CHEM 483 – Nucleic Acids in Research, Biotechnology, and Medicine
Spring 2022
T/R 10:50–12:05 Room: SSMB 127

Instructors Contact Information:
This class has two instructors. Both will be available for questions and explanations. If you send an email regarding the class, please include both instructors as recipients.

Dr. Renaud Geslain. Office: RITA 121. Email: geslainr@cofc.edu, Phone: 843-953-8080.

Dr. Marcello Forconi. Office: SSMB 302. Email: forconim@cofc.edu. Phone: 843-953-3616.

Office hours: Via appointment.

Course Description:
This is an upper-level course for students with a background in biochemistry and molecular biology and a strong interest in biotechnology and medicine. The course will discuss and analyze recently published research news articles about the involvement of nucleic acids in the prevention, treatment, and diagnosis of human diseases as well as the enhancement of food, the preservation of the environment, as well as any relevant topic that is going to emerge as the semester unfolds.

Credit Hours and pre-requisites.
CHEM 483 is 3 credit hours.
Prerequisites: CHEM 351 or BIOL 312, or instructors’ permission.

Student Learning Outcomes:
- Describe and appreciate important features of nucleic acids that allow them to carry out their biological roles.
- Read and interpret articles that discuss the roles of nucleic acids in modern life.
- Discuss articles and find further references in the literature on the same topic of the discussion.
- Understand limitations and strengths of different applications of nucleic acids.
- Assess the objectivity of science news in popular media.

Important Dates:
Tuesday January 11 is the first day of class.
The add/drop deadline is January 18.
No classes on March 8 and March 10 (Spring Break).
The deadline to withdraw with a status of “W” is March 25.
The last day of class is Thursday April 21.
The date and time allocated for final the exam is Thursday, April 28, 10:30 am-12:30 pm.
Course schedule:

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Graded presentation
Graded BQ
Graded ANS
Graded NP

Acronyms:
- BQ= Burning Question that you write and post on Oaks
- ANS= Your written ANSWer to a BQ that you selected
- NP= Nerd Picture that you snap and post on Oaks together with a caption
- QA= Question on the article that is provided by your instructors (the backbone of our lecture discussion)

Refer to the each column to see what assignments to complete

You write one BQ before midnight that day
You answer one BQ anytime before midnight that day

The number in each box indicates both your team and the QA that you will address together

QAs are provided by your instructors the Sunday before the beginning of each module

Example: For the entirety of module#1 (Jan 13 - Jan 25), Ashlyn teams up with Dana Mae (Team#4).

Jan. 13 They studied article#1 and present together QA#4 (we are still practicing, presentations are not graded yet).
They each post one NP before midnight.

Jan. 18 They studied article#2 and present together QA#4 (same deal, no grade).
They each post one NP before midnight.
Ashlyn post one BQ before midnight (1 point).

Jan. 20 They studied article#3 and present together QA#4 (no grade).
They each post one NP before midnight.
Dana Mae selects one BQ and post a reply before midnight (2 points).

Jan. 25 No preparation for this meeting, they can both relax :)

Required Materials:

There is no textbook associated with this class. All the material will be delivered via OAKS or in the classroom by the instructors. It is the student’s responsibility to obtain the class material from these sources.
Class Format, Etiquette, and Attendance:
As of now, the class will be in-person in the designated room. Because of the interactive nature of the class, students are strongly encouraged to attend class. Class-based discussions will contribute to the final grade, as specified in the “Grading Policy and Scale” section. These terms are subject to change in case the College of Charleston will revise its classroom policy.

Learning Assessment:

1. Pre-class assignments: You are expected to read the articles discussed in class significantly in advance. Pre-class assignments will involve activities related to the paper(s) that will be discussed and will be announced during the course.

2. Discussion and participation: Discussions will be fundamental in this course. You are expected to actively participate to discussions with your original contributions. Discussions will be mostly during the class period but could involve contribution to tools used outside the class period, such as the discussion board on OAKS.

3. Post-class assignments: Some classes will involve further explorations of the topics discussed in the class. Terms and deadlines will be given with the individual assignments.

Grading Policy and Scale:
Pre-class assignments 35%
Discussion and participation 40%
Post-class assignments 25%
There is no grade replacement or assignment dropping policy.
There are no credit-bearing assignments other than those discussed in this syllabus.

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**OAKS Course Site:**
You should check both your CofC email address and the OAKS course site regularly, as announcements will be posted and communicated using these tools, in addition to the regular communication in the class.

**Honor Code and Academic Integrity:**
1. It is your responsibility to conform to the College of Charleston Honor Code and Code of Conduct (http://deanofstudents.cofc.edu/policies-and-procedures/honor-code-and-code-of-conduct.php).
2. Lying, cheating, attempted cheating, and plagiarism are violations of our Honor Code that, when suspected, are investigated. Each incident will be examined to determine the degree of deception involved. Incidents where the instructor determines the student’s actions are related more to misunderstanding and confusion will be handled by the instructor. The instructor designs an intervention or assigns a grade reduction to help prevent the student from repeating the error. The response is recorded on a form and signed both by the instructor and the student. It is forwarded to the Office of the Dean of Students and placed in the student’s file. Cases of suspected academic dishonesty will be reported directly by the instructor and/or others having knowledge of the incident to the Dean of Students. A student found responsible by the Honor Board for academic dishonesty will receive a XXF in the course, indicating failure of the course due to academic dishonesty. This status indicator will appear on the student’s transcript for two years after which the student may petition for the XX to be expunged. The F is permanent. Students can find the complete Honor Code and all related processes in the Student Handbook (refer to the link in the middle of this webpage for a PDF of the handbook http://deanofstudents.cofc.edu/honor-system/studenthandbook/).

**SNAP (Students Needing Access Parity) and Disability Access:**
The College will make reasonable accommodations for persons with documented disabilities. Students should apply for services at the Center for Disability Services/SNAP located on the first floor of the Lightsey Center, Suite 104 (http://disabilityservices.cofc.edu/). Students approved for accommodations are responsible for notifying me as soon as possible and for contacting me at least one week before accommodation is needed.