

Module Code	19349007	Course Term
Course Subject Name	Analytical Chemistry	Spring
Course Tutor	Douglas Drummond	The 4th Semester
Credit	2	Taught Day
Schools	School of Agriculture	THU-1
Taught Year	The 2nd year	
Campus	Ito campus	
Subject Area	Lecture	
Course Subject Classification	Common Basic Subjects	
Course Requirements		
Course Requirement (Pre-requisite)	Basic knowledge of chemistry	Thursday, 1st period (8:40-10:10)
Course Outline		
<p>This course provides students with an introduction to the basic principles of quantitative analytical chemistry. The course will cover theoretical principles and selected applications including classical and instrument based analytical techniques.</p>		
key words		
Analytical Chemistry equilibrium Titration spectrophotometry		
Study Objectives (General)		
To learn the fundamental principles of analytical chemistry and its practical applications.		
Study Objectives (Specific) The course aims to achieve the following:		
To understand and be able to apply the fundamental principles of analytical chemistry.		
To learn common classical and instrumentation methods used for elemental and compound analysis.		
To demonstrate the ability to apply the analytical approach to the solution of problems in chemical analysis.		
Course Plan		
Weekly schedule (may be subject to revision)		
<ol style="list-style-type: none"> 1. Analytical chemistry and measurements 2. Chemical equilibrium (Quiz: treatment of errors) 3. Acid -Base equilibrium 4. Acid- Base Titration I 5. Acid - Base Titration II 6. Complexometric titration (Quiz: acid and bases) 7. Gravimetric analysis introduction 8. Gravimetric analysis, Precipitation reactions and Titration 9. Exam (lectures 1 - 8) 10. Fundamentals of Electrochemistry 11. Potentiometry 12. Redox titrations 13. Fundamentals of Spectrophotometry (Quiz: electrochemistry, potentiometry and redox) 14. Analytical separations I 15. Analytical separations II 16. (Final exam: whole course) 		
Course Approaches	Lectures and problem solving exercises.	
Textbooks	Quantitative Chemical Analysis, 8th ed.(2010) by Daniel Harris Fundamentals of Analytical Chemistry, 8th ed. (2004) bySkoog, West, Holler and Crouch	
Reference Books		
Study consultation (office hour)	Office: Rm.679, WEST ZONE 5, Faculty of Agriculture, Kyushu University Ito Campus Office Hours: 9:00-18:00 Email: d.drummond@agr.kyushu-u.ac.jp Phone: (092)-802-4768	
Exams/Results Evaluation Method	Class participation 5% short quizzes 15% exams 80% A minimum of 80% attendance is mandatory	
Others		