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GDCW Hussainialam for women, Hyd Department of Microbiology

Online Certificate Courses-2020-21

Online Certificate Courses which are conducted after class hours. These courses are conducted by microbiology faculty and help students stand apart from the rest in the job market by adding further value to their resume. They are mostly independent to each type of the fields. Explained with virtual class rooms.

Objectives

The main objectives of the Certificate Course are:

To provide students an understanding of the expectations of industry.

To improve employability skills of students.

To bridge the skill gaps.

To provide an opportunity to students to develop inter-disciplinary skills.

To mould students as job providers rather than job seekers.

DEPARTMENT OF MICROBIOLOGY

Topic: Advanced Techniques in Clinical Microbiology.

Learning Objectives: To learn the basic and advanced techniques in clinical Laboratory. Course Outcomes At the end of this course, students will be able to, Understand laboratory safety methods. Understand pathological analysis of clinical specimens. Gain knowledge about automated techniques in Clinical Laboratory Technology.

Assessment of Certificate Courses

Tests shall be conducted during the semester by the

Department (s) offering certificate and evaluated by the course teacher.

Unit I Laboratory Safety

Organization of laboratory and safety precautions in laboratory – Personal hygiene and care – General health care – Vaccination Schedule for technicians – Laboratory care and cautions – Do's and Dont's – lab accidents – Cuts and wounds – Fire Accidents (Chemical Gas, Flammable Chemicals, Electrical, Spirit Lamp, Gas) – Chemical burns.

Unit II

Sample Analysis Sample collection, processing, preservation and transportation of various clinical pathology samples. Pathological Analysis of clinical specimens.

Unit III

Microscopic Analysis Microscopic analysis of clinical specimens – Urine, Stool, Sputum, Pus, Blood, CSF and other body fluids.

Unit IV

Culture Methods Culture methods – Culturing and isolation of pathogens from clinical specimens. Culture media – General purpose media – special media – selective media – differential media – transport media.

Unit V

Advanced Techniques & Automation ELISA – PCR- Fluorescence Microscopy – Automated culture systems – automated Blood culture – Automated Urine culture – Automated Antibiotic Sensitivity testing.

Unit V Advanced Techniques & Automation

ELISA – PCR- Fluorescence Microscopy – Automated culture systems – automated Blood culture – Automated Urine culture – Automated Antibiotic Sensitivity testing.

Text Books:

Online Virtual labs.

Anantha narayanan. R. and Paniker C.K.J. Text Book of Microbiology,

9th Chakraborthy, A Text Book of Microbiology 3 Edition Orient Longman, (2013). rd James cappuccino, Natalie Sherman. (2004) Microbiology A Laboratory manual.

7th Edition. Edn, New Central book Agency (P) Ltd, Kolkata, India 2005. Praful Godkar, Darsan, 2014.

Text book of Medical Laboratory Technology Vol I & II, Bhalani Publishing House.

Students enrolled in the courses:

Name of the value added courses	Year of offering	No. of times offered during the same year	Number of students enrolled in the year	Number of students completing the course in the year
	20-21	01	22 ,,	-22
Advanced				
Techniques				
in Clinical				
Microbiology.				