



હેમચંદ્રાચાર્ય ઉત્તર ગુજરાત યુનિવર્સિટી, પાટણ  
યુનિવર્સિટી રોડ, પો. બો. નં.-૨૧, પાટણ.-૩૮૪ ૨૬૫. (ઉ. ગુ.) ફોન નં.- (૦૨૭૬૬) ૨૨૦ ૯૩૨.

પરિપત્ર ક્રમાંક- ૨૪૦ / ૨૦૧૩

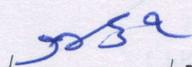
વિષય : પી.જી.ડી.એમ.એલ.ટી. ના નવા અભ્યાસક્રમ/સ્કીમ અંગે....

આ યુનિવર્સિટી સંલગ્ન સાયંસ કોલેજોના આચાર્યશ્રીઓ તથા લાઈફ સાયંસ ડીપાર્ટમેન્ટના અધ્યક્ષશ્રીને જણાવવાનું કે, યુનિવર્સિટીના લાઈફ સાયંસ ડીપાર્ટમેન્ટમાં જૂન-૨૦૧૩ થી પુનઃ શરૂ કરવામાં આવેલ પી.જી.ડી.એમ.એલ.ટી.ના કોર્ષ માટે કોર્ષના કો-ઓર્ડીનેટરશ્રી ધ્વારા બાદમાં રજૂ કરવામાં આવેલ સામેલ પરિશિષ્ટ પ્રમાણેનો અભ્યાસક્રમ/સ્કીમ એકેડેમિક કાઉન્સિલની તારીખ : ૧૦/૧૦/૨૦૧૩ ની સભાએ તેના ઠરાવ ક્રમાંક-૨૭ થી મંજૂર કરેલ છે. જેનો અમલ થવા સારૂ સંબંધિતોને આથી જાણ કરવામાં આવે છે.

આ બાબતની અધ્યાપકશ્રીઓ તથા વિદ્યાર્થીઓને આપના સ્તરેથી જાણ કરવા વિનંતી છે.

બિડાણ : ઉપર મુજબ.

  
કુલસચિવવતી

નં.-એ કે/અ xસ/  / ૨૦૧૩

તારીખ : ૨૦ / ૧૨ / ૨૦૧૩

પ્રતિ,

૧. સંલગ્ન સાયંસ કોલેજોના આચાર્યશ્રીઓ
૨. કો-ઓર્ડીનેટરશ્રી, પીજીડીએમએલટી કોર્ષ, લાઈફ સાયંસ ડીપાર્ટમેન્ટ, હેમચંદ્રાચાર્ય ઉત્તર ગુજરાત યુનિવર્સિટી, પાટણ.
૩. ડો.એમ.બી.પ્રજાપતિ (ડીનશ્રી-વિજ્ઞાન વિદ્યાશાખા) મેથેમેટીક્સ ડીપાર્ટમેન્ટ, હેમચંદ્રાચાર્ય ઉત્તર ગુજરાત યુનિવર્સિટી, પાટણ.
૪. પરીક્ષા નિયામકશ્રી, હેમચંદ્રાચાર્ય ઉત્તર ગુજરાત યુનિવર્સિટી, પાટણ (પાંચ નકલ)
૫. ગ્રંથપાલશ્રી, હેમચંદ્રાચાર્ય ઉત્તર ગુજરાત યુનિવર્સિટી, પાટણ. તરફ ⇨ વિદ્યાર્થીઓના ઉપયોગ સારૂ રેકર્ડ ફાઈલ માટે
૬. ઈન્ચાર્જશ્રી, કોમ્પ્યુટર (રીઝલ્ટ) સેન્ટર, હેમ.ઉ.ગુ.યુનિવર્સિટી, પાટણ. તરફ ⇨ પરિણામ માટે તથા વેબ સાઈટ પર મૂકવા સારૂ.
૭. માન.કુલપતિશ્રી/ઉપકુલપતિશ્રી/કુલસચિવશ્રી નું કાર્યાલય, હેમચંદ્રાચાર્ય ઉત્તર ગુજરાત યુનિવર્સિટી, પાટણ.
૮. પ્રવેશ પ્રશાખા (એકેડેમિક), હેમચંદ્રાચાર્ય ઉત્તર ગુજરાત યુનિવર્સિટી, પાટણ.
૯. એનરોલમેન્ટ/રજીસ્ટ્રેશન પ્રશાખા (એકેડેમિક), હેમચંદ્રાચાર્ય ઉત્તર ગુજરાત યુનિવર્સિટી, પાટણ.
૧૦. મુખ્ય હિસાબી અધિકારીશ્રી (મહેકમ), હેમચંદ્રાચાર્ય ઉત્તર ગુજરાત યુનિવર્સિટી, પાટણ. તરફ ⇨ પરિપત્રની ફાઈલ અર્થે.

**HEMCHANDRACHARYA NORTH GUJARAT UNIVERSITY, PATAN**

**PG Diploma in Medical Laboratory Technology CBCS Syllabus 2013**

Document code :	SYLLABUS PGDMT 2013
Revision No:	
Name of Faculty	
Faculty Code	
Programme Code :	PGDMT
Programme Name :	PG Diploma in Medical Laboratory Technology
Effective from:	June 2013

## Programme Outline

**Introduction:** The Post Graduate Diploma in medical laboratory technology is professional programme with opportunities in Various Government & Private Health sector, Pharm Industry, Clinical Research organization.

**Eligibility :** Graduate in any Life sciences subject and chemistry

**Admission:** Strictly on merit basis(95% seats reserved for students of H. N. G. University & 05% seats for Universities other than H. N. G. University)

**Terms :** June to Nov. & Dec. to April (Semester and CBCS System)

### Examination Pattern

Sem	Paper Code	Paper Type	Paper Name	Marking scheme				Credit	Total
				External		Internal			
				The	Pra	The	Pra		
1	PGDMT101CC	CC	Introduction to Profession and Hematology	70		30		4	100
1	PGDMT102CC	CC	Introduction to Human body and Clinical Pathology	70		30		4	100
1	PGDMT103CC	CC	Clinical Biochemistry	70		30		4	100
1	PGDMT101PR	PR	Lab I (Practicals based upon 101 to 103 paper )		150			6	150
1	PGDMT101ES	ES	Advances in TB, HIV and Malaria diagnostic	50				2	50
2	PGDMT201CC	CC	Serology and histopathology	70		30		4	100
2	PGDMT202CC	CC	Advance diagnostic techniques	70		30		4	100
2	PGDMT203CC	CC	Clinical Microbiology	70		30		4	100
2	PGDMT201PR	PR	Practicals based upon 201 to 203 paper		150			6	150
2	PGDMT201ES	ES	Clinical Research	50				2	50

**Internal exam:** Marks for internal assessment only for core theory papers shall be awarded on the basis of attendance/regularity/punctuality, seminars, Poster presentations, viva-voce, field work/library work/academic tour, MCQ's tests, quiz competitions, assignments etc.

**Passing Standard:** 40 %

**Class and Grade:** Class and Grade as per the HNGU university common rules and regulation

HEMCHANDRACHARYA NORTH GUJARAT UNIVERSITY, PATAN				
Programme code :		PGDMT	Programme Name :	
Course Code		PGDMT101CC	Semester :	
			1	
Introduction to Profession and Hematology				
Course type :		Core Compulsory	Total Credit :	
			04	
Teaching time (hours)		Examination Marking scheme		
Theory (hrs)	Practical (hrs)	Internal (Marks)	External (Marks)	Total (Marks)
4 X 15 = 60	00	30	70 ( Paper of 3 hrs)	100

#### Unit I

- Introduction to the Profession
- Introduction to medical terminology
- Disciplines in laboratory medicine and application to functions of the body system
- Laboratory Mathematics

#### Unit II

- Introduction to hematology
- Specimen collection and Laboratory preparation in Hematology
- Routine Hematological tests
- Special Hematological tests

#### Unit III

- Interpretation of laboratory findings in Hematology
- Introduction to Homeostasis and coagulation
- Laboratory investigation of bleeding disorders
- Principles of Immunohematology and clinical significance of blood transfusion

#### Unit IV

- Collection and processing of blood for transfusion
- Routine Laboratory process in blood banking
- Transfusion reactions and hemolytic disease of newborn
- Hematological diseases

#### Reference books

1. Medical Laboratory Technology: Procedure Manual for Routine Diagnostic Tests by Mukherjee, McGraw Hill Education
2. Textbook of medical laboratory technology by Godkar , Bhalani Publishing House
3. Clinical Microbiology Made Ridiculously Simple, GLADWIN,
4. Microbiology an Introduction By Tortora, Benjamin Cummings
5. Medical Microbiology by Kayser
6. Instant Notes in Biochemistry, Hoper
7. Instant Notes in Microbiology,
8. Oxford handbook of clinical and laboratory investigation by Provan
9. District laboratory practice in tropical country by Cheesbrough, Cambridge University Press

HEMCHANDRACHARYA NORTH GUJARAT UNIVERSITY, PATAN				
Programme code :	PGDMT	Programme Name :	Post graduate Diploma in Medical laboratory technology	
Course Code	PGDMT102CC	Semester :	1	
<b>Introduction to Human body and Clinical Pathology</b>				
Course type :	Core Compulsory	Total Credit :	04	
<b>Teaching time (hours)</b>		<b>Examination Marking scheme</b>		
Theory (hrs)	Practical (hrs)	Internal (Marks)	External (Marks)	Total (Marks)
4 X 15 = 60	00	30	70 ( Paper of 3 hrs)	100

#### Unit I

- Human Health and Medical care in developing country
- Organization of the clinical laboratory and Role of Medical Laboratory technician
- Introduction to Human body and anatomy
- Introduction to Human physiology

#### Unit II

- Safety regulation, First aid and clinical laboratory records
- Introduction to laboratory equipment and Basic Laboratory operation
- General comment on specimen collection,
- Units of measurement of Laboratory Findings

#### Unit III

- Clinical Pathology and urine analysis
- Cerebrospinal fluid (CSF) analysis
- Cavity fluid analysis
- Test of Gastric fluid

#### Unit IV

- Semen analysis
- Stool examination
- Toxicological Investigation and Therapeutic drug Monitoring
- Case studies

#### Reference books

1. Medical Laboratory Technology: Procedure Manual for Routine Diagnostic Tests by Mukherjee, McGraw Hill Education
2. Textbook of medical laboratory technology by Godkar , Bhalani Publishing House
3. Clinical Microbiology Made Ridiculously Simple, GLADWIN,
4. Microbiology an Introduction By Tortora, Benjamin Cummings
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9. District laboratory practice in tropical country by Cheesbrough, Cambridge University Press

HEMCHANDRACHARYA NORTH GUJARAT UNIVERSITY, PATAN				
Programme code :		PGDMT	Programme Name :	
Course Code		PGDMT103CC	Semester :	
			1	
Clinical Biochemistry				
Course type :		Core Compulsory	Total Credit :	
			04	
Teaching time (hours)		Examination Marking scheme		
Theory (hrs)	Practical (hrs)	Internal (Marks)	External (Marks)	Total (Marks)
4 X 15 = 60	00	30	70 ( Paper of 3 hrs)	100

#### Unit I

- Introduction to Carbohydrates
- Introduction to Proteins
- Introduction to Lipids
- Introduction to DNA

#### Unit II

- Introduction to Enzyme
- Introduction to Hormones
- Normal and abnormal Biochemical process of the body
- Specimen processing for Biochemical analysis

#### Unit III

- Principles of analytical techniques
- Automation in clinical biochemistry laboratory
- Routine biochemical techniques
- Renal profiles

#### Unit IV

- Liver profiles
- Cardiac profile
- Water and Mineral metabolism
- Acid base balance

#### Reference books

1. Medical Laboratory Technology: Procedure Manual for Routine Diagnostic Tests by Mukherjee, McGraw Hill Education
2. Textbook of medical laboratory technology by Godkar , Bhalani Publishing House
3. Clinical Microbiology Made Ridiculously Simple, GLADWIN,
4. Microbiology an Introduction By Tortora, Benjamin Cummings
5. Medical Microbiology by Kayser
6. Instant Notes in Biochemistry, Hoper
7. Instant Notes in Microbiology,
8. Oxford handbook of clinical and laboratory investigation by Provan
9. District laboratory practice in tropical country by Cheesbrough, Cambridge University Press

HEMCHANDRACHARYA NORTH GUJARAT UNIVERSITY, PATAN				
Programme code :		PGDMT	Programme Name :	
Course Code		PGDMT101PR	Post graduate Diploma in Medical laboratory technology	
		Semester :		1
		Lab I		
Course type :		Practical	Total Credit :	
		06		
Teaching time (hours)		Examination Marking scheme		
Theory (hrs)	Practical (hrs)	Internal (Marks)	External (Marks)	Total (Marks)
00	12X15= 180	00	150	150

Practical based upon 101 to 103 papers

HEMCHANDRACHARYA NORTH GUJARAT UNIVERSITY, PATAN				
Programme code :	PGDMT	Programme Name :	Post graduate Diploma in Medical laboratory technology	
Course Code	PGDMT101ES	Semester :	1	
<b>Advances in TB, HIV and Malaria diagnostic</b>				
Course type :	Elective Subject	Total Credit :	02	
<b>Teaching time (hours)</b>		<b>Examination Marking scheme</b>		
<b>Theory (hrs)</b>	<b>Practical (hrs)</b>	<b>Internal (Marks)</b>	<b>External (Marks)</b>	<b>Total (Marks)</b>
2 X 15 = 30	00	00	50	50

#### Unit I

- Recent Advances in TB, diagnostic
- Recent Advances in HIV diagnostic

#### Unit II

- Recent Advances in Malaria diagnostic
- Current National and International trends in TB, HIV, Malaria treatment