## CTSE 2000 Step 2: Inquiry Approaches to Science Teaching 1 Credit (Lecture: 1 Hour, Lab: 2 Hours)

**Term:** Spring 2024  
**Prerequisites:** CTSE 1000   
**Class Meetings:** Thursdays 3:30-4:45, Haley 2462  
**Lab:** Field placements will occur five times throughout the semester **Instructor:** Mr. Matthew McVay  
**Email:** mmcvay@auburn.edu  
**Office:** Haley 3354, (334) 844-8273  
**Office Hours:** I will generally be in my office Monday and Tuesday afternoons and Friday mornings.  
**Textbook:** There is no textbook to purchase. All required materials will be made available in Canvas.  
  
**Course Description**

In Step 2, students who want to explore teaching careers become familiar with the middle school setting by observing and discussing the middle school environment, and by teaching lessons to middle school students. Step 2 students, generally team-teaching with a partner, are assigned to a science Mentor Teacher in a local middle school to observe once and then teach three inquiry-based lessons.

Step 2 students build upon and practice inquiry-based lesson design and questioning skills that were developed in Step 1, but shifts the focus to middle school (rather than elementary school) curricula. Step 2 students will experience teaching with technology through a number of demo lessons, and it is a requirement that at least one lesson they teach incorporate technology in a way that allows the students to collect and/or analyze data or explore content.

For their final project, Step 2 students analyze and modify one of the lessons they taught, taking into account the results of the assessments, their reflection on how successful the lesson was, and feedback from observers (Mentor Teacher, Instructor, and/or TA).

As a result of the Step 2 experiences, students are able to make a decision as to whether they want to pursue a pathway to teacher certification through the AUTeach program.

## Course Objectives

In this course, students will learn how to do the following:

1. Demonstrate science content knowledge in the planning and teaching of middle school lessons aligned with district curriculum.
2. Utilize exemplary sources of and appropriate resources (including appropriate technologies) for inquiry-based science lessons.
3. Write performance objectives aligned with national and state standards and assessments of those objectives for each lesson.
4. Design and implement inquiry-based lessons using the 5E Instructional Model.
5. Demonstrate awareness of diversity within classrooms, discuss the implications for teaching and learning, and explore strategies for achieving instructional equity.
6. Identify the unique attributes of adolescent students and implement teaching strategies that are effective in the middle school environment.
7. Use pre- and post-assessments aligned to performance objectives to evaluate student learning, to provide instructive feedback to middle school students, and as a basis for revising lesson plans.
8. Provide instructive feedback to peers.
9. Reflect on teaching experiences to revise lesson plans.
10. Develop and use probing questions to elicit feedback to determine students’ misconceptions, alternative conceptions, and acquisition of knowledge.
11. Design and teach lessons that incorporate the use of technology.
12. Plan for and implement safe instructional practices.
13. Reflect on personal interest in teaching and assess commitment to pursue teaching as a career path.

## Expectations

### Attendance & Participation

In class, you will: 1) plan and practice your lessons with your team, 2) receive feedback from the instructor and other members of the class regarding your lessons, and 3) observe and learn from demonstration lessons. Twenty-five percent of your grade is based on attendance, active participation, and professionalism in all class sessions and field experiences. Credit for attendance requires arriving to class sessions and fieldwork appointments on time, participating in all class activities, and staying until the session ends. Students will begin the semester with 25 points. Deductions will be made for any unexcused absence (-5), tardy (-2), or lack of professionalism (-5). Field activities are considered class activities, and any late arrival or early departure of 30 minutes or more constitutes an absence rather than a tardy.

### Missing Class Sessions

Because the course meets only once per week and there are no texts, most topics and activities are covered in only one class session. Missing class means you miss essential information and experiences for that week. Most students will be working with a partner. The workload for each lesson should be shared equally. If you are not in class, you inconvenience your partner by forcing them to work with you outside of class. If you miss a class, it is your responsibility to communicate with your partner about coordinating the next lesson.

#### *Missing Field Appointments*

A missed teaching appointment at the school you are assigned is taken very seriously. The Mentor Teachers you will work with have generously donated their classrooms and student learning time for your education. At the minimum, a missed lesson must be rescheduled. However, there may be more serious ramifications, which will be dealt with on a case-by-case basis. Lack of transportation is not an excusable reason to miss a field appointment, so be proactive and let someone know if you need assistance. **If you have a serious emergency and you must miss your scheduled teaching day**, notify your partner, Mentor Teacher, and AUTeach course instructor as soon as possible. Your partner will teach the lesson alone, and you will be responsible for completing the missed lesson. Failure to complete all field requirements will result in failure of the course regardless of accumulated points.

#### *Technology*

You must have access to and be able to use technology for course assignments (e.g., Canvas, Word, Adobe Acrobat, etc.) and for timely and appropriate communication with your instructor, Mentor Teacher, partner, and classmates. Check your email daily, and regularly access Canvas to view and post assignments.

### Professionalism

As representatives of Auburn University and AUTeach, and as visitors in local school districts, you are expected to maintain professionalism in all field experiences for this class. You are expected to be on time, appropriately dressed, and well prepared for all field experiences. Before your first field appointment, you must sign and adhere to the department’s ***Professional Behaviors Contract***, which will be distributed and discussed in class.

### Background Check & Fingerprinting

To be eligible to go into the local schools, all AUTeach students must consent to a background check and fingerprinting. More details will be provided in class and on Canvas. You must always bring a government-issued ID to your field placements each time you attend (e.g., driver’s license or passport).

### Academic Honesty

Students will be expected to abide by the Auburn University Academic Honesty Code found in the [*Student Policy eHandbook*](http://www.auburn.edu/student_info/student_policies/).  All academic honesty violations will be reported to the Office of the Provost, which will then refer the case to the Academic Honesty Committee. A plagiarism checker will be used throughout the semester. When using someone else’s ideas or work, you must include appropriate citations and references.

### Disability Accommodations

Any students who require accommodations should electronically submit their university-approved accommodation documentation through AU Access and must meet with me regarding the specific accommodations requested. Please mention this to me in the first week of class so that we can set up a time to meet either during office hours or before/after class. If you need to establish your accommodations with the Office of Accessibility for the first time, please contact the Office of Accessibility, 844-2096, 1228 Haley Center (<https://accessibility.auburn.edu/>).

## Assignments

### Field Experiences

In Step 2, a team of two students will be assigned to a middle school classroom. Over the course of the semester, the team will visit this classroom to conduct **one observation and teach three inquiry-based lessons**. Early in the semester, the team will communicate with their Mentor Teacher to verify the dates of the observations. The dates and topics of the three lessons are already set. **Dates for field events may be changed ONLY by the instructor or Mentor Teacher.** See the course calendar for semester observation and teaching dates.

### Lesson Plans and Reflections

You will write reflections for each visit to your field placement. You and your partner will be responsible for writing and revising a lesson plan for each lesson you teach. Students will share the responsibility of developing and writing their lesson plans. Then, one student (Student A) will lead teach Lesson Plan 1 while the other student (Student B) supports and observes. For Lesson Plan 2, Student B will lead teach while Student A supports and observes. Following each lesson, both students will write a reflection on their experiences. For your final project, you will 1) revise one of your lesson plans and 2) give a short presentation of your revisions and analysis of student work, explaining your rationale for the changes you made.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Observation 1 | Co-Teach | Observation 2 | Lesson Plan 1 (LP1) | Lesson Plan 2 (LP2) |
| Observe Mentor Teacher | Students Co-Teach with Mentor Teacher | Observe Mentor Teacher | **Student A**: Lead Teacher  **Student B**: Support | **Student B**: Lead Teacher  **Student A**: Support |

### Mentor Teacher Feedback

Your Mentor Teacher will complete a feedback form on each lesson. Mentor Teachers may choose to provide a hard copy of the feedback form or email an electronic copy at the end of each lesson you teach. You are responsible for getting that feedback form from your Mentor Teacher before you leave and then submitting it to Canvas as part of your grade. There are scanners available in the Learning Resources Center (3084 Haley, <https://education.auburn.edu/learning-resources-center/>) and in the AUTeach office (3354 Haley).

## Grading

Grading scale: A = 90-100, B = 80-89, C = 70-79, D = 65-69, F = below 65%

|  |  |  |  |
| --- | --- | --- | --- |
| Week | Activities |  | Points |
|  | **Attendance, Participation, and Professionalism**  (-5 per unexcused absence; -2 per tardy; -5 for lack of professionalism) | | 25 |
| 9  10  11  13 | **Reflections**  Reflection 1: Classroom Observation 1  Reflection 2: Co-Teach Lesson  Reflection 3: Lesson Plan 1 (LP1)  Reflection 4: Lesson Plan 2 (LP2) | 5  5  5  5 | 20 |
| 8  10 | **Lesson Plans**\*  LP1: Objectives, Draft, and Final Lesson Plan  LP2: Objectives, Draft, and Final Lesson Plan | 15  15 | 30 |
| 8 & 10 | **Mentor Teacher Feedback Forms**  Upload feedback forms to Canvas | 2.5 | 5 |
| 13 | **Analysis of Student Work**  Analyze and answer questions about collected student work |  | 5 |
| 14  15 | **Final Project**  Final Project Presentation  Revised Lesson Plan (choose from lessons taught) | 5  5 | 10 |
| 13 | Return of all inventory materials |  | 5 |
|  |  | Total | 100 |

\*Late lesson plans will result in a 5% deduction per day late and may result in delayed or canceled field experiences, which will negatively affect your grade.