

BT-419 Laboratory Quality Assurance and Quality Control

Elective Course

Credit Hour: 3

Pre-Requisite:	–	Co-requisite: or Permission of Instructor	–
Objectives	<p>The aim of this course is to provide students with</p> <ul style="list-style-type: none"> • To introduce principles of good laboratory practices • To impart the importance of quality assurance and quality controls within a regulated laboratory environment • To provide insights into quality control and assurance • To understand components of laboratory quality management system and sources of laboratory errors 		
Topics	<ul style="list-style-type: none"> • Certification and Accreditation • Elements of Laboratory Quality Management System • Personal Protective Equipment • Standard Operating Procedures • Laboratory Design • Equipment selection and Equipment Operating Procedures • Preventive Maintenance • Inventory • Pre-analytical errors • Collection, receipt/transport and storage of samples • Qualitative and Quantitative tests • Calibration • Quality Control • Quality Assurance • External Quality Assurance Schemes • Post-analytical errors 		

<p>Expected outcomes</p>	<p>After completing this course, students should be able to;</p> <ul style="list-style-type: none"> • Understand the difference between quality control and quality assurance • Acquire basic knowledge of laboratory design and management • Understand pre and post analytical errors • Technically defend scientific data by its quality and reliability using Good Laboratory practices • Apply the regulations and standards associated with Good Laboratory practices • Understand consequences of non-compliance regulated laboratories.
<p>Recommended Books</p>	<ol style="list-style-type: none"> 1. Good Laboratory Practice: Nonclinical Laboratory Studies Concise Reference (2010) by Mindy J. Allport-Settle, Pharma Logica Inc, NC, USA 2. The Indispensable Guide to Good Laboratory Practice (GLP): Second Edition (2009) by Mark Gregory Slomiany, Pinehurst Press USA 3. Good clinical laboratory practice (2009) World Health Organization on behalf of the Special Program for Research and Training in Tropical Diseases, Geneva, Switzerland