

Instructional Strategies in Science Education
MBIO 618

Summer 2018

Time: Monday 5:30-7:30pm

Place: Room 601 CTRB

2 hour interactive discussion sessions

Course Instructor

Pascale Alard, Ph.D., Department of Microbiology and Immunology, CTRB, Room 609.

Telephone: (502) 852-5364; email: p0alar01@louisville.edu

The course will involve activities, student presentations, discussion and online discussion. Students will be graded on their performance in course participation, online participation and attendance. By permission of Instructor.

Course Description: This course will teach students how to engage their own students in the classroom during a lecture as well as in class activities, and will prepare them to teach in graduate courses at the School of Medicine. Topics covered in this course include how to make a lesson plan, a powerpoint of that lesson, present a lecture, organize an activity to engage the students, and assess student's performance. Class activities will include in class presentations by students and online discussions based on assigned reading when not meeting.

<u>Date</u>	<u>Topic</u>
5/7*	Effective teaching and effective learning
5/14	Making the best of drop-in teaching
5/21	Specific tools for engaging students in the classroom
5/28*	Specific activities for engaging students in the classroom
6/4	Demonstration of class activities
6/11*	Lesson plan
6/18*	Assessment and Feedback
6/25	Powerpoint presentation of lesson

* No meeting

Learning Objectives

Upon completion of the course, the students will be able to develop a powerpoint and in class activities on a specific topic as well as exam questions, and will be able to assess student performance. The ultimate objective is for the students to teach the chosen topic in one graduate course, including the Method course in the Department of Microbiology & Immunology.

Reference Material

Small teaching: 1st Edition, by James Lang, Springer (2016)

Teaching for learning: 1st Edition, by Claire Major, Michael Harris and Todd Zakrajsek (2016)

Class Cancellations

An assignment will be placed on the Blackboard site for this course in the event that a class is cancelled. Completion of this assignment by the given due date will count toward class attendance for the day class was cancelled.

Grading

The course will be Pass/fail. Students are expected to attend class meetings and actively engage in class discussions and activities, participate in online discussion and complete all course assignments.

Assignments	% contribution
Teaching toolbox	4x5 (20 total)
Lesson Plan & Powerpoint	30
Assessment	10
In class Activities	20
Powerpoint presentation	20
Total	100

Assignments

Teaching toolbox

Students will choose four methods of instruction/instructional strategies that they could use for the Method course. Students will submit a 1-paragraph summary about each following example below.

Clustering submitted by Pascale Alard

Major, Harris & Zakrajsek Teaching for Learning, 2016, p116-118

- Students are given information about concepts, and move around the room to transfer learned information to other students, looking for connections and links between concepts which allow them to form clusters.
- Method is helpful for understanding and recalling information and supports student networking and collaboration with the advantage of having every student participate.
- Limited to classroom with sufficient open space. Apply to all group size.

Lesson plan and powerpoint

Students will develop a lesson plan (based on provided example during class) and a powerpoint by revising or creating a lecture for the Method course. The lesson plan/powerpoint should incorporate the instructional strategies/method of instruction reviewed in this course. Clarity, organization, opportunity for students to retrieve/connect information, opportunity to engage students, and opportunity for practice will be evaluated using a 0-6 scale (0-2 not achieved, 3-4 somewhat achieved, 5-6 achieved).

Assessment

Present your plan for formative and summative assessment. Level of preparation and clarity will be evaluated using a 0-4 scale (0-1 poor, 2-3 good, 4 very good).

In class activities

Present your plan for in class activities including any assigned work before the class. Level of preparation, content understanding, student engagement and communication skills will be evaluated by peers using a 0-4 scale (0-1 poor, 2-3 good, 4 very good).

Powerpoint presentation

Deliver a 30-minute component of your developed lesson. Provide context by describing where the lesson falls within the semester curriculum, any assigned work, and planned activities. Level of preparation, content understanding, student engagement and communication skills will be evaluated by peers using a 0-4 scale (0-1 poor, 2-3 good, 4 very good).

Policy on Instructional Modifications

"The University of Louisville is committed to providing access to programs and services for qualified students with disabilities. If you are a student with a disability and require accommodation to participate and complete requirements for this class, notify me immediately and contact the Disability Resource Center (Stevenson Hall, 852-6938) for verification of eligibility and determination of specific accommodations."

Title IX/Clery Act Notification

Sexual misconduct (including sexual harassment, sexual assault, and any other nonconsensual behavior of a sexual nature) and sex discrimination violate University policies. Students experiencing such behavior may obtain **confidential** support from the PEACC Program (852-2663), Counseling Center (852-6585), and Campus Health Services (852-6479). To report sexual misconduct or sex discrimination, contact the Dean of Students (852-5787) or University of Louisville Police (852-6111).

Disclosure to **University faculty or instructors** of sexual misconduct, domestic violence, dating violence, or sex discrimination occurring on campus, in a University-sponsored program, or involving a campus visitor or University student or employee (whether current or former) is **not confidential** under Title IX. Faculty and instructors must forward such reports, including names and circumstances, to the University's Title IX officer.

For more information, see the Sexual Misconduct Resource Guide (<http://louisville.edu/hr/employeerelations/sexual-misconduct-brochure>).