HON299 The Art of Science Communication **Spring 2021**
Syllabus **St Bonaventure University**

Class meetings:
TTH, 11:30am – 12:45 pm, PLAS 202

Instructor: Dr. Xiao-Ning Zhang
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Office Hours: 1-4 pm, TTH (additional office hours available upon request) – *according to university guidelines, in-person gathers should be avoided as much as possible. I will hold zoom office hours at the scheduled time listed above. Here is an online sign-up sheet for office hours that students should fill out by 1pm on T or TH before the office hour period. If an in-person office hour meeting is needed, please schedule a separate appointment with me via email.*
Prerequisite: None.
Credit Hours: 3 Credits.

Course Description:

The Art of Science Communication is a course that provides fundamental training in science communication, focusing on how to present science to a nonexpert audience in a formal setting, such as a public lecture or a science outreach event.

Using videos, lectures, background material, peer mentoring and discussions, the course covers the important components of what makes for a successful presentation, including messaging, generating interest and engaging with the audience.

This course is an offering from the American Society for Biochemistry and Molecular Biology (ASBMB). Upon successful completion, each student will receive a Certificate of Completion from ASBMB.

Due to the ongoing COVID-19 pandemic, both before and after lecture, students MUST use provided 70% ethanol spray and paper towel to disinfect their table and chair. All students are required to clean hands with soap and water/or hand sanitizer, keep 6-ft distance from each other whenever possible and cover their nose and mouth at all times. Students who refuse to follow these rules WILL be asked to leave the classroom immediately.

Course Learning Objectives:

Part I (Weeks 1-4):

- Students will be able to explain what science communication is.
- Students will provide examples of science communication throughout history.
- Students will discuss what can be the goals for science communication.
- Students will be able to explain the motivations to communicate science.

Part II (Weeks 5-8):

- Students will be familiar with common stereotypes of scientists, the reason for that, and discuss ways to change them
- Students will discuss the factors giving public figures credibility, influence, and power of persuasion, and discuss examples.
- Students will discuss the motivations of a given audience and why is it important to "know the audience" before addressing it
- Students will discuss specific examples of tailoring the message to different audiences.

Part III (Weeks 9-15):

- Students will discuss and apply essential elements of a science communication presentation, including defining the mission, connecting with the audience, and leveling the playing field
- Students will discuss and apply important elements of the presentation, including how to start and how to end, formatting, presenting conclusion and call to actions, as well as evaluating the impact of the talk.
- Students will discuss and apply practical elements to their presentations, including slide design, mechanics, and delivery.
- Students will complete and submit their "after" presentation.

Required Text:
There is no textbook required.

Power Point slides and supplemental materials will be provided on Moodle in a weekly manner.

Grading (no extra credit and no curving in this course):

Grade Ranges

A	93% and above	B-	80 to 82%	D+	67 to 69%
A-	90 to 92%	C+	77 to 79%	D	63 to 66%
B+	87 to 89%	C	73 to 76%	D-	60 to 62%
B	83 to 86%	C-	70 to 72%	F	59 % and below

Value of Items Graded

Class Participation	1 x	20	= 20
Homework	4 x	5	= 20
Term paper	1 x	20	= 20
Presentation 2	1 x	10	= 10
Final Video	1 x	30	= 30
Total points			= 100

Attendance and Missing Assignments:
Full attendance and completing graded items as scheduled are expected. It is the student's responsibility to make up for the coursework if he/she chooses to miss a lecture(s). Missing an assignment and desiring accommodation for an alternative due day requires a significant reason with official documentations, a demonstrated pattern of regular attendance, and the student contacting the instructor at least a week prior to the scheduled exam. In case of emergency, the student should contact the instructor immediately.

It is the students' responsibility to attend the course as much they can without putting themselves, the instructor or classmates at risk. Students placed on a mandatory quarantine or in isolation for potential exposure to or contraction of COVID-19 may electronically send the instructor documentation showing that they are in one of those statuses, and the instructor will then make accommodations for those students within the confines of the course objectives.

Intellectual Property and Academic Honesty:
All material cited in the course content is copyrighted, by virtue of its publication on the internet, under the Millennium Act. Therefore, students are asked to respect the intellectual property of the authors. It is illegal to copy or distribute any of these materials unless it is for personal use, or you have obtained the consent of the authors of the materials.

Discussions on course subjects among students are highly encouraged only if it is to improve one's understanding and learning. **Cheating** and **plagiarism** are prohibited. Once identified, it will lead to a grade of "**ZERO**" and will be reported to the dean's office and the university. It is a serious matter and will be dealt with according to "*St. Bonaventure Academic Honesty Policy*" (http://web.sbu.edu/friedsam/governing/academic_policies/academic_honesty_policy.pdf). The reference *Writing Papers in the Biological Sciences* has very useful information on **plagiarism**. Students must read page 29-30, and engrave the understanding of what **plagiarism** entails in their hearts.

The following are some examples of academic dishonesty:

- Collaborating with another student in the planning, writing, or editing of a project without the knowledge of the instructor, or in ways that go beyond the instructor's expectations.
- Obtaining general background information for an assignment from a printed or electronic source which is not acknowledged, and paraphrasing without citations.
- Inserting phrasing or paragraphs from printed or electronic sources without sufficient rewriting to demonstrate your own synthesis of ideas, *with or without crediting the original source*.

Students with disabilities are encouraged to contact the Disability Support Services Office, Plassmann Hall, Room 100D, 375-2065 and shall follow the procedure stated in http://web.sbu.edu/friedsam/governing/academic_policies/students_with_disabilities.htm. Should a student need accommodation on the basis of disabilities, a discussion with instructor shall take place within the first week of the semester.

Tentative Lecture Schedule

Date	Topics *
PART I	
Jan 26	Introduction to Science Communication
Jan 28	Why Should We Care About Science Communication?
Feb 2	Class Discussion: Where is Science Communication needed?
Feb 4	Communications Awareness (Diversity and Disability, Health Communication)
Feb 9	How Do Different Disciplines Communicate With Their Audience? (Journalism & History)
Feb 11	How Do Different Disciplines Communicate With Their Audience? (Performing Arts & Music)
Feb 16	How Do Different Disciplines Communicate With Their Audience? (Education & Business)
Feb 18	**No Class (SBU One-day Break)**
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PART II	
Feb 23	Current Status of STEM Literacy
Feb 25	Current Status of STEM Literacy
Mar 2	Perceptions of Scientists
Mar 4	Class Discussion - How to Improve Perceptions of Scientists
Mar 9	Credibility, Influence and Persuasion
Mar 11	Credibility, Influence and Persuasion
Mar 16	Know Your Audience
Mar 18	Tailor the Message to Different Audience
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PART III	
Mar 23	Group Work – What Is Your Mission
Mar 25	Level the Playing Field
Mar 30	Good Science Storytelling
Apr 1	Group Work – Construct Your Story
Apr 6	Student Presentation Round 1
Apr 8	Student Presentation Round 1 (continued), Body Language
Apr 13	**No Class (SBU One-day Break)**
Apr 15	Confidence and Stage Presence
Apr 20	Student Presentation Round 2
Apr 22	Student Presentation Round 2
Apr 27	Refine Your Science Communication
Apr 29	Refine Your Science Communication
May 4	**Student Presentation Final Round**
May 6	**Student Presentation Final Round**

** Related readings will be provided on Moodle.*