

Syllabus for Skill development course

Title of course- Basic Certificate in Medical Laboratory	
Paper Title: Fundamentals of Medical Laboratory	
Nodal Department of HEI to run course	Department of Vocational studies
Broad Area/Sector-	Health care
Sub Sector-	Medical lab
Nature of course - Independent / Progressive	Progressive
Name of suggestive Sector Skill Council	NSDC
Aliened NSQF level	
Expected fees of the course –Free/Paid	As decided by College/University
Stipend to student expected from industry	
Number of Seats-.....30.....	
Course Code-.....ML-01	Credits- 03 (1 Theory, 2 Practical)
Max Marks...25..... Minimum Marks.....10...	
Name of proposed skill Partner (Please specify, Name of industry, company etc for Practical /training/ internship/OJT	
Job prospects-Expected Fields of Occupation where student will be able to get job after completing this course in (Please specify name/type of industry, company etc.)	Student will be able to get job in medical laboratories working privately or medical labs in Govt/private hospitals.

Syllabus

Unit	Topics	General/ Skill component	Theory/ Practical/ OJT/ Internship/ Training	No of theory hours (Total-15 Hours=1 credit)	No of Practical Hours (Total-60 Hours=2 credits)
I	Functional components of clinical laboratories	Skill	Theory/Pra ctical	3	5
II	Basic needs of clinical laboratory technician	Skill	Theory/Pra ctical	4	5
III	Sterilization and Disinfection	Skill	Theory/Pra ctical	3	20
IV	Collection of Specimen and Disposal of Waste	Skill	Theory/Pra ctical	3	15
V	Identification, use, maintenance and care of common laboratory glassware and equipment	Skill	Theory/Pra ctical	2	15

Suggested Readings:

S.No.	Title	Author	Publisher
1.	Text book of medical laboratory technology	Praful Godkar; Bhalani	Bhalani Publishing House
2.	A Hand Book of D.M.L.T. (Diploma in Medical Laboratory Technology)	Payal Soan, Gitesh Amrohit)	Vardhan Publishers & Distributors
3.	Textbook of Medical Laboratory Technology	Ramnik Sood	Jaypee Brothers Medical Publishers

Suggested Digital platforms/ web links for reading-

Suggested OJT/ Internship/ Training/ Skill partner

Suggested Continuous Evaluation Methods:

Total Marks: 25

House Examination/Test: 10 Marks

Written Assignment/Presentation/Project / Term Papers/Seminar: 10 Marks

Class performance/Participation: 5 Marks

Course Pre-requisites:

- Student of science stream with biology
- To study this course, a student must have the subject Biology in class/12th/ certificate/diploma
- If progressive, to study this course a student must have passed previous courses of this series.

Suggested equivalent online courses:

Any remarks/ suggestions:

Notes:

- Number of units in Theory/Practical may vary as per need
- Total credits/semester-3 (it can be more credits, but students will get only 3credit/ semester or 6credits/ year
- Credits for Theory =01 (Teaching Hours = 15)
- Credits for Internship/OJT/Training/Practical = 02 (Training Hours = 60)

Syllabus for Fundamentals of Medical Laboratory

Unit	Topics	Syllabus
I	Functional components of clinical laboratories	<ul style="list-style-type: none">• common types of laboratory• Basic causes of accidents• cleanliness, precautions to be taken WRT patients, reports, analysis• Communication between physician, patients, and the medical laboratory professional
II	Basic needs of clinical laboratory technician	<ul style="list-style-type: none">• To develop basic understanding and precautions to ensure sample preservation while Transporting• Describe common emergency conditions and what to do in medical emergencies• Describe basics of first aid• To develop understanding and precautions to ensure self-safety
III	Sterilization and Disinfection	<ul style="list-style-type: none">• Sterilization and Disinfection:• Physical agents- Sunlight, Temperature, steam at atmospheric pressure and steam under pressure, irradiation, filtration.• Chemical Agents- Alcohol, aldehyde, Dyes, Halogens, Phenols, Ethylene oxide
IV	Collection of Specimen and Disposal of Waste	<ul style="list-style-type: none">• To understand different types of samples to be taken in medical laboratory and handling• To understand different equipment useful for blood sample collection.• To understand correct method of blood sample collection and transportation• To understand importance of proper and safe disposal of bio-medical waste & treatment• To understand categories of biomedical waste

V	Identification, use, maintenance and care of common laboratory glassware and equipment	• Identification, use, maintenance and care of common laboratory glassware and equipment, handling of all glassware. Use, principle and care of centrifuge, colorimeter, oven, incubator, microscope,
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