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COURSE SYLLABUS

Term: Spring 2017 (2016-2)

Course: FRSC205 and FRSC205L FORENSIC SCIENCE II Lecture and Lab - SECTION A

Instructor Information:

Instructor Name	Dr. Rogers
Office Number:	335
Phone Number:	219-473-4268
Email:	drrogers@ccsj.edu
Hours Available:	All hours and schedules are posted outside of room 335, however, if the door is open and no one is in there, come on in! No appt necessary, but they are welcomed. Monday through Thursday 6:45AM to 8:30AM. Monday, Tuesday and Thursday 1:30-2:30PM and Wednesdays from 1:30-3:30PM

Instructor Background: *B.S University of Illinois (Chemistry); Ph.D. University of Illinois (Chemistry); Post-Doctoral Fellow, University of Illinois (Bioanalytical Chemistry); Adjunct Professor: National Louis University (2008), Prairie State College (2008-2009), Elmhurst College (2008-2009), Visiting Assistant Professor: DePaul University (2009-2011) and Assistant Professor of Bioanalytical Chemistry and Director of Undergraduate Studies (2011-2013). Director of the Science Program, Assistant Professor at Calumet College (2013-2016). Department Chair of Science, Math, and Behavioral Science (2015-2016). Director of the Biophysical Chemistry Program, Associate Professor at Calumet College (2016-present). Biophysical Chemistry and Math Department Chair (2016-present).*

What does my research at Calumet College of St. Joseph entail?

- Analyze structural and neurotoxic properties of neurodegenerative-disease related proteins and peptides, which are major suspects of Alzheimer's disease and Parkinson's disease
- Utilize various sample preparation techniques including but not limited to biochemical assays, kinetics, neurotoxic effects involving instrumentation such as fluorescence, UV/Vis, NMR, FTIR, and electron microscopy.

The types of sciences which are involved in my research cover a broad range of interdisciplinary aspects from analytical chemistry, physical chemistry, biophysics, nanotechnology, bioanalytical, molecular biology, biochemistry, and neuroscience.

Theoretically, everyone in this class could get an A. This fact means that you are never in competition with your classmates. I have this policy to encourage you to study in groups for the exams to help each other out. I encourage you to follow your performance using the grades that will be posted on Blackboard.

Course Information:	
Course Time:	12:00 PM - 1:30 PM, Mondays and Wednesdays Labs on Wednesdays from 10:15-11:45 AM
Classroom:	CCSJ 332
Prerequisites:	Prerequisites: C or better in BIOL 115, BIOL 115L, BIOL 205, BIOL 205L, CHEM 200, CHEM 200L, FRSC 200, and FRSC 200L along with concurrent enrollment in FRSC 205L
Required Books and Materials:	Required on a daily basis 1. Handouts to be provided
<p>Learning Outcomes/ Competencies: This is a list of very specific learning objectives for FRSC 205A lecture. The lab will also provide hands-on opportunities to develop and apply this knowledge. Please note that for many of the topics in this course real world examples are used. Also, on occasion, the topics result in brief discussions of economic and societal issues and some historical development can also be done so as to see the role science played in certain world events.</p> <p><u>By the end of this course, students will be able to:</u></p> <ol style="list-style-type: none"> 1. Obtain a basic understanding of the branches of Forensic Science and its applications in society. 2. Utilize case studies to gain knowledge of forensic techniques and terminology 3. Collect and categorize evidence and data 4. Examine data and evidence 5. Develop keen observational skills 6. Use observations and evidence to analyze crime scenarios 7. Create comprehensive scientific reports 8. Be exposed to careers which related to forensic science 9. Learn from and make connections with community members (detectives, arson investigator, print specialist, medical examiner)and local colleges 10. Develop the ability to listen intently and speak confidently 11. Investigate computer simulations and relate them to real world applications 12. Enhance their intellectual curiosity and personal integrity 	
<p>Course Description: A 3 credit hour course implementing the forensic sciences with emphasis on criminalistics; unique characteristics, underlying philosophies; nature, analytical methods, significance of results with chemical, biological, trace, and pattern evidence. Forensic Science 2 is the second component of the forensic science sequence which develops the reasoning strategies through examination of case studies; solving real-world problems as part of an investigative team. The lab component of the forensic science sequence where the examination of case studies; solving real-world problems as part of an investigative team is implemented. Prerequisites: C or better in BIOL 115, BIOL 115L, BIOL 205, BIOL 205L, CHEM 200, and CHEM 200L, FRSC 200 and FRSC 200L along with concurrent enrollment in FRSC 205. Laboratory Fee: See current fee schedule.</p>	
<p>Learning Strategies: Active learning, BlackBoard, group discussions, team projects, collaborative learning, lecturing, laboratory exercises, demonstrations, oral and poster presentations.</p>	
<p>Experiential Learning Opportunities: In class discussion, comprehension and critical thinking along with laboratory experience is essential for a fundamental understanding of the scientific method. This course has a required laboratory portion that provides students with experiential learning through experimental design,</p>	

hypothesis development, data interpretation, and communication of results through laboratory reports.

Assessments:

The point values for each category of assessment are listed below. Point values for each category may be adjusted to reflect actual number of assignments, quizzes, etc., at the professor's discretion and any changes made during the semester supersede the point values reflected here; changes will be announced in class and posted on BlackBoard.

One overall grade given is based on *both* lab and lecture assignments; this means that the same grade will be applied to both lab and lecture courses.

There are no make-ups for a missed final. Keep in mind that if you have *more than one laboratory absences for invalid reasons, you will fail the course.* Your grade for this course will be based on the total number of points you accumulate during the session. Any questions regarding grading must be addressed within one week after the graded material has been returned to you. **The grade you earn in this course will be determined by the following components:**

CATEGORY	DESCRIPTION	POINTS
Quizzes	Given at the beginning of class; covers the assigned reading/previous lectures	10%
In class activities / Participation	Completed at the end of class	30%
Lecture Exams	90 minutes, during class (total of 2)	Each 20% Total 40%
Final Exam	Cumulative Murder Mystery Exam.	20%
	TOTAL PERCENT	100%

Grading Scale

100 – 92: A	91 – 90: A-
89 – 88: B+	87 – 82: B
81 – 80: B-	
79 – 78: C+	77 – 72: C
71 – 70: C-	
69 – 68: D+	67 – 62: D
61 – 60: D-	
59 and below	F

Any student concerns about grading on laboratory reports or other evaluated work must be addressed within one week after receipt of the graded material. The lowest laboratory score will be dropped and the grade computed out of the remaining scores. The percentage score will be determined, and the following scale applied.

Course Schedule:

Lecture	Labs
Week 1: Jan 9-Jan 13 Fingerprinting Gunshot residue	Fingerprinting Gunshot residue
Week 2: Jan 16-20 <u>NO CLASS ON MONDAY, January 16, 2016</u> Blood testing	Blood identification

Week 3: Jan 23-27 Bodily Fluids.	Blood 2
Week 4: Jan. 30-Feb 3 Bodily Fluids	Saliva
Week 5: Feb 6-10 Bodily Fluids	Semen
Week 6: Feb 13-17 DNA	NO CLASS/LAB
Week 7: Feb 20-24 DNA	Kissing kit
Week 8: Feb 27-March 3 ***Spring Break***	
Week 9: March 6-10 DNA	Kissing kit
Week 10: March 13-17 DNA	Hair samples
Week 11: March 20-24 DNA	Fingernails
Week 12: March 27-March 31 DRUGS	Identify unknowns
Week 13: April 3-7 <u>Mock Crime Scene</u>	Mock Crime Scene
Week 14: April 10-14 <u>Mock Crime Scene</u>	Mock Crime Scene
Week 15: April 17-21 Final Mock Crime Scene	Final Mock Crime Scene

I reserve the right to change this schedule to meet the needs of the class.

Responsibilities	
Attending Class	<p>You cannot succeed in this class if you do not attend. We believe that intellectual growth and success in higher education occur through interaction in the classroom and laboratories. However, we do not want to penalize students for participating in college-sponsored events. When you miss class because of a college event, you must give notice of your absence in advance, and you are responsible for all missed work. Being absent doesn't excuse you from doing class work; you have more responsibilities to keep up and meet the objectives of this course.</p> <p><u>Attendance is counted as being present from the first 10 minutes of class until the end of lecture and lab.</u> It is the student's responsibility to make attendance a priority. Anyone missing after the first 10 minutes of class will be marked absent unless a written excuse is provided within 24 hours of the occurrence. Similarly, anyone leaving early without a written excuse will be counted as absent.</p> <p>Class times will be used for lecture, to discuss homework, review material for exams, and administer exams, quizzes, and in-class assignments. Please remember that you are participants during these</p>

hours. In order to get the most out of each class, you should read the material we will cover prior to coming to class and **bring a calculator and periodic table DAILY** so that you can participate in in-class activities.

It is to your benefit to attend each class meeting. **You are responsible for all material presented in class and all in-class announcements and assignments.** Attendance is mandatory, however, for all examinations since they cannot be made up at a later date without a valid excuse left to the discretion of the instructor of this course.

Validated proof must be received and provided immediately to the instructor (no make-ups what so ever for any of the in class assignments). **Any exceptions are left to the discretion of the instructor.** Train delays, broken down cars, oversleeping, forgetting, and other personal business are examples of invalid excuses.

Additionally, you should plan to arrive on time and remain throughout the lecture to avoid disrupting the class. Other classroom disruptions, such as cell phones, pagers, etc. are unacceptable; these devices should be turned off before the start of class.

80% of success is showing up -Woody Allen

There are only 27 class meetings in a given semester, 4 of those class meetings are exams and 1 is the initial introduction day, therefore each class meeting covers ~8% of the course material. You are responsible for your own education. Based on the calculations below, The basic, full-time tuition rate for the academic year, (not including housing, fees, student health etc.) is approximately \$15,000. There are a total of 32 hours of class time in a quarter; this means that at the very minimum for **every hour of class costs you about \$86**. You have already paid for this class and it is up to you to make the most out of this investment.

$$\begin{aligned} & \frac{\$15,000}{1 \text{ year}} \times \frac{1 \text{ year}}{2 \text{ semesters}} \times \frac{1 \text{ semester}}{12 \text{ credits}} \times \frac{3 \text{ credits}}{32 \text{ contact hours}} \\ & = \$58.59 \text{ per hour} \times \frac{1.5 \text{ Hours}}{1 \text{ class meeting}} = \$87.89 \text{ per class meeting} \end{aligned}$$

If for whatever reason you have to miss class, please approach your fellow students for the notes you missed, and take advantage of the class materials that will be posted on Blackboard <http://class.ccsj.edu>

Intellectual growth and success in college is reinforced through interaction in the classroom. Students reach personal goals and course outcomes through regular and prompt attendance. **Therefore, three (3) unexcused absences will result in an administrative withdrawn from the course.**

Participation through regular attendance is required to be successful in this course. Therefore, if a student is absent more than three (3) times (excessive tardiness is counted as absence), the student will be

	<p>subjected to a grade of F or FW per policy stated under the Withdrawal from Classes section on this syllabus.</p> <p><u>In the event of absence during an exam, the student will receive a ZERO (0) on that exam.</u> The lowest exam score is dropped, so that exam score will not be considered when determining the final grade. If a student is absent during more than one exam, the student will receive a ZERO (0) for each exam, but only one grade will be dropped. It is the student's responsibility to ensure attendance on exam dates.</p> <p><u>In the event of absence during lab, the student will receive a ZERO (0) for that report.</u> As with exams, one lab report is dropped so one absence is permitted without penalty.</p>
<p>Turning In Your Work</p>	<p>You cannot succeed in this class if you do not turn in all your work on the day it is due. Due dates are specified for each assignment on this syllabus; any changes will be announced in class and posted on BlackBoard.</p> <p>See "attending class" above. All assignments can be submitted via e-mail if a link is not provided through BB. It is the student's responsibility to request extensions in writing from the instructor.</p>
<p>Using Electronic Devices</p>	<p>In order to minimize distractions in the classroom, please turn off the sound on cell phones and pagers and keep classroom chatter and eating noises to a minimum. No social media chatting/texting will be allowed to be used during lecture or lab times unless otherwise directed by the instructor. No videotaping or recording of lecture without written consent and discretion of the instructor. The instructor reserves the right to ask you to leave the room if you interrupt the class.</p> <p>The science faculty will address electronic device use as follows:</p> <p style="padding-left: 40px;">Occurrence</p> <ul style="list-style-type: none"> • 1st – Student is given a verbal warning. • 2nd - Student is instructed to leave the classroom. The student cannot return to class until they have met with the professor. • 3rd - Student is instructed to leave the classroom. The student can return to class until they have meet with the V.P. of Academic Affairs. <p><i>Things can and do happen. If someone really needs to reach you while you are in class, please inform the professor at the beginning of class. You can set your device to "vibrate" and answer your phone call in the hallway.</i></p> <p>In order for the lectures to flow smoothly and for the class to get the most of the time spent together, I request that the use of the podium computer be prohibited 10 minutes prior to lecture and 10 minutes post lecture.</p>
<p>Participating in Class</p>	<p><u>General Laboratory Guidelines:</u></p> <ul style="list-style-type: none"> • Know the locations of the safety shower, eye wash stations, and first aid kit in the lab.

	<ul style="list-style-type: none"> • Report all personal injuries to the instructor who will assess the wound and summon professional help if necessary. • Assume the chemicals are dangerous unless you are told otherwise. • Work only with clean equipment and glassware (dry) on a clean bench top. • Carefully handle and measure appropriate quantities of the reagents needed in the experiment. • Use the right chemicals – pay attention to the names of the chemicals you plan to use. You could cause a serious accident if you mix the wrong chemicals. • Save all solutions and solids until you have successfully completed the experiment. • Manage your time wisely so that you do not rush or take short cuts. • Record all data in ink in your laboratory notebook while you work! Do not write data, even temporarily, on scraps or other pieces of paper. Make sure your data is complete. Make sure to record the date or the unknown number, if any. • If you do not know or are unsure about any aspect of your experiment, ask the instructor. <p>Your preparedness and behavior in lab will be evaluated as part of your lab report grade. If you follow the rules and guidelines stated above, earning these points should be straightforward.</p> <p>Laboratory Resources: The lab instructor has office hours during which they can answer questions regarding pre-lab assignments, calculations from a lab, the writing of lab reports, etc. If you have questions regarding the formatting, organization, etc. of your lab report, you should refer first to the rubric for the lab and the lab report writing guidelines; both of these are available on Bb. If you still have questions, you should contact the lab instructor. With enough notice, they may be able to look over a rough draft of your report. In addition, the Center for Writing has tutors familiar with writing lab reports that can help you revise a rough draft. In all cases, it is important to schedule an appointment several days before your report is due.</p>
<p>Doing Your Own Work</p>	<p>If you turn in work that is not your own, you are subject to judicial review, and these procedures can be found in the College Catalog and the Student Planner. The maximum penalty for any form of academic dishonesty is dismissal from the College.</p> <p>It will be assumed at all times that work handed in is one's own and one's own alone, unless specific credit is given to the contributions of others. The giving or receiving of assistance during examinations is dishonest. Any violations of the academic integrity (i.e., copying assignments, plagiarism, cheating on exams, etc...) will be treated with the utmost seriousness.</p>

Cheating on Exams

Cheating on exams comes in two forms: (1) Communicating with others in any form, either verbally or nonverbally, as a way of sharing information during an exam; (2) Bringing in some sort of aid, such as notes, to assist you during the taking of an exam. To help facilitate honest test taking, I will require that all cell phones be shut off and put away, all tables cleared, and all hats removed, during all exams.

Plagiarism

Plagiarism is the presentation of the ideas, opinions, or the writings of others as though it were your own. Plagiarism is stealing. It is dishonest, unethical, and illegal. It is also not a very smart approach to school, because it defeats the point of your being here, namely, to improve your own powers of thought and expression.

Consequences of Academic Dishonesty

I have zero tolerance for cheating or plagiarism in my classroom. If you are caught cheating on an exam, or if you are caught plagiarizing on a written assignment, you will receive a zero on that exam or written assignment without impunity. You will not be given the opportunity to retake an exam, or to drop or rewrite the assignment. I will also turn the matter over to the proper channels for further possible action. I will have no reservations reporting this activity.

If an instructor or other Calumet College of St. Joseph personnel find that a student has plagiarized or been involved in another form of academic dishonesty, the instructor or other personnel may elect to bring the matter up for judicial review. The maximum penalty for any form of academic dishonesty is dismissal from the College. The procedures for judicial review are listed under the section of CCSJ handbook that addresses student grievances.

PLEASE NOTE: All papers can and may be submitted for checks on plagiarism from the Internet/Electronic sources/Databases.

If you turn in work that is not your own, you are subject to judicial review, and these procedures can be found in the College Catalog and the Student Planner. The maximum penalty for any form of academic dishonesty is dismissal from the College.

Using standard citation guidelines, such as MLA or APA format, to document sources avoids plagiarism. The Library has reference copies of each of these manuals, and there are brief checklists in your Student Handbook and Planner.

This course uses ACS format for all citations.

PLEASE NOTE: All papers may be electronically checked for plagiarism.

Withdrawing from Class	After the last day established for class changes has passed (see the College calendar), you may withdraw from a course by following the policy outlined in the CCSJ Course Catalog.
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Resources	
Student Success Center:	The Student Success Center provides faculty tutors at all levels to help you master specific subjects and develop effective learning skills. It is open to all students at no charge. You can contact the Student Success Center at 219 473-4287 or stop by the Library.
Disability Services:	Disability Services strives to meet the needs of all students by providing academic services in accordance with Americans with Disabilities Act (ADA) guidelines. If you believe that you need a “reasonable accommodation” because of a disability, contact the Disability Services Coordinator at 219-473-4349.
CCSJ Alerts:	<p>Calumet College of St. Joseph’s emergency communications system will tell you about emergencies, weather-related closings, or other incidents via text, email, or voice messages. Please sign up for this important service annually on the College’s website at: http://www.ccsj.edu/alerts/index.html.</p> <p>In addition, you can check other media for important information, such as school closings:</p> <p>Internet: http://www.ccsj.edu Radio: WAKE – 1500 AM, WGN – 720 AM, WIJE – 105.5 FM, WLS – 890 AM, WZVN – 107.1 FM, WBBM NEWS RADIO 78 TV Channels: 2, 5, 7, 9, 32</p>

Emergency Procedures

MEDICAL EMERGENCY

EMERGENCY ACTION
<ol style="list-style-type: none"> 1. Call 911 and report incident. 2. Do not move the patient unless safety dictates. 3. Have someone direct emergency personnel to patient. 4. If trained: Use pressure to stop bleeding. 5. Provide basic life support as needed.

FIRE

EMERGENCY ACTION
<ol style="list-style-type: none"> 1. Pull alarm (located by EXIT doors). 2. Leave the building.

3. Call 911 from a safe distance, and give the following information:
 - Location of the fire within the building.
 - A description of the fire and how it started (if known)

BUILDING EVACUATION

1. All building evacuations will occur when an alarm sounds and/or upon notification by security/safety personnel. **DO NOT ACTIVATE ALARM IN THE EVENT OF A BOMB THREAT.**
2. If necessary or if directed to do so by a designated emergency official, activate the building alarm.
3. When the building evacuation alarm is activated during an emergency, leave by the nearest marked exit and alert others to do the same.
4. Assist the disabled in exiting the building! Remember that the elevators are reserved for persons who are disabled. **DO NOT USE THE ELEVATORS IN CASE OF FIRE. DO NOT PANIC.**
5. Once outside, proceed to a clear area that is at least 500 feet away from the building. Keep streets, fire lanes, hydrant areas and walkways clear for emergency vehicles and personnel. The assembly point is the sidewalk in front of the college on New York Avenue.
6. **DO NOT RETURN** to the evacuated building unless told to do so by College official or emergency responders.

IF YOU HAVE A DISABILITY AND ARE UNABLE TO EVACUATE:

Stay calm, and take steps to protect yourself. If there is a working telephone, call 911 and tell the emergency dispatcher where you are **or** where you will be moving. If you must move,

1. Move to an exterior enclosed stairwell.
2. Request persons exiting by way of the stairway to notify the Fire Department of your location.
3. As soon as practical, move onto the stairway and await emergency personnel.
4. Prepare for emergencies by learning the locations of exit corridors and enclosed stairwells. Inform professors, and/or classmates of best methods of assistance during an emergency.

HAZARDOUS MATERIAL SPILL/RELEASE

EMERGENCY ACTION

1. Call 911 and report incident.
2. Secure the area.
3. Assist the injured.
4. Evacuate if necessary.

TORNADO

EMERGENCY ACTION

1. Avoid automobiles and open areas.
2. Move to a basement or corridor.
3. Stay away from windows.
4. Do not call 911 unless you require emergency assistance.

SHELTER IN PLACE

EMERGENCY ACTION

1. Stay inside a building.
2. Seek inside shelter if outside.
3. Seal off openings to your room if possible.

4. Remain in place until you are told that it is safe to leave.

BOMB THREATS

EMERGENCY ACTION

1. Call 911 and report incident.
2. If a suspicious object is observed (e.g. a bag or package left unattended):
 - Don't touch it!
 - Evacuate the area.

TERRORISM AND ACTIVE SHOOTER SITUATIONS

EMERGENCY ACTION

1. Call 911 and report intruder.

RUN, HIDE OR FIGHT TIPS:

1. **Prepare** – frequent training drills to prepare the most effectively.
2. **Run and take others with you** – learn to stay in groups if possible.
3. **Leave the cellphone.**
4. **Can't run? Hide** – lock the door and lock or block the door to prevent the shooter from coming inside the room.
5. **Silence your cellphone** -- use landline phone line.
6. **Why the landline?** It allows emergency responders to know your physical location.
7. **Fight** – learn to “fight for your life” by utilizing everything you can use as a weapon.
8. **Forget about getting shot – fight!** You want to buy time to distract the shooter to allow time for emergency responders to arrive.
9. **Aim high** – attack the shooter in the upper half of the body: the face, hands, shoulder, neck.
10. **Fight as a group** – the more people come together, the better the chance to take down the shooter.
11. **Whatever you do, do something** – “react immediately” is the better option to reduce traumatic incidents.