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Smt. Narsamma Hirraya Shaikshanik Trusts
Arts, Commerce and Science College, Kiran Nagar, Amravati

Certificatecourse in Handling UV- Visible Spectrophotometer

Duration: 30 Hours (One Week)
Course Fees (Per Course): Rs. 1,000

Module 1- Calibration of UV/ Visible Spectrometer

Course Introduction	The module of Performance in Calibration of UV/Visible Spectrophotometer aims to equip participants with the skills in the calibration of UV/ VIS Spectrophotometer that are critical for those working in an accredited laboratory and Industry
Course Objective	The primary emphasis for this laboratory session shall be on • Laboratory safety, • Preparation of sample, • Calibration of UV/ Vis Spectrophotometer, • Data handling, analysis and reporting.
Course Outline	Topics shall include the calibration of • UV/Visible Spectrophotometer

Module 2 – Perform Instrumental Analysis using UV/ Vis Spectrophotometer

Course Introduction	Thismodule of Performance in Instrumental Analysis using UV/ Vis Spectrophotometer aims to equip participants with the knowledge and skills to operate UV/ Vis Spectrophotometer that is critical for those working in a Quality Assurance (QA)/ and Quality Control(QC) laboratory.
Course Objective	The primary emphasis for this laboratory session shall be on • Laboratory safety, • Preparation of sample (include choice of cuvettes), • Operating UV/ Vis Spectrophotometer, • Data handling, analysis and reporting.
Course Outline	Topics shall include • Understanding of working principles behind UV/Visible Spectrophotometry and • Operation of UV/ Vis Spectrophotometer.

Course Content Module 1 and 2-

- Introduction and overview of UV- Visible course and Instrumentation
- Brief review of basic UV - visible spectrophotometry theory and its relevance to spectral interpretation
- Calibration technique of UV-Visible Spectrophotometer
- How to obtain good spectrum
- Sample specific factors affecting spectral quality, mixtures, detection limits
- Discussion and demonstration of various sample preparation techniques
- Preparation of sample and acquisition of spectra
- Spectral interpretation

Distribution of the session-(30 Credits/30 Hours)

Theory - 07 Hours
Demonstration - 05 Hours
Practical - 10 Hours
Project - 08 Hours
Total Duration - 30 Hours

Course Outcomes-

1. Student should acquire a technique of preparation of sample
2. Should able to obtained best spectrum possible from real word sample.
3. Should able to interpret the spectra.
4. Should able to calibrate the instrument.

Award of Certificate-

- Students are expected to successfully complete the variety of task including hands on training, laboratory techniques and the tasks given within the stipulated time period for module 1 and 2.
- 100% attendance for all the sessions
- Class participation
- Final assessment will be done on the basis of written and practical test
- Upon successfully meeting these requirements, a student is awarded a certificate of completion.