

Course at a Glance

Fall 2015

Course Title: Environmental Laboratory Principles

Course Number: PHC 6325

Dept: EOH

Credits: 3

Traditional Section: 310

Reference Number: 92046

For GDM, PHP, IMSPH, ExMPH Sections: please visit Self-Funded Program [website](#) for course reference numbers, registration procedures and deadlines.

Instructor Name: Dr. Foday M. Jaward

Instructor Email: fjaward@health.usf.edu

Course Description:

This course discusses the principles of various analytical instruments, sampling, extraction, cleanup, statistical treatment of data, and analytical data interpretation.

Format of content presentation, activities and/or instructional methods:

The course is online. Each week the course instructor will upload a unit/lecture materials using power point presentation and also provide insights and perspectives on the material. Although course material is provided, it is strongly encouraged that students be prepared to do additional reading to supplement the material. Every week or after every topic, quiz questions will be uploaded and complete answers are due within a specific time frame.

Course content organization:

This course consists of sixteen units – one unit per week. Each unit has pre-determined date for the materials to become available. Every unit has an open-ended quiz question that assesses students' understanding of the core concept of that unit/week. Unless specified differently, each quiz is due on Sunday of that week at 10PM. It is expected that all work is turned in on time and **I request that you submit your work within its respectively assigned week.**

Textbook and Ordering materials:

Required Text:

Fifield, F W and Haines, P J (editors), second edition (2000). **Environmental Analytical Chemistry (2nd Edition)**: Blackwell, USA.

Recommended Text:

Any Environmental Analytical Chemistry Text

How to Order:

Purchase your textbook online on the [HSC Bookstore website](http://usfhsc.bncollege.com) (<http://usfhsc.bncollege.com>)

Other Required Materials:

Additional readings will be available on Canvas.

Topics:

- Introduction - General Principles and Techniques
- Statistical Procedures
- Environmental Analytical Data - Assessment & Interpretation
- Titrimetry and Gravimetry
- Separation Techniques
- Atomic Spectrometry
- Ultraviolet and Visible Spectrophotometry
- Infrared Spectrometry
- Nuclear Magnetic Resonance Spectrometry (NMR)
- Mass Spectrometry (MS)
- Electroanalytical Techniques
- Thermal Methods of Analysis
- Biological Indicators
- Analysis of Atmospheric Samples

Types of assessments and activities in the course:

1. Exams (60%): Students will have two exams: a mid-term (30%) and final exam (30%).
2. Quiz questions (20%): There will be quiz questions after every topic or lecture.
3. Report/essay (20%): There will be a long essay paper toward the end of the semester.

Course Expectations:

Students are required to log in at least once per week, read the textbook and the required materials (supplemental materials may also be provided), listen/view guest lectures and videos, and complete any other assignments (individual and group). At a minimum, our group interaction is the discussion board. Students are expected to demonstrate initiative to learn the material and to work with other students.

Required Dates: The dates of exams are final. There are no makeup exams. See syllabus for dates.

For more information about the course, contact the instructors:

Dr. Foday M. Jaward fjaward@health.usf.edu

Note: For problems accessing the course materials and other computer technical problems, click the **Tech Assistance** button in your course website and fill out a "Technical Problem Report Form". Tech Assistance button links to the Technical Assistance page of the Office of Educational Technology & Assessment website at: <http://health.usf.edu/publichealth/eta/techsupport.html>. Students can also receive assistance via telephone at 813-974-6666, Mon-Fri 8:30am-5pm, or via email at eta@health.usf.edu.

Technology Requirements (e.g. software or hardware):

Visit this website for software requirements and downloads:

http://health.usf.edu/publichealth/eta/students_tech_requirements.htm

Please Note: The information on this document is subject to change. The course instructor has the right to change any information posted in this document. Students should check the official course syllabus released during the first week of classes for any updates to this document.