	1	1	2	2	2	2	CI04	3	2	2	2
CI05	3	2	3	2	2	3	1	2	2	CI05	2	3	3	1
CI06	2	3	2	1	2	2	2	2	1	CI06	2	2	3	3
AVERAGE	2.5	2.1	2.3	2	2	2	2	2.1	2.1	AVERAGE	2.3	2.5	2.5	2.3
HOSPITAL PHARMACY PRACTICAL I.3														
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CO	PS01	PS02	PS03	PS04
CI01	3	1	2	1	2	2	3	2	2	CI01	2	3	3	1
CI02	2	2	3	2	3	3	2	3	3	CI02	3	2	1	2
CI03	3	2	2	1	2	2	3	2	2	CI03	3	1	3	2
CI04	2	2	2	2	3	2	2	3	3	CI04	2	1	3	3
CI05	2	2	2	3	2	3	3	2	2	CI05	2	3	2	1
CI06	3	2	1	3	2	2	2	2	2	CI06	2	3	1	3
AVERAGE	2.5	1.8	2	2	2.3	2.3	2.5	2.3	2.3	AVERAGE	2.3	2.1	2.1	2
CLINICAL PHARMACY THEORY I.4														
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CO	PS01	PS02	PS03	PS04
CI01	2	2	3	2	2	2	2	3	2	CI01	3	2	3	3
CI02	2	3	1	3	3	2	3	3	3	CI02	3	3	3	2
CI03	2	2	3	3	3	2	1	2	3	CI03	2	3	3	2
CI04	1	1	1	3	3	2	2	3	3	CI04	3	3	1	2
CI05	1	2	2	2	2	1	1	3	2	CI05	3	2	3	2
CI06	3	3	3	3	3	2	3	1	2	CI06	3	2	3	2
AVERAGE	2.0	2.3	2.3	2.7	2.7	1.8	1.7	2.6	2.5	AVERAGE	2.6	2.5	3.0	2.3



[Signature]
PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

CLINICAL PHARMACY PRACTICAL -1.4														
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CO	PS01	PS02	PS03	PS04
C001	2	2	2	2	2	2	3	2	2	C001	3	3	3	3
C002	2	1	2	3	2	2	2	2	2	C002	3	3	3	3
C003	2	2	2	2	2	2	2	2	2	C003	3	3	3	3
C004	2	2	2	2	2	2	2	2	2	C004	3	3	3	3
AVERAGE	2	1.75	2	2.25	2	2	2.25	2	2	C005	3	3	3	3
BIOSTATISTICS AND RESEARCH METHODOLOGY THEORY 1.5														
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CO	PS01	PS02	PS03	PS04
C001	-	1	2	-	1	-	-	-	1	C001	-	3	1	-
C002	1	-	3	1	-	-	-	1	-	C002	-	2	2	-
C003	1	-	1	-	-	-	-	1	-	C003	-	1	1	-
C004	-	-	3	-	-	-	-	1	-	C004	-	-	-	-
C005	3	1	3	-	-	2	-	-	-	C005	-	-	1	-
C006	3	3	3	-	-	3	2	3	1	C006	2	2	2	2
AVERAGE	1.3	0.83	2.5	0.16	0.16	0.83	0.3	1	0.33	AVERAGE	0.3	1.3	1.1	0.3
BIOPHARMACEUTICS AND PHARMACOKINETICS THEORY 1.6														
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CO	PS01	PS02	PS03	PS04
C001	3	3	3	2	1	3	3	3	3	C001	3	3	3	2
C002	3	3	3	3	1	3	3	3	3	C002	3	3	3	2
C003	3	3	3	3	1	3	3	3	3	C003	3	3	2	2
C004	3	3	3	3	1	3	3	3	3	C004	3	3	3	2



Sujitha
PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

C105	3	3	3	3	2	3	3	3	3	C106	3	3	3	2
AVERAGE	3	3	3	2.8	1.2	3	3	3	3	AVERAGE	3	3	2.8	2
BIOPHARMACEUTICS AND PHARMACOKINETICS PRACTICAL 1.6														
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CO	PSO1	PSO2	PSO3	PSO4
C101	3	3	3	2	1	2	3	1	1	C101	3	1	2	1
C102	3	3	3	2	1	2	1	1	1	C102	2	3	2	1
C103	3	3	3	2	1	2	2	1	3	C103	3	2	3	2
C104	3	3	3	2	1	3	2	3	3	C104	3	1	3	3
C105	3	3	3	2	1	3	2	3	3	C105	3	1	3	3
AVERAGE	3	3	3	2	1	2.5	1.6	2.2	2.2	AVERAGE	2.4	1.4	2.8	2
CLINICAL TOXICOLOGY THEORY 1.7														
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CO	PSO1	PSO2	PSO3	PSO4
C101	2	2	3	2	1	2	3	2	1	C101	2	2	1	3
C102	3	2	2	1	2	1	2	2	1	C102	3	2	1	3
C103	2	2	1	3	2	3	2	2	3	C103	3	2	3	2
C104	2	2	2	2	2	3	3	2	2	C104	2	2	2	2
C105	2	2	1	1	3	2	3	2	2	C105	3	3	2	1
C106	1	2	3	2	1	1	2	3	2	C106	2	2	2	3
AVERAGE	2.3	2.1	2	1.6	1.8	2	2.1	2.1	1.8	AVERAGE	2	2.1	2	2.1
SECOND YEAR														
CLINICAL RESEARCH THEORY 2.1														
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CO	PSO1	PSO2	PSO3	PSO4



[Signature]
PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

C101	3	2	3	5	2	2	2	2	2	C101	5	2	2	2
C102	2	3	2	2	2	3	2	3	3	C102	2	3	2	3
C103	2	3	2	3	2	3	2	3	2	C103	2	2	3	3
C104	2	3	3	2	3	2	3	2	3	C104	3	2	3	3
C105	2	1	2	1	2	2	2	2	2	C105	2	3	2	3
AVERAGE	2.2	2.4	2.4	2.2	2.2	2.4	2.2	2.4	2.4	AVERAGE	2.4	2.4	2.4	2.4
PHARMACOEPIDEMOLOGY AND PHARMACOECONOMICS THEORY 2.2														
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CO	PO1	PO2	PO3	PO4
C101	3	2	3	2	3	2	3	3	3	C101	1	1	1	1
C102	2	3	1	3	3	2	3	3	3	C102	3	2	1	1
C103	2	2	3	3	2	2	3	1	3	C103	2	2	1	1
C104	2	2	2	3	3	2	2	3	3	C104	2	2	1	1
AVERAGE	2.25	2.25	2.25	2.7	2.75	2	2.25	2.5	2.75	C105	1	2	1	1.25
CLINICAL PHARMACOKINETICS & PHARMACOTHERAPEUTIC DRUG MONITORING THEORY 2.3														
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	CO	PO1	PO2	PO3	PO4
C101	3	2	3	3	2	2	3	2	2	C101	3	3	2	3
C102	2	3	2	2	2	3	2	3	3	C102	2	3	2	3
C103	2	3	2	3	2	3	2	3	2	C103	2	3	3	2
C104	2	3	3	2	3	2	3	2	3	C104	3	2	3	3
C105	2	1	2	1	2	2	2	2	2	C105	2	3	2	3



PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

C106	3	2	3	2	3	2	3	2	3	C106	2	3	3	3
AVERAGE	2.3	2.3	2.5	2.1	2.3	2.3	2.3	2.3	2.5	AVERAGE	2.3	2.6	2.5	2.8




PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

MAPPING OF M.PHARM



[Signature]
PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode

KMCT Medical College Campus, Manassery, P.O, Mukkam Ph:-04952297440, Email:-pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

MPHARM PHARMACY PRACTICE																	
SEMESTER I																	
CLINICAL PHARMACY PRACTICE (MPP101)																	
COPD MAPPING												COPSO MAPPING					
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PS01	PS02	PS03	PS04	
C101	2	2	3	2	2	2	2	3	2	3	3	C101	3	2	3	3	
C102	2	3	1	3	3	2	3	3	3	3	2	C102	3	3	3	2	
C103	2	2	3	3	3	2	1	2	3	3	2	C103	2	3	3	2	
C104	1	1	1	3	3	2	2	3	3	1	2	C104	3	3	1	2	
C105	1	2	2	2	2	1	1	3	2	3	2	C105	3	2	3	2	
C106	3	3	3	3	3	2	3	1	2	3	2	C106	1	2	3	2	
AVERAGE	2.0	2.3	2.5	2.7	2.7	1.8	1.7	2.6	2.5	3.0	2	AVERAGE	2.6	2.5	3.0	2.3	
PHARMACOTHERAPEUTICS I (MPP102)												3					
COPD MAPPING												COPSO MAPPING					
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PS01	PS02	PS03	PS04	
C101	3	2	1	2	2	2	2	3	3	2	1	C101	3	3	3	3	
C102	2	1	2	2	2	3	2	3	2	2	2	C102	2	3	3	2	
C103	3	2	2	2	3	3	3	2	2	2	1	C103	3	2	3	3	
C104	2	3	3	1	2	2	3	3	2	2	2	C104	1	3	2	3	
AVERAGE	2.5	2.0	2.0	1.75	2.25	2.5	2.5	2.75	2.25	2.0	1	AVERAGE	2.5	2.75	2.75	2.75	
HOSPITAL AND COMMUNITY PHARMACY (MPP103)												5					
COPD MAPPING												COPSO MAPPING					
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PS01	PS02	PS03	PS04	
C101	3	2	1	2	2	2	2	2	3	2	1	C101	3	3	3	3	
C102	2	2	2	2	2	3	2	3	2	2	2	C102	2	3	2	2	



[Signature]
Principal
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

C101	2	2	2	2	3	3	3	2	2	2	1	C102	3	2	3	3
C104	2	3	3	1	2	2	3	2	2	2	2	C104	2	3	2	3
AVERAGE	2.25	1.25	2.0	1.75	2.25	2.4	2.5	2.25	2.25	2.0	1.5	AVERAGE	2.5	2.75	2.6	2.75
CLINICAL RESEARCH (MPP104T)																
COPD MAPPING												COPD MAPPING				
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PO1	PO2	PO3	PO4
C101	3	1	1	2	2	2	2	2	3	3	3	C101	2	2	3	3
C102	3	2	2	2	1	2	2	2	3	3	3	C102	2	2	3	2
C103	3	2	3	3	2	3	2	2	2	3	3	C103	2	2	2	3
C104	3	2	2	2	2	3	2	2	2	3	3	C104	2	2	2	3
AVERAGE	3.0	1.75	2.0	2.25	1.75	2.5	2.0	2.0	2.5	3.0	3.0	AVERAGE	2.0	2.0	2.5	2.7
PHARMACY PRACTICE PRACTICAL I (MPP105P)																
COPD MAPPING												COPD MAPPING				
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PO1	PO2	PO3	PO4
C101	2	2	2	2	2	2	3	3	2	2	2	C101	3	3	3	3
C102	2	1	2	3	2	2	2	2	2	2	1	C102	3	3	3	3
C103	2	2	2	2	2	2	2	2	2	2	1	C103	3	3	3	3
C104	2	2	2	2	2	2	2	2	2	2	2	C104	3	3	3	3
AVERAGE	2.0	1.75	2.0	2.25	2.0	2.0	2.2	2.0	2.0	2.0	1.5	AVERAGE	3.0	3.0	3.0	3.0
SECOND SEMESTER																
PRINCIPLES OF QUALITY USE OF MEDICINE (MPP 2017)																
COPD MAPPING												COPD MAPPING				
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PO1	PO2	PO3	PO4
C101	3	1	1	2	2	2	2	2	3	3	3	C101	2	2	3	3
C102	3	2	2	2	1	2	2	2	3	3	3	C102	2	2	3	2
C103	3	2	3	3	2	3	2	2	2	3	3	C103	2	2	2	3
C104	3	2	2	2	2	3	2	2	2	3	3	C104	2	2	2	3
AVERAGE	3.0	1.75	2.0	2.25	1.75	2.5	2.0	2.0	2.5	3.0	3.0	AVERAGE	2.0	2.0	2.5	2.7
PHARMACOTHERAPEUTICS -II (MPP 2027)																
COPD MAPPING												COPD MAPPING				
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PO1	PO2	PO3	PO4
C101	3	1	1	2	2	2	2	2	3	3	3	C101	2	2	3	3
C102	3	2	2	2	1	2	2	2	3	3	3	C102	2	2	3	2
C103	3	2	3	3	2	3	2	2	2	3	3	C103	2	2	2	3
C104	3	2	2	2	2	3	2	2	2	3	3	C104	2	2	2	3
AVERAGE	3.0	1.75	2.0	2.25	1.75	2.5	2.0	2.0	2.5	3.0	3.0	AVERAGE	2.0	2.0	2.5	2.7



NATIONAL COLLEGE OF PHARMACY
Manassery, Kochi-682 002



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

CH1	3	2	1	2	2	2	2	3	3	2	1	CH1	3	3	3	3
CH2	2	1	2	2	2	3	2	3	2	2	2	CH2	2	3	3	2
CH3	3	2	2	2	3	3	3	2	2	2	1	CH3	3	2	3	3
CH4	2	3	3	1	2	3	3	3	1	2	2	CH4	2	3	2	3
AVERAGE	2.5	2.0	2.0	1.75	2.25	2.5	2.5	2.75	2.25	2.0	1.5	AVERAGE	2.5	2.75	2.75	2.75
CLINICAL PHARMACOKINETICS AND THERAPEUTIC DRUG MONITORING (MPP 203T)																
COPD MAPPING												COPD MAPPING				
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
CH1	3	2	1	2	2	2	2	3	3	2	1	CH1	3	3	3	3
CH2	2	2	2	2	2	3	2	3	2	2	2	CH2	2	2	3	2
CH3	3	2	2	2	3	3	3	2	2	2	1	CH3	3	3	2	3
CH4	2	3	3	1	2	2	3	3	2	3	2	CH4	2	2	3	3
AVERAGE	2.5	2.25	2.0	2.25	2.25	2.5	2.5	2.75	2.25	2.0	1.5	AVERAGE	2.75	2.5	2.75	2.75
PHARMACOEPIDEMIOLOGY AND PHARMACOECONOMICS (MPP 204T)																
COPD MAPPING												COPD MAPPING				
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
CH1	3	2	3	2	3	2	3	3	2	3	3	CH1	3	3	3	3
CH2	2	3	1	3	3	2	3	3	3	3	2	CH2	3	2	3	3
CH3	2	2	3	3	2	2	1	1	3	2	3	CH3	2	2	3	3
CH4	2	3	2	3	3	2	2	3	3	2	2	CH4	2	3	3	2
AVERAGE	2.25	2.25	2.25	2.7	2.75	2.0	2.0	2.5	2.75	2.5	2.5	AVERAGE	2.0	2.0	3.0	3.25
PHARMACY PRACTICE PRACTICAL II (MPP 205P)																
COPD MAPPING												COPD MAPPING				
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
CH1	2	2	2	2	2	2	3	2	2	2	2	CH1	3	3	3	3
CH2	2	1	2	3	2	2	2	2	2	2	2	CH2	3	3	3	3
CH3	2	2	2	2	2	2	2	2	2	2	1	CH3	3	3	3	3
CH4	2	2	2	2	2	2	2	2	2	2	2	CH4	3	3	3	3
AVERAGE	2.0	1.75	2.0	2.25	2.0	2.0	2.2	2.0	2.0	2.0	1.5	AVERAGE	3.0	3.0	3.0	3.0
THIRD SEMESTER																



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

RESEARCH METHODOLOGY AND BIOSTATISTICS (MRM 301T)																
CO-PO MAPPING											CO-PSO MAPPING					
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
C101	2	2	-	-	2	3	-	-	1	2	3	C101	2	1	3	2
C102	3	2	-	-	3	2	-	-	-	3	3	C102	3	3	2	1
C103	2	-	3	3	2	-	-	-	-	-	2	C103	3	2	2	3
C104	2	1	2	3	-	-	-	-	-	-	1	C104	1	2	3	1
AVERAGE	2.25	1.25	1.25	1.5	1.75	1.25	-	-	0.25	1.25	2.25	AVERAGE	2.25	2.0	2.5	2.0
MPHARM PHARMACEUTICAL ANALYSIS																
SEMESTER I																
MODERN PHARMACEUTICAL ANALYTICAL TECHNIQUES-MPT 101T																
CO-PO MAPPING	CO-PSO MAPPING															
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
C101	3	-	2	-	-	2	-	-	2	-	1	C101	2	-	1	1
C102	3	3	-	2	-	3	-	-	3	-	2	C102	1	1	2	1
C103	2	-	-	-	-	3	-	-	2	2	2	C103	-	1	1	-
C104	2	2	2	2	-	-	-	-	2	2	1	C104	-	-	-	-
AVERAGE	2.5	1.25	1.0	1.0	0.0	2.0	0.0	0.0	2.0	1.0	1.25	AVERAGE	0.75	0.5	1.0	0.5
ADVANCED PHARMACEUTICAL ANALYSIS (MPA 102T)																
CO-PO MAPPING	CO-PSO MAPPING															
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
C101	2	2	1	2	1	1	-	-	1	1	1	C101	1	1	1	1
C102	2	2	1	-	3	1	-	-	1	-	-	C102	2	1	1	1
C103	2	3	1	1	-	-	-	-	-	2	3	C103	2	1	1	1
C104	1	1	1	1	-	1	-	-	1	1	1	C104	1	1	1	1



S. S. S. S.
PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

AVERAGE	1.75	2.0	1.0	1.0	1.0	0.75	00	00	0.75	1.0	1.25	AVERAGE	1.5	1.0	1.0	1.0
PHARMACEUTICAL VALIDATION (MPA 103T)																
CO-PO MAPPING	CO- PSO MAPPING															
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
C101	3	2	-	2	1	-	-	-	1	1	1	C101	2	1	1	1
C102	3	2	1	-	-	1	-	-	1	2	-	C102	1	1	1	1
C103	3	2	-	1	2	-	-	-	-	-	1	C103	1	-	1	2
C104	3	2	-	1	-	2	-	-	1	-	1	C104	1	1	-	1
AVERAGE	3.0	2.0	0.25	1.0	0.75	0.75	00	00	0.75	0.75	0.75	AVERAGE	1.25	0.75	0.75	1.25
FOOD ANALYSIS (MPA 104T)																
CO-PO MAPPING	CO- PSO MAPPING															
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
C101	3	1	1	2	1	-	1	-	2	1	1	C101	1	2	1	3
C102	2	1	-	2		1	-	-	1	-	-	C102	1	1	-	1
C103	3	1	3	2	3	-	-	1	-	2	1	C103	-	1	1	1
C104	2	1	-	2	-	-	-	-	3	-	1	C104	1	3	1	1
AVERAGE	2.5	1.0	1.0	2.0	1.0	0.25	0.2	0.25	1.5	0.75	0.75	AVERAGE	0.75	1.75	0.75	1.5
PHARMACEUTICAL ANALYSIS PRACTICAL - I (MPA 105P)																
CO-PO MAPPING	CO- PSO MAPPING															
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
C101	3	2	1	2	1	-	1	-	1	1	1	C101	2	1	-	1
C102	3	2	-	-	-	1	-	1	1	2		C102	-	-	2	2



Sujith K
PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

C101	2	2	1	1	-	-	1	-	-	-	1	C103	3	-	2	1
C104	2	2	-	1	2	-	-	2	-	-	1	C104	1	2	1	1
AVERAGE	2.5	2.0	0.5	1.0	0.75	0.25	0.5	0.75	0.5	0.75	0.75	AVERAGE	1.5	0.75	1.25	1.25
SECOND SEMESTER																
ADVANCED INSTRUMENTAL ANALYSIS (MPA 201T)																
CO-PO MAPPING	CO-PSO MAPPING NO															
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
C101	3	2	2	-	-	1	-	-	1	1	1	C101	1	1	-	1
C102	3	2	2	-	-	1	1	-	1	-	1	C102	2	1	1	-
C103	3	2	2	-	-	1	-	1	1	-	1	C103	-	1	2	1
C104	3	2	2	-	-	1	-	-	1	1	1	C104	1	1	1	1
AVERAGE	3.00	2.00	2.00	00	00	1.00	0.25	0.2	1.0	0.50	1.00	AVERAGE	1.0	1.0	1.0	0.75
MODERN BIO-ANALYTICAL TECHNIQUES(MPA 202T)																
CO-PO MAPPING	CO-PSO MAPPING NO															
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
C101	3	2	-	1	2	1	-	-	1	2	1	C101	1	1	-	1
C102	3	2	-	1	-	1	-	-	1	-	1	C102	1	1	1	2
C103	3	2	-	-	1	1	-	-	1	2	1	C103	1	-	1	1
C104	2	1	-	2	-	-	-	-	-	-	-	C104	-	2	-	1
AVERAGE	2.75	1.75	00	1.0	0.75	0.75	00	00	0.75	1.0	0.75	AVERAGE	0.75	1.0	0.50	1.25
QUALITY CONTROL AND QUALITY ASSURANCE (MPA 203T)																
CO-PO MAPPING	CO-PSO MAPPING NO															
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4



[Signature]
PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

CH1	3	3	2	3	3	3	+	1	3	+	1	CH1	2	1	1	1
CH2	3	3	2	2	3	3	+	+	3	+	+	CH2	1	+	1	+
CH3	3	3	2	2	1	2	+	1	3	1	+	CH3	1	2	+	1
CH4	3	2	+	1	+	+	+	+	2	1	2	CH4	1	1	1	1
AVERAGE	3.00	2.75	2.5	2.0	1.25	2.0	00	0.50	2.0	0.50	0.75	AVERAGE	2.5	1.0	0.75	0.75
HERBAL AND COSMETIC ANALYSIS(MPA 204T)																
CHD MAPPING	CH-PSO MAPPI NG															
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PS01	PS02	PS03	PS04
CH1	2	2	2	+	+	1	+	+	1	+	1	CH1	1	1	+	1
CH2	2	2	2	+	3	1	+	3	1	2	1	CH2	1	1	1	1
CH3	2	2	2	+	+	+	+	+	+	+	+	CH3	1	2	+	+
CH4	2	2	2	+	3	2	+	3	+	1	2	CH4	1	+	1	2
AVERAGE	2.0	2.0	2.0	00	1.5	1.0	00	1.2	0.5	0.75	1.0	AVERAGE	1.0	1.0	0.50	1.0
PHARMACEUTICAL ANALYSIS PRACTICAL - II (MPA 205P)																
CHD MAPPING	CH-PSO MAPPI NG															
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PS01	PS02	PS03	PS04
CH1	3	2	+	2	1	+	+	+	2	1	1	CH1	2	1	+	1
CH2	3	2	+	+	+	1	+	+	1	+	+	CH2	1	+	2	1
CH3	2	3	+	1	2	2	+	+	+	2	1	CH3	1	2	1	2
CH4	3	2	+	1	+	+	+	+	+	+	1	CH4	1	1	1	1
AVERAGE	2.75	2.25	00	1.0	0.75	0.75	00	00	0.75	0.75	0.75	AVERAGE	2.5	1.0	1.0	1.25
THIRD SEMESTER																
RESEARCH METHODOLOGY AND BIostatISTICS (MRM 302T)																
CHD MAPPING	CH-PSO															



National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PS01	PS02	PS03	PS04
C101	2	2	-	-	2	3	-	-	1	2	3	C101	2	1	3	2
C102	3	2	-	-	3	2	-	-	-	3	3	C102	3	3	2	1
C103	2	-	3	3	2	-	-	-	1	-	2	C103	3	2	2	3
C104	2	1	2	3	-	-	-	-	1	-	1	C104	1	2	3	1
AVERAGE	2.25	1.25	1.25	1.5	1.75	1.25	00	00	0.75	1.25	2.0	AVERAGE	2.2	2.0	2.5	1.75

MPHARM PHARMACEUTICAL CHEMISTRY

SEMESTER I

MODERN PHARMACEUTICAL ANALYTICAL TECHNIQUES (MPT 101T)

CO-PO MAPPING	CO-PSO-MAPPING															
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PS01	PS02	PS03	PS04
C101	3	2	-	-	-	2	-	-	2	-	1	C101	2	2	1	2
C102	3	3	-	2	-	3	-	-	3	-	2	C102	-	-	2	3
C103	2	-	-	-	-	3	-	-	2	2	2	C103	2	2	-	2
AVERAGE	2.6	1.6	00	0.66	00	2.6	00	00	2.3	0.66	1.6	AVERAGE	1.33	1.33	1.0	2.33

ADVANCED ORGANIC CHEMISTRY -II(MPC 102T)

CO-PO MAPPING	CO-PSO-MAPPING															
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PS01	PS02	PS03	PS04
C101	3	2	-	2	1	1	-	-	1	1	1	C101	2	-	1	2
C102	2	2	-	-	-	1	-	-	1	-	-	C102	3	1	2	-
C103	2	3	-	1	-	-	-	-	-	-	1	C103	1	2	-	1
C104	3	2	-	1	-	-	-	-	-	-	1	C104	-	2	1	1
AVERAGE	2.5	2.25	00	1.0	0.25	0.5	00	00	0.50	0.25	0.75	AVERAGE	1.5	1.25	1.0	1.0

ADVANCED MEDICINAL CHEMISTRY(MPC 103T)



[Signature]
PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

CO-PO MAPPING	CO- PSO MAPPING																
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4	
C001	3	2	-	2	1	-	-	-	2	1	1	C001	2	-	1	1	
C002	3	2	-	-	-	1	-	-	1	-	-	C002	1	1	2	-	
C003	2	3	-	1	-	-	-	-	-	-	1	C003	1	2	-	2	
C004	3	2	-	1	-	-	-	-	-	-	1	C004	1	-	1	1	
AVERAGE	2.75	2.25	00	1.0	0.25	0.25	00	00	0.75	0.25	0.75	AVERAGE	1.25	0.75	1.0	1.0	
CHEMISTRY OF NATURAL PRODUCTS(MPC 104T)																	
CO-PO MAPPING	CO- PSO MAPPING																
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4	
C001	3	2	-	2	1	-	-	-	2	1	1	C001	2	1	1		
C002	3	2	-	-	-	1	-	-	1	-	-	C002	1	-	2	3	
C003	2	3	-	1	-	-	-	-	-	-	1	C003	-	2	1	1	
C004	3	2	-	1	-	-	-	-	-	-	1	C004	1	-	-	1	
AVERAGE	2.0	2.25	00	1.0	0.25	0.25	00	00	0.75	0.25	0.75	AVERAGE	1.0	0.75	1.0	1.25	
PHARMACEUTICAL CHEMISTRY PRACTICAL – I(MPC 105P)																	
CO-PO MAPPING	CO- PSO MAPPING																
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4	
C001	3	2	-	2	1	-	-	-	2	1	1	C001	2	1	1	-	
C002	3	2	-	-	-	1	-	-	1	-	-	C002	1	-	2	3	
C003	2	3	-	1	-	-	-	-	-	-	1	C003	-	2	1	1	
AVERAGE	2.6	2.3	00	1.0	0.33	0.33	00	00	1.0	0.33	0.66	AVERAGE	1.0	1.0	1.33	1.33	
SEMESTER II																	
ADVANCED SPECTRAL ANALYSIS(MPC 201T)																	



[Signature]
PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

CO-PO MAPPING	CO- PSO MAPPING																
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4	
C101	2	2	-	-	-	1	-	-	1	-	1	C101	2	1	1	1	
C102	2	2	-	-	-	1	-	-	1	-	1	C102	-	1	2	1	
C103	2	2	-	-	-	1	-	-	1	-	1	C103	1	2	1	1	
AVERAGE	2.0	2.0	00	00	00	1.00	00	00	1.00	00	1.00	AVERAGE	1.0	1.33	1.33	1.0	
ADVANCED ORGANIC CHEMISTRY -II(MPC 202T)																	
CO-PO MAPPING	CO- PSO MAPPING																
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4	
C101	3	2	-	1	2	1	-	-	1	2	1	C101	3	2	1	1	
C102	3	2	-	1	-	1	-	-	1	-	1	C102	1	1	-	1	
C103	3	2	-	-	-	1	-	-	1	-	1	C103	-	-	1	2	
C104	3	2	-	-	-	-	-	-	-	-	-	C104	1	2	2	1	
AVERAGE	3.0	2.0	00	0.5	00	0.75	00	00	0.75	00	0.75	AVERAGE	1.25	1.25	1.0	1.25	
COMPUTER AIDED DRUG DESIGN(MPC 203T)																	
CO-PO MAPPING	CO- PSO MAPPING																
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4	
C101	3	3	-	3	3	3	-	1	3	-	2	C101	2	1	-	1	
C102	3	3	-	2	3	3	-	-	3	-	-	C102	-	2	1	1	
C103	3	3	-	2	1	2	-	2	3	1	-	C103	1	1	1	2	
C104	3	3	-	1	-	-	-	-	-	1	2	C104	1	-	2	1	
AVERAGE	3.00	3.00	00	2	1.75	2.00	00	0.75	2.25	0.75	1.00	AVERAGE	1.00	1.00	1.00	1.25	
PHARMACEUTICAL PROCESS CHEMISTRY(MPC 204T)																	



[Signature]
PRINCIPAL
National College of Pharmacy,
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

CO-PO MAPPING	CO-PSO MAPPING																
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4	
C101	2	2	-	-	-	1	-	-	1	-	1	C101	1	2	-	1	
C102	2	2	-	-	-	1	-	-	1	-	1	C102	1	2	2	2	
AVERAGE	2.00	2.00	00	00	00	1.00	00	00	1.00	00	1.00	AVERAGE	1.0	2.0	1.0	1.5	
PHARMACEUTICAL CHEMISTRY PRACTICAL II (MPC 205P)																	
CO-PO MAPPING	CO-PSO MAPPING																
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4	
C101	3	2	-	2	1	-	-	-	2	1	1	C101	1	-	2	1	
C102	3	2	-	-	-	1	-	-	1	-	-	C102	-	2	-	2	
C103	2	3	-	1	-	-	-	-	-	-	1	C103	2	1	1	-	
C104	3	2	-	1	-	-	-	-	-	-	1	C104	2	1	1	1	
AVERAGE	2.75	2.25	00	1.00	0.25	0.25	00	00	0.75	0.25	0.75	AVERAGE	1.25	1.00	1.00	1.00	
SEMESTER III																	
RESEARCH METHODOLOGY AND BIOSTATISTICS (MRM 301T)																	
CO-PO MAPPING	CO-PSO MAPPING																
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4	
C101	2	2	-	-	2	3	-	-	1	2	3	C101	2	1	3	2	
C102	3	2	-	-	3	2	-	-	-	3	3	C102	3	3	2	1	
C103	2	-	3	3	2	-	-	-	-	-	2	C103	3	2	2	3	
C104	2	1	2	3	-	-	-	-	-	-	1	C104	1	2	3	1	
C105	2	1	-	-	2	-	-	-	-	3	2	C105	2	1	2	2	
C106	3	2	-	2	-	3	-	-	1	2	2	C106	2	1	3	3	
AVERAGE	2.33	1.33	0.83	1.33	1.5	1.33	00	00	0.33	1.66	2.16	AVERAGE	2.2	1.7	2.5	2.0	



S. J. Varghese
PRINCIPAL
National College of Pharmacy
Manassery, Kuzhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

MPHARM PHARMACEUTICS																
SEMESTER I																
MODERN PHARMACEUTICAL ANALYTICAL TECHNIQUES (MPT101T)																
CO-PO MAPPING	CO- PSO MAPPING															
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
C101	3	2	2	2	2	2	2	2	2	2	1	C101	3	3	3	3
C102	3	3	2	2	1	3	2	3	3	2	2	C102	3	3	3	2
C103	2	2	2	2	2	3	2	2	2	2	2	C103	3	2	3	2
AVERAGE	2.6	2.3	2.0	2.0	1.6	2.6	2.0	2.3	2.3	2.0	1.6	AVERAGE	3.0	3.0	3.0	3.0
DRUG DELIVERY SYSTEMS (MPH 102T)																
CO-PO MAPPING	CO- PSO MAPPING															
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
C101	2	2	2	3	3	1	2	2	1	1	2	C101	2	3	3	3
C102	1	2	1	1	2	2	1	1	1	2	2	C102	2	2	3	2
C103	2	2	1	2	2	1	2	3	1	2	1	C103	2	3	2	2
C104	2	2	2	3	2	2	2	2	2	2	2	C104	2	2	2	2
AVERAGE	1.75	2.0	1.5	2.25	2.25	1.5	1.7	2.0	1.25	1.75	1.75	AVERAGE	2.0	2.4	2.8	2.5
MODERN PHARMACEUTICS (MPH 103T)																
CO-PO MAPPING	CO- PSO MAPPING															



S. S. S. S.
PRINCIPAL
National College of Pharmacy,
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
C101	3	2	-	2	1	-	2	1	1	1	1	C101	3	3	3	3
C102	3	2	2	-	-	1	2	2	1	1	2	C102	2	3	3	3
C103	3	2.5	1	1.5	1	2	2	2	2	1	1	C103	3	2	3	3
C104	3	2	-	1	2	2	2	2	1	1	1	C104	2	3	3	3
AVERAGE	3.0	2.1	0.75	1.12	1.0	1.25	2.0	1.75	1.25	1.0	1.25	AVERAGE	2.8	2.9	3.0	3.0
REGULATORY AFFAIRS(MPH 104T)																
CO-PO MAPPING	CO- PSO MAPPING															
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
C101	3	1	1	2	2	2	2	2	3	3	3	C101	2	2	3	3
C102	3	2	2	2	1	2	2	2	3	3	3	C102	2	2	3	2
C103	3	2	3	3	2	3	2	2	2	3	3	C103	2	2	2	3
C104	3	2	2	2	2	3	2	2	2	3	3	C104	2	2	2	3
AVERAGE	3.0	1.75	2.0	2.25	1.75	2.5	2.0	2.0	2.5	3.0	3.0	AVERAGE	2.0	2.0	2.5	2.7
PHARMACEUTICS PRACTICAL I (MPH105P)																
CO-PO MAPPING	CO- PSO MAPPING															
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
C101	3	1	1	2	2	2	2	2	3	3	3	C101	3	3	3	3



Signature
PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

C101	3	2	2	2	1	2	2	2	3	3	3	C101	2	3	3	3
C102	3	2	3	3	2	3	2	2	2	3	1	C102	3	2	3	3
C104	3	2	2	2	2	3	2	2	2	3	1	C104	2	3	3	3
AVERAGE	3.0	1.75	2.0	2.25	1.75	2.5	2.0	2.0	2.5	3.0	1.0	AVERAGE	2.8	2.9	3	3
MOLECULAR PHARMACEUTICS/NANOTECH & TARGETTED DDS (MPH201T)																
CO-PO MAPPING	CO-PSO MAPPING															
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
C101	3	2	1	2	2	2	2	3	3	2	1	C101	2	2	3	3
C102	2	1	2	2	2	3	2	3	2	2	2	C102	2	2	3	2
C103	3	2	2	2	3	3	3	2	2	2	1	C103	2	2	2	3
C104	2	3	3	1	2	2	3	3	2	2	2	C104	2	2	2	3
AVERAGE	2.3	2.16	2.2	1.8	2.3	2.5	2.5	2.6	2.3	2.0	1.6	AVERAGE	2.0	2.0	2.5	2.7
ADVANCED BIOPHARMACEUTICS & PHARMACOKINETICS (MPH 202T)																
CO-PO MAPPING	CO-PSO MAPPING															
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
C101	3	2	1	2	2	2	2	3	3	2	1	C101	3	3	3	3
C102	2	1	2	2	2	3	2	3	2	2	2	C102	2	3	3	2
C103	3	2	2	2	3	3	3	2	2	2	1	C103	3	2	3	3



PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

AVERAGE	2.3	2.16	2.2	1.8	2.3	2.5	2.5	2.6	2.3	2.0	1.6	AVERAGE	2.5	2.6	2.6	2.5
COMPUTER AIDED DRUG DEVELOPMENT(MPH 203T)																
CO-PO MAPPING	CO-PSO MAPPI NG															
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
C101	3	3	2	3	2	3	-	1	3	2	2	C101	3	3	3	3
C102	3	2.5	2	1.5	2	3	-	-	3	-	-	C102	2	2	3	2
C103	3	3	2	1.5	2	2	-	-	3	1	-	C103	3	3	2	3
C104	3	2.5	-	1	-	-	-	3	2	1	2	C104	2	2	3	3
AVERAGE	3.00	2.75	1.5	1.75	1.5	2.00	00	1.00	2.60	1.0	1.0	AVERAGE	2.5	2.3	2.6	2.5
COSMETICS AND COSMECEUTICALS(MPH 204T)																
CO-PO MAPPING	CO-PSO MAPPI NG															
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
C101	2	2	-	-	2	3	-	-	1	2	3	C101	3	3	3	3
C102	3	2	-	-	3	2	-	-	-	3	3	C102	2	3	3	2
C103	2	-	3	3	2	-	-	-	-	-	2	C103	3	2	3	3
C104	2	1	2	3	-	-	-	-	-	-	1	C104	2	3	2	3
AVERAGE	2.25	1.25	1.25	1.5	1.75	1.25	-	-	0.25	1.25	2.25	AVERAGE	2.5	2.6	2.6	2.5
PHARMACEUTICS PRACTICAL II(MPH205P)																
CO-PO MAPPING	CO-PSO MAPPI NG															



[Signature]
PRINCIPAL
National College of Pharmacy
Manassery, Kuttanadu



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
C101	3	2	-	2	1	-	-	2	2	2	2	C101	2	1	1	-
C102	2	2	-	1	1	-	-	1	1	3	3	C102	-	-	2	3
C103	3	1	-	1	2	3	-	-	1	2	3	C103	3	2	2	1
C104	2	1	-	2	1	-	-	-	1	2	2	C104	-	1	-	2
AVERAGE	2.5	1.5	00	1.5	1.25	0.75	00	0.75	1.25	2.25	2.5	AVERAGE	1.25	1.0	1.25	1.5

SEMESTER III																
RESEARCH METHODOLOGY AND BIostatISTICS(MRM 301T)																
Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	CO	PSO1	PSO2	PSO3	PSO4
C101	2	2	-	-	2	3	-	-	1	2	3	C101	2	1	3	2
C102	3	2	-	-	3	2	-	-	-	3	3	C102	3	3	2	1
C103	2	-	3	3	2	-	-	-	-	-	2	C103	3	2	1	3
C104	2	1	2	3	-	-	-	-	-	-	1	C104	1	2	3	1
C105	2	1	-	-	2	-	-	-	-	3	2	C105	2	1	2	2
C106	3	2	-	2	-	3	-	-	1	2	2	C106	2	1	3	3
AVERAGE	2.33	1.3	0.83	1.3	1.5	1.33	00	00	0.33	1.6	2.16	AVERAGE	2.2	1.7	2.5	2.0



S. S. S. S.
PRINCIPAL
National College of Pharmacy
Manassery, Mukkam



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

ATTAINMENT OF B.PHARM



Sujitha
PRINCIPAL
National College of Pharmacy
Kozhikode

KMCT Medical College Campus, Manassery, P.O, Mukkam Ph:-04952297440, Email:-pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

PROGRAM OUTCOME B.PHARM (2021-2022)

COURSE: HERBAL DRUG TECHNOLOGY

PROGRAM OUTCOME

PO1 Pharmacy Knowledge: Possess knowledge and comprehension of the core and basic associated with the profession of pharmacy, including biomedical sciences; pharmaceutical sciences; behavioral, social, and administrative pharmacy sciences; and manufacturing practices.

PO2 Planning Abilities: Demonstrate effective planning abilities including time management, resource management, delegation skills and organizational skills. Develop and implement plans and organize work to meet deadlines.

PO3 Problem analysis: Utilize the principles of scientific enquiry, thinking analytically, clearly and critically, while solving problems and making decisions during daily practice. Find, analyze, evaluate and apply information systematically and shall make defensible decisions.

PO4 Modern tool usage: Learn, select, and apply appropriate methods and procedures resources, and modern pharmacy-related computing tools with an understanding of the limitations.

PO5 Leadership skills: Understand and consider the human reaction to change, motivation issues, leadership and teambuilding, when planning changes required for fulfillment of practice, professional and societal responsibilities. Assume participatory roles as responsible citizens or leadership roles when appropriate to facilitate improvement in health and wellbeing.

PO6 Professional Identity: Understand, analyze and communicate the value of their professional roles in society (e.g. health care professionals, promoters of health, educators, managers, employers, employees).

PO7 Pharmaceutical Ethics: Honour personal values and apply ethical principles in professional and social contexts. Demonstrate behavior that recognizes cultural and personal variability in

KMCT Medical College Campus, Manassery, P.O., Mukkam Ph:-04952297440, Email: pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org



Sujitha
Principal
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

values, communication and lifestyles. Use ethical frameworks; apply ethical principles while making decisions and take responsibility for the outcomes associated with the decisions.

PO8 Communication: Communicate effectively with the pharmacy community and with society at large, such as, being able to comprehend and write effective reports, make effective presentations and documentation, and give and receive clear instructions.

PO9 The Pharmacist and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety and legal issues and the consequent responsibilities relevant to the professional pharmacy practice.

PO10 Environment and sustainability: Understand the impact of the professional pharmacy solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO11 Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change. Self-assess and use feedback effectively from others to identify learning needs and satisfy these needs on an ongoing basis.

PROGRAM-SPECIFIC OUTCOME

PSO1: Equip a profound understanding of different subjects of pharmaceutical sciences and enable them to fulfill industry and healthcare standards.

PSO2: Provide high levels of professionalism, ethical conduct, and leadership qualities, ensuring responsible contributions to the healthcare community.

PSO3: Provide proficiency in problem-solving methodologies for designing innovative solutions for drug development, quality assurance, and patient care.

KMCT Medical College Campus, Manassery, P.O., Mukkam Ph:-04952297440, Email:-pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org



Emithra
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



NATIONAL COLLEGE OF PHARMACY

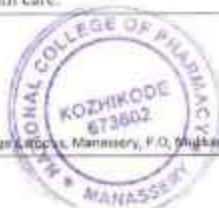
Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

PSO4: Empower with strong communication skills to effectively convey pharmaceutical information to diverse audiences and cultivate an ability to excel in teamwork for collaborating seamlessly with healthcare teams to optimize patient care outcomes.

COURSE OUTCOME (CO)

BP 603 T	HERBAL DRUG TECHNOLOGY
CO1	To understand about selection of herbs from its sources, good agricultural practices, processing and development of herbal medicinal products. Learn about Indian systems of medicines, formulation and standardization of medicines. Understand GMP of Indian systems of medicines.
CO2	Understand the importance and applications of nutraceuticals in healthcare and its market demand. Analyze herbal drug interactions and its importance in health care.
CO3	To understand the sources and description of raw materials from herbs used in personal care products. Also, learn about the use/application of herbal excipients in formulations and novel dosage forms.
CO4	To understand the evaluation and stability testing of herbal drugs as per WHO & ICH guidelines. Also to explain the patenting aspects of natural products.

SL NO	COURSE OUTCOME (CO)	KNOWLEDGE LEVEL (BLOOMS LEVEL)
CO1	To understand about selection of herbs from its sources, good agricultural practices, processing and development of herbal medicinal products. Learn Indian systems of medicines, formulation and standardization of medicines. Understand GMP of Indian systems of medicines.	L1, L2, L4, L6
CO2	Understand the importance and applications of nutraceuticals in healthcare and its market demand. Analyze herbal drug interactions and its importance in health care.	L1, L2, L4



KMCT Medical College Campus, Manassery, P.O, Mukkam Ph:-04952297440, Email:-pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org

Sujitha
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

CO3	To understand the sources and description of raw materials from herbs used in personal care products. Also, learn about the use/application of herbal excipients in formulations and in novel dosage forms.	1.2, 1.3, 1.4
CO4	To understand the evaluation and stability testing of herbal drugs as per WHO & ICH guidelines. Also to explain the patenting aspects of natural products.	1.2, 1.3, 1.5

SL NO	COURSE OUTCOME	PO	PSO
CO1	To understand about selection of herbs from its sources, good agricultural practices, processing and development of herbal medicinal products. Learn about Indian systems of medicines, formulation and standardization of medicines. Understand GMP of Indian systems of medicines.	1,2,3,4,7,9,10,11	1,2,3,4
CO2	Understand the importance and applications of nutraceuticals in healthcare and its market demand. Analyze herbal drug interactions and its importance in health care.	1,2,4,6,7,9,11	1,2,3,4
CO3	To understand the sources and description of raw materials from herbs used in personal care products. Also learn about the use/application of herbal excipients in formulations and in novel dosage forms.	1,2,3,4,6,7,9,11	1,2,4
CO4	To understand the evaluation and stability testing of herbal drugs as per WHO & ICH guidelines. Also to explain about the patenting aspects of natural products.	1,9,10,11	1



KMCT Medical College Campus, Manassery, P.O, Mukkam Ph:-04952297440, Email:-pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org

Sujitha
PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

CO Vs PO MAPPING (PO)

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	1	1	1	2	-	-	1	-	1	3	2
CO2	3	3	-	3	-	2	2	-	3	-	3
CO3	3	1	2	3	-	1	1	-	1	-	3
CO4	3	-	-	-	-	-	-	-	3	1	2
AVG	2.5	1.25	0.75	2	0	0.75	1.0	0	2	1	2.5

INFERENCE: 1- LOW, 2- MEDIUM, 3 -HIGH

COURSE OUTCOME – PROGRAM SPECIFIC OUTCOME MATRIX

SL NO	COURSE OUTCOME	PROGRAM SPECIFIC OUTCOME MATRIX			
		PSO 1	PSO 2	PSO 3	PSO 4
CO1	To understand about selection of herbs from its sources, good agricultural practices, processing and development of herbal medicinal products. Learn about Indian systems of medicines, formulation and standardization of medicines. Understand GMP of Indian systems of medicines.	3	1	2	1
CO2	Understand the importance and applications of nutraceuticals in healthcare and its market demand. Analyze herbal drug interactions and its importance in health care.	3	2	1	2
CO3	To understand the sources and description of raw materials from herbs used in personal care products. Also, learn about the use/application of herbal excipients in formulations and novel dosage forms.	3	2	-	1
CO4	To understand the evaluation and stability testing of herbal drugs as per WHO & ICH guidelines. Also to explain the patenting aspects of natural products.	2	-	-	-
AVERAGE		2.75	1.25	0.75	1

INFERENCE: 1- LOW, 2- MEDIUM, 3 -HIGH



KMCT Medical College Campus, Manassery, P.O, Mukkam Ph:-04952297440, Email:-pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org

Sujitha
PRINCIPAL
National College of Pharmacy
Manassery, Manassery



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

COMPUTATION OF COURSE OUTCOME – PROGRAM OUTCOME/ PROGRAM SPECIFIC OUTCOME ATTAINMENT

COURSE	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3	PSO4
HDT	3	1	1	2	0	1	1	0	2	1	3	3	1	1	1
AVERAGE	2.5	1.25	0.75	2	0	0.75	1.0	0	2	1	2.5	2.75	1.25	0.75	1

COURSE OUTCOME ATTAINMENT

ASSESSMENT PATTERN

ASSESSMENT TYPE	ASSESSMENT TOOL
DIRECT ATTAINMENT	FIRST INTERNAL EXAMINATION (CM-10+SM-15) THEORY - 25
	SECOND INTERNAL EXAMINATION (CM-10+SM-15) THEORY - 25
	END SEMESTER EXAMINATION THEORY - 75
INDIRECT ATTAINMENT	COURSE END SURVEY/ ONE MINUTE PAPER WRITING

DIRECT COURSE OUTCOME ATTAINMENT = 20% OF INTERNAL EXAMINATION (IF) ATTAINMENT + 80% OF END SEMESTER EXAMINATION (EE) ATTAINMENT.

OVERALL COURSE OUTCOME ATTAINMENT = 90% DIRECT COURSE OUTCOME ATTAINMENT + 10% OF INDIRECT ATTAINMENT

KMCT Medical College Campus, Manassery, P.O, Mukkam Ph-04952297440, Email: pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org



Sujitha
PRINCIPAL
National College of Pharmacy
Manassery, Kozhi



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

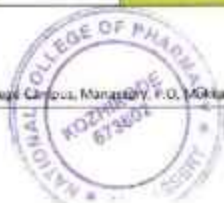
CO ATTAINMENT TARGET LEVEL

ASSESSMENT METHOD	ATTAINMENT LEVEL
END SEMESTER EXAMINATIONS	THRESHOLD VALUE FOR THEORY -75 THRESHOLD VALUE IS 50%, i.e. $0.5 \times (75) = 37.5$
	LEVEL 1: 50% OF STUDENTS SCORING MORE THAN 50% MARKS IN THEORY
	LEVEL 2: 60% OF STUDENTS SCORING MORE THAN 50% MARKS IN THEORY
	LEVEL 3: 70% OF STUDENTS SCORING MORE THAN 50% MARKS IN THEORY
ASSESSMENT METHOD	ATTAINMENT LEVEL
INTERNAL EXAMINATIONS	INTERNAL ASSESSMENT (25) (CM+SM-10+15=25) THRESHOLD VALUE IS 50%, i.e. $0.5 \times (10 + 15) = 12.5$
	LEVEL 1: 50% OF STUDENTS SCORING MORE THAN 50% MARKS IN THEORY
	LEVEL 2: 60% OF STUDENTS SCORING MORE THAN 50% MARKS IN THEORY
	LEVEL 3: 70% OF STUDENTS SCORING MORE THAN 50% MARKS IN THEORY

COMPUTATION OF CO DIRECT ATTAINMENT

COs	Assessment tool (Internal examination /End Semester examination)	INTERNAL EXAMINATION (IE)		END SEMESTER EXAMINATION (EE)	DIRECT CO ATTAINMENT = $(0.2 \times \text{IE ATTAINMENT LEVEL}) + (0.8 \times \text{EE ATTAINMENT LEVEL})$
		ATTAINMENT LEVEL	AVERAGE ATTAINMENT LEVEL	ATTAINMENT LEVEL	
CO1	THEORY	2.1	2.1	3	2.82
CO2	THEORY	1.8	1.8	3	2.76
CO3	THEORY	2.25	2.25	3	2.85
CO4	THEORY	2.0	2.0	3	2.80

KMCT Medical College Campus, Manassery, P.O, Mukkam Ph-04952297440, Email-pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org



Signature
National College of Pharmacy
Manassery, Mukkam



NATIONAL COLLEGE OF PHARMACY

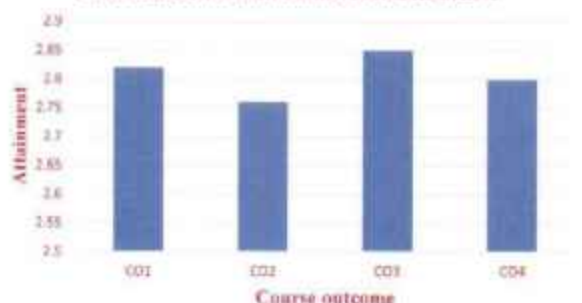
Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

COURSE OUTCOME DIRECT ATTAINMENT



COMPUTATION OF CO INDIRECT ATTAINMENT IN THE COURSE:

Attainment of CO HDT = $\frac{(\text{Level-1} \times \text{No of Students Attempted}) + (\text{Level-2} \times \text{No of Students Attempted}) + (\text{Level-3} \times \text{No of Students Attempted})}{\text{Total No of Students}}$

COS	CO1	CO2	CO3	CO4
Students Answered Level-1	21	13	14	8
Students Answered Level-2	25	26	30	27
Students Answered Level-3	28	35	30	39
TOTAL STUDENTS PARTICIPATED	74	74	74	74
COF Attainment Level-1	2.82	2.72	2.81	2.80

INFERENCE: 1- LOW, 2- MEDIUM, 3- HIGH

KMCT Medical College Campus, Manassery, P.O, Mukkam Ph:-04952297440, Email:-pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org



Sujitha
Principal
National College of Pharmacy
Manassery, P.O, Mukkam



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

COMPUTATION OF CO INDIRECT ATTAINMENT



COMPUTATION OF COURSE OUTCOME OVERALL ATTAINMENT

CO	DIRECT CO ATTAINMENT LEVEL(DA)	INDIRECT CO ATTAINMENT LEVEL(IDA)	OVERALL CO ATTAINMENT LEVEL (0.9*DA+0.1*IDA)
CO1	2.82	2.09	2.74
CO2	2.76	2.29	2.71
CO3	2.85	2.21	2.78
CO4	2.80	2.41	2.76
AVERAGE CO ATTAINMENT			2.74

KMCT Medical College Campus, Manassery, P.O, Mukkam Ph:-04952297440, Email:-pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org



Sijitha
PRINCIPAL
National College of Pharmacy
Manassery, Mukkam



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

PO/PSO ASSESMENT PROCESS

COURSE	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
HERBAL DRUG TECHNOLOGY	3	1	1	2	0	1	1	0	2	1	3
AVERAGE	2.5	1.25	0.75	2	0	0.75	1.0	0	2	1	2.5

PO	ATTAINMENT LEVEL
PO1	$2.5 \times 2.74/3 = 2.28$
PO2	$1.25 \times 2.74/3 = 1.14$
PO3	$0.75 \times 2.74/3 = 0.68$
PO4	$2.0 \times 2.74/3 = 1.82$
PO6	$0.75 \times 2.74/3 = 0.68$
PO7	$1.0 \times 2.74/3 = 0.91$
PO9	$2.0 \times 2.74/3 = 1.82$
PO10	$1.0 \times 2.74/3 = 0.91$
PO11	$2.5 \times 2.74/3 = 2.28$

RESULT OF PO ATTAINMENT

COURSE	PO1	PO2	PO3	PO4	PO6	PO7	PO9	PO10	PO11
HDT	3	1	1	2	1	1	2	1	3
ATTAINMENT	2.28	1.14	0.68	1.82	0.68	0.91	1.82	0.91	2.28

KMCT Medical College Campus, Manassery, P.O. Mukkam Ph:-04952297440, Email:-pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org



Sujitha
Principal
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

PSO's ATTAINMENT RESULTS

PSO= Average value of PSO*CO attainment average/3

PSO MAPPING

COURSE	PSO1	PSO2	PSO3	PSO4
HDT	3	1	1	1
AVERAGE	2.75	1.25	0.75	1

PSO ATTAINMENT COMPUTATION

PSO	ATTAINMENT LEVEL
PSO1	$2.75 \times 2.74 / 3 = 2.51$
PSO2	$1.25 \times 2.74 / 3 = 1.14$
PSO3	$0.75 \times 2.74 / 3 = 0.68$
PSO4	$1.0 \times 2.74 / 3 = 0.91$

PSO ATTAINMENT LEVELS

COURSE	PSO1	PSO2	PSO3	PSO4
HDT	3	1	1	1
ATTAINMENT	2.51	1.14	0.68	0.91



Sujitha
PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode

KMCT Medical College Campus, Manassery, P.O, Mukkam Ph:-04952297440, Email:-pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

ATTAINMENT OF PHARM D



PRINCIPAL

National College of Pharmacy
Kozhikode

KMCT Medical College Campus, Manassery, P.O, Mukkam Ph:-04952297440, Email:-pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

PROGRAM OUTCOME PHARM. D

COURSE: PHARMACOLOGY I

PROGRAM OUTCOME

PO1: Demonstrate comprehension of basic principles of pharmaceutical sciences along with the ability to acquire manage and use current evidence-based care to promote safe and optimal pharmacotherapy outcomes.

PO2: Apply critical thinking skill, including investigation, applications, analysis, creativity and evaluation of data and document related to drug, clinical investigation, pharmaceutical care and practice

PO3: The students are in an ideal position to provide a link between prescriber and patient and to communicate information on health and medicines to the public

PO4: Using the best available evidence students will provide patient-centered care to diverse patients.

PO5: Students will design, implement and assess initiatives to improve health and wellness

PO6: The students are able to use the evidences effectively in health care team including optimizing patient care and outcomes from their documenting experiences.

PO7: Students are able to increase the accessibility of unbiased health and medicine related to the public and other health care professionals.

PO8: Students will engage in innovative activities by using creative thinking for developing technological products in healthcare practices.

PO9: Students will exhibit professional ethics, attitudes and behaviors by demonstrating compassion, integrity and respect for others. Students should gain the ability to assume a leadership position in the overall welfare of the patient and community.



Singithrasu

National College of Pharmacy
Manassery, P.O., Mukkam



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

PROGRAM-SPECIFIC OUTCOME

PSO1: Acquire a thorough knowledge and solid foundation in different subjects of pharmaceutical sciences to fulfill industry and healthcare standards.

PSO2: Provide culturally and socially appropriate pharmaceutical care, fostering inclusion, diversity and advocating for health equity.

PSO3: Understand the significance of pharmaceutical care, medication management, pharmacoeconomics, and pharmacogenomics, as well as the fundamentals of hospital, community, and clinical pharmacy in providing for the needs of the community.

PSO4: Provide effective and empathic communication with members of the healthcare team, patients, and their care partners to enhance patient care through creative problem-solving.

COURSE OUTCOME (CO)

2.4	PHARMACOLOGY I
CO1	To remember the general pharmacology (such as definitions, scope, routes of drug administration, pharmacokinetics, pharmacodynamics, factors modifying drug effects, drug toxicity, pre-clinical evaluations and drug interactions)
CO2	Understand the entire pharmacology (such as definitions, classifications, pharmacokinetics, pharmacodynamics, mechanisms of actions, pharmacological actions, adverse drug reactions, drug interactions contraindications, doses and uses) acting on autonomic nervous system
CO3	Implement the entire pharmacology (such as definitions, classifications, pharmacokinetics, pharmacodynamics, mechanisms of actions, pharmacological actions, adverse drug reactions, drug interactions contraindications, doses and uses) acting on cardio vascular system.

KMCT Medical College Campus, Manassery, P.O. Mukkam Ph:-04952297440, Email: pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org



Sugithra
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

CO4	Apply the entire pharmacology (such as definitions, classifications, pharmacokinetics, pharmacodynamics, mechanisms of actions, pharmacological actions, adverse drug reactions, drug interactions contraindications, doses and uses) acting on central nervous system
CO5	Analyze the entire pharmacology (such as definitions, classifications, pharmacokinetics, pharmacodynamics, mechanisms of actions, pharmacological actions, adverse drug reactions, drug interactions contraindications, doses and uses) acting on respiratory system
CO6	Create the importance of hormones and hormone antagonist, autocooids and and their antagonist.

CO's	COURSE OUTCOME (CO)	KNOWLEDGE LEVEL (BLOOMS LEVEL)
CO1	To remember the general pharmacology (such as definitions, scope, routes of drug administration, pharmacokinetics, pharmacodynamics, factors modifying drug effects, drug toxicity, pre-clinical evaluations and drug interactions)	L1, L2
CO2	Understand the entire pharmacology (such as definitions, classifications, pharmacokinetics, pharmacodynamics, mechanisms of actions, pharmacological actions, adverse drug reactions, drug interactions contraindications, doses and uses) acting on autonomic nervous system	L1, L2, L3
CO3	Implement the entire pharmacology (such as definitions, classifications, pharmacokinetics, pharmacodynamics, mechanisms of actions, pharmacological actions, adverse drug reactions, drug interactions contraindications, doses and uses) acting on cardio vascular system.	L3, L4

KMCT Medical College Campus, Manassery, P.O, Mukkam Ph- 04952297440, Email:-pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org



Sujitha
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

CO4	Apply the entire pharmacology (such as definitions, classifications, pharmacokinetics, pharmacodynamics, mechanisms of actions, pharmacological actions, adverse drug reactions, drug interactions contraindications, doses and uses) acting on central nervous system.	L1, L2, L3, L4
CO5	Analyze the entire pharmacology (such as definitions, classifications, pharmacokinetics, pharmacodynamics, mechanisms of actions, pharmacological actions, adverse drug reactions, drug interactions contraindications, doses and uses) acting on respiratory system.	L1, L2, L3, L4
CO6	Create the importance of hormones and hormone antagonist, autocooids and and their antagonist.	L1, L2, L4

SL NO	COURSE OUTCOME	PO	PSO
CO1	To remember the general pharmacology (such as definitions, scope, routes of drug administration, pharmacokinetics, pharmacodynamics, factors modifying drug effects, drug toxicity, pre-clinical evaluations and drug interactions)	2	1,2
CO2	Understand the entire pharmacology (such as definitions, classifications, pharmacokinetics, pharmacodynamics, mechanisms of actions, pharmacological actions, adverse drug reactions, drug interactions contraindications, doses and uses) acting on autonomic nervous system	2, 8	1,2
CO3	Implement the entire pharmacology (such as definitions, classifications, pharmacokinetics, pharmacodynamics, mechanisms of actions, pharmacological actions, adverse drug reactions, drug interactions contraindications, doses and uses) acting on cardio vascular system.	-	1,2

KMCT Medical College Campus, Manassery, P.O, Mukkam Ph:-04952297440, Email:-pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org



Supriya
PRINCIPAL

National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

CO4	Apply the entire pharmacology (such as definitions, classifications, pharmacokinetics, pharmacodynamics, mechanisms of actions, pharmacological actions, adverse drug reactions, drug interactions contraindications, doses and uses) acting on central nervous system	-	1,2
CO5	Analyze the entire pharmacology (such as definitions, classifications, pharmacokinetics, pharmacodynamics, mechanisms of actions, pharmacological actions, adverse drug reactions, drug interactions contraindications, doses and uses) acting on respiratory system	2, 5, 7, 8	1,2
CO6	Create the importance of hormones and hormone antagonist, autocoids and their antagonist.	2, 5, 8	1,2

CO Vs PO MAPPING (PO)

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
CO1	-	1	2	2	-	3	3	-	-
CO2	-	3	2	2	-	3	3	-	-
CO3	-	3	2	2	-	3	3	-	-
CO4	-	3	2	2	-	3	3	-	-
CO5	-	3	2	2	-	3	3	-	-
CO6	-	3	2	2	-	3	3	-	-
AVG	-	2.83	2	2	-	3	3	-	-

INFERENCE: 1- LOW, 2- MEDIUM, 3- HIGH



Syithra
PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode

KMCT Medical College Campus, Manassery, P.O, Mukkam Ph:-04952297440, Email:- pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

COURSE OUTCOME – PROGRAM SPECIFIC OUTCOME MATRIX

SL NO	COURSE OUTCOME	PROGRAM SPECIFIC OUTCOME MATRIX			
		PSO 1	PSO 2	PSO 3	PSO 4
CO1	To remember the general pharmacology (such as definitions, scope, routes of drug administration, pharmacokinetics, pharmacodynamics, factors modifying drug effects, drug toxicity, pre-clinical evaluations and drug interactions)	1	1	-	-
CO2	Understand the entire pharmacology (such as definitions, classifications, pharmacokinetics, pharmacodynamics, mechanisms of actions, pharmacological actions, adverse drug reactions, drug interactions contraindications, doses and uses) acting on autonomic nervous system	1	1	-	-
CO3	Implement the entire pharmacology (such as definitions, classifications, pharmacokinetics, pharmacodynamics, mechanisms of actions, pharmacological actions, adverse drug reactions, drug interactions contraindications, doses and uses) acting on cardio vascular system.	2	1	-	-
CO4	Apply the entire pharmacology (such as definitions, classifications, pharmacokinetics, pharmacodynamics, mechanisms of actions, pharmacological actions, adverse drug reactions, drug interactions contraindications, doses and uses) acting on central nervous system	2	1	-	-
CO5	Analyze the entire pharmacology (such as definitions, classifications, pharmacokinetics, pharmacodynamics, mechanisms of actions, pharmacological actions, adverse drug reactions, drug interactions contraindications, doses and uses) acting on respiratory system	2	1	-	-

KMCT Medical College Campus, Manassery, P.O., Mukkam Ph:-04952297440, Email:-pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org



Srinivasan
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

CO6	Create the importance of hormones and hormone antagonist, autocoids and and their antagonist.	2	1	-	-
AVERAGE		1.6	1	-	-

INFERENCE: 1- LOW, 2- MEDIUM, 3- HIGH

COMPUTATION OF COURSE OUTCOME – PROGRAM OUTCOME/ PROGRAM SPECIFIC OUTCOME ATTAINMENT

COURSE	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2	PSO3	PSO4
PHARMACOLOGY I	0	3	2	2	0	3	3	0	0	2	1	0	0
AVERAGE	0	2.83	2	2	0	3	3	0	0	1.6	1	0	0

COURSE OUTCOME ATTAINMENT

ASSESSMENT PATTERN

ASSESSMENT TYPE	ASSESSMENT TOOL
DIRECT ATTAINMENT	FIRST INTERNAL EXAMINATION THEORY- 30
	SECOND INTERNAL EXAMINATION THEORY - 30
	THIRD INTERNAL EXAMINATION THEORY-30
	YEAR-END EXAMINATION THEORY- 70
INDIRECT ATTAINMENT	COURSE END SURVEY/ ONE MINUTE PAPER WRITING

KMCT Medical College Campus, Manassery, P.O, Mukkam Ph:-04952297440, Email:-pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org



Singitharam
PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

DIRECT COURSE OUTCOME ATTAINMENT = 20% OF INTERNAL EXAMINATION (IE)
ATTAINMENT + 80% OF YEAR END EXAMINATION (EE) ATTAINMENT.

OVERALL COURSE OUTCOME ATTAINMENT = 90% DIRECT COURSE OUTCOME
ATTAINMENT + 10% OF INDIRECT ATTAINMENT

CO ATTAINMENT TARGET LEVEL

ASSESSMENT METHOD	ATTAINMENT LEVEL	
YEAR-END EXAMINATION	THRESHOLD VALUE FOR THEORY - 70 THRESHOLD VALUE IS 50%, i.e. $0.5 \times (70) = 35$	
	LEVEL 1	50% OF STUDENTS SCORING MORE THAN 50% MARKS IN THEORY
	LEVEL 2	60% OF STUDENTS SCORING MORE THAN 50% MARKS IN THEORY
	LEVEL 3	70% OF STUDENTS SCORING MORE THAN 50% MARKS IN THEORY
ASSESSMENT METHOD	ATTAINMENT LEVEL	
INTERNAL EXAMINATIONS	INTERNAL ASSESSMENT (30) THRESHOLD VALUE IS 50%, i.e. $0.5 \times (30) = 15$	
	LEVEL 1	50% OF STUDENTS SCORING MORE THAN 50% MARKS IN THEORY
	LEVEL 2	60% OF STUDENTS SCORING MORE THAN 50% MARKS IN THEORY
	LEVEL 3	70% OF STUDENTS SCORING MORE THAN 50% MARKS IN THEORY



S. Jithu

PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode

KMCT Medical College Campus, Manassery, P.O, Mukkam Ph:-04952297440, Email:-pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



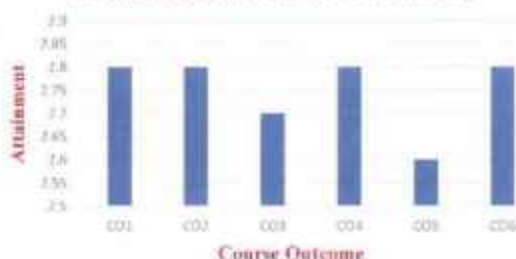
NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

COMPUTATION OF CO DIRECT ATTAINMENT

COs	Assessment tool (Internal examination /year end examination)	INTERNAL EXAMINATION (IE)		YEAR-END EXAMINATION (EE)	DIRECT CO ATTAINMENT $=(0.2 \times \text{IE ATTAINMENT LEVEL}) + (0.8 \times \text{EE ATTAINMENT LEVEL})$
		Attainment level	Average attainment level	Attainment level	
CO1	THEORY	2	2	3	2.8
CO2	THEORY	2	2	3	2.8
CO3	THEORY	1.5	1.5	3	2.7
CO4	THEORY	2	2	3	2.8
CO5	THEORY	1	1	3	2.6
CO6	THEORY	2	2	3	2.8

COURSE OUTCOME DIRECT ATTAINMENT



KMCT Medical College Campus, Manassery,

Mukkam Ph: 04952297440, Email: pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org



Sujitha
PRINCIPAL
National College of Pharmacy
Manassery, Mukkam



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

COMPUTATION OF CO INDIRECT ATTAINMENT IN THE COURSE:

Attainment of CO of Pharmacology I= (Level-1 X No of Students Attempted) + (Level-2x No of Students Attempted) + (Level-3 X No of Students Attempted)/Total No of Students

COMPUTATION OF CO INDIRECT ATTAINMENT IN THE COURSE						
COS	CO1	CO2	CO3	CO4	CO5	CO6
Students Answered Level-1	5	6	7	7	7	7
Students Answered Level-2	14	11	11	8	9	10
Students Answered Level-3	8	10	9	12	11	10
TOTAL STUDENTS PARTICIPATED	27	27	27	27	27	27
CO Attainment Level	2.11	2.14	2.07	2.19	2.14	2.11

INFERENCE: 1- LOW, 2- MEDIUM, 3 -HIGH

COMPUTATION OF CO INDIRECT ATTAINMENT



Syithwamy
PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode

KMCT Medical College Campus, Manassery, P.O, Mukkam Ph:-04952297440, Email:-pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

COMPUTATION OF COURSE OUTCOME OVERALL ATTAINMENT

CO	DIRECT CO ATTAINMENT LEVEL(DA)	INDIRECT CO ATTAINMENT LEVEL(IDA)	OVERALL CO ATTAINMENT LEVEL (0.9*DA+0.1*IDA)
CO1	2.8	2.11	2.73
CO2	2.8	2.14	2.73
CO3	2.7	2.07	2.63
CO4	2.8	2.18	2.73
CO5	2.6	2.14	2.55
CO6	2.8	2.11	2.73
AVERAGE CO ATTAINMENT			2.68

PO/PSO ASSESMENT PROCESS

COURSE	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
PHARMACOLOGY I	0	3	2	2	0	3	3	0	0
AVERAGE	0	2.83	2	2	0	3	3	0	0

PO	ATTAINMENT LEVEL
PO2	$2.83 \times 2.68 / 3 = 2.52$
PO3	$2.0 \times 2.68 / 3 = 1.78$
PO4	$2.0 \times 2.68 / 3 = 1.78$
PO6	$3.0 \times 2.68 / 3 = 2.68$
PO7	$3.0 \times 2.68 / 3 = 2.68$

KMCT Medical College Campus, Manassery, P.O, Mukkam Ph:-04952297440, Email:-pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org



Sujitha
Principal
National College of Pharmacy
Manassery, Koduvayal



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

RESULT OF PO ATTAINMENT

COURSE	PO2	PO3	PO4	PO6	PO7
PHARMACOLOGY I	3	2	2	3	3
ATTAINMENT	2.52	1.78	1.78	2.68	2.68

PSO's ATTAINMENT RESULTS

PSO=Average value of PSO*CO attainment average/3

PSO MAPPING

COURSE	PSO1	PSO2	PSO3	PSO4
PHARMACOLOGY I	2	1	-	-
AVERAGE	1.6	1	-	-

PSO ATTAINMENT COMPUTATION

PSO	ATTAINMENT LEVEL
PSO1	$1.6 \times 2.68 / 3 = 1.42$
PSO2	$1.0 \times 2.68 / 3 = 0.89$

PSO ATTAINMENT LEVELS

COURSE	PSO1	PSO2
PHARMACOLOGY I	2	1
ATTAINMENT	1.42	0.89



Sujitha
Principal

National College of Pharmacy
Manassery, Kozhikode

KMCT Medical College Campus, Manassery, P.O, Mukkam Ph:-04952297440, Email:-pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

ATTAINMENT OF PHARM D P.B



PRINCIPAL

National College of Pharmacy
Manassery, Kerala

KMCT Medical College Campus, Manassery, P.O, Mulkam Ph:-04952297440, Email:-pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

PROGRAM OUTCOME PHARM D POST BACCALAUREATE (2021-2022)

COURSE: PHARMACOTHERAPEUTICS I & II

PROGRAM OUTCOME

PO1: The Pharmacy program aims to equip students to understand the fundamental principles in pharmaceutical sciences which are essential for the pharmacy profession.

PO2: The students are trained to develop skills in formulating and dispensing medications, considering patient needs and overcoming potential incompatibilities.

PO3: Applying critical thinking skills in pharmacy involves investigating, analyzing, evaluating, and creatively applying data and documents related to drugs, clinical investigations, pharmaceutical care, and practice.

PO4: Gain the ability to demonstrate and communicate ethical values and a commitment to societal welfare. Also must ensure that patient privacy and confidentiality are protected..

PO5: To enhance the entrepreneurial capabilities and develop a sense of professional responsibility.

PO6: To develop a strong sense of professional responsibility to use medications safely and effectively.

PO7: The students learn to regulate and utilize marketed drugs in patient care and use evidence-based practices in healthcare teams

PO8: The students are able to use the evidences effectively in health care team including optimizing patient care and outcomes from their documenting experiences.

PO9: The students are in an ideal position to provide a link between prescriber and patient and to communicate information on health and medicines to the public.

KMCT Medical College Campus, Manassery, P.O, Mukkam Ph: 04952297440, Email: pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org



Sugithra
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

PROGRAM-SPECIFIC OUTCOME

PSO1: Acquire a thorough knowledge and solid foundation in different subjects of pharmaceutical sciences to fulfill industry and healthcare standards.

PSO2: Provide culturally and socially appropriate pharmaceutical care, fostering inclusion, diversity and advocating for health equity.

PSO3: Understand the significance of pharmaceutical care, medication management, pharmacoconomics, and pharmacogenomics, as well as the fundamentals of hospital, community, and clinical pharmacy in providing for the needs of the community.

PSO4: Provide effective and empathic communication with members of the healthcare team, patients, and their care partners to enhance patient care through creative problem-solving.

COURSE OUTCOME (CO)

I.1	PHARMACOTHERAPEUTICS I& II-THEORY
CO1	Understand the pathophysiology, clinical manifestations and management of common diseases associated with different systems of human body.
CO2	Understand the therapeutic approach to the management of the diseases based on latest guidelines.
CO3	Understand the guidelines for rational use of antibiotics.
CO4	Understand the role of pharmacist in essential drug concept and rational drug use.
CO5	Understand the basic principle of cancer and to know cancer chemotherapeutic agents.
CO6	Understand the general prescribing guidelines for special population such as geriatrics, paediatrics, pregnancy and lactating women.



Sujitha
Principal

National College of Pharmacy
Manassery, Kozhikode

KMCT Medical College Campus, Manassery, P.O, Mukkam Ph:-04952297440, Email:-pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

SL NO	COURSE OUTCOME (CO)	KNOWLEDGE LEVEL (BLOOMS LEVEL)
CO1	Understand the pathophysiology, clinical manifestations and management of common diseases associated with different systems of human body.	L2, L1
CO2	Understand the therapeutic approach to the management of the diseases based on latest guidelines.	L2
CO3	Understand the guidelines for rational use of antibiotics.	L2
CO4	Understand the role of pharmacist in essential drug concept and rational drug use.	L2
CO5	Understand the basic principle of cancer and to know cancer chemotherapeutic agents.	L2
CO6	Understand the general prescribing guidelines for special population such as geriatrics, paediatrics, pregnancy and lactating women.	L2

SL NO	COURSE OUTCOME	PO	PSO
CO1	Understand the pathophysiology, clinical manifestations and management of common diseases associated with different systems of human body.	1,2,3,4,5,6,7,8,9	1,2,3,4
CO2	Understand the therapeutic approach to the management of the diseases based on latest guidelines.	1,2,3,4,5,6,7,8,9	1,2,3,4
CO3	Understand the guidelines for rational use of antibiotics.	1,2,3,4,5,6,7,8,9	1,2,3,4



Sujitha
Principal
National College of Pharmacy
Manassery, Kozhikode

KMCT Medical College Campus, Manassery, P.O, Mukkam Ph:-04952297440, Email:-pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

CO4	Understand the role of pharmacist in essential drug concept and rational drug use.	1,2,3,4,5,6,7,8,9	1,2,3,4
CO5	Understand the basic principle of cancer and to know cancer chemotherapeutic agents.	1,2,3,4,5,6,7,8,9	1,2,3,4
CO6	Understand the general prescribing guidelines for special population such as geriatrics, paediatrics, pregnancy and lactating women.	1,2,3,4,6,7,8,9	1,2,3,4

PROGRAM OUTCOME (PO)

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
CO1	2	3	3	2	1	3	2	3	3
CO2	2	3	3	2	1	3	2	3	3
CO3	2	3	3	2	1	3	2	3	3
CO4	2	3	3	2	1	3	2	3	3
CO5	2	3	3	2	1	3	2	3	3
CO6	2	2	3	3	-	3	3	3	2
AVG	2	2.8	3	2.1	0.83	3	2.1	3	2.8

INFERENCE: 1- LOW, 2- MEDIUM, 3- HIGH

COURSE OUTCOME – PROGRAM-SPECIFIC OUTCOME MATRIX

SL NO	COURSE OUTCOME	PROGRAM SPECIFIC OUTCOME MATRIX			
		PSO 1	PSO 2	PSO 3	PSO 4
CO1	Understand the pathophysiology, clinical manifestations and management of common diseases associated with different systems of human body.	3	2	3	3

KMCT Medical College Campus, Manassery, P.O, Mukkam Ph:-04952297440, Email:-pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org



Sujitha
Principal

National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

CO2	Understand the therapeutic approach to the management of the diseases based on latest guidelines.	3	2	3	3
CO3	Understand the guidelines for rational use of antibiotics.	3	2	3	3
CO4	Understand the role of pharmacist in essential drug concept and rational drug use.	3	3	3	3
CO5	Understand the basic principle of cancer and to know cancer chemotherapeutic agents.	3	2	3	3
CO6	Understand the general prescribing guidelines for special population such as geriatrics, paediatrics, pregnancy and lactating women.	3	3	3	2
AVERAGE		3	2.3	3	2.8

INFERENCE: 1- LOW, 2- MEDIUM, 3- HIGH

COMPUTATION OF COURSE OUTCOME – PROGRAM OUTCOME/ PROGRAM SPECIFIC OUTCOME ATTAINMENT

COURSE	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2	PSO3	PSO4
(PHARMACOTHERAPEUTICS I & II)	2	3	3	2	1	3	2	3	3	3	2	3	3
AVERAGE	2	2.8	3	2.1	0.83	3	2.1	3	2.8	3	2.3	3	2.8



Sujithram
PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode

KMCT Medical College Campus, Manassery, P.O, Mukkam Ph:-04952297440, Email:-pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

COURSE OUTCOME ATTAINMENT

ASSESSMENT PATTERN

ASSESSMENT TYPE	ASSESSMENT TOOL
DIRECT ATTAINMENT	FIRST INTERNAL EXAMINATION THEORY- 30
	SECOND INTERNAL EXAMINATION THEORY- 30
	THIRD INTERNAL EXAMINATION THEORY-30
	YEAR-END EXAMINATION THEORY- 70
INDIRECT ATTAINMENT	COURSE END SURVEY/ ONE MINUTE PAPER WRITING

DIRECT COURSE OUTCOME ATTAINMENT = 20% OF INTERNAL EXAMINATION (IE)
ATTAINMENT + 80% OF YEAR END EXAMINATION (EE) ATTAINMENT.

OVERALL COURSE OUTCOME ATTAINMENT = 90% DIRECT COURSE OUTCOME
ATTAINMENT + 10% OF INDIRECT ATTAINMENT



Sujitha
PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode

KMCT Medical College Campus, Manassery, P.O, Mukkam Ph:-04952297440, Email:-pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org.



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

CO ATTAINMENT TARGET LEVELS

ASSESSMENT METHOD	ATTAINMENT LEVEL	
YEAR-END EXAMINATION	THRESHOLD VALUE FOR THEORY = 70 THRESHOLD VALUE IS 50%, i.e. $0.5 \times (70) = 35$	
	LEVEL 1	50% OF STUDENTS SCORING MORE THAN 50% MARKS IN THEORY
	LEVEL 2	60% OF STUDENTS SCORING MORE THAN 50% MARKS IN THEORY
	LEVEL 3	70% OF STUDENTS SCORING MORE THAN 50% MARKS IN THEORY
ASSESSMENT METHOD	ATTAINMENT LEVEL	
INTERNAL EXAMINATIONS	INTERNAL ASSESSMENT (30) THRESHOLD VALUE IS 50%, i.e. $0.5 \times (30) = 15$	
	LEVEL 1	50% OF STUDENTS SCORING MORE THAN 50% MARKS IN THEORY
	LEVEL 2	60% OF STUDENTS SCORING MORE THAN 50% MARKS IN THEORY
	LEVEL 3	70% OF STUDENTS SCORING MORE THAN 50% MARKS IN THEORY

National College of Pharmacy
Manassery, Kozhikode



KMCT Medical College Campus, Manassery, P.O, Mukkam Ph:-04952297440, Email:-pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



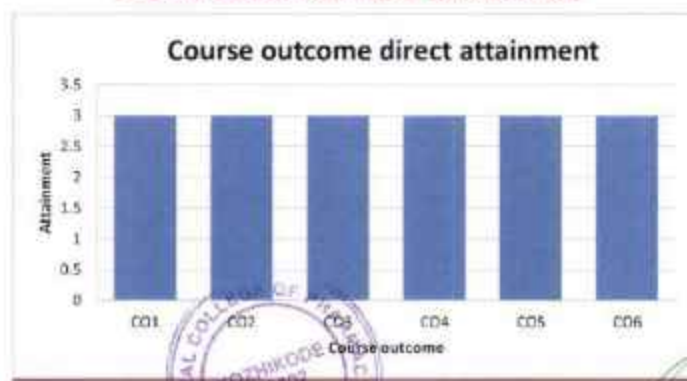
NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

COMPUTATION OF CO DIRECT ATTAINMENT

COs	Assessment tool (Internal examination /year end examination)	INTERNAL EXAMINATION(IE)		YEAR END EXAMINATION (EE)	DIRECT CO ATTAINMENT = (0.2*IE ATTAINMENT LEVEL)+(0.8*EE ATTAINMENT LEVEL)
		ATTAINMENT LEVEL	AVERAGE ATTAINMENT LEVEL	ATTAINMENT LEVEL	
CD1	THEORY	3	3	3	3
CD2	THEORY	3	3	3	3
CD3	THEORY	3	3	3	3
CD4	THEORY	3	3	3	3
CD5	THEORY	3	3	3	3
CD6	THEORY	3	3	3	3

COURSE OUTCOME DIRECT ATTAINMENT



KMCT Medical College Campus, Manassery, P.O, Mukkam Ph:-04952297440, Email:-pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org

Sujitha
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

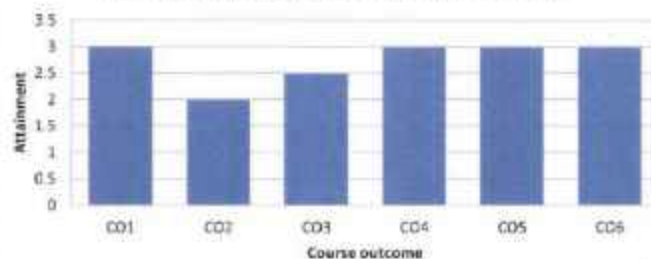
COMPUTATION OF CO INDIRECT ATTAINMENT IN THE COURSE:

Attainment of CO Pharmacotherapeutics I & II = (Level-1 X No of Students Attempted) + (Level-2 x No of Students Attempted) + (Level-3 X No of Students Attempted) / Total No of Students

COs	CO1	CO2	CO3	CO4	CO5	CO6
Students Answered Level-1	0	0	0	0	0	0
Students Answered Level-2	0	2	1	0	0	0
Students Answered Level-3	2	0	1	2	2	2
TOTAL STUDENTS PARTICIPATED	2	2	2	2	2	2
CO Attainment Level	3	2	2.5	3	3	3

INFERENCE: 1- LOW, 2- MEDIUM, 3 -HIGH

Computation of CO indirect method



Sujitha
PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode

KMCT Medical College Campus, Manassery, P.O, Mukkam Ph:-04952297440, Email:-pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

COMPUTATION OF COURSE OUTCOME OVERALL ATTAINMENT

CO	DIRECT CO ATTAINMENT LEVEL (DA)	INDIRECT CO ATTAINMENT LEVEL (IDA)	OVERALL CO ATTAINMENT LEVEL (0.9*DA+0.1*IDA)
CO1	3	3	3
CO2	3	2	2.9
CO3	3	2.5	2.95
CO4	3	3	3
CO5	3	3	3
CO6	3	3	3
AVERAGE CO ATTAINMENT			2.97

PO/PSO ASSESMENT PROCESS

COURSE	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
PHARMACOTHERAPEUTICS (I & II)	2	3	3	2	1	3	2	3	3
AVERAGE	2	2.8	3	2.1	0.83	3	2.1	3	2.8

PO	ATTAINMENT LEVEL
PO1	$2.0 \times 2.97 / 3 = 1.98$
PO2	$2.8 \times 2.97 / 3 = 2.77$
PO3	$3.0 \times 2.97 / 3 = 2.97$
PO4	$2.1 \times 2.97 / 3 = 2.07$
PO5	$0.83 \times 2.97 / 3 = 0.82$
PO6	$3.0 \times 2.97 / 3 = 2.97$
PO7	$2.1 \times 2.97 / 3 = 2.07$
PO8	$3.0 \times 2.97 / 3 = 2.97$
PO9	$2.8 \times 2.97 / 3 = 2.77$

KMCT Medical College Campus, Manassery, P.O, Mukkam Ph:-04952297440, Email:-pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org



Sigithan
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

RESULT OF PO ATTAINMENT

COURSE	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
PHARMACOTHERAPEUTICS I & II	2	3	3	2	1	3	2	3	3
ATTAINMENT	1.98	2.77	2.97	2.07	0.82	2.97	2.07	2.97	2.77

PSO's ATTAINMENT RESULTS

PSO= Average value of PSO*CO attainment average/3

PSO MAPPING

COURSE	PSO1	PSO2	PSO3	PSO4
PHARMACOTHERAPEUTICS I & II	3	2	3	3
AVERAGE	3	2.3	3	2.8

PSO ATTAINMENT COMPUTATION

PSO	ATTAINMENT LEVEL
PSO1	$3.0 \times 2.97 / 3 = 2.97$
PSO2	$2.3 \times 2.97 / 3 = 2.27$
PSO3	$3.0 \times 2.97 / 3 = 2.97$
PSO4	$2.8 \times 2.97 / 3 = 2.77$

PSO ATTAINMENT LEVELS

COURSE	PSO1	PSO2	PSO3	PSO4
PHARMACOTHERAPEUTICS I & II	3	2	3	3
AVERAGE	2.97	2.27	2.97	2.77

KMCT Medical College Campus, Manassery, P.O, Mukkam Ph-04952297440, Email:-pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org



Syithwary
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

ATTAINMENT OF M.PHARM



PRINCIPAL
National College of Pharmacy
Kozhikode

KMCT Medical College Campus, Manassery, P.O, Mukkam Ph:-04952297440, Email:-pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

PROGRAM OUTCOME M.PHARM (2021-2022)

COURSE: MODERN PHARMACEUTICAL ANALYTICAL TECHNIQUES

PROGRAM OUTCOME

1. To clarify and regulate drug discovery, drug development, care, and practice, use the fundamentals of pharmaceutical chemistry, pharmaceutical analysis, pharmaceuticals, and pharmacy practice.
2. The capacity to create, carry out, analyse, and interpret data for the right pharmaceutical system or procedure.
3. The capacity to design, synthesize, or isolate a drug and drug formulation system, component, or drug use process to satisfy desired needs within actual constraints, including economic, environmental, social, political, ethical, health and safety, and manufacturability and sustainability.
4. The capacity to work in multidisciplinary groups across various organizational levels in academia, business, research, and healthcare.
5. The capacity to recognize, define, and address professional issues in pharmaceutical concerns.
6. Knowledge of professional pharmacy values and ethical responsibility in carrying out professional tasks from societal, governmental, and international viewpoints.
7. The capacity to successfully communicate verbally and in writing to be recognized in social and professional circles.
8. The capacity to comprehend how pharmacy practice affects society, the economy, the environment, and the environment in general.
9. Understanding the value of, and capacity for, lifelong learning in line with the most recent developments in the professional sector in order to better serve the community.

KMCT Medical College Campus, Manassery, P.O. Mukkam Ph:-04952297440, Email:-pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org



Sujitha
Principal
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

10. Knowledge of current concerns relating to pharmaceutical product use in society and research, development, and manufacturing technologies.

11. The capacity to use the methods, abilities, and contemporary equipment required for professional practice research and development.

PROGRAM-SPECIFIC OUTCOME

PSO1: Graduates will acquire in-depth knowledge of analytical techniques and regulatory procedures applicable to pharmaceuticals, food, cosmetics, and herbal products.

PSO2: Graduates will possess core knowledge of bioanalytical techniques, regulatory procedures, and a deep understanding of the responsibilities associated with Quality Control and Quality Assurance departments.

PSO3: Graduates will demonstrate expertise in advanced pharmaceutical analytical techniques, showcasing competence in handling instruments used in spectroscopy and chromatography.

PSO4: Graduates will develop, integrate, and apply their knowledge to critically evaluate scientific literature and conduct research projects related to product development, analytical method development, and validation.

COURSE OUTCOME (CO)

MPT 101T	MODERN PHARMACEUTICAL ANALYTICAL TECHNIQUES
CO1	To understand the basic knowledge on assay of single and multiple component pharmaceuticals by using various analytical instruments. Skills in selecting suitable techniques for analysis of drugs and pharmaceuticals. To expand the theoretical knowledge on various instrumental techniques available for analysis of organic substances.
CO2	To develop basic practical skills using instrumentation techniques.
CO3	To develop the Skills in selecting suitable techniques for analysis of drugs and pharmaceuticals.

KMCT Medical College Campus, Manassery, P.O., Mukkam Ph:-04952297440, Email:-pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org



Sujithamma
PRINCIPAL
National College of Pharmacy
Manassery, Kottimode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

CO4	To execute the theoretical knowledge on various instrumental techniques available for analysis of organic substances
-----	--

SL NO	COURSE OUTCOME (CO)	KNOWLEDGE LEVEL (BLOOMS LEVEL)
CO1	To understand the basic knowledge on assay of single and multiple component pharmaceuticals by using various analytical instruments. Skills in selecting the suitable techniques for analysis of drugs and pharmaceuticals. To expand the theoretical knowledge on various instrumental techniques available for analysis of organic substances.	L1, L2
CO2	To develop basic practical skills using instrumentation techniques	L1, L2
CO3	To develop the Skills in selecting suitable techniques for analysis of drugs and pharmaceuticals	L2, L3
CO4	To execute the theoretical knowledge on various instrumental techniques available for analysis of organic substances	L3

SL NO	COURSE OUTCOME	PO	PSO
CO1	To understand the basic knowledge on assay of single and multiple component pharmaceuticals by using various analytical instruments.	1,3,6,9,11	1,3,4

KMCT Medical College Campus, Manassery, P.O, Mukkam Ph:-04952297440, Email:-pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org



Sujitha
PRINCIPAL
National College of Pharmacy
Manassery, P.O, Mukkam



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

	Skills in selecting the suitable techniques for analysis of drugs and pharmaceuticals. To expand the theoretical knowledge on various instrumental techniques available for analysis of organic substances.		
CO2	To develop basic practical skills using instrumentation techniques	1,2,4,6,9,11	1,2,3,4
CO3	To develop the Skills in selecting suitable techniques for analysis of drugs and pharmaceuticals	1,6,9,10,11	2,3
CO4	To execute the theoretical knowledge on various instrumental techniques available for analysis of organic substances	1,2,3,4,9,10,11	---

CO Vs PO MAPPING (PO)

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	3	-	2	-	-	2	-	-	2	-	1
CO2	3	3	-	2	-	3	-	-	3	-	2
CO3	2	-	-	-	-	3	-	-	2	2	2
CO4	2	2	2	2	-	-	-	-	2	2	1
Average	2.5	1.25	1.00	1.00	00	2.0	00	00	2.0	1.00	1.25

INFERENCE: 1- LOW, 2- MEDIAL 3- HIGH

SL NO	COURSE OUTCOME	PROGRAM SPECIFIC OUTCOME MATRIX			
		PSO 1	PSO 2	PSO 3	PSO 4
CO1	To understand the basic knowledge on assay of single and multiple component pharmaceuticals by using various analytical instruments Skills in selecting the suitable techniques for analysis of drugs and pharmaceuticals. To expand the theoretical knowledge on various instrumental techniques available for analysis of organic substances	2	-	1	1
CO2	To develop basic practical skills using instrumentation techniques	1	1	2	1

KMCT Medical College Campus, Manassery, P.O, Mukkam Ph:-04952297440, Email:-pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org



Sujitha
PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

CO3	To develop the Skills in selecting suitable techniques for analysis of drugs and pharmaceuticals	-	1	1	-
CO4	To execute the theoretical knowledge on various instrumental techniques available for analysis of organic substances	-	-	-	-
AVERAGE		0.75	0.5	1.0	0.5

INFERENCE: 1- LOW, 2- MEDIUM, 3- HIGH

COMPUTATION OF COURSE OUTCOME – PROGRAM OUTCOME/ PROGRAM SPECIFIC OUTCOME ATTAINMENT

COURSE	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3	PSO4
MPAT	3	1	1	1	0	2	0	0	2	1	1	1	1	1	1
AVERAGE	2.5	1.25	1.00	1.00	00	2.0	00	00	2.0	1.00	1.25	0.75	0.5	1.0	0.5

COURSE OUTCOME ATTAINMENT

ASSESSMENT PATTERN

ASSESSMENT TYPE	ASSESSMENT TOOL
DIRECT ATTAINMENT	FIRST INTERNAL EXAMINATION (CM-10+SM-15) THEORY- 25
	SECOND INTERNAL EXAMINATION (CM-10+SM-15) THEORY - 25
	END SEMESTER EXAMINATION THEORY -75
INDIRECT ATTAINMENT	COURSE END SURVEY/ ONE MINUTE PAPER WRITING



Sujitha
PRINCIPAL
National College of Pharmacy
Manassery, Kozhikode

KMCT Medical College Campus, Manassery, P.O, Mukkam Ph:-04952297440, Email:-pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

DIRECT COURSE OUTCOME ATTAINMENT = 20% OF INTERNAL EXAMINATION (IE)
ATTAINMENT + 80% OF END SEMESTER EXAMINATION (EE) ATTAINMENT.

OVERALL COURSE OUTCOME ATTAINMENT = 90% DIRECT COURSE OUTCOME
ATTAINMENT + 10% OF INDIRECT ATTAINMENT

CO ATTAINMENT TARGET LEVEL

ASSESSMENT METHOD	ATTAINMENT LEVEL	
END SEMESTER EXAMINATIONS	THRESHOLD VALUE FOR THEORY (75) THRESHOLD VALUE IS 50%. i.e. $0.5 \times (75) = 37.5$	
	LEVEL 1	50% OF STUDENTS SCORING MORE THAN 50% MARKS IN THEORY
	LEVEL 2	60% OF STUDENTS SCORING MORE THAN 50% MARKS IN THEORY
	LEVEL 3	70% OF STUDENTS SCORING MORE THAN 50% MARKS IN THEORY
ASSESSMENT METHOD	ATTAINMENT LEVEL	
INTERNAL EXAMINATIONS	INTERNAL ASSESSMENT (25) (CM+SM-10+15=25) THRESHOLD VALUE IS 50%. i.e. $0.5 \times (10 + 15) = 12.5$	
	LEVEL 1	50% OF STUDENTS SCORING MORE THAN 50% MARKS IN THEORY
	LEVEL 2	60% OF STUDENTS SCORING MORE THAN 50% MARKS IN THEORY
	LEVEL 3	70% OF STUDENTS SCORING MORE THAN 50% MARKS IN THEORY



Sujitha

PRINCIPAL
National College of Pharmacy
Kozhikode
www.nationalcollegeofpharmacy.org

KMCT Medical College Campus, Manassery, P.O, Mukkam Ph:-04952297440, Email:-pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

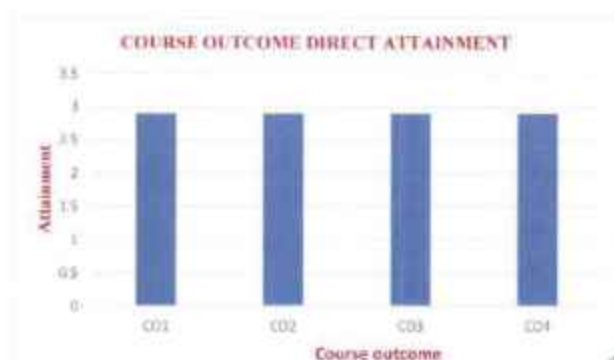


NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

COMPUTATION OF CO DIRECT ATTAINMENT

COs	Assessment tool (Internal examination /End Semester examination)	INTERNAL EXAMINATION (IE)		END SEMESTER EXAMINATION (EE)	DIRECT CO ATTAINMENT = (0.2*IE ATTAINMENT LEVEL) + (0.8*EE ATTAINMENT LEVEL)
		ATTAINMENT LEVEL	AVERAGE ATTAINMENT LEVEL	ATTAINMENT LEVEL	
CO1	THEORY	2.5	2.5	3	2.9
CO2	THEORY	2.5	2.5	3	2.9
CO3	THEORY	2.5	2.5	3	2.9
CO4	THEORY	2.5	2.5	3	2.9



Sujitha
PRINCIPAL
National College of Pharmacy
Manassery, Kottayam

KMCT Medical College Campus, Manassery, P.O, Mukkam Ph:-04952297440, Email:-pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

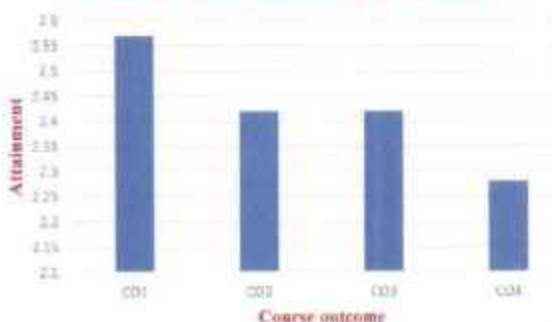
COMPUTATION OF CO INDIRECT ATTAINMENT IN THE COURSE:

Attainment of CO MPAT= (Level-1 X No of Students Attempted) + (Level-2x No of Students Attempted) + (Level-3 X No of Students Attempted)/Total No of Students

COS	CO1	CO2	CO3	CO4
Students Answered Level-1	1	1	1	2
Students Answered Level-2	1	2	2	1
Students Answered Level-3	5	4	4	4
TOTAL STUDENTS PARTICIPATED	7	7	7	7
CO Attainment Level	2.57	2.42	2.42	2.28

INFERENCE: 1- LOW, 2- MEDIUM, 3- HIGH

COURSE OUTCOME INDIRECT ATTAINMENT



Sigithrasree

PRINCIPAL
National College of Pharmacy
Manassery, Kollam

KMCT Medical College Campus, Manassery, P.O, Mukkam Ph-04952297440, Email- pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

COMPUTATION OF COURSE OUTCOME OVERALL ATTAINMENT

CO	DIRECT CO ATTAINMENT LEVEL (DA)	INDIRECT CO ATTAINMENT LEVEL (IDA)	OVERALL CO ATTAINMENT LEVEL (0.9*DA+0.1*IDA)
CO1	2.9	2.57	2.86
CO2	2.9	2.42	2.85
CO3	2.9	2.42	2.85
CO4	2.9	2.28	2.83
AVERAGE CO ATTAINMENT			2.85

PO/PSO ASSESMENT PROCESS

COURSE	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
MPAT	3	1	1	1	0	2	0	0	2	1	1
AVERAGE	2.5	1.25	1.00	1.00	00	2.0	00	00	2.0	1.00	1.25

PO	ATTAINMENT LEVEL
PO1	$2.5 \times 2.85 / 3 = 2.37$
PO2	$1.25 \times 2.85 / 3 = 1.18$
PO3	$1.0 \times 2.85 / 3 = 0.95$
PO4	$1.0 \times 2.85 / 3 = 0.95$
PO6	$2.0 \times 2.85 / 3 = 1.9$
PO9	$2.0 \times 2.85 / 3 = 1.9$
PO10	$1.0 \times 2.85 / 3 = 0.95$
PO11	$1.25 \times 2.85 / 3 = 1.18$



Sujithamma

PRINCIPAL

National College of Pharmacy
Manassery, Kozhikode

KMCT Medical College Campus, Manassery, P.O, Mukkam Ph:-04952297440, Email:-pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA



NATIONAL COLLEGE OF PHARMACY

Approved by Pharmacy Council of India, AICTE, DME & Govt of Kerala
Affiliated to Kerala University of Health Sciences, Accredited by NBA

RESULT OF PO ATTAINMENT

COURSE	PO1	PO2	PO3	PO4	PO6	PO9	PO10	PO11
MPAT	3	1	1	1	2	2	1	1
ATTAINMENT	2.37	1.18	0.95	0.95	1.9	1.9	0.95	1.18

PSO's ATTAINMENT RESULTS

PSO=Average value of PSO*CO attainment average/3

PSO MAPPING

COURSE	PSO1	PSO2	PSO3	PSO4
MPAT	1	1	1	1
AVERAGE	0.75	0.5	1.0	0.5

PSO ATTAINMENT COMPUTATION

PSO	ATTAINMENT LEVEL
PSO1	$0.75 \times 2.85/3 = 0.71$
PSO2	$0.5 \times 2.85/3 = 0.47$
PSO3	$1.0 \times 2.85/3 = 0.95$
PSO4	$0.5 \times 2.85/3 = 0.47$

PSO ATTAINMENT LEVELS

COURSE	PSO1	PSO2	PSO3	PSO4
MPAT	1	1	1	1
ATTAINMENT	0.71	0.47	0.95	0.47



Syithamma

PRINCIPAL

KMCT Medical College Campus, Manassery, P.O, Mukkam Ph:-04952297440, Email:-pharmacy@kmct.edu.in, www.nationalcollegeofpharmacy.org
National College of Pharmacy
Manassery, Kerala-686 002