CHEM 521: Forensic Science Summer II 2016	
Instructors: Dr. Lisa Zuraw	*Class Meetings:* Online
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Credit Hours: 3	

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Required Textbook

No traditional textbook is required for this course. Reading materials or references will be provided via Citlearn. If you would like to have a textbook for a resource, I recommend Criminalistics: An Introduction to Forensic Science, 10th Edition by Richard Saferstein.

Student Information

This course is an elective in the M.Ed. in Interdisciplinary STEM Education program and is intended to provide an interdisciplinary application of science concepts for STEM teachers.

Learning and Developmental Goals

By the end of the Forensic Science course, each student will be able to:

1. Improve content knowledge in science.
2. Appreciate the interdisciplinary nature of the science disciplines in forensics.
3. Learn some of the scientific techniques used in forensics.
4. Incorporate forensics as an integrative approach for teaching science content.

Course Description

 The Forensic Science course incorporates concepts of biology, chemistry and physics in learning about the science involved in crime investigations. Activities will be incorporated to illustrate the techniques used in forensic science. Topics to be covered include crime scene investigation, physical evidence, fingerprinting, serology, document analysis, trace evidence and DNA analysis. Actual cases will be utilized.

Required Course Management System

The Citadel's course management system, CitLearn (http://citadel.blackboard.com), will be used for all class activities. If you have difficulties with CitLearn, please contact The Citadel Help Desk at (843) 953-HELP (4357) or enter a Hotline on Lesesne Gateway.

Conceptual Base

Developing Principled Educational Leaders for P-20 Schools - The Citadel's Professional Education Unit prepares principled educational leaders to be knowledgeable, reflective, and ethical professionals. Candidates completing our programs are committed to ensuring that all students succeed in a learner-centered environment.

The Citadel's Professional Education Unit is committed to the simultaneous transformation of the preparation of educational leaders and of the places where they work. Specifically, The Citadel's Professional Education Unit seeks to develop principled educational leaders who:

1. have mastered their subject matter and are skilled in using it to foster student   learning;
2. know the self who educates (Parker J. Palmer) and integrate this self-knowledge with content knowledge, knowledge of students, and in the context of becoming professional change agents committed to using this knowledge and skill to ensure that all students succeed in a learner-centered environment; and
3. exemplify the highest ethical standards by modeling respect for all human beings and valuing diversity as an essential component of an effective learner-centered environment.

The Citadel's Professional Educational Unit is on the march, transforming itself into a Center of Excellence for the preparation of principled educational leaders. Through our initial programs for teacher candidates for P-12 schools and our advanced programs for professional educators in P-20 schools, The Citadel's Professional Education Unit transforms cadets and graduate students into principled educational leaders capable of and committed to transforming our schools into learning communities where all children and youth succeed.

The Citadel's Professional Education Unit has identified 15 performance indicators for candidates to demonstrate that they are principled educational leaders who are knowledgeable, reflective, and ethical professionals:

Knowledgeable Principled Educational Leaders…

1. Have mastered the subject matter of their field of professional study and practice;
2. Utilize the knowledge gained from developmental and learning theories to establish and implement an educational program that is varied, creative, and nurturing;
3. Model instructional and leadership theories of best practice;
4. Integrate appropriate technology to enhance learning;
5. Demonstrate a commitment to lifelong learning;

Reflective Principled Educational Leaders…

6. Develop and describe their philosophy of education and reflect upon its impact in the teaching and learning environment;
7. Develop and manage meaningful educational experiences that address the needs of all learners with respect for their individual and cultural experiences;
8. Construct, foster, and maintain a learner-centered environment in which all learners contribute and are actively engaged;
9. Apply their understanding of both context and research to plan, structure, facilitate and monitor effective teaching and learning in the context of continual assessment;
10. Reexamine their practice by reflectively and critically asking questions and seeking answers;

Ethical Principled Educational Leaders…

11. Demonstrate commitment to a safe, supportive, learning environment;
12. Embrace and adhere to appropriate professional codes of ethics;
13. Value diversity and exhibit a caring, fair, and respectful attitude and respect toward all cultures;
14. Establish rapport with students, families, colleagues, and communities;
15. Meet obligations on time, dress professionally, and use language appropriately.

Student Responsibilities

Class Expectations

This is an online course. There are no lectures, no classes to attend. You will work independently all semester, but there will be opportunities for interaction with other students in the course and with the instructor; they just won't be face to face. Expect to put in 13-18 hours a week working on this 7-week, 3 credit course. In this course, you will have PowerPoint presentations, quizzes, readings, assignments, discussions, and projects. This course is not self-paced; you will be working on more than one of these each week and, for each topic we cover. It will be your responsibility to keep up with the due dates, manage your time, identify areas where you are having problems, and contact me for help if you need it.

Class Attendance

This course is highly interactive and thus we have high expectations regarding your participation in the class. This not only means participating in online course activities but being prepared in all formats for in-depth discussions of the topics at hand. If participation drops below the expected levels, we reserve the right to adjust assignments/expectations accordingly. You will be informed if anything changes in that regard.

Guidelines for Meeting Online

Here are the discussion board guidelines for meeting online. You are required to spend an equivalent amount of instructional time (6 hrs/week) on the boards that you would spend in class (this can include reading, etc..

Here's how these weeks will work.
Since this is a summer course it is accelerated. So there are two topics most weeks. The first topic (Week #A) will generally have a due date of Thursday at noon. The second topic (Week #B) will usually have a due date of Monday at noon. After week 2, I will assess the midweek due date to make sure it is working. For each topic, you should expect there to be a PowerPoint presentation of content, a quiz on the content in the PowerPoint, a discussion forum(s), and at least one assignment (Some topics have more than one).

There will be three projects.

Project I (Case Project) will be a presentation of an actual case that will be due on week 2 through 6 by posting it on the discussion board and leading a discussion on the case. The sign up for the case will be posted in the Introduction to the Course during Week 1A.

Project II is a laboratory investigation into the Pattern Analysis of Dropping Liquids. It will be due on July 27th.

Project III (Application of Forensics) is incorporating what you learned during the course into your current STEM position. This will be due on August 10th.

Discussion Board - You are required to make at least **ONE** meaningful comment (**per topic, per question**) as well as a meaningful response (**per topic, per question**) by the end of that Module (either Monday at 11:59 am or Thursday at 11:59 am) unless otherwise noted by the instructor. I understand that there is a lot going on but please try to contribute as much as possible.

Discussions will be assessed as **class participation** and are based on your contributions and the quality of your comments. You must make it apparent that you have read and reflected on the questions.

Here is a rubric explaining our expectations on discussion participation.

Low	Medium	High
• Student does not exhibit knowledge of assigned readings • Posts are not elaborative, no comments and no supporting statements	• Student exhibits a small amount of knowledge of assigned readings • Posts are somewhat elaborative, short comments and no supporting statements	• Student exhibits deep knowledge of assigned readings • Posts are elaborative, including thought out comments and supporting statements

Below are a few ways to respond to a classmate's posting to encourage a dialogue:

- *Ask a probing question.*

- *Share an insight from having read your colleague's posting.*

- *Offer and support an opinion.*

- *Validate an idea with your own experience.*

- *Make a suggestion.*

- *Expand on your colleague's posting.*

- *Ask for evidence that supports the posting.*

Communication
All official electronic communication will be conducted via Citlearn and email utilizing students' Citadel email account. As per University policy, no non-Citadel email addresses will be used. However, if you wish to use your non-Citadel email, you can set your Citadel account to automatically forward to a different account. We will not keep track of non-Citadel accounts, thus should reply with your Citadel account.

Assignment Criteria
Criteria for each assignment will be distributed as assignments are generated. Points awarded will be based on fulfilling the specific criteria for each assignment. Details for each assignment are located under the correspondent Module on Citlearn. Assignments should be turned in through Citlearn only. All assignments are due at 11:59 am EST on the due date specified in the Assignment.

ALL assignments will require the following:
- Correct grammar and spelling
- Word processed, in APA 6.0 format unless noted otherwise
- Received by instructor on or before due date/time (unless otherwise arranged with instructor) through Citlearn.

Late Work
No credit will be given for an assignment that is more than one week late unless arrangements have been made prior to the assignment due date. Any assignment received after the due date will have the points received reduced by 5% per day (24 hours). Late Wiki and Discussion Board entries WILL NOT receive credit.

GRADING:

Assignment	Points
Discussion Board Activities	20
Assignments	20
PowerPoint Quizzes	10
Projects	30
Final	20
Total	100

Final grading is based on the following scale:

90-100=A, 86-89.9=B+, 80-85.9=B, 76-79.9=C+, 70-75.9=C, 0-69.9=F

Honor Statement

As a professional educator, integrity is an expectation.   Students of The School of Education at The Citadel are expected to meet the standards set forth in the Citadel Code.   Available at: http://citadel.edu/r3/honor/manual.shtml

Cheating and plagiarism violations will be reported and a failing grade will be assigned for the work in question. This class will follow The Citadel Honor Manual regarding plagiarism: "Plagiarism is the act of using someone else's words or ideas as your own without giving proper credit to the sources:

- When you quote another's words exactly you must use quotation marks and a footnote (or an indication in your paragraph) to tell exactly where the words came from, down to the page number(s). When you mix another's words and ideas with your own in one or more sentences, partially quoting the source exactly and partially substituting your own words, you must put quotation marks around the words you quote and not around your own. Then you cite the source, down to the page number(s).
- When you paraphrase another's words or ideas, that is, when you substitute your words for another's words, but keep their idea(s), you do not use quotation marks, but you must cite the source, down to the page number(s).
- When you use only another's idea(s), knowing that they are the other's ideas, you must cite the source of that idea or those ideas, down to the page number(s).
- Citing the source means giving, as a minimum, the author, the title of the book, and the page number. (The Citadel Honor Manual)

Disability Disclosure

If you need accommodations because of a disability, please inform one of the instructors immediately. You may send an email message or private message through the Citlearn class page. To initiate accommodation, students must register with the Office of Access Services, Instruction and Support (OASIS) located in room 105 Thompson Hall or call 953-1820 to set up an appointment. This office is responsible for reviewing documentation provided by students requesting academic accommodation and for accommodation in cooperation with students and instructors as needed and consistent with course requirements.

Instructional Units and Assessment

Course Schedule for CHEM 521 - Schedule subject to change based on class needs. Additional reading/activities will be assigned as the course develops.

Length/Date	Unit Topic or Title	Assessment(s)
Week 1 – 6/27/16-7/4/16	Course Introduction/Introduction to Forensics	Discussion board, PowerPoint and syllabus quizzes and assignments
Week 2 – 7/4/16-7/11/16	Crime Scene/Physical Evidence	Discussion board, PowerPoint quizzes and assignments
Week 3 – 7/11/16-7/18/16	Questioned Documents/ Fingerprinting	Discussion board, PowerPoint quizzes, Hands-on and regular assignments
Week 4 – 7/18/16-7/25/16	Trace Evidence/Pattern Analysis	Discussion board, PowerPoint quizzes, Project II and assignments
Week 5 – 7/25/16-8/1/16	Serology /DNA	Discussion board, PowerPoint quizzes and assignment
Week 6 – 8/1/16-8/8/16	Incorporation of Forensics into STEM	Discussion board, Project III and assignment
Week 7 –8/8/16-8/11/16	Final	Final

Note Project I (Case Project) due date will vary dependent on the case you choose.