Module Handbook

Module Name	Quality Control and Assurance				
Module Level	Higher Diploma				
Code, if applicable	VKT538				
The subtitle, if applicable	-				
Courses, if applicable	-				
Semester(s) in which the module is taught	5th semester				
Person responsible for the module	Thorikul Huda, M.Sc.				
Lecturer	Thorikul Huda, M.Sc. Tri Esti Purbaningtias, M.Si.				
Language	Bahasa Indonesia				
Relation to curriculum	Compulsory				
Type of teaching, contact hours	Lecture (face to face teaching, structured activities, independent study and exam): 11.3 hours x 16 weeks per semester				
Workload	Total workload	91 hours; 2CU			
		Face to face teaching	Structured activities	Independent study	Exam
	Hours	23	28	28	11
Credit Points	2 SCU				
Requirements according to the examination regulations	75% minimum requirements of attendance in theory 100% requirements of attendance in lab activities				
Recommended prerequisites	Standardization				
Module objectives/intended learning outcomes	PLO 4: Able to lead in his/her working environment and be an exemplification for society Subject LO: 1. Able to describe the type of reference material 2. Able to understand the concept of metrology and make instrument calibration procedures 3. Able to make procedures and reports on instrument verification results 4. Able to create and develop quality control programs internally and externally 5. Able to describe environmental sampling quality control 6. Able to determine statistical parameters in quality control				
Content	a. Reference material b. Metrology and calibration c. Verification of instrument performance d. Internal and external quality control e. Sampling quality control f. Statistical techniques in quality control				
Study and examination	Midterm (35%), presentation (10%), final exam (35%), assignment (20%)				

requirements and forms of examination	
Media employed	Google classroom, youtube, zoom meeting, google form, google doc, standard method, laboratory handbook
Reading list	1. Taylor, J.K., 1997. Standard reference materials: Handbook for SRM users. DIANE Publishing. 2. Zschunke, A. ed., 2000. Reference materials in analytical chemistry: a guide for selection and use (Vol. 40). Springer Science & Business Media. 3. Prichard E., Barwick V., 2007, Quality Assurance in Analytical Chemistry, Wiley 4. Kenkel, J., 2000. A primer on quality in the analytical laboratory. Lewis 5. Milman, B.L., 2011. Chemical identification and its quality assurance. Berlin: Springer. 6. Schilling, E.G. and Neubauer, D.V., 2017. Acceptance sampling in quality control. CRC Press. 7. Raghavendra, N.V. and Krishnamurthy, L., 2013. Engineering Metrology and Measurements. Oxford University Press. 8. Gupta, S.V., 2012. Measurement uncertainties: physical parameters and calibration of instruments. Springer Science & Business Media. 9. Nicholas, J.V. and White, D.R., 2002. Traceable temperatures: an introduction to temperature measurement and calibration.