

# CHS 4537 – Forensic Laboratory Quality Assurance and Professional Practice

University of Central Florida – Spring 2023

Section	Times (mode)	Dates	Class Number
0W61	Online, asynchronous (W)	01/09/2023 – 05/02/2023	15054

**Instructor:** Dr. Tamra Legron-Rodriguez (Office PSB 231, 407-823-1167)

- Zoom office hour times/information is in the syllabus tab in Webcourses.

**Names and Pronouns:** If you go by a different name than what is indicated on the class roster/Webcourses, please let me know. If I accidentally use an incorrect pronoun when addressing you, please let me know in whatever manner you feel comfortable.

**Online Communication and Webcourses:** Use the Webcourses inbox for all communication. Messages sent to the instructors' UCF email and/or messages that are unprofessional (for example no subject, no salutation, no signature) or disrespectful will not receive a response. Allow 48 hours (not including weekends) for responses. Information you will need for this course is available through the Webcourses course management system. You are responsible for checking this site daily (available at my.ucf.edu then the "Online Course Tools" tab). Webcourses will also contain your course grades. Feedback on assignments will be provided within the assignment, typically two weeks after the due date. All group communication should be conducted using the Module Discussions. This allows for the instructor to see the communication should any issues arise.

**Course Description and Prerequisites:** CHS 4537 is a three-credit, one semester course that covers the concepts and principles of quality assurance and quality systems management in forensic laboratories as well as professional practices in forensic science. The prerequisites for this course are a Grade of "C" or better in all of the following: CHS 3501, STA 2023, CHM 3120, and CHM 3120L. The course relies heavily on teamwork and cooperation. If you are having difficulties with working in groups, please feel free to discuss with the instructor.

**Ethics:** As reflected in the UCF creed, integrity and scholarship are core values that should guide our conduct and decisions as members of the UCF community. Plagiarism and cheating contradict these values, and so are very serious academic offenses. Penalties can include a failing grade in an assignment or in the course, or suspension or expulsion from the university. Students are expected to familiarize themselves with and follow the University's Rules of Conduct (see <https://scai.sdes.ucf.edu/student-rules-of-conduct/>).

## Required Materials

- Webcam with microphone for online quiz/exam proctoring.
- Textbooks - free through the UCF Library. See syllabus tab in Webcourses for links to books.
  - *Handbook of Quality Assurance for the Analytical Chemistry Laboratory* by James Dux
  - Write Like a Chemist, ISBN 978-0195305074
  - ACS Guide to Scholarly Communication ISBN: 9780841235830
- Office 365 and Microsoft Excel - available for free to all UCF students <https://tpc.ucf.edu/product/microsoft-office-2016/>
  - Accessibility information for Microsoft <https://www.microsoft.com/en-us/accessibility?rtc=1>

**Technology:** If you need help related to this course or other courses being offered in Webcourses, contact [Webcourses@ucf.edu](mailto:Webcourses@ucf.edu) for support

**Course Accessibility:** The University of Central Florida is committed to providing access and inclusion for all persons with disabilities. Students with disabilities who need access to course content due to course design limitations should contact the professor as soon as possible. Students should also connect with Student Accessibility Services (SAS) <<http://sas.sdes.ucf.edu/>> (Ferrell Commons 185, [sas@ucf.edu](mailto:sas@ucf.edu), phone 407-823-2371). For students connected with SAS, a Course Accessibility Letter may be created and sent to professors, which informs faculty of potential course access and accommodations that might be necessary and reasonable. Determining reasonable access and accommodations requires consideration of the course design, course learning objectives and the individual academic and course barriers experienced by the student. Further conversation with SAS, faculty and the student may be warranted to ensure an accessible course experience.

**UCF Cares:** During your UCF career, you may experience challenges including struggles with academics, finances, or your personal well-being. UCF has a multitude of resources available to all students. Please visit [UCFCares.com](http://UCFCares.com) if you are seeking resources and support, or if you are worried about a friend or classmate. If you are in immediate distress, please call Counseling and Psychological Services to speak directly with a counselor 24/7 at 407-823-2811, or call 911.

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## Course Objectives and Goals:

The learning objectives in this course are organized into five big ideas. By the end of this course students will be able to demonstrate mastery through the evaluation and application of the concepts related to each of the following big ideas:

- **Big Idea 1 (BI-1): Quality Control Processes**
- **Big Idea 2 (BI-2): Statistical Methods for Quality Control**
- **Big Idea 3 (BI-3): Quality Assurance Processes & Accreditation**
- **Big Idea 4 (BI-4): Professional Communication**
- **Big Idea 5 (BI-5): Resume and Job Searching**

Each of these big ideas have associated learning objectives which will be addressed when we cover each of the topics.

## Evaluation and Grading:

**Webcourses Gradebook:** All grades will be recorded in the Webcourses gradebook. Given the complexity of assignments in this course, grades will typically be posted 14 days after the due date. Questions related to grades must be addressed within two weeks of the grade posting. After that time, the grade will stand as posted. We will be using the Learning Mastery Gradebook for this course - be sure to watch the video in the module: "Tokens & the Learning Mastery Grade Book" so you know how to track your progress in this course.

## Assignment Grading

In this course, assignments are graded either **Meets Expectations (1)** or **Unsatisfactory (0)**. Partial credit or a score of an A/B/C/D/F will not be given for any assignments. For some assignments, if you earn an Unsatisfactory (0) score, you will be able to redeem a token for an opportunity to retake/resubmit the unsatisfactory assignment. See the "Redeeming Tokens" section below for details. The retakes/resubmissions will not be identical to the original assignment.

Several assignments throughout the semester will be completed in groups for which peer evaluations will also be completed. Peer evaluation scores will be used to determine if the individual student within the group will earn a Meets Expectations (1) score. A minimum group evaluation score of 85% must be achieved to earn credit for group assignments. For example:

- Group Evaluation Scenario 1: The group score for the SOP assignment is Meets Expectations (1) and you earn 85% or higher on your group evaluation score, your score for the assignment is Meets Expectations (1).
- Group Evaluation Scenario 2: The group score for the SOP assignment is Unsatisfactory (0), all students on the group earn an Unsatisfactory (0) score regardless of group evaluation scores.
- Group Evaluation Scenario 3: The group score for the SOP assignment is Meets Expectations (1) and you earn less than an 85% on the group evaluation score, you earn an Unsatisfactory (0) for the assignment.

## Tokens

Tokens are a "currency" in the course that you can use to unlock an additional attempt to demonstrate mastery of a specific assignment.

Earning tokens: Tokens can be earned by achieving an 85% or higher on peer evaluations for group assignments. Up to four tokens can be earned during the semester (one for each of the group assignments). You start the semester with one free token.

Redeeming tokens: Requests to redeem tokens can be made by posting in your individual discussion thread "Tokens Earned and Redeemed" with the instructor and indicate which assignment you would like to redeem your token for. If tokens are redeemed for discussion/photovoice, the subsequent attempt will be an alternative individual assignment. If tokens are redeemed for a group assignment, the subsequent attempt will be an individual assignment. Subsequent attempts on assignments may or may not be the same format, however, the topics covered will be the same. The new score on the assignment will replace old score. Tokens can only be redeemed at specific times throughout the semester, there will be three token redemption opportunities (dates posted in Webcourses). Unused tokens stay in your token bank; they must be redeemed by the date of the last redemption opportunity.

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## Determination of Final Grades

Your course grade is determined by the mastery of each Big Idea demonstrated by quality of the work that you submit. You must earn a Meets Expectations (1) for ALL assignment in the Big Idea to demonstrate mastery of that Big Idea.

To determine your grade, look up your mastery in the following table:

To Earn:	Mastery Of:
A	5 Big Ideas + Final Word Cloud
B	4 Big Ideas + Final Word Cloud
C	3 Big Ideas + Final Word Cloud
D	2 Big Ideas
F	1 Big Idea

- Example Grading Scenario 1: Student X earns Meets Expectations (1) on all assignments for Big Ideas 1, 2, 3, 4, 5, and Meets Expectations (1) on the final word cloud. The grade earned is an A.
- Example Grading Scenario 2: Student Y earns Meets Expectations (1) on all assignments for Big Ideas 1, 2, 4, 5, and Meets Expectations (1) on the final word cloud. However, they earned Unsatisfactory (0) for one or more assignments for Big Idea 3. The grade earned is a B.
- Example Grading Scenario 3: Student Z earned Meets Expectations (1) on all assignments for Big Ideas 1, 2, 3, 4, 5, and Unsatisfactory (0) on the final word cloud. The grade earned is a D even though they earned Meets Expectations (1) for each of the assignments in all of the Big Ideas for the semester.
- If a student does not earn Meets Expectations (1) on the final word cloud, the highest grade possible to earn is a D.

### • Big Idea 1 (BI-1): Quality Control Processes

- Associated Assignments for Mastery:
  - BI-1: Discussion: Quality Assurance in Forensics
  - BI-1: Group Assignment: Instrumental Maintenance & Group Evaluations
  - BI-1: Pipette Calibration homework

### • Big Idea 2 (BI-2): Statistical Methods for Quality Control

- Associated Assignments for Mastery:
  - BI-2: Basic Calculations using Excel
  - BI-2: Group Assignment: Control Charting & Group Evaluations
  - BI-2: Quiz: Statistical Methods for Quality Control
  - BI-2: Discussion: Photovoice for Module 3

### • Big Idea 3 (BI-3): Quality Assurance Processes & Accreditation

- Associated Assignments for Mastery:
  - BI-3: Discussion: Photovoice for Module 6
  - BI-3: Analyzing an ASTM method
  - BI-3: Quiz: Quality Assurance Processes
  - BI-3: Group Assignment: Writing an SOP & Group Evaluations
  - BI-3: Quiz: Good Laboratory Practices and Accreditation
  - BI-3: Group Discussion for Module 8

### • Big Idea 4 (BI-4): Professional Communication

- Associated Assignments for Mastery:
  - BI-4: Profile photo
  - BI-4: Group Discussion: Professional Communication
  - BI-4: Group Assignment: Graduate School Brochure & Group Evaluations

### • Big Idea 5 (BI-5): Resume and Job Searching

- Associated Assignments for Mastery:
  - BI-5: Job add analysis
  - BI-5: Resume Draft
  - BI-5: Resume Peer Review
  - BI-5: Resume Review Author Response
  - BI-5: Resume Final Draft

- Final assignment: Word Cloud Summary and Synthesis Activity

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## Tentative Schedule

Wek of	Topics	Individual Assignment	Group Assignments
Jan 9	Module 0	Quiz: Academic Engagement <b>BI-4: Profile photo</b>	Discussion: Group Introductions
Jan 16	Module 1	<b>BI-2: Basic Calculations using Excel</b>	<b>BI-1: Discussion: Quality Assurance in Forensics</b> Group Assignment: Practice with Collaborative Documents
Jan 23	Module 2	<b>BI-2: Group Evaluations for Control Charting Assignment</b>	<b>BI-2: Group Assignment: Control Charting</b>
Jan 30	Module 3	<b>BI-2: Quiz: Statistical Methods for Quality Control</b>	<b>BI-2: Discussion: Photovoice for Module 3</b>
Feb 6	Module 4	<b>BI-3: Quiz: Laboratory Methods</b>	
Feb 13	Module 5	<b>BI-1: Pipette Calibration homework</b> <b>BI-1: Group Evaluations for Instrumental Maintenance Assignment</b>	<b>BI-1: Group Assignment: Instrumental Maintenance</b>
Feb 20	Module 6		<b>BI-3: Discussion: Photovoice for Module 6</b>
Feb 27	Module 7	<b>BI-3: Quiz: Quality Assurance Processes</b>	<b>BI-3: Group Assignment: Writing an SOP</b>
Mar 6	Module 7	<b>BI-3: Group Evaluations for Writing an SOP Assignment</b>	
Mar 13	Spring Break.	No assignments due – enjoy your break!	
Mar 20	Module 8	<b>BI-3: Quiz: Auditing and Accreditation</b>	<b>BI-3: Group Discussion for Module 8</b>
Mar 27	Module 9	<b>BI-4: Group Evaluations for Graduate School Brochure Assignment</b>	<b>BI-4: Group Assignment: Graduate School Brochure</b>
Apr 3	Module 9	<b>BI-5: Job add analysis</b>	<b>BI-4: Group Discussion: Professional Communication</b>
Apr 10	Module 10	<b>BI-5: Resume Draft</b> <b>BI-5: Resume Peer Review</b>	
Apr 17	Module 10	<b>BI-5: Resume Review Author Response</b> <b>BI-5: Resume Final Draft</b>	
Apr 24	Final Exams	Final Assignment due April 26, 2023 - Word Cloud Summary and Synthesis Activity	

## Course Policies

**Attendance:** There are no required face-to-face class meetings, however, there is a mandatory Getting Started Enrollment Quiz to verify student academic activity at the beginning of each course. All students must complete the Getting Started Enrollment Quiz on Webcourses by the end of the first week of classes (due **11:59 pm on January 13, 2023**). Failure to do so will result in a delay in the disbursement of your financial aid. Students are expected to participate in each assigned module, discussion postings, and complete all activities and assignments.

**Missed Assignments and Late Work:** All assignments will be completed and/or submitted online through Webcourses. Assignments sent via the Webcourses inbox or email will not be accepted. Assignments will be available at least one week before the due date. It is the student's responsibility to ensure that the assignments are turned in on time (computer/internet issues are not valid excuses). Late assignments will NOT be accepted. Time extensions will be handled on a case-by-case basis for extreme cases such as prolonged illness/hospitalization, call to active military duty, and prolonged court-imposed legal obligations. Students requesting additional time for an assignment due to a prolonged absence must account for 60% of the time the assignments were available (e.g. an assignment was available for 10 days, you must show proof that you were unavailable for 6 of the 10 days). In the case of scheduled university events and religious holidays, an extension must be requested at least two weeks before the assignment due date.

**Red Zone Policy:** In this course, the last 24 hours prior to a due date is known as "The Red Zone". During the red zone, there is no guarantee that the instructor will be available to answer any questions pertaining to the assignment, and/or to assist with any issues (i.e., power outages, computer crashes, etc.) you may encounter that inhibits completion of the assignment. Do not wait until the last minute to complete your assignments, as there will be no make-up opportunities outside those listed above.

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**Religious Observations:** Assignments will be completed online and available at least one week before the due date. Contact the instructor if you would like to discuss accommodations for religious observances.

## Academic Integrity

Students should familiarize themselves with UCF's Rules of Conduct at <https://scai.sdes.ucf.edu/student-rules-of-conduct/>. According to Section 1, "Academic Misconduct," students are prohibited from engaging in

1. Unauthorized assistance: Using or attempting to use unauthorized materials, information or study aids in any academic exercise unless specifically authorized by the instructor of record. The unauthorized possession of examination or course-related material also constitutes cheating.
2. Communication to another through written, visual, electronic, or oral means: The presentation of material which has not been studied or learned, but rather was obtained through someone else's efforts and used as part of an examination, course assignment, or project.
3. Commercial Use of Academic Material: Selling of course material to another person, student, and/or uploading course material to a third-party vendor without authorization or without the express written permission of the university and the instructor. Course materials include but are not limited to class notes, Instructor's PowerPoints, course syllabi, tests, quizzes, labs, instruction sheets, homework, study guides, handouts, etc.
4. Falsifying or misrepresenting the student's own academic work.
5. Plagiarism: Using or appropriating another's work without any indication of the source, thereby attempting to convey the impression that such work is the student's own.
6. Multiple Submissions: Submitting the same academic work for credit more than once without the express written permission of the instructor.
7. Helping another violate academic behavior standards.
8. Soliciting assistance with academic coursework and/or degree requirements.

## Responses to Academic Dishonesty, Plagiarism, or Cheating

Students should also familiarize themselves with the procedures for academic misconduct in UCF's student handbook, *The Golden Rule* <https://goldenrule.sdes.ucf.edu/>. UCF faculty members have a responsibility for students' education and the value of a UCF degree, and so seek to prevent unethical behavior and respond to academic misconduct when necessary. Penalties for violating rules, policies, and instructions within this course can range from a zero on the exercise to an "F" letter grade in the course. In addition, an Academic Misconduct report could be filed with the Office of Student Conduct, which could lead to disciplinary warning, disciplinary probation, or deferred suspension or separation from the University through suspension, dismissal, or expulsion with the addition of a "Z" designation on one's transcript. Being found in violation of academic conduct standards could result in a student having to disclose such behavior on a graduate school application, being removed from a leadership position within a student organization, the recipient of scholarships, participation in University activities such as study abroad, internships, etc.

Let's avoid all of this by demonstrating values of honesty, trust, and integrity. No grade is worth compromising your integrity and moving your moral compass. Stay true to doing the right thing: take the zero, not a shortcut.

**Turnitin:** In this course will utilize turnitin.com, an automated system that compares student assignment with web sites, as well as a database of student papers that grows with each submission. Students will be expected to submit assignments in both hard copy and electronic format. After the assignment is processed, the instructor receives a report from turnitin.com that states if and how another author's work was used in the assignment. For a more information, visit <http://www.turnitin.com>.

**Copyright:** This course may contain copyright protected materials such as audio or video clips, images, text materials, etc. These items are being used with regard to the Fair Use doctrine in order to enhance the learning environment. Please do not copy, duplicate, download or distribute these items. The use of these materials is strictly reserved for this online classroom environment and your use only. All copyright materials are credited to the copyright holder.

**Honorlock:** This course will use Honorlock to proctor your quizzes and exams this semester. Honorlock is an online proctoring service that allows you to complete your assessment from the comfort of your home. You DO NOT need to create an account, download software, or schedule an appointment in advance. Honorlock is available 24/7, and all that is needed is a computer, a working webcam, Google Chrome, and a stable Internet connection. To get started, you will need Google Chrome and to download the Honorlock Chrome Extension. You can download the extension at [www.honorlock.com/extension/install](http://www.honorlock.com/extension/install). When you are ready to test, log into [Webcourses@UCF](mailto:Webcourses@UCF), go to your course, and click on your assessment. Clicking "Launch Proctoring" will begin the Honorlock authentication process. Once authentication is complete, Honorlock will record your

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quiz/exam session by webcam as well as recording your screen. Honorlock also has an integrity algorithm that can detect search-engine use, so please do not attempt to search for answers, even if it's on a secondary device. In the event that your webcam access is lost during the assessment and Honorlock does not reconnect you within an acceptable time, you will be required to take the exam in the presence of the instructor or GTA via Zoom at an appropriate date and time decided by your instructor. Honorlock support is available 24/7/365. If you encounter any issues, you may contact them via the live chat at <https://honorlock.com/support/>.

**Third-Party Software and FERPA:** During this course you might have the opportunity to use public online services and/or software applications sometimes called third-party software such as a blog or wiki. While some of these could be required assignments, you need not make any personally identifying information on a public site. Do not post or provide any private information about yourself or your classmates. Where appropriate you may use a pseudonym or nickname. Some written assignments posted publicly may require personal reflection/comments, but the assignments will not require you to disclose any personally identity-sensitive information. If you have any concerns about this, please contact your instructor.

**Campus Safety Statement:** Though most emergency situations are primarily relevant to courses that meet in person, such incidents can also impact online students, either when they are on or near campus to participate in other courses or activities or when their course work is affected by off-campus emergencies. The following policies apply to courses in online modalities.

- To stay informed about emergency situations, students can sign up to receive UCF text alerts by going to <https://my.ucf.edu> and logging in. Click on “Student Self Service” located on the left side of the screen in the toolbar, scroll down to the blue “Personal Information” heading on the Student Center screen, click on “UCF Alert”, fill out the information, including e-mail address, cell phone number, and cell phone provider, click “Apply” to save the changes, and then click “OK.”
- Students with special needs related to emergency situations should speak with their instructors outside of class.

**Religious observations:** Students must notify their instructor in advance if they intend to miss class for a religious observance. For more information, see the UCF policy at <http://regulations.ucf.edu/chapter5/documents/5.020ReligiousObservancesFINALJan19.pdf>.

**Make-Up Assignments for Authorized University Events or Co-curricular Activities:** Students who represent the university in an authorized event or activity (for example, student-athletes) and who are unable to meet a course deadline due to a conflict with that event must provide the instructor with documentation in advance to arrange a make-up. No penalty will be applied. For more information, see the UCF policy at <https://policies.ucf.edu/documents/4-401.pdf>

**Deployed Active Duty Military Students:** Students who are deployed active duty military and/or National Guard personnel and require accommodation should contact their instructors as soon as possible after the semester begins and/or after they receive notification of deployment to make related arrangements.

## **Modification of the Course Syllabus**

The instructor reserves the right to modify the course syllabus at any time during the course to address changes needed in content, resources, assignments, due dates, etc. Changes will be made so as not to impact student grades negatively. Students will be notified of any changes via Webcourses.